

CRESTONE PEAK RESOURCES

**ARAPAHOE COUNTY
SEC 30-T4S-R64W
WATKINS 4-64 30-29 1AH**

**OWB
PROPOSAL 1**

Anticollision Report

15 February, 2023

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Reference	PROPOSAL 1		
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 10,000.00 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	2/10/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	18,558.76	PROPOSAL 1 (OWB)	MWD OWSG	OWSG MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SEC 26-T4S-R65W						
EXIST HZ CHICO 4-65 26-25 2BH - OWB - FINAL SURV	7,747.32	17,932.00	1,463.77	1,175.14	5.071	CC
EXIST HZ CHICO 4-65 26-25 2BH - OWB - FINAL SURV	7,800.00	17,932.00	1,464.90	1,173.27	5.023	ES
EXIST HZ CHICO 4-65 26-25 2BH - OWB - FINAL SURV	7,900.00	17,932.00	1,473.16	1,177.22	4.978	SF
EXIST HZ CHICO 4-65 26-25 2CH - OWB - FINAL SURV	7,561.80	17,734.00	1,718.40	1,431.09	5.981	CC
EXIST HZ CHICO 4-65 26-25 2CH - OWB - FINAL SURV	7,600.00	17,734.00	1,718.80	1,429.47	5.941	ES
EXIST HZ CHICO 4-65 26-25 2CH - OWB - FINAL SURV	7,800.00	17,734.00	1,736.11	1,438.77	5.839	SF
EXIST HZ CHICO 4-65 26-25 2DH - OWB - FINAL SURV	7,608.67	17,975.00	2,080.70	1,790.78	7.177	CC
EXIST HZ CHICO 4-65 26-25 2DH - OWB - FINAL SURV	7,700.00	17,975.00	2,082.89	1,789.04	7.088	ES
EXIST HZ CHICO 4-65 26-25 2DH - OWB - FINAL SURV	7,900.00	17,975.00	2,102.47	1,802.42	7.007	SF
EXIST HZ CHICO 4-65 26-25 3AH - OWB - FINAL SURV	7,466.47	17,900.00	2,351.74	2,063.97	8.172	CC
EXIST HZ CHICO 4-65 26-25 3AH - OWB - FINAL SURV	7,500.00	17,900.00	2,351.98	2,062.85	8.135	ES
EXIST HZ CHICO 4-65 26-25 3AH - OWB - FINAL SURV	7,800.00	17,900.00	2,377.22	2,078.69	7.963	SF
SEC 30-T4S-R64W						
ABND VERT LOWRY 11-29 - OWB - Design #1	14,312.44	7,686.00	418.94	117.04	1.388	Level 3, CC, ES, SF
ABND VERT ROSENFELD 4-29 - OWB - Design #1	14,240.43	7,690.00	421.60	121.47	1.405	Level 3, CC, ES, SF
CHICO 4-65 25-26 3BH - OWB - PROPOSAL 1	100.00	100.00	99.81	99.54	371.228	CC, ES
CHICO 4-65 25-26 3BH - OWB - PROPOSAL 1	800.00	806.94	182.92	177.50	33.791	SF
CHICO 4-65 25-26 4AH - OWB - PROPOSAL 1	100.00	100.00	139.88	139.61	520.284	CC, ES
CHICO 4-65 25-26 4AH - OWB - PROPOSAL 1	11,000.00	7,084.84	4,563.45	4,470.41	49.048	SF
CHICO 4-65 25-26 4BH - OWB - PROPOSAL 1	100.00	102.00	159.91	159.64	588.913	CC, ES
CHICO 4-65 25-26 4BH - OWB - PROPOSAL 1	11,800.00	6,706.69	5,514.20	5,409.43	52.635	SF
CHICO 4-65 26-25 1AH - OWB - PROPOSAL 1	8,123.44	7,907.24	37.61	-29.36	0.562	Level 1, CC, ES, SF
CHICO 4-65 26-25 1BH - OWB - PROPOSAL 1	3,718.37	3,555.96	154.28	116.42	4.075	CC
CHICO 4-65 26-25 1BH - OWB - PROPOSAL 1	3,800.00	3,635.88	155.17	116.10	3.971	ES
CHICO 4-65 26-25 1BH - OWB - PROPOSAL 1	3,900.00	3,733.78	158.66	118.35	3.937	SF
EXIST HZ TEBO 29-1H - OWB - FINAL SURVEY	18,181.69	7,757.98	4,595.44	4,303.69	15.751	CC
EXIST HZ TEBO 29-1H - OWB - FINAL SURVEY	18,300.00	7,758.47	4,596.96	4,302.61	15.617	ES
EXIST HZ TEBO 29-1H - OWB - FINAL SURVEY	18,558.76	7,759.55	4,610.88	4,311.48	15.400	SF
EXIST HZ TEBO 29-1H - STK 1 - STK 1	15,900.00	15,900.00	4,121.56	3,695.82	9.681	ES, SF
EXIST HZ TEBO 29-1H - STK 1 - STK 1	16,691.78	9,017.00	4,095.33	3,822.08	14.987	CC
EXIST HZ TEBO 29-2H - OWB - FINAL SURVEY	14,390.11	12,164.48	1,551.53	1,256.26	5.255	CC
EXIST HZ TEBO 29-2H - OWB - FINAL SURVEY	14,400.00	12,159.15	1,551.55	1,256.20	5.253	ES
EXIST HZ TEBO 29-2H - OWB - FINAL SURVEY	18,558.76	7,921.57	1,574.72	1,269.52	5.160	SF
EXIST HZ WATKINS 30-5-4H - OWB - FINAL SURVEY	2,870.01	2,723.85	142.60	119.67	6.220	CC
EXIST HZ WATKINS 30-5-4H - OWB - FINAL SURVEY	2,900.00	2,753.17	142.73	119.45	6.131	ES
EXIST HZ WATKINS 30-5-4H - OWB - FINAL SURVEY	13,136.49	12,169.00	1,211.56	949.34	4.620	SF

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SEC 30-T4S-R64W						
EXIST HZ WATKINS 30-5-5H - OWB - FINAL SURVEY	2,726.62	2,593.25	79.81	58.33	3.716	CC, ES, SF
EXIST HZ WATKINS 30-5-8H - OWB - FINAL SURVEY	2,627.21	2,500.82	63.79	47.09	3.819	CC, ES, SF
EXIST HZ WATKINS 30-5-8H - STK 1 - STK 1	2,627.21	2,500.82	63.79	47.09	3.819	CC, ES, SF
SI HZ WATKINS 30-5-5GH - OWB - FINAL SURVEY	2,951.28	2,788.84	142.33	115.92	5.391	CC
SI HZ WATKINS 30-5-5GH - OWB - FINAL SURVEY	3,000.00	2,835.89	142.71	115.64	5.271	ES
SI HZ WATKINS 30-5-5GH - OWB - FINAL SURVEY	13,135.08	12,200.00	874.80	612.68	3.337	SF
WATKINS 4-64 30-29 1BH - OWB - PROPOSAL 1	100.00	101.00	20.03	19.76	73.538	CC, ES
WATKINS 4-64 30-29 1BH - OWB - PROPOSAL 1	13,400.00	13,214.18	505.98	220.30	1.771	SF
WATKINS 4-64 30-29 3AH - OWB - PROPOSAL 1	100.00	101.00	40.07	39.80	147.080	CC, ES
WATKINS 4-64 30-29 3AH - OWB - PROPOSAL 1	18,558.76	18,069.27	2,480.80	1,918.06	4.408	SF
WATKINS 4-64 30-29 3BH - OWB - PROPOSAL 1	100.00	101.00	59.74	59.47	219.279	CC, ES
WATKINS 4-64 30-29 3BH - OWB - PROPOSAL 1	18,558.76	18,078.52	3,140.94	2,578.47	5.584	SF
WATKINS 4-64 30-29 4AH - OWB - PROPOSAL 1	100.00	101.00	79.77	79.50	292.817	CC, ES
WATKINS 4-64 30-29 4AH - OWB - PROPOSAL 1	18,558.76	18,145.08	3,800.71	3,238.50	6.760	SF
WATKINS 4-64 30-29 4BH - OWB - PROPOSAL 1	100.00	102.00	119.84	119.56	434.167	CC, ES
WATKINS 4-64 30-29 4BH - OWB - PROPOSAL 1	18,558.76	18,259.27	4,460.49	3,898.47	7.936	SF

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 2BH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 66-MWD OWSG													Offset Well Error:	0.00 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	17,932.00	7,832.52	0.00	271.00	-36.18	1,132.24	-827.91	7,932.22					
100.00	100.00	17,932.00	7,832.52	0.13	271.00	-36.18	1,132.24	-827.91	7,833.82	7,743.55	90.27	86.783		
200.00	199.98	17,932.00	7,832.52	0.50	271.00	-24.10	1,132.24	-827.91	7,735.18	7,644.73	90.44	85.525		
300.00	299.84	17,932.00	7,832.52	0.86	271.00	-30.90	1,132.24	-827.91	7,636.09	7,545.50	90.59	84.293		
400.00	399.45	17,932.00	7,832.52	1.23	271.00	-41.96	1,132.24	-827.91	7,536.66	7,445.97	90.70	83.097		
500.00	498.70	17,932.00	7,832.52	1.63	271.00	-60.78	1,132.24	-827.91	7,437.00	7,346.24	90.76	81.940		
600.00	597.47	17,932.00	7,832.52	2.05	271.00	-89.24	1,132.24	-827.91	7,337.23	7,246.45	90.78	80.822		
700.00	695.62	17,932.00	7,832.52	2.49	271.00	-117.72	1,132.24	-827.91	7,237.46	7,146.70	90.76	79.745		
800.00	793.06	17,932.00	7,832.52	2.98	271.00	-136.56	1,132.24	-827.91	7,137.81	7,047.13	90.68	78.711		
900.00	889.64	17,932.00	7,832.52	3.50	271.00	-147.64	1,132.24	-827.91	7,038.43	6,947.86	90.56	77.720		
1,000.00	985.27	17,932.00	7,832.52	4.06	271.00	-154.44	1,132.24	-827.91	6,939.43	6,849.04	90.39	76.772		
1,100.00	1,079.82	17,932.00	7,832.52	4.66	271.00	-158.91	1,132.24	-827.91	6,840.96	6,750.79	90.17	75.866		
1,200.00	1,173.23	17,932.00	7,832.52	5.31	271.00	-161.18	1,132.24	-827.91	6,743.14	6,653.23	89.91	75.000		
1,300.00	1,266.35	17,932.00	7,832.52	5.98	271.00	-161.18	1,132.24	-827.91	6,645.55	6,555.90	89.65	74.125		
1,400.00	1,359.46	17,932.00	7,832.52	6.66	271.00	-161.18	1,132.24	-827.91	6,548.04	6,458.63	89.41	73.240		
1,500.00	1,452.58	17,932.00	7,832.52	7.34	271.00	-161.18	1,132.24	-827.91	6,450.59	6,361.43	89.16	72.346		
1,600.00	1,545.69	17,932.00	7,832.52	8.03	271.00	-161.18	1,132.24	-827.91	6,353.23	6,264.31	88.93	71.444		
1,700.00	1,638.81	17,932.00	7,832.52	8.72	271.00	-161.18	1,132.24	-827.91	6,255.95	6,167.26	88.70	70.533		
1,800.00	1,731.92	17,932.00	7,832.52	9.41	271.00	-161.18	1,132.24	-827.91	6,158.76	6,070.29	88.47	69.612		
1,900.00	1,825.04	17,932.00	7,832.52	10.11	271.00	-161.18	1,132.24	-827.91	6,061.66	5,973.41	88.26	68.683		
2,000.00	1,918.15	17,932.00	7,832.52	10.81	271.00	-161.18	1,132.24	-827.91	5,964.66	5,876.61	88.05	67.744		
2,100.00	2,011.27	17,932.00	7,832.52	11.51	271.00	-161.18	1,132.24	-827.91	5,867.76	5,779.91	87.85	66.795		
2,200.00	2,104.39	17,932.00	7,832.52	12.21	271.00	-161.18	1,132.24	-827.91	5,770.96	5,683.30	87.66	65.837		
2,300.00	2,197.50	17,932.00	7,832.52	12.91	271.00	-161.18	1,132.24	-827.91	5,674.27	5,586.80	87.47	64.868		
2,400.00	2,290.62	17,932.00	7,832.52	13.61	271.00	-161.18	1,132.24	-827.91	5,577.70	5,490.40	87.30	63.889		
2,500.00	2,383.73	17,932.00	7,832.52	14.31	271.00	-161.18	1,132.24	-827.91	5,481.26	5,394.11	87.14	62.898		
2,600.00	2,476.85	17,932.00	7,832.52	15.01	271.00	-161.18	1,132.24	-827.91	5,384.94	5,297.94	87.00	61.896		

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

Anticollision Report

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Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 2BH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 66-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
2,700.00	2,569.96	17,932.00	7,832.52	15.72	271.00	-161.18	1,132.24	-827.91	5,288.76	5,201.89	86.87	60.880		
2,800.00	2,663.08	17,932.00	7,832.52	16.42	271.00	-161.18	1,132.24	-827.91	5,192.72	5,105.96	86.76	59.852		
2,900.00	2,756.20	17,932.00	7,832.52	17.12	271.00	-161.18	1,132.24	-827.91	5,096.84	5,010.17	86.67	58.809		
3,000.00	2,849.31	17,932.00	7,832.52	17.83	271.00	-161.18	1,132.24	-827.91	5,001.12	4,914.52	86.60	57.751		
3,100.00	2,942.43	17,932.00	7,832.52	18.53	271.00	-161.18	1,132.24	-827.91	4,905.57	4,819.01	86.55	56.677		
3,200.00	3,035.54	17,932.00	7,832.52	19.24	271.00	-161.18	1,132.24	-827.91	4,810.20	4,723.66	86.54	55.586		
3,300.00	3,128.66	17,932.00	7,832.52	19.94	271.00	-161.18	1,132.24	-827.91	4,715.02	4,628.47	86.55	54.476		
3,400.00	3,221.77	17,932.00	7,832.52	20.65	271.00	-161.18	1,132.24	-827.91	4,620.04	4,533.44	86.60	53.347		
3,500.00	3,314.89	17,932.00	7,832.52	21.35	271.00	-161.18	1,132.24	-827.91	4,525.28	4,438.59	86.70	52.196		
3,600.00	3,408.01	17,932.00	7,832.52	22.06	271.00	-161.18	1,132.24	-827.91	4,430.76	4,343.92	86.84	51.024		
3,700.00	3,501.12	17,932.00	7,832.52	22.77	271.00	-161.18	1,132.24	-827.91	4,336.47	4,249.44	87.03	49.828		
3,800.00	3,594.24	17,932.00	7,832.52	23.47	271.00	-161.18	1,132.24	-827.91	4,242.45	4,155.17	87.28	48.608		
3,900.00	3,687.35	17,932.00	7,832.52	24.18	271.00	-161.18	1,132.24	-827.91	4,148.71	4,061.11	87.60	47.362		
4,000.00	3,780.47	17,932.00	7,832.52	24.89	271.00	-161.18	1,132.24	-827.91	4,055.27	3,967.28	87.99	46.089		
4,100.00	3,873.58	17,932.00	7,832.52	25.59	271.00	-161.18	1,132.24	-827.91	3,962.15	3,873.68	88.46	44.788		
4,200.00	3,966.70	17,932.00	7,832.52	26.30	271.00	-161.18	1,132.24	-827.91	3,869.37	3,780.33	89.03	43.459		
4,300.00	4,059.81	17,932.00	7,832.52	27.01	271.00	-161.18	1,132.24	-827.91	3,776.96	3,687.24	89.71	42.101		
4,400.00	4,152.93	17,932.00	7,832.52	27.71	271.00	-161.18	1,132.24	-827.91	3,684.94	3,594.44	90.51	40.714		
4,500.00	4,246.05	17,932.00	7,832.52	28.42	271.00	-161.18	1,132.24	-827.91	3,593.36	3,501.92	91.43	39.300		
4,600.00	4,339.16	17,932.00	7,832.52	29.13	271.00	-161.18	1,132.24	-827.91	3,502.23	3,409.72	92.51	37.858		
4,700.00	4,432.28	17,932.00	7,832.52	29.83	271.00	-161.18	1,132.24	-827.91	3,411.60	3,317.85	93.75	36.390		
4,800.00	4,525.39	17,932.00	7,832.52	30.54	271.00	-161.18	1,132.24	-827.91	3,321.51	3,226.33	95.17	34.900		
4,900.00	4,618.51	17,932.00	7,832.52	31.25	271.00	-161.18	1,132.24	-827.91	3,232.00	3,135.20	96.80	33.390		
5,000.00	4,711.62	17,932.00	7,832.52	31.95	271.00	-161.18	1,132.24	-827.91	3,143.12	3,044.48	98.64	31.863		
5,100.00	4,804.74	17,932.00	7,832.52	32.66	271.00	-161.18	1,132.24	-827.91	3,054.93	2,954.20	100.74	30.326		
5,200.00	4,897.86	17,932.00	7,832.52	33.37	271.00	-161.18	1,132.24	-827.91	2,967.49	2,864.40	103.10	28.784		
5,300.00	4,990.97	17,932.00	7,832.52	34.08	271.00	-161.18	1,132.24	-827.91	2,880.87	2,775.12	105.75	27.243		
5,400.00	5,084.09	17,932.00	7,832.52	34.78	271.00	-161.18	1,132.24	-827.91	2,795.14	2,686.42	108.72	25.709		
5,500.00	5,177.20	17,932.00	7,832.52	35.49	271.00	-161.18	1,132.24	-827.91	2,710.39	2,598.35	112.04	24.191		
5,600.00	5,270.32	17,932.00	7,832.52	36.20	271.00	-161.18	1,132.24	-827.91	2,626.71	2,510.98	115.73	22.697		
5,700.00	5,363.43	17,932.00	7,832.52	36.91	271.00	-161.18	1,132.24	-827.91	2,544.21	2,424.39	119.82	21.233		
5,800.00	5,456.55	17,932.00	7,832.52	37.61	271.00	-161.18	1,132.24	-827.91	2,463.01	2,338.66	124.35	19.808		
5,900.00	5,549.67	17,932.00	7,832.52	38.32	271.00	-161.18	1,132.24	-827.91	2,383.24	2,253.91	129.33	18.428		
6,000.00	5,642.78	17,932.00	7,832.52	39.03	271.00	-161.18	1,132.24	-827.91	2,305.04	2,170.25	134.79	17.101		
6,100.00	5,735.90	17,932.00	7,832.52	39.74	271.00	-161.18	1,132.24	-827.91	2,228.59	2,087.84	140.75	15.833		
6,200.00	5,829.01	17,932.00	7,832.52	40.44	271.00	-161.18	1,132.24	-827.91	2,154.07	2,006.82	147.25	14.629		
6,300.00	5,922.13	17,932.00	7,832.52	41.15	271.00	-161.18	1,132.24	-827.91	2,081.69	1,927.40	154.29	13.492		
6,400.00	6,015.24	17,932.00	7,832.52	41.86	271.00	-161.18	1,132.24	-827.91	2,011.67	1,849.80	161.88	12.427		
6,500.00	6,108.36	17,932.00	7,832.52	42.57	271.00	-161.18	1,132.24	-827.91	1,944.28	1,774.26	170.02	11.436		
6,600.00	6,201.47	17,932.00	7,832.52	43.28	271.00	-161.18	1,132.24	-827.91	1,879.79	1,701.09	178.70	10.519		
6,700.00	6,294.59	17,932.00	7,832.52	43.98	271.00	-161.18	1,132.24	-827.91	1,818.52	1,630.63	187.89	9.678		
6,800.00	6,387.71	17,932.00	7,832.52	44.69	271.00	-161.18	1,132.24	-827.91	1,760.80	1,563.25	197.56	8.913		
6,900.00	6,480.82	17,932.00	7,832.52	45.40	271.00	-161.18	1,132.24	-827.91	1,706.99	1,499.37	207.62	8.222		
7,000.00	6,573.94	17,932.00	7,832.52	46.11	271.00	-161.18	1,132.24	-827.91	1,657.48	1,439.49	217.99	7.604		
7,100.00	6,667.05	17,932.00	7,832.52	46.82	271.00	-161.18	1,132.24	-827.91	1,612.65	1,384.11	228.54	7.056		
7,200.00	6,760.17	17,932.00	7,832.52	47.52	271.00	-161.18	1,132.24	-827.91	1,572.91	1,333.78	239.12	6.578		
7,300.00	6,853.28	17,932.00	7,832.52	48.23	271.00	-161.18	1,132.24	-827.91	1,538.65	1,289.08	249.56	6.165		
7,400.00	6,946.40	17,932.00	7,832.52	48.94	271.00	-161.18	1,132.24	-827.91	1,510.24	1,250.59	259.66	5.816		
7,500.00	7,039.52	17,932.00	7,832.52	49.65	271.00	-161.18	1,132.24	-827.91	1,488.03	1,218.83	269.20	5.528		
7,600.00	7,132.64	17,932.00	7,832.52	50.33	271.00	-179.68	1,132.24	-827.91	1,472.52	1,194.57	277.95	5.298		
7,700.00	7,225.98	17,932.00	7,832.52	50.90	271.00	156.78	1,132.24	-827.91	1,464.68	1,179.13	285.55	5.129		
7,747.32	7,269.07	17,932.00	7,832.52	51.11	271.00	148.01	1,132.24	-827.91	1,463.77	1,175.14	288.63	5.071 CC		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 2BH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 66-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
7,800.00	7,315.86	17,932.00	7,832.52	51.34	271.00	140.11	1,132.24	-827.91	1,464.90	1,173.27	291.63	5.023 ES		
7,900.00	7,399.85	17,932.00	7,832.52	51.68	271.00	129.13	1,132.24	-827.91	1,473.16	1,177.22	295.94	4.978 SF		
8,000.00	7,475.41	17,932.00	7,832.52	51.91	271.00	121.27	1,132.24	-827.91	1,489.09	1,190.72	298.36	4.991		
8,100.00	7,540.24	17,932.00	7,832.52	52.05	271.00	114.96	1,132.24	-827.91	1,511.96	1,213.03	298.93	5.058		
8,200.00	7,592.37	17,932.00	7,832.52	52.11	271.00	109.42	1,132.24	-827.91	1,540.80	1,243.01	297.79	5.174		
8,300.00	7,630.20	17,932.00	7,832.52	52.09	271.00	104.31	1,132.24	-827.91	1,574.42	1,279.27	295.15	5.334		
8,400.00	7,652.61	17,932.00	7,832.52	52.01	271.00	99.54	1,132.24	-827.91	1,611.54	1,320.29	291.26	5.533		
8,500.00	7,659.00	17,932.00	7,832.52	51.89	271.00	95.63	1,132.24	-827.91	1,650.87	1,364.52	286.34	5.765		
8,600.00	7,659.00	17,932.00	7,832.52	51.77	271.00	95.63	1,132.24	-827.91	1,693.76	1,412.92	280.83	6.031		
8,700.00	7,659.00	17,932.00	7,832.52	51.67	271.00	95.63	1,132.24	-827.91	1,741.35	1,466.34	275.00	6.332		
8,800.00	7,659.00	17,932.00	7,832.52	51.61	271.00	95.63	1,132.24	-827.91	1,793.25	1,524.30	268.95	6.668		
8,900.00	7,659.00	17,932.00	7,832.52	51.58	271.00	95.63	1,132.24	-827.91	1,849.11	1,586.32	262.79	7.037		
9,000.00	7,659.00	17,932.00	7,832.52	51.59	271.00	95.63	1,132.24	-827.91	1,908.58	1,651.99	256.59	7.438		
9,100.00	7,659.00	17,932.00	7,832.52	51.67	271.00	95.63	1,132.24	-827.91	1,971.33	1,720.90	250.42	7.872		
9,200.00	7,659.00	17,932.00	7,832.52	51.83	271.00	95.63	1,132.24	-827.91	2,037.06	1,792.71	244.35	8.337		
9,300.00	7,659.00	17,932.00	7,832.52	52.14	271.00	95.63	1,132.24	-827.91	2,105.48	1,867.07	238.41	8.831		
9,400.00	7,659.00	17,932.00	7,832.52	52.67	271.00	95.63	1,132.24	-827.91	2,176.35	1,943.72	232.63	9.355		
9,500.00	7,659.00	17,932.00	7,832.52	53.53	271.00	95.63	1,132.24	-827.91	2,249.44	2,022.40	227.04	9.908		
9,600.00	7,659.00	17,932.00	7,832.52	54.75	271.00	95.63	1,132.24	-827.91	2,324.53	2,102.89	221.65	10.488		
9,700.00	7,659.00	17,932.00	7,832.52	56.29	271.00	95.63	1,132.24	-827.91	2,401.44	2,184.98	216.46	11.094		
9,800.00	7,659.00	17,932.00	7,832.52	58.05	271.00	95.63	1,132.24	-827.91	2,479.99	2,268.50	211.49	11.726		
9,900.00	7,659.00	17,932.00	7,832.52	59.97	271.00	95.63	1,132.24	-827.91	2,560.05	2,353.31	206.73	12.383		
10,000.00	7,659.00	17,932.00	7,832.52	62.00	271.00	95.63	1,132.24	-827.91	2,641.46	2,439.27	202.19	13.064		
10,100.00	7,659.00	17,932.00	7,832.52	64.11	271.00	95.63	1,132.24	-827.91	2,724.11	2,526.26	197.84	13.769		
10,200.00	7,659.00	17,932.00	7,832.52	66.28	271.00	95.63	1,132.24	-827.91	2,807.88	2,614.18	193.70	14.496		
10,300.00	7,659.00	17,932.00	7,832.52	68.51	271.00	95.63	1,132.24	-827.91	2,892.69	2,702.94	189.75	15.245		
10,400.00	7,659.00	17,932.00	7,832.52	70.77	271.00	95.63	1,132.24	-827.91	2,978.45	2,792.46	185.98	16.014		
10,500.00	7,659.00	17,932.00	7,832.52	73.06	271.00	95.63	1,132.24	-827.91	3,065.06	2,882.67	182.39	16.805		
10,600.00	7,659.00	17,932.00	7,832.52	75.39	271.00	95.63	1,132.24	-827.91	3,152.47	2,973.50	178.97	17.614		
10,700.00	7,659.00	17,932.00	7,832.52	77.74	271.00	95.63	1,132.24	-827.91	3,240.61	3,064.89	175.71	18.443		
10,800.00	7,659.00	17,932.00	7,832.52	80.12	271.00	95.63	1,132.24	-827.91	3,329.41	3,156.81	172.60	19.290		
10,900.00	7,659.00	17,932.00	7,832.52	82.51	271.00	95.63	1,132.24	-827.91	3,418.84	3,249.20	169.64	20.154		
11,000.00	7,659.00	17,932.00	7,832.52	84.93	271.00	95.63	1,132.24	-827.91	3,508.83	3,342.03	166.81	21.035		
11,100.00	7,659.00	17,932.00	7,832.52	87.36	271.00	95.63	1,132.24	-827.91	3,599.36	3,435.25	164.11	21.933		
11,200.00	7,659.00	17,932.00	7,832.52	89.81	271.00	95.63	1,132.24	-827.91	3,690.37	3,528.84	161.53	22.846		
11,300.00	7,659.00	17,932.00	7,832.52	92.27	271.00	95.63	1,132.24	-827.91	3,781.84	3,622.77	159.07	23.775		
11,400.00	7,659.00	17,932.00	7,832.52	94.75	271.00	95.63	1,132.24	-827.91	3,873.73	3,717.01	156.72	24.718		
11,500.00	7,659.00	17,932.00	7,832.52	97.23	271.00	95.63	1,132.24	-827.91	3,966.01	3,811.54	154.47	25.675		
11,600.00	7,659.00	17,932.00	7,832.52	99.73	271.00	95.63	1,132.24	-827.91	4,058.66	3,906.34	152.32	26.646		
11,700.00	7,659.00	17,932.00	7,832.52	102.24	271.00	95.63	1,132.24	-827.91	4,151.64	4,001.38	150.26	27.629		
11,800.00	7,659.00	17,932.00	7,832.52	104.75	271.00	95.63	1,132.24	-827.91	4,244.95	4,096.66	148.29	28.625		
11,900.00	7,659.00	17,932.00	7,832.52	107.28	271.00	95.63	1,132.24	-827.91	4,338.56	4,192.15	146.41	29.633		
12,000.00	7,659.00	17,932.00	7,832.52	109.81	271.00	95.63	1,132.24	-827.91	4,432.44	4,287.84	144.60	30.653		
12,100.00	7,659.00	17,932.00	7,832.52	112.35	271.00	95.63	1,132.24	-827.91	4,526.59	4,383.72	142.87	31.684		
12,200.00	7,659.00	17,932.00	7,832.52	114.90	271.00	95.63	1,132.24	-827.91	4,620.98	4,479.78	141.21	32.725		
12,300.00	7,659.00	17,932.00	7,832.52	117.46	271.00	95.63	1,132.24	-827.91	4,715.60	4,575.99	139.61	33.777		
12,400.00	7,659.00	17,932.00	7,832.52	120.02	271.00	95.63	1,132.24	-827.91	4,810.45	4,672.37	138.08	34.838		
12,500.00	7,659.00	17,932.00	7,832.52	122.58	271.00	95.63	1,132.24	-827.91	4,905.49	4,768.88	136.61	35.909		
12,600.00	7,659.00	17,932.00	7,832.52	125.15	271.00	95.63	1,132.24	-827.91	5,000.73	4,865.53	135.20	36.988		
12,700.00	7,659.00	17,932.00	7,832.52	127.73	271.00	95.63	1,132.24	-827.91	5,096.15	4,962.31	133.84	38.077		
12,800.00	7,659.00	17,932.00	7,832.52	130.31	271.00	95.63	1,132.24	-827.91	5,191.75	5,059.21	132.53	39.173		
12,900.00	7,659.00	17,932.00	7,832.52	132.90	271.00	95.63	1,132.24	-827.91	5,287.50	5,156.23	131.28	40.277		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 2BH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 66-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
13,000.00	7,659.00	17,932.00	7,832.52	135.49	271.00	95.63	1,132.24	-827.91	5,383.42	5,253.35	130.07	41.389		
13,100.00	7,659.00	17,932.00	7,832.52	138.08	271.00	95.63	1,132.24	-827.91	5,479.47	5,350.57	128.90	42.508		
13,200.00	7,659.00	17,932.00	7,832.52	140.68	271.00	95.41	1,132.24	-827.91	5,575.55	5,447.78	127.77	43.639		
13,300.00	7,659.00	17,932.00	7,832.52	143.28	271.00	95.41	1,132.24	-827.91	5,671.56	5,544.92	126.64	44.784		
13,400.00	7,659.00	17,932.00	7,832.52	145.88	271.00	95.41	1,132.24	-827.91	5,767.71	5,642.16	125.56	45.937		
13,500.00	7,659.00	17,932.00	7,832.52	148.48	271.00	95.41	1,132.24	-827.91	5,863.99	5,739.48	124.51	47.096		
13,600.00	7,659.00	17,932.00	7,832.52	151.09	271.00	95.41	1,132.24	-827.91	5,960.40	5,836.89	123.50	48.261		
13,700.00	7,659.00	17,932.00	7,832.52	153.70	271.00	95.41	1,132.24	-827.91	6,056.91	5,934.38	122.53	49.432		
13,800.00	7,659.00	17,932.00	7,832.52	156.32	271.00	95.41	1,132.24	-827.91	6,153.54	6,031.95	121.59	50.608		
13,900.00	7,659.00	17,932.00	7,832.52	158.94	271.00	95.41	1,132.24	-827.91	6,250.28	6,129.59	120.69	51.790		
14,000.00	7,659.00	17,932.00	7,832.52	161.56	271.00	95.41	1,132.24	-827.91	6,347.11	6,227.30	119.81	52.976		
14,100.00	7,659.00	17,932.00	7,832.52	164.18	271.00	95.41	1,132.24	-827.91	6,444.05	6,325.08	118.97	54.168		
14,200.00	7,659.00	17,932.00	7,832.52	166.80	271.00	95.41	1,132.24	-827.91	6,541.07	6,422.92	118.15	55.363		
14,300.00	7,659.00	17,932.00	7,832.52	169.43	271.00	95.41	1,132.24	-827.91	6,638.19	6,520.83	117.36	56.563		
14,400.00	7,659.00	17,932.00	7,832.52	172.06	271.00	95.41	1,132.24	-827.91	6,735.38	6,618.79	116.60	57.767		
14,500.00	7,659.00	17,932.00	7,832.52	174.69	271.00	95.41	1,132.24	-827.91	6,832.66	6,716.81	115.86	58.974		
14,600.00	7,659.00	17,932.00	7,832.52	177.33	271.00	95.41	1,132.24	-827.91	6,930.02	6,814.87	115.15	60.185		
14,700.00	7,659.00	17,932.00	7,832.52	179.96	271.00	95.41	1,132.24	-827.91	7,027.45	6,913.00	114.46	61.399		
14,800.00	7,659.00	17,932.00	7,832.52	182.60	271.00	95.41	1,132.24	-827.91	7,124.95	7,011.16	113.79	62.616		
14,900.00	7,659.00	17,932.00	7,832.52	185.24	271.00	95.41	1,132.24	-827.91	7,222.52	7,109.38	113.14	63.835		
15,000.00	7,659.00	17,932.00	7,832.52	187.88	271.00	95.41	1,132.24	-827.91	7,320.16	7,207.64	112.52	65.058		
15,100.00	7,659.00	17,932.00	7,832.52	190.52	271.00	95.41	1,132.24	-827.91	7,417.86	7,305.95	111.91	66.282		
15,200.00	7,659.00	17,932.00	7,832.52	193.16	271.00	95.41	1,132.24	-827.91	7,515.62	7,404.29	111.33	67.509		
15,300.00	7,659.00	17,932.00	7,832.52	195.81	271.00	95.41	1,132.24	-827.91	7,613.44	7,502.67	110.76	68.738		
15,400.00	7,659.00	17,932.00	7,832.52	198.45	271.00	95.41	1,132.24	-827.91	7,711.31	7,601.10	110.21	69.968		
15,500.00	7,659.00	17,932.00	7,832.52	201.10	271.00	95.41	1,132.24	-827.91	7,809.24	7,699.56	109.68	71.200		
15,600.00	7,659.00	17,932.00	7,832.52	203.75	271.00	95.41	1,132.24	-827.91	7,907.22	7,798.05	109.16	72.434		
15,700.00	7,659.00	17,932.00	7,832.52	206.40	271.00	95.41	1,132.24	-827.91	8,005.24	7,896.58	108.67	73.669		
15,800.00	7,659.00	17,932.00	7,832.52	209.05	271.00	95.41	1,132.24	-827.91	8,103.32	7,995.14	108.18	74.905		
15,900.00	7,659.00	17,932.00	7,832.52	211.70	271.00	95.41	1,132.24	-827.91	8,201.45	8,093.73	107.71	76.142		
16,000.00	7,659.00	17,932.00	7,832.52	214.36	271.00	95.41	1,132.24	-827.91	8,299.61	8,192.36	107.26	77.379		
16,100.00	7,659.00	17,932.00	7,832.52	217.01	271.00	95.41	1,132.24	-827.91	8,397.83	8,291.01	106.82	78.617		
16,200.00	7,659.00	17,932.00	7,832.52	219.67	271.00	95.41	1,132.24	-827.91	8,496.08	8,389.69	106.39	79.856		
16,300.00	7,659.00	17,932.00	7,832.52	222.32	271.00	95.41	1,132.24	-827.91	8,594.37	8,488.40	105.98	81.095		
16,400.00	7,659.00	17,932.00	7,832.52	224.98	271.00	95.41	1,132.24	-827.91	8,692.71	8,587.13	105.58	82.335		
16,500.00	7,659.00	17,932.00	7,832.52	227.64	271.00	95.41	1,132.24	-827.91	8,791.08	8,685.89	105.19	83.574		
16,600.00	7,659.00	17,932.00	7,832.52	230.30	271.00	95.41	1,132.24	-827.91	8,889.48	8,784.67	104.81	84.814		
16,700.00	7,659.00	17,932.00	7,832.52	232.96	271.00	95.41	1,132.24	-827.91	8,987.93	8,883.48	104.45	86.053		
16,800.00	7,659.00	17,932.00	7,832.52	235.62	271.00	95.41	1,132.24	-827.91	9,086.40	8,982.31	104.09	87.292		
16,900.00	7,659.00	17,932.00	7,832.52	238.28	271.00	95.41	1,132.24	-827.91	9,184.91	9,081.16	103.75	88.531		
17,000.00	7,659.00	17,932.00	7,832.52	240.95	271.00	95.41	1,132.24	-827.91	9,283.45	9,180.04	103.42	89.769		
17,100.00	7,659.00	17,932.00	7,832.52	243.61	271.00	95.41	1,132.24	-827.91	9,382.02	9,278.93	103.09	91.006		
17,200.00	7,659.00	17,932.00	7,832.52	246.27	271.00	95.41	1,132.24	-827.91	9,480.63	9,377.85	102.78	92.243		
17,300.00	7,659.00	17,932.00	7,832.52	248.94	271.00	95.41	1,132.24	-827.91	9,579.26	9,476.78	102.47	93.479		
17,400.00	7,659.00	17,932.00	7,832.52	251.60	271.00	95.41	1,132.24	-827.91	9,677.91	9,575.73	102.18	94.714		
17,500.00	7,659.00	17,932.00	7,832.52	254.27	271.00	95.41	1,132.24	-827.91	9,776.60	9,674.71	101.89	95.948		
17,600.00	7,659.00	17,932.00	7,832.52	256.94	271.00	95.41	1,132.24	-827.91	9,875.31	9,773.70	101.62	97.181		
17,700.00	7,659.00	17,932.00	7,832.52	259.61	271.00	95.41	1,132.24	-827.91	9,974.05	9,872.70	101.35	98.413		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 2CH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 66-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	17,734.00	7,721.08	0.00	268.19	-44.85	815.35	-811.17	7,781.25					
100.00	100.00	17,734.00	7,721.08	0.13	268.19	-44.85	815.35	-811.17	7,682.36	7,596.70	85.66	89.681		
200.00	199.98	17,734.00	7,721.08	0.50	268.19	-36.07	815.35	-811.17	7,583.29	7,497.54	85.76	88.428		
300.00	299.84	17,734.00	7,721.08	0.86	268.19	-48.22	815.35	-811.17	7,483.90	7,398.07	85.83	87.198		
400.00	399.45	17,734.00	7,721.08	1.23	268.19	-67.24	815.35	-811.17	7,384.29	7,298.42	85.87	85.998		
500.00	498.70	17,734.00	7,721.08	1.63	268.19	-92.78	815.35	-811.17	7,284.58	7,198.71	85.87	84.831		
600.00	597.47	17,734.00	7,721.08	2.05	268.19	-117.03	815.35	-811.17	7,184.89	7,099.05	85.84	83.698		
700.00	695.62	17,734.00	7,721.08	2.49	268.19	-133.97	815.35	-811.17	7,085.35	6,999.57	85.78	82.601		
800.00	793.06	17,734.00	7,721.08	2.98	268.19	-144.69	815.35	-811.17	6,986.08	6,900.40	85.68	81.538		
900.00	889.64	17,734.00	7,721.08	3.50	268.19	-151.62	815.35	-811.17	6,887.23	6,801.68	85.54	80.510		
1,000.00	985.27	17,734.00	7,721.08	4.06	268.19	-156.33	815.35	-811.17	6,788.93	6,703.55	85.38	79.516		
1,100.00	1,079.82	17,734.00	7,721.08	4.66	268.19	-159.69	815.35	-811.17	6,691.32	6,606.14	85.18	78.552		
1,200.00	1,173.23	17,734.00	7,721.08	5.31	268.19	-161.49	815.35	-811.17	6,594.53	6,509.57	84.96	77.616		
1,300.00	1,266.35	17,734.00	7,721.08	5.98	268.19	-161.49	815.35	-811.17	6,498.03	6,413.27	84.77	76.658		
1,400.00	1,359.46	17,734.00	7,721.08	6.66	268.19	-161.49	815.35	-811.17	6,401.65	6,317.06	84.58	75.684		
1,500.00	1,452.58	17,734.00	7,721.08	7.34	268.19	-161.49	815.35	-811.17	6,305.38	6,220.96	84.42	74.693		
1,600.00	1,545.69	17,734.00	7,721.08	8.03	268.19	-161.49	815.35	-811.17	6,209.22	6,124.96	84.26	73.687		
1,700.00	1,638.81	17,734.00	7,721.08	8.72	268.19	-161.49	815.35	-811.17	6,113.19	6,029.06	84.13	72.664		
1,800.00	1,731.92	17,734.00	7,721.08	9.41	268.19	-161.49	815.35	-811.17	6,017.29	5,933.27	84.01	71.625		
1,900.00	1,825.04	17,734.00	7,721.08	10.11	268.19	-161.49	815.35	-811.17	5,921.52	5,837.61	83.91	70.568		
2,000.00	1,918.15	17,734.00	7,721.08	10.81	268.19	-161.49	815.35	-811.17	5,825.89	5,742.06	83.83	69.494		
2,100.00	2,011.27	17,734.00	7,721.08	11.51	268.19	-161.49	815.35	-811.17	5,730.42	5,646.64	83.78	68.402		
2,200.00	2,104.39	17,734.00	7,721.08	12.21	268.19	-161.49	815.35	-811.17	5,635.10	5,551.36	83.74	67.292		
2,300.00	2,197.50	17,734.00	7,721.08	12.91	268.19	-161.49	815.35	-811.17	5,539.95	5,456.21	83.73	66.162		
2,400.00	2,290.62	17,734.00	7,721.08	13.61	268.19	-161.49	815.35	-811.17	5,444.97	5,361.21	83.75	65.012		
2,500.00	2,383.73	17,734.00	7,721.08	14.31	268.19	-161.49	815.35	-811.17	5,350.17	5,266.37	83.80	63.842		
2,600.00	2,476.85	17,734.00	7,721.08	15.01	268.19	-161.49	815.35	-811.17	5,255.56	5,171.68	83.89	62.650		
2,700.00	2,569.96	17,734.00	7,721.08	15.72	268.19	-161.49	815.35	-811.17	5,161.16	5,077.16	84.01	61.436		
2,800.00	2,663.08	17,734.00	7,721.08	16.42	268.19	-161.49	815.35	-811.17	5,066.98	4,982.81	84.17	60.199		
2,900.00	2,756.20	17,734.00	7,721.08	17.12	268.19	-161.49	815.35	-811.17	4,973.02	4,888.64	84.38	58.938		
3,000.00	2,849.31	17,734.00	7,721.08	17.83	268.19	-161.49	815.35	-811.17	4,879.30	4,794.67	84.63	57.652		
3,100.00	2,942.43	17,734.00	7,721.08	18.53	268.19	-161.49	815.35	-811.17	4,785.84	4,700.89	84.94	56.341		
3,200.00	3,035.54	17,734.00	7,721.08	19.24	268.19	-161.49	815.35	-811.17	4,692.64	4,607.33	85.32	55.003		
3,300.00	3,128.66	17,734.00	7,721.08	19.94	268.19	-161.49	815.35	-811.17	4,599.73	4,513.98	85.75	53.639		
3,400.00	3,221.77	17,734.00	7,721.08	20.65	268.19	-161.49	815.35	-811.17	4,507.13	4,420.86	86.26	52.248		
3,500.00	3,314.89	17,734.00	7,721.08	21.35	268.19	-161.49	815.35	-811.17	4,414.84	4,327.99	86.85	50.830		
3,600.00	3,408.01	17,734.00	7,721.08	22.06	268.19	-161.49	815.35	-811.17	4,322.90	4,235.37	87.53	49.386		
3,700.00	3,501.12	17,734.00	7,721.08	22.77	268.19	-161.49	815.35	-811.17	4,231.33	4,143.02	88.31	47.915		
3,800.00	3,594.24	17,734.00	7,721.08	23.47	268.19	-161.49	815.35	-811.17	4,140.15	4,050.96	89.19	46.419		
3,900.00	3,687.35	17,734.00	7,721.08	24.18	268.19	-161.49	815.35	-811.17	4,049.38	3,959.19	90.19	44.899		
4,000.00	3,780.47	17,734.00	7,721.08	24.89	268.19	-161.49	815.35	-811.17	3,959.06	3,867.74	91.31	43.357		
4,100.00	3,873.58	17,734.00	7,721.08	25.59	268.19	-161.49	815.35	-811.17	3,869.21	3,776.63	92.58	41.795		
4,200.00	3,966.70	17,734.00	7,721.08	26.30	268.19	-161.49	815.35	-811.17	3,779.87	3,685.88	93.99	40.216		
4,300.00	4,059.81	17,734.00	7,721.08	27.01	268.19	-161.49	815.35	-811.17	3,691.08	3,595.52	95.57	38.623		
4,400.00	4,152.93	17,734.00	7,721.08	27.71	268.19	-161.49	815.35	-811.17	3,602.88	3,505.56	97.32	37.021		
4,500.00	4,246.05	17,734.00	7,721.08	28.42	268.19	-161.49	815.35	-811.17	3,515.31	3,416.04	99.27	35.413		
4,600.00	4,339.16	17,734.00	7,721.08	29.13	268.19	-161.49	815.35	-811.17	3,428.42	3,327.00	101.42	33.804		
4,700.00	4,432.28	17,734.00	7,721.08	29.83	268.19	-161.49	815.35	-811.17	3,342.26	3,238.46	103.80	32.200		
4,800.00	4,525.39	17,734.00	7,721.08	30.54	268.19	-161.49	815.35	-811.17	3,256.89	3,150.48	106.41	30.607		
4,900.00	4,618.51	17,734.00	7,721.08	31.25	268.19	-161.49	815.35	-811.17	3,172.38	3,063.10	109.28	29.030		
5,000.00	4,711.62	17,734.00	7,721.08	31.95	268.19	-161.49	815.35	-811.17	3,088.80	2,976.38	112.42	27.475		
5,100.00	4,804.74	17,734.00	7,721.08	32.66	268.19	-161.49	815.35	-811.17	3,006.21	2,890.36	115.85	25.949		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 2CH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 66-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,200.00	4,897.86	17,734.00	7,721.08	33.37	268.19	-161.49	815.35	-811.17	2,924.72	2,805.13	119.59	24.457		
5,300.00	4,990.97	17,734.00	7,721.08	34.08	268.19	-161.49	815.35	-811.17	2,844.40	2,720.75	123.65	23.004		
5,400.00	5,084.09	17,734.00	7,721.08	34.78	268.19	-161.49	815.35	-811.17	2,765.37	2,637.32	128.05	21.597		
5,500.00	5,177.20	17,734.00	7,721.08	35.49	268.19	-161.49	815.35	-811.17	2,687.74	2,554.94	132.80	20.239		
5,600.00	5,270.32	17,734.00	7,721.08	36.20	268.19	-161.49	815.35	-811.17	2,611.63	2,473.70	137.92	18.935		
5,700.00	5,363.43	17,734.00	7,721.08	36.91	268.19	-161.49	815.35	-811.17	2,537.17	2,393.75	143.43	17.690		
5,800.00	5,456.55	17,734.00	7,721.08	37.61	268.19	-161.49	815.35	-811.17	2,464.53	2,315.21	149.32	16.505		
5,900.00	5,549.67	17,734.00	7,721.08	38.32	268.19	-161.49	815.35	-811.17	2,393.86	2,238.24	155.61	15.383		
6,000.00	5,642.78	17,734.00	7,721.08	39.03	268.19	-161.49	815.35	-811.17	2,325.34	2,163.04	162.30	14.327		
6,100.00	5,735.90	17,734.00	7,721.08	39.74	268.19	-161.49	815.35	-811.17	2,259.17	2,089.78	169.39	13.337		
6,200.00	5,829.01	17,734.00	7,721.08	40.44	268.19	-161.49	815.35	-811.17	2,195.57	2,018.71	176.86	12.414		
6,300.00	5,922.13	17,734.00	7,721.08	41.15	268.19	-161.49	815.35	-811.17	2,134.75	1,950.06	184.70	11.558		
6,400.00	6,015.24	17,734.00	7,721.08	41.86	268.19	-161.49	815.35	-811.17	2,076.97	1,884.10	192.87	10.769		
6,500.00	6,108.36	17,734.00	7,721.08	42.57	268.19	-161.49	815.35	-811.17	2,022.49	1,821.15	201.34	10.045		
6,600.00	6,201.47	17,734.00	7,721.08	43.28	268.19	-161.49	815.35	-811.17	1,971.58	1,761.53	210.05	9.386		
6,700.00	6,294.59	17,734.00	7,721.08	43.98	268.19	-161.49	815.35	-811.17	1,924.52	1,705.59	218.94	8.790		
6,800.00	6,387.71	17,734.00	7,721.08	44.69	268.19	-161.49	815.35	-811.17	1,881.61	1,653.70	227.91	8.256		
6,900.00	6,480.82	17,734.00	7,721.08	45.40	268.19	-161.49	815.35	-811.17	1,843.12	1,606.25	236.87	7.781		
7,000.00	6,573.94	17,734.00	7,721.08	46.11	268.19	-161.49	815.35	-811.17	1,809.35	1,563.63	245.72	7.364		
7,100.00	6,667.05	17,734.00	7,721.08	46.82	268.19	-161.49	815.35	-811.17	1,780.56	1,526.24	254.32	7.001		
7,200.00	6,760.17	17,734.00	7,721.08	47.52	268.19	-161.49	815.35	-811.17	1,757.00	1,494.45	262.55	6.692		
7,300.00	6,853.28	17,734.00	7,721.08	48.23	268.19	-161.49	815.35	-811.17	1,738.88	1,468.60	270.28	6.434		
7,400.00	6,946.40	17,734.00	7,721.08	48.94	268.19	-161.49	815.35	-811.17	1,726.37	1,448.98	277.39	6.224		
7,500.00	7,039.52	17,734.00	7,721.08	49.65	268.19	-161.49	815.35	-811.17	1,719.60	1,435.83	283.77	6.060		
7,561.80	7,097.26	17,734.00	7,721.08	50.07	268.19	-173.34	815.35	-811.17	1,718.40	1,431.09	287.31	5.981 CC		
7,600.00	7,132.94	17,734.00	7,721.08	50.33	268.19	-178.90	815.35	-811.17	1,718.80	1,429.47	289.33	5.941 ES		
7,700.00	7,225.98	17,734.00	7,721.08	50.90	268.19	154.02	815.35	-811.17	1,724.37	1,430.48	293.89	5.867		
7,800.00	7,315.86	17,734.00	7,721.08	51.34	268.19	136.19	815.35	-811.17	1,736.11	1,438.77	297.34	5.839 SF		
7,900.00	7,399.85	17,734.00	7,721.08	51.68	268.19	124.26	815.35	-811.17	1,753.53	1,453.95	299.59	5.853		
8,000.00	7,475.41	17,734.00	7,721.08	51.91	268.19	115.72	815.35	-811.17	1,775.96	1,475.31	300.65	5.907		
8,100.00	7,540.24	17,734.00	7,721.08	52.05	268.19	109.01	815.35	-811.17	1,802.53	1,501.93	300.60	5.996		
8,200.00	7,592.37	17,734.00	7,721.08	52.11	268.19	103.40	815.35	-811.17	1,832.28	1,532.74	299.54	6.117		
8,300.00	7,630.20	17,734.00	7,721.08	52.09	268.19	98.55	815.35	-811.17	1,864.18	1,566.57	297.61	6.264		
8,400.00	7,652.61	17,734.00	7,721.08	52.01	268.19	94.34	815.35	-811.17	1,897.17	1,602.23	294.94	6.432		
8,500.00	7,659.00	17,734.00	7,721.08	51.89	268.19	91.16	815.35	-811.17	1,930.25	1,638.60	291.65	6.618		
8,600.00	7,659.00	17,734.00	7,721.08	51.77	268.19	91.16	815.35	-811.17	1,965.89	1,677.98	287.91	6.828		
8,700.00	7,659.00	17,734.00	7,721.08	51.67	268.19	91.16	815.35	-811.17	2,005.89	1,722.06	283.83	7.067		
8,800.00	7,659.00	17,734.00	7,721.08	51.61	268.19	91.16	815.35	-811.17	2,049.99	1,770.51	279.47	7.335		
8,900.00	7,659.00	17,734.00	7,721.08	51.58	268.19	91.16	815.35	-811.17	2,097.93	1,823.02	274.91	7.631		
9,000.00	7,659.00	17,734.00	7,721.08	51.59	268.19	91.16	815.35	-811.17	2,149.46	1,879.27	270.19	7.955		
9,100.00	7,659.00	17,734.00	7,721.08	51.67	268.19	91.16	815.35	-811.17	2,204.32	1,938.95	265.37	8.307		
9,200.00	7,659.00	17,734.00	7,721.08	51.83	268.19	91.16	815.35	-811.17	2,262.27	2,001.78	260.50	8.684		
9,300.00	7,659.00	17,734.00	7,721.08	52.14	268.19	91.16	815.35	-811.17	2,323.09	2,067.47	255.62	9.088		
9,400.00	7,659.00	17,734.00	7,721.08	52.67	268.19	91.16	815.35	-811.17	2,386.54	2,135.78	250.76	9.517		
9,500.00	7,659.00	17,734.00	7,721.08	53.53	268.19	91.16	815.35	-811.17	2,452.44	2,206.48	245.96	9.971		
9,600.00	7,659.00	17,734.00	7,721.08	54.75	268.19	91.16	815.35	-811.17	2,520.58	2,279.34	241.24	10.448		
9,700.00	7,659.00	17,734.00	7,721.08	56.29	268.19	91.16	815.35	-811.17	2,590.78	2,354.17	236.62	10.949		
9,800.00	7,659.00	17,734.00	7,721.08	58.05	268.19	91.16	815.35	-811.17	2,662.90	2,430.80	232.10	11.473		
9,900.00	7,659.00	17,734.00	7,721.08	59.97	268.19	91.16	815.35	-811.17	2,736.76	2,509.05	227.71	12.019		
10,000.00	7,659.00	17,734.00	7,721.08	62.00	268.19	91.16	815.35	-811.17	2,812.25	2,588.80	223.45	12.586		
10,100.00	7,659.00	17,734.00	7,721.08	64.11	268.19	91.16	815.35	-811.17	2,889.22	2,669.90	219.32	13.174		
10,200.00	7,659.00	17,734.00	7,721.08	66.28	268.19	91.16	815.35	-811.17	2,967.57	2,752.24	215.33	13.782		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 2CH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 66-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,300.00	7,659.00	17,734.00	7,721.08	68.51	268.19	91.16	815.35	-811.17	3,047.18	2,835.71	211.47	14.409		
10,400.00	7,659.00	17,734.00	7,721.08	70.77	268.19	91.16	815.35	-811.17	3,127.96	2,920.21	207.75	15.056		
10,500.00	7,659.00	17,734.00	7,721.08	73.06	268.19	91.16	815.35	-811.17	3,209.83	3,005.66	204.17	15.721		
10,600.00	7,659.00	17,734.00	7,721.08	75.39	268.19	91.16	815.35	-811.17	3,292.70	3,091.98	200.72	16.404		
10,700.00	7,659.00	17,734.00	7,721.08	77.74	268.19	91.16	815.35	-811.17	3,376.50	3,179.09	197.40	17.105		
10,800.00	7,659.00	17,734.00	7,721.08	80.12	268.19	91.16	815.35	-811.17	3,461.15	3,266.95	194.21	17.822		
10,900.00	7,659.00	17,734.00	7,721.08	82.51	268.19	91.16	815.35	-811.17	3,546.61	3,355.47	191.14	18.555		
11,000.00	7,659.00	17,734.00	7,721.08	84.93	268.19	91.16	815.35	-811.17	3,632.81	3,444.63	188.18	19.305		
11,100.00	7,659.00	17,734.00	7,721.08	87.36	268.19	91.16	815.35	-811.17	3,719.70	3,534.36	185.34	20.069		
11,200.00	7,659.00	17,734.00	7,721.08	89.81	268.19	91.16	815.35	-811.17	3,807.23	3,624.62	182.61	20.849		
11,300.00	7,659.00	17,734.00	7,721.08	92.27	268.19	91.16	815.35	-811.17	3,895.37	3,715.38	179.99	21.642		
11,400.00	7,659.00	17,734.00	7,721.08	94.75	268.19	91.16	815.35	-811.17	3,984.06	3,806.60	177.46	22.450		
11,500.00	7,659.00	17,734.00	7,721.08	97.23	268.19	91.16	815.35	-811.17	4,073.28	3,898.24	175.03	23.271		
11,600.00	7,659.00	17,734.00	7,721.08	99.73	268.19	91.16	815.35	-811.17	4,162.98	3,990.29	172.70	24.105		
11,700.00	7,659.00	17,734.00	7,721.08	102.24	268.19	91.16	815.35	-811.17	4,253.15	4,082.70	170.45	24.952		
11,800.00	7,659.00	17,734.00	7,721.08	104.75	268.19	91.16	815.35	-811.17	4,343.75	4,175.46	168.29	25.811		
11,900.00	7,659.00	17,734.00	7,721.08	107.28	268.19	91.16	815.35	-811.17	4,434.75	4,268.54	166.21	26.682		
12,000.00	7,659.00	17,734.00	7,721.08	109.81	268.19	91.16	815.35	-811.17	4,526.13	4,361.93	164.20	27.564		
12,100.00	7,659.00	17,734.00	7,721.08	112.35	268.19	91.16	815.35	-811.17	4,617.87	4,455.60	162.27	28.458		
12,200.00	7,659.00	17,734.00	7,721.08	114.90	268.19	91.16	815.35	-811.17	4,709.94	4,549.53	160.41	29.361		
12,300.00	7,659.00	17,734.00	7,721.08	117.46	268.19	91.16	815.35	-811.17	4,802.34	4,643.72	158.62	30.276		
12,400.00	7,659.00	17,734.00	7,721.08	120.02	268.19	91.16	815.35	-811.17	4,895.03	4,738.14	156.89	31.200		
12,500.00	7,659.00	17,734.00	7,721.08	122.58	268.19	91.16	815.35	-811.17	4,988.00	4,832.77	155.23	32.134		
12,600.00	7,659.00	17,734.00	7,721.08	125.15	268.19	91.16	815.35	-811.17	5,081.24	4,927.62	153.62	33.077		
12,700.00	7,659.00	17,734.00	7,721.08	127.73	268.19	91.16	815.35	-811.17	5,174.73	5,022.67	152.07	34.029		
12,800.00	7,659.00	17,734.00	7,721.08	130.31	268.19	91.16	815.35	-811.17	5,268.46	5,117.89	150.57	34.990		
12,900.00	7,659.00	17,734.00	7,721.08	132.90	268.19	91.16	815.35	-811.17	5,362.42	5,213.30	149.13	35.959		
13,000.00	7,659.00	17,734.00	7,721.08	135.49	268.19	91.16	815.35	-811.17	5,456.60	5,308.87	147.73	36.936		
13,100.00	7,659.00	17,734.00	7,721.08	138.08	268.19	91.16	815.35	-811.17	5,550.97	5,404.59	146.38	37.921		
13,200.00	7,659.00	17,734.00	7,721.08	140.68	268.19	91.12	815.35	-811.17	5,645.40	5,500.34	145.06	38.917		
13,300.00	7,659.00	17,734.00	7,721.08	143.28	268.19	91.12	815.35	-811.17	5,739.78	5,596.02	143.76	39.926		
13,400.00	7,659.00	17,734.00	7,721.08	145.88	268.19	91.12	815.35	-811.17	5,834.35	5,691.85	142.50	40.943		
13,500.00	7,659.00	17,734.00	7,721.08	148.48	268.19	91.12	815.35	-811.17	5,929.10	5,787.82	141.28	41.967		
13,600.00	7,659.00	17,734.00	7,721.08	151.09	268.19	91.12	815.35	-811.17	6,024.01	5,883.91	140.10	42.997		
13,700.00	7,659.00	17,734.00	7,721.08	153.70	268.19	91.12	815.35	-811.17	6,119.09	5,980.13	138.96	44.035		
13,800.00	7,659.00	17,734.00	7,721.08	156.32	268.19	91.12	815.35	-811.17	6,214.32	6,076.47	137.85	45.079		
13,900.00	7,659.00	17,734.00	7,721.08	158.94	268.19	91.12	815.35	-811.17	6,309.70	6,172.92	136.78	46.129		
14,000.00	7,659.00	17,734.00	7,721.08	161.56	268.19	91.12	815.35	-811.17	6,405.22	6,269.48	135.75	47.185		
14,100.00	7,659.00	17,734.00	7,721.08	164.18	268.19	91.12	815.35	-811.17	6,500.88	6,366.14	134.74	48.246		
14,200.00	7,659.00	17,734.00	7,721.08	166.80	268.19	91.12	815.35	-811.17	6,596.67	6,462.90	133.77	49.314		
14,300.00	7,659.00	17,734.00	7,721.08	169.43	268.19	91.12	815.35	-811.17	6,692.57	6,559.75	132.83	50.386		
14,400.00	7,659.00	17,734.00	7,721.08	172.06	268.19	91.12	815.35	-811.17	6,788.60	6,656.69	131.91	51.463		
14,500.00	7,659.00	17,734.00	7,721.08	174.69	268.19	91.12	815.35	-811.17	6,884.74	6,753.71	131.02	52.546		
14,600.00	7,659.00	17,734.00	7,721.08	177.33	268.19	91.12	815.35	-811.17	6,980.99	6,850.82	130.16	53.633		
14,700.00	7,659.00	17,734.00	7,721.08	179.96	268.19	91.12	815.35	-811.17	7,077.34	6,948.01	129.33	54.724		
14,800.00	7,659.00	17,734.00	7,721.08	182.60	268.19	91.12	815.35	-811.17	7,173.79	7,045.27	128.52	55.820		
14,900.00	7,659.00	17,734.00	7,721.08	185.24	268.19	91.12	815.35	-811.17	7,270.34	7,142.61	127.73	56.919		
15,000.00	7,659.00	17,734.00	7,721.08	187.88	268.19	91.12	815.35	-811.17	7,366.98	7,240.01	126.97	58.023		
15,100.00	7,659.00	17,734.00	7,721.08	190.52	268.19	91.12	815.35	-811.17	7,463.70	7,337.48	126.23	59.130		
15,200.00	7,659.00	17,734.00	7,721.08	193.16	268.19	91.12	815.35	-811.17	7,560.52	7,435.01	125.51	60.240		
15,300.00	7,659.00	17,734.00	7,721.08	195.81	268.19	91.12	815.35	-811.17	7,657.41	7,532.61	124.81	61.354		
15,400.00	7,659.00	17,734.00	7,721.08	198.45	268.19	91.12	815.35	-811.17	7,754.39	7,630.26	124.13	62.472		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 2CH - OWB - FINAL SURVEY												Offset Site Error:	0.00 usft
Survey Program: 66-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	
15,500.00	7,659.00	17,734.00	7,721.08	201.10	268.19	91.12	815.35	-811.17	7,851.44	7,727.97	123.47	63.592	
15,600.00	7,659.00	17,734.00	7,721.08	203.75	268.19	91.12	815.35	-811.17	7,948.56	7,825.74	122.82	64.715	
15,700.00	7,659.00	17,734.00	7,721.08	206.40	268.19	91.12	815.35	-811.17	8,045.75	7,923.55	122.20	65.840	
15,800.00	7,659.00	17,734.00	7,721.08	209.05	268.19	91.12	815.35	-811.17	8,143.02	8,021.42	121.59	66.968	
15,900.00	7,659.00	17,734.00	7,721.08	211.70	268.19	91.12	815.35	-811.17	8,240.34	8,119.34	121.01	68.099	
16,000.00	7,659.00	17,734.00	7,721.08	214.36	268.19	91.12	815.35	-811.17	8,337.73	8,217.30	120.43	69.232	
16,100.00	7,659.00	17,734.00	7,721.08	217.01	268.19	91.12	815.35	-811.17	8,435.18	8,315.31	119.87	70.367	
16,200.00	7,659.00	17,734.00	7,721.08	219.67	268.19	91.12	815.35	-811.17	8,532.69	8,413.36	119.33	71.503	
16,300.00	7,659.00	17,734.00	7,721.08	222.32	268.19	91.12	815.35	-811.17	8,630.26	8,511.46	118.81	72.642	
16,400.00	7,659.00	17,734.00	7,721.08	224.98	268.19	91.12	815.35	-811.17	8,727.88	8,609.59	118.29	73.782	
16,500.00	7,659.00	17,734.00	7,721.08	227.64	268.19	91.12	815.35	-811.17	8,825.56	8,707.77	117.79	74.924	
16,600.00	7,659.00	17,734.00	7,721.08	230.30	268.19	91.12	815.35	-811.17	8,923.29	8,805.98	117.31	76.067	
16,700.00	7,659.00	17,734.00	7,721.08	232.96	268.19	91.12	815.35	-811.17	9,021.06	8,904.23	116.83	77.212	
16,800.00	7,659.00	17,734.00	7,721.08	235.62	268.19	91.12	815.35	-811.17	9,118.89	9,002.51	116.37	78.358	
16,900.00	7,659.00	17,734.00	7,721.08	238.28	268.19	91.12	815.35	-811.17	9,216.76	9,100.83	115.93	79.505	
17,000.00	7,659.00	17,734.00	7,721.08	240.95	268.19	91.12	815.35	-811.17	9,314.68	9,199.19	115.49	80.653	
17,100.00	7,659.00	17,734.00	7,721.08	243.61	268.19	91.12	815.35	-811.17	9,412.64	9,297.57	115.07	81.801	
17,200.00	7,659.00	17,734.00	7,721.08	246.27	268.19	91.12	815.35	-811.17	9,510.64	9,395.99	114.65	82.951	
17,300.00	7,659.00	17,734.00	7,721.08	248.94	268.19	91.12	815.35	-811.17	9,608.69	9,494.44	114.25	84.101	
17,400.00	7,659.00	17,734.00	7,721.08	251.60	268.19	91.12	815.35	-811.17	9,706.77	9,592.91	113.86	85.252	
17,500.00	7,659.00	17,734.00	7,721.08	254.27	268.19	91.12	815.35	-811.17	9,804.89	9,691.42	113.48	86.403	
17,600.00	7,659.00	17,734.00	7,721.08	256.94	268.19	91.12	815.35	-811.17	9,903.06	9,789.95	113.11	87.554	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 2DH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 66-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	17,975.00	7,895.22	0.00	271.08	-58.74	493.19	-812.55	7,927.11					
100.00	100.00	17,975.00	7,895.22	0.13	271.08	-58.74	493.19	-812.55	7,827.84	7,743.72	84.12	93.052		
200.00	199.98	17,975.00	7,895.22	0.50	271.08	-55.77	493.19	-812.55	7,728.45	7,644.30	84.15	91.842		
300.00	299.84	17,975.00	7,895.22	0.86	271.08	-75.31	493.19	-812.55	7,628.88	7,544.72	84.16	90.645		
400.00	399.45	17,975.00	7,895.22	1.23	271.08	-98.57	493.19	-812.55	7,529.24	7,445.08	84.16	89.467		
500.00	498.70	17,975.00	7,895.22	1.63	271.08	-119.16	493.19	-812.55	7,429.66	7,345.52	84.13	88.309		
600.00	597.47	17,975.00	7,895.22	2.05	271.08	-133.80	493.19	-812.55	7,330.25	7,246.16	84.09	87.171		
700.00	695.62	17,975.00	7,895.22	2.49	271.08	-143.54	493.19	-812.55	7,231.16	7,147.13	84.03	86.054		
800.00	793.06	17,975.00	7,895.22	2.98	271.08	-150.12	493.19	-812.55	7,132.52	7,048.57	83.95	84.957		
900.00	889.64	17,975.00	7,895.22	3.50	271.08	-154.75	493.19	-812.55	7,034.47	6,950.60	83.87	83.876		
1,000.00	985.27	17,975.00	7,895.22	4.06	271.08	-158.14	493.19	-812.55	6,937.15	6,853.38	83.77	82.809		
1,100.00	1,079.82	17,975.00	7,895.22	4.66	271.08	-160.70	493.19	-812.55	6,840.72	6,757.05	83.68	81.752		
1,200.00	1,173.23	17,975.00	7,895.22	5.31	271.08	-162.13	493.19	-812.55	6,745.29	6,661.71	83.58	80.702		
1,300.00	1,266.35	17,975.00	7,895.22	5.98	271.08	-162.13	493.19	-812.55	6,650.24	6,566.71	83.53	79.612		
1,400.00	1,359.46	17,975.00	7,895.22	6.66	271.08	-162.13	493.19	-812.55	6,555.33	6,471.82	83.51	78.497		
1,500.00	1,452.58	17,975.00	7,895.22	7.34	271.08	-162.13	493.19	-812.55	6,460.58	6,377.07	83.51	77.359		
1,600.00	1,545.69	17,975.00	7,895.22	8.03	271.08	-162.13	493.19	-812.55	6,365.99	6,282.45	83.55	76.197		
1,700.00	1,638.81	17,975.00	7,895.22	8.72	271.08	-162.13	493.19	-812.55	6,271.57	6,187.96	83.61	75.011		
1,800.00	1,731.92	17,975.00	7,895.22	9.41	271.08	-162.13	493.19	-812.55	6,177.32	6,093.62	83.70	73.801		
1,900.00	1,825.04	17,975.00	7,895.22	10.11	271.08	-162.13	493.19	-812.55	6,083.26	5,999.43	83.83	72.566		
2,000.00	1,918.15	17,975.00	7,895.22	10.81	271.08	-162.13	493.19	-812.55	5,989.38	5,905.39	83.99	71.308		
2,100.00	2,011.27	17,975.00	7,895.22	11.51	271.08	-162.13	493.19	-812.55	5,895.71	5,811.52	84.19	70.025		
2,200.00	2,104.39	17,975.00	7,895.22	12.21	271.08	-162.13	493.19	-812.55	5,802.25	5,717.82	84.44	68.718		
2,300.00	2,197.50	17,975.00	7,895.22	12.91	271.08	-162.13	493.19	-812.55	5,709.02	5,624.30	84.72	67.387		
2,400.00	2,290.62	17,975.00	7,895.22	13.61	271.08	-162.13	493.19	-812.55	5,616.01	5,530.96	85.05	66.031		
2,500.00	2,383.73	17,975.00	7,895.22	14.31	271.08	-162.13	493.19	-812.55	5,523.25	5,437.82	85.43	64.650		
2,600.00	2,476.85	17,975.00	7,895.22	15.01	271.08	-162.13	493.19	-812.55	5,430.75	5,344.88	85.87	63.245		
2,700.00	2,569.96	17,975.00	7,895.22	15.72	271.08	-162.13	493.19	-812.55	5,338.51	5,252.15	86.36	61.816		
2,800.00	2,663.08	17,975.00	7,895.22	16.42	271.08	-162.13	493.19	-812.55	5,246.57	5,159.65	86.92	60.363		
2,900.00	2,756.20	17,975.00	7,895.22	17.12	271.08	-162.13	493.19	-812.55	5,154.92	5,067.38	87.54	58.887		
3,000.00	2,849.31	17,975.00	7,895.22	17.83	271.08	-162.13	493.19	-812.55	5,063.58	4,975.35	88.23	57.389		
3,100.00	2,942.43	17,975.00	7,895.22	18.53	271.08	-162.13	493.19	-812.55	4,972.59	4,883.58	89.01	55.869		
3,200.00	3,035.54	17,975.00	7,895.22	19.24	271.08	-162.13	493.19	-812.55	4,881.94	4,792.08	89.86	54.328		
3,300.00	3,128.66	17,975.00	7,895.22	19.94	271.08	-162.13	493.19	-812.55	4,791.66	4,700.86	90.81	52.768		
3,400.00	3,221.77	17,975.00	7,895.22	20.65	271.08	-162.13	493.19	-812.55	4,701.78	4,609.94	91.85	51.192		
3,500.00	3,314.89	17,975.00	7,895.22	21.35	271.08	-162.13	493.19	-812.55	4,612.32	4,519.33	92.99	49.600		
3,600.00	3,408.01	17,975.00	7,895.22	22.06	271.08	-162.13	493.19	-812.55	4,523.29	4,429.05	94.25	47.995		
3,700.00	3,501.12	17,975.00	7,895.22	22.77	271.08	-162.13	493.19	-812.55	4,434.74	4,339.12	95.62	46.380		
3,800.00	3,594.24	17,975.00	7,895.22	23.47	271.08	-162.13	493.19	-812.55	4,346.68	4,249.56	97.12	44.757		
3,900.00	3,687.35	17,975.00	7,895.22	24.18	271.08	-162.13	493.19	-812.55	4,259.15	4,160.40	98.75	43.131		
4,000.00	3,780.47	17,975.00	7,895.22	24.89	271.08	-162.13	493.19	-812.55	4,172.18	4,071.65	100.53	41.504		
4,100.00	3,873.58	17,975.00	7,895.22	25.59	271.08	-162.13	493.19	-812.55	4,085.80	3,983.35	102.45	39.880		
4,200.00	3,966.70	17,975.00	7,895.22	26.30	271.08	-162.13	493.19	-812.55	4,000.06	3,895.52	104.54	38.263		
4,300.00	4,059.81	17,975.00	7,895.22	27.01	271.08	-162.13	493.19	-812.55	3,915.00	3,808.20	106.80	36.657		
4,400.00	4,152.93	17,975.00	7,895.22	27.71	271.08	-162.13	493.19	-812.55	3,830.66	3,721.42	109.24	35.067		
4,500.00	4,246.05	17,975.00	7,895.22	28.42	271.08	-162.13	493.19	-812.55	3,747.09	3,635.22	111.87	33.496		
4,600.00	4,339.16	17,975.00	7,895.22	29.13	271.08	-162.13	493.19	-812.55	3,664.34	3,549.64	114.69	31.949		
4,700.00	4,432.28	17,975.00	7,895.22	29.83	271.08	-162.13	493.19	-812.55	3,582.47	3,464.74	117.73	30.429		
4,800.00	4,525.39	17,975.00	7,895.22	30.54	271.08	-162.13	493.19	-812.55	3,501.54	3,380.56	120.99	28.942		
4,900.00	4,618.51	17,975.00	7,895.22	31.25	271.08	-162.13	493.19	-812.55	3,421.62	3,297.15	124.47	27.489		
5,000.00	4,711.62	17,975.00	7,895.22	31.95	271.08	-162.13	493.19	-812.55	3,342.79	3,214.60	128.19	26.076		
5,100.00	4,804.74	17,975.00	7,895.22	32.66	271.08	-162.13	493.19	-812.55	3,265.11	3,132.95	132.16	24.706		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 2DH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 66-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,200.00	4,897.86	17,975.00	7,895.22	33.37	271.08	-162.13	493.19	-812.55	3,188.68	3,052.29	136.38	23.380		
5,300.00	4,990.97	17,975.00	7,895.22	34.08	271.08	-162.13	493.19	-812.55	3,113.58	2,972.71	140.87	22.103		
5,400.00	5,084.09	17,975.00	7,895.22	34.78	271.08	-162.13	493.19	-812.55	3,039.92	2,894.29	145.62	20.875		
5,500.00	5,177.20	17,975.00	7,895.22	35.49	271.08	-162.13	493.19	-812.55	2,967.80	2,817.15	150.65	19.700		
5,600.00	5,270.32	17,975.00	7,895.22	36.20	271.08	-162.13	493.19	-812.55	2,897.33	2,741.38	155.95	18.578		
5,700.00	5,363.43	17,975.00	7,895.22	36.91	271.08	-162.13	493.19	-812.55	2,828.65	2,667.11	161.54	17.511		
5,800.00	5,456.55	17,975.00	7,895.22	37.61	271.08	-162.13	493.19	-812.55	2,761.88	2,594.49	167.39	16.499		
5,900.00	5,549.67	17,975.00	7,895.22	38.32	271.08	-162.13	493.19	-812.55	2,697.16	2,523.64	173.52	15.544		
6,000.00	5,642.78	17,975.00	7,895.22	39.03	271.08	-162.13	493.19	-812.55	2,634.65	2,454.74	179.91	14.644		
6,100.00	5,735.90	17,975.00	7,895.22	39.74	271.08	-162.13	493.19	-812.55	2,574.51	2,387.96	186.55	13.800		
6,200.00	5,829.01	17,975.00	7,895.22	40.44	271.08	-162.13	493.19	-812.55	2,516.91	2,323.48	193.43	13.012		
6,300.00	5,922.13	17,975.00	7,895.22	41.15	271.08	-162.13	493.19	-812.55	2,462.02	2,261.51	200.51	12.279		
6,400.00	6,015.24	17,975.00	7,895.22	41.86	271.08	-162.13	493.19	-812.55	2,410.04	2,202.27	207.77	11.600		
6,500.00	6,108.36	17,975.00	7,895.22	42.57	271.08	-162.13	493.19	-812.55	2,361.14	2,145.97	215.17	10.973		
6,600.00	6,201.47	17,975.00	7,895.22	43.28	271.08	-162.13	493.19	-812.55	2,315.54	2,092.86	222.67	10.399		
6,700.00	6,294.59	17,975.00	7,895.22	43.98	271.08	-162.13	493.19	-812.55	2,273.42	2,043.19	230.22	9.875		
6,800.00	6,387.71	17,975.00	7,895.22	44.69	271.08	-162.13	493.19	-812.55	2,234.98	1,997.22	237.76	9.400		
6,900.00	6,480.82	17,975.00	7,895.22	45.40	271.08	-162.13	493.19	-812.55	2,200.42	1,955.19	245.23	8.973		
7,000.00	6,573.94	17,975.00	7,895.22	46.11	271.08	-162.13	493.19	-812.55	2,169.93	1,917.37	252.56	8.592		
7,100.00	6,667.05	17,975.00	7,895.22	46.82	271.08	-162.13	493.19	-812.55	2,143.66	1,884.00	259.67	8.255		
7,200.00	6,760.17	17,975.00	7,895.22	47.52	271.08	-162.13	493.19	-812.55	2,121.79	1,855.30	266.49	7.962		
7,300.00	6,853.28	17,975.00	7,895.22	48.23	271.08	-162.13	493.19	-812.55	2,104.45	1,831.50	272.95	7.710		
7,400.00	6,946.40	17,975.00	7,895.22	48.94	271.08	-162.13	493.19	-812.55	2,091.76	1,812.77	278.99	7.498		
7,500.00	7,039.52	17,975.00	7,895.22	49.65	271.08	-162.13	493.19	-812.55	2,083.79	1,799.26	284.53	7.324		
7,600.00	7,132.64	17,975.00	7,895.22	50.33	271.08	178.44	493.19	-812.55	2,080.72	1,791.20	289.52	7.187		
7,608.67	7,141.06	17,975.00	7,895.22	50.38	271.08	176.14	493.19	-812.55	2,080.70	1,790.78	289.92	7.177 CC		
7,700.00	7,225.98	17,975.00	7,895.22	50.90	271.08	153.91	493.19	-812.55	2,082.89	1,789.04	293.85	7.088 ES		
7,800.00	7,315.86	17,975.00	7,895.22	51.34	271.08	136.53	493.19	-812.55	2,090.23	1,792.84	297.39	7.029		
7,900.00	7,399.85	17,975.00	7,895.22	51.68	271.08	125.13	493.19	-812.55	2,102.47	1,802.42	300.05	7.007 SF		
8,000.00	7,475.41	17,975.00	7,895.22	51.91	271.08	117.19	493.19	-812.55	2,119.15	1,817.36	301.79	7.022		
8,100.00	7,540.24	17,975.00	7,895.22	52.05	271.08	111.15	493.19	-812.55	2,139.66	1,837.05	302.61	7.071		
8,200.00	7,592.37	17,975.00	7,895.22	52.11	271.08	106.20	493.19	-812.55	2,163.29	1,860.73	302.56	7.150		
8,300.00	7,630.20	17,975.00	7,895.22	52.09	271.08	101.99	493.19	-812.55	2,189.23	1,887.51	301.73	7.256		
8,400.00	7,652.61	17,975.00	7,895.22	52.01	271.08	98.36	493.19	-812.55	2,216.63	1,916.45	300.18	7.384		
8,500.00	7,659.00	17,975.00	7,895.22	51.89	271.08	95.63	493.19	-812.55	2,244.64	1,946.65	297.99	7.533		
8,600.00	7,659.00	17,975.00	7,895.22	51.77	271.08	95.63	493.19	-812.55	2,275.14	1,979.76	295.38	7.702		
8,700.00	7,659.00	17,975.00	7,895.22	51.67	271.08	95.63	493.19	-812.55	2,309.57	2,017.09	292.48	7.896		
8,800.00	7,659.00	17,975.00	7,895.22	51.61	271.08	95.63	493.19	-812.55	2,347.75	2,058.43	289.33	8.115		
8,900.00	7,659.00	17,975.00	7,895.22	51.58	271.08	95.63	493.19	-812.55	2,389.52	2,103.57	285.95	8.356		
9,000.00	7,659.00	17,975.00	7,895.22	51.59	271.08	95.63	493.19	-812.55	2,434.68	2,152.29	282.39	8.622		
9,100.00	7,659.00	17,975.00	7,895.22	51.67	271.08	95.63	493.19	-812.55	2,483.05	2,204.36	278.69	8.910		
9,200.00	7,659.00	17,975.00	7,895.22	51.83	271.08	95.63	493.19	-812.55	2,534.44	2,259.57	274.87	9.220		
9,300.00	7,659.00	17,975.00	7,895.22	52.14	271.08	95.63	493.19	-812.55	2,588.67	2,317.70	270.97	9.553		
9,400.00	7,659.00	17,975.00	7,895.22	52.67	271.08	95.63	493.19	-812.55	2,645.58	2,378.56	267.02	9.908		
9,500.00	7,659.00	17,975.00	7,895.22	53.53	271.08	95.63	493.19	-812.55	2,704.98	2,441.94	263.05	10.283		
9,600.00	7,659.00	17,975.00	7,895.22	54.75	271.08	95.63	493.19	-812.55	2,766.73	2,507.67	259.06	10.680		
9,700.00	7,659.00	17,975.00	7,895.22	56.29	271.08	95.63	493.19	-812.55	2,830.66	2,575.56	255.10	11.096		
9,800.00	7,659.00	17,975.00	7,895.22	58.05	271.08	95.63	493.19	-812.55	2,896.64	2,645.47	251.17	11.533		
9,900.00	7,659.00	17,975.00	7,895.22	59.97	271.08	95.63	493.19	-812.55	2,964.52	2,717.23	247.29	11.988		
10,000.00	7,659.00	17,975.00	7,895.22	62.00	271.08	95.63	493.19	-812.55	3,034.17	2,790.71	243.46	12.463		
10,100.00	7,659.00	17,975.00	7,895.22	64.11	271.08	95.63	493.19	-812.55	3,105.49	2,865.78	239.71	12.955		
10,200.00	7,659.00	17,975.00	7,895.22	66.28	271.08	95.63	493.19	-812.55	3,178.35	2,942.32	236.03	13.466		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 2DH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 66-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,300.00	7,659.00	17,975.00	7,895.22	68.51	271.08	95.63	493.19	-812.55	3,252.66	3,020.22	232.44	13.993		
10,400.00	7,659.00	17,975.00	7,895.22	70.77	271.08	95.63	493.19	-812.55	3,328.31	3,099.37	228.94	14.538		
10,500.00	7,659.00	17,975.00	7,895.22	73.06	271.08	95.63	493.19	-812.55	3,405.21	3,179.69	225.52	15.099		
10,600.00	7,659.00	17,975.00	7,895.22	75.39	271.08	95.63	493.19	-812.55	3,483.29	3,261.10	222.20	15.677		
10,700.00	7,659.00	17,975.00	7,895.22	77.74	271.08	95.63	493.19	-812.55	3,562.47	3,343.50	218.97	16.269		
10,800.00	7,659.00	17,975.00	7,895.22	80.12	271.08	95.63	493.19	-812.55	3,642.67	3,426.84	215.83	16.877		
10,900.00	7,659.00	17,975.00	7,895.22	82.51	271.08	95.63	493.19	-812.55	3,723.83	3,511.04	212.79	17.500		
11,000.00	7,659.00	17,975.00	7,895.22	84.93	271.08	95.63	493.19	-812.55	3,805.89	3,596.05	209.84	18.137		
11,100.00	7,659.00	17,975.00	7,895.22	87.36	271.08	95.63	493.19	-812.55	3,888.78	3,681.80	206.98	18.788		
11,200.00	7,659.00	17,975.00	7,895.22	89.81	271.08	95.63	493.19	-812.55	3,972.46	3,768.25	204.21	19.453		
11,300.00	7,659.00	17,975.00	7,895.22	92.27	271.08	95.63	493.19	-812.55	4,056.89	3,855.35	201.53	20.130		
11,400.00	7,659.00	17,975.00	7,895.22	94.75	271.08	95.63	493.19	-812.55	4,142.00	3,943.07	198.94	20.821		
11,500.00	7,659.00	17,975.00	7,895.22	97.23	271.08	95.63	493.19	-812.55	4,227.77	4,031.35	196.42	21.524		
11,600.00	7,659.00	17,975.00	7,895.22	99.73	271.08	95.63	493.19	-812.55	4,314.15	4,120.16	193.99	22.239		
11,700.00	7,659.00	17,975.00	7,895.22	102.24	271.08	95.63	493.19	-812.55	4,401.11	4,209.47	191.64	22.966		
11,800.00	7,659.00	17,975.00	7,895.22	104.75	271.08	95.63	493.19	-812.55	4,488.61	4,299.24	189.36	23.704		
11,900.00	7,659.00	17,975.00	7,895.22	107.28	271.08	95.63	493.19	-812.55	4,576.62	4,389.46	187.16	24.453		
12,000.00	7,659.00	17,975.00	7,895.22	109.81	271.08	95.63	493.19	-812.55	4,665.12	4,480.09	185.03	25.213		
12,100.00	7,659.00	17,975.00	7,895.22	112.35	271.08	95.63	493.19	-812.55	4,754.07	4,571.10	182.96	25.984		
12,200.00	7,659.00	17,975.00	7,895.22	114.90	271.08	95.63	493.19	-812.55	4,843.45	4,662.48	180.97	26.764		
12,300.00	7,659.00	17,975.00	7,895.22	117.46	271.08	95.63	493.19	-812.55	4,933.24	4,754.21	179.03	27.555		
12,400.00	7,659.00	17,975.00	7,895.22	120.02	271.08	95.63	493.19	-812.55	5,023.42	4,846.26	177.16	28.355		
12,500.00	7,659.00	17,975.00	7,895.22	122.58	271.08	95.63	493.19	-812.55	5,113.96	4,938.61	175.35	29.164		
12,600.00	7,659.00	17,975.00	7,895.22	125.15	271.08	95.63	493.19	-812.55	5,204.85	5,031.25	173.60	29.982		
12,700.00	7,659.00	17,975.00	7,895.22	127.73	271.08	95.63	493.19	-812.55	5,296.06	5,124.17	171.90	30.810		
12,800.00	7,659.00	17,975.00	7,895.22	130.31	271.08	95.63	493.19	-812.55	5,387.59	5,217.34	170.25	31.645		
12,900.00	7,659.00	17,975.00	7,895.22	132.90	271.08	95.63	493.19	-812.55	5,479.42	5,310.76	168.66	32.489		
13,000.00	7,659.00	17,975.00	7,895.22	135.49	271.08	95.63	493.19	-812.55	5,571.52	5,404.41	167.11	33.341		
13,100.00	7,659.00	17,975.00	7,895.22	138.08	271.08	95.63	493.19	-812.55	5,663.90	5,498.29	165.61	34.200		
13,200.00	7,659.00	17,975.00	7,895.22	140.68	271.08	95.47	493.19	-812.55	5,756.36	5,592.22	164.14	35.070		
13,300.00	7,659.00	17,975.00	7,895.22	143.28	271.08	95.47	493.19	-812.55	5,848.80	5,686.11	162.69	35.950		
13,400.00	7,659.00	17,975.00	7,895.22	145.88	271.08	95.47	493.19	-812.55	5,941.49	5,780.20	161.29	36.838		
13,500.00	7,659.00	17,975.00	7,895.22	148.48	271.08	95.47	493.19	-812.55	6,034.41	5,874.49	159.92	37.734		
13,600.00	7,659.00	17,975.00	7,895.22	151.09	271.08	95.47	493.19	-812.55	6,127.55	5,968.95	158.60	38.636		
13,700.00	7,659.00	17,975.00	7,895.22	153.70	271.08	95.47	493.19	-812.55	6,220.90	6,063.59	157.31	39.545		
13,800.00	7,659.00	17,975.00	7,895.22	156.32	271.08	95.47	493.19	-812.55	6,314.46	6,158.40	156.06	40.461		
13,900.00	7,659.00	17,975.00	7,895.22	158.94	271.08	95.47	493.19	-812.55	6,408.22	6,253.37	154.85	41.383		
14,000.00	7,659.00	17,975.00	7,895.22	161.56	271.08	95.47	493.19	-812.55	6,502.16	6,348.48	153.67	42.311		
14,100.00	7,659.00	17,975.00	7,895.22	164.18	271.08	95.47	493.19	-812.55	6,596.27	6,443.74	152.53	43.246		
14,200.00	7,659.00	17,975.00	7,895.22	166.80	271.08	95.47	493.19	-812.55	6,690.56	6,539.14	151.42	44.186		
14,300.00	7,659.00	17,975.00	7,895.22	169.43	271.08	95.47	493.19	-812.55	6,785.01	6,634.67	150.34	45.132		
14,400.00	7,659.00	17,975.00	7,895.22	172.06	271.08	95.47	493.19	-812.55	6,879.62	6,730.33	149.29	46.083		
14,500.00	7,659.00	17,975.00	7,895.22	174.69	271.08	95.47	493.19	-812.55	6,974.38	6,826.11	148.27	47.039		
14,600.00	7,659.00	17,975.00	7,895.22	177.33	271.08	95.47	493.19	-812.55	7,069.28	6,922.01	147.27	48.001		
14,700.00	7,659.00	17,975.00	7,895.22	179.96	271.08	95.47	493.19	-812.55	7,164.33	7,018.02	146.31	48.967		
14,800.00	7,659.00	17,975.00	7,895.22	182.60	271.08	95.47	493.19	-812.55	7,259.50	7,114.13	145.37	49.938		
14,900.00	7,659.00	17,975.00	7,895.22	185.24	271.08	95.47	493.19	-812.55	7,354.80	7,210.35	144.46	50.914		
15,000.00	7,659.00	17,975.00	7,895.22	187.88	271.08	95.47	493.19	-812.55	7,450.23	7,306.66	143.57	51.894		
15,100.00	7,659.00	17,975.00	7,895.22	190.52	271.08	95.47	493.19	-812.55	7,545.78	7,403.07	142.70	52.878		
15,200.00	7,659.00	17,975.00	7,895.22	193.16	271.08	95.47	493.19	-812.55	7,641.44	7,499.58	141.86	53.866		
15,300.00	7,659.00	17,975.00	7,895.22	195.81	271.08	95.47	493.19	-812.55	7,737.20	7,596.16	141.04	54.859		
15,400.00	7,659.00	17,975.00	7,895.22	198.45	271.08	95.47	493.19	-812.55	7,833.08	7,692.84	140.24	55.855		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 2DH - OWB - FINAL SURVEY													Offset Site Error: 0.00 usft	
Survey Program: 66-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
15,500.00	7,659.00	17,975.00	7,895.22	201.10	271.08	95.47	493.19	-812.55	7,929.05	7,789.59	139.46	56.854		
15,600.00	7,659.00	17,975.00	7,895.22	203.75	271.08	95.47	493.19	-812.55	8,025.13	7,886.42	138.70	57.858		
15,700.00	7,659.00	17,975.00	7,895.22	206.40	271.08	95.47	493.19	-812.55	8,121.30	7,983.33	137.97	58.864		
15,800.00	7,659.00	17,975.00	7,895.22	209.05	271.08	95.47	493.19	-812.55	8,217.56	8,080.31	137.25	59.874		
15,900.00	7,659.00	17,975.00	7,895.22	211.70	271.08	95.47	493.19	-812.55	8,313.91	8,177.36	136.55	60.887		
16,000.00	7,659.00	17,975.00	7,895.22	214.36	271.08	95.47	493.19	-812.55	8,410.34	8,274.48	135.86	61.903		
16,100.00	7,659.00	17,975.00	7,895.22	217.01	271.08	95.47	493.19	-812.55	8,506.86	8,371.66	135.20	62.922		
16,200.00	7,659.00	17,975.00	7,895.22	219.67	271.08	95.47	493.19	-812.55	8,603.46	8,468.91	134.55	63.943		
16,300.00	7,659.00	17,975.00	7,895.22	222.32	271.08	95.47	493.19	-812.55	8,700.13	8,566.21	133.92	64.967		
16,400.00	7,659.00	17,975.00	7,895.22	224.98	271.08	95.47	493.19	-812.55	8,796.88	8,663.58	133.30	65.994		
16,500.00	7,659.00	17,975.00	7,895.22	227.64	271.08	95.47	493.19	-812.55	8,893.70	8,761.00	132.70	67.023		
16,600.00	7,659.00	17,975.00	7,895.22	230.30	271.08	95.47	493.19	-812.55	8,990.59	8,858.48	132.11	68.054		
16,700.00	7,659.00	17,975.00	7,895.22	232.96	271.08	95.47	493.19	-812.55	9,087.54	8,956.00	131.54	69.087		
16,800.00	7,659.00	17,975.00	7,895.22	235.62	271.08	95.47	493.19	-812.55	9,184.56	9,053.58	130.98	70.123		
16,900.00	7,659.00	17,975.00	7,895.22	238.28	271.08	95.47	493.19	-812.55	9,281.65	9,151.22	130.43	71.160		
17,000.00	7,659.00	17,975.00	7,895.22	240.95	271.08	95.47	493.19	-812.55	9,378.79	9,248.89	129.90	72.199		
17,100.00	7,659.00	17,975.00	7,895.22	243.61	271.08	95.47	493.19	-812.55	9,476.00	9,346.62	129.38	73.240		
17,200.00	7,659.00	17,975.00	7,895.22	246.27	271.08	95.47	493.19	-812.55	9,573.26	9,444.39	128.88	74.283		
17,300.00	7,659.00	17,975.00	7,895.22	248.94	271.08	95.47	493.19	-812.55	9,670.58	9,542.20	128.38	75.327		
17,400.00	7,659.00	17,975.00	7,895.22	251.60	271.08	95.47	493.19	-812.55	9,767.96	9,640.06	127.90	76.372		
17,500.00	7,659.00	17,975.00	7,895.22	254.27	271.08	95.47	493.19	-812.55	9,865.38	9,737.95	127.43	77.419		
17,600.00	7,659.00	17,975.00	7,895.22	256.94	271.08	95.47	493.19	-812.55	9,962.86	9,835.89	126.97	78.467		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 3AH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 66-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	17,900.00	7,845.44	0.00	269.05	-77.52	187.05	-845.27	7,867.92					
100.00	100.00	17,900.00	7,845.44	0.13	269.05	-77.52	187.05	-845.27	7,768.53	7,685.47	83.07	93.523		
200.00	199.98	17,900.00	7,845.44	0.50	269.05	-78.64	187.05	-845.27	7,669.09	7,586.03	83.06	92.331		
300.00	299.84	17,900.00	7,845.44	0.86	269.05	-98.46	187.05	-845.27	7,569.59	7,486.53	83.05	91.140		
400.00	399.45	17,900.00	7,845.44	1.23	269.05	-116.26	187.05	-845.27	7,470.15	7,387.11	83.04	89.954		
500.00	498.70	17,900.00	7,845.44	1.63	269.05	-129.80	187.05	-845.27	7,370.91	7,287.88	83.03	88.773		
600.00	597.47	17,900.00	7,845.44	2.05	269.05	-139.41	187.05	-845.27	7,271.99	7,188.98	83.02	87.597		
700.00	695.62	17,900.00	7,845.44	2.49	269.05	-146.22	187.05	-845.27	7,173.53	7,090.53	83.00	86.425		
800.00	793.06	17,900.00	7,845.44	2.98	269.05	-151.17	187.05	-845.27	7,075.68	6,992.68	82.99	85.255		
900.00	889.64	17,900.00	7,845.44	3.50	269.05	-154.86	187.05	-845.27	6,978.57	6,895.57	83.00	84.082		
1,000.00	985.27	17,900.00	7,845.44	4.06	269.05	-157.70	187.05	-845.27	6,882.36	6,799.34	83.02	82.903		
1,100.00	1,079.82	17,900.00	7,845.44	4.66	269.05	-159.94	187.05	-845.27	6,787.21	6,704.15	83.06	81.711		
1,200.00	1,173.23	17,900.00	7,845.44	5.31	269.05	-161.22	187.05	-845.27	6,693.23	6,610.09	83.14	80.505		
1,300.00	1,266.35	17,900.00	7,845.44	5.98	269.05	-161.22	187.05	-845.27	6,599.70	6,516.42	83.28	79.247		
1,400.00	1,359.46	17,900.00	7,845.44	6.66	269.05	-161.22	187.05	-845.27	6,506.36	6,422.90	83.46	77.959		
1,500.00	1,452.58	17,900.00	7,845.44	7.34	269.05	-161.22	187.05	-845.27	6,413.22	6,329.54	83.68	76.642		
1,600.00	1,545.69	17,900.00	7,845.44	8.03	269.05	-161.22	187.05	-845.27	6,320.29	6,236.36	83.94	75.297		
1,700.00	1,638.81	17,900.00	7,845.44	8.72	269.05	-161.22	187.05	-845.27	6,227.59	6,143.34	84.24	73.924		
1,800.00	1,731.92	17,900.00	7,845.44	9.41	269.05	-161.22	187.05	-845.27	6,135.11	6,050.51	84.59	72.524		
1,900.00	1,825.04	17,900.00	7,845.44	10.11	269.05	-161.22	187.05	-845.27	6,042.87	5,957.87	84.99	71.099		
2,000.00	1,918.15	17,900.00	7,845.44	10.81	269.05	-161.22	187.05	-845.27	5,950.88	5,865.44	85.44	69.648		
2,100.00	2,011.27	17,900.00	7,845.44	11.51	269.05	-161.22	187.05	-845.27	5,859.15	5,773.21	85.94	68.173		
2,200.00	2,104.39	17,900.00	7,845.44	12.21	269.05	-161.22	187.05	-845.27	5,767.70	5,681.19	86.50	66.675		
2,300.00	2,197.50	17,900.00	7,845.44	12.91	269.05	-161.22	187.05	-845.27	5,676.54	5,589.41	87.12	65.154		
2,400.00	2,290.62	17,900.00	7,845.44	13.61	269.05	-161.22	187.05	-845.27	5,585.68	5,497.87	87.81	63.612		
2,500.00	2,383.73	17,900.00	7,845.44	14.31	269.05	-161.22	187.05	-845.27	5,495.13	5,406.57	88.56	62.050		
2,600.00	2,476.85	17,900.00	7,845.44	15.01	269.05	-161.22	187.05	-845.27	5,404.92	5,315.54	89.38	60.470		
2,700.00	2,569.96	17,900.00	7,845.44	15.72	269.05	-161.22	187.05	-845.27	5,315.06	5,224.78	90.28	58.873		
2,800.00	2,663.08	17,900.00	7,845.44	16.42	269.05	-161.22	187.05	-845.27	5,225.57	5,134.31	91.26	57.260		
2,900.00	2,756.20	17,900.00	7,845.44	17.12	269.05	-161.22	187.05	-845.27	5,136.47	5,044.14	92.32	55.635		
3,000.00	2,849.31	17,900.00	7,845.44	17.83	269.05	-161.22	187.05	-845.27	5,047.77	4,954.29	93.48	53.998		
3,100.00	2,942.43	17,900.00	7,845.44	18.53	269.05	-161.22	187.05	-845.27	4,959.51	4,864.77	94.73	52.353		
3,200.00	3,035.54	17,900.00	7,845.44	19.24	269.05	-161.22	187.05	-845.27	4,871.70	4,775.61	96.09	50.701		
3,300.00	3,128.66	17,900.00	7,845.44	19.94	269.05	-161.22	187.05	-845.27	4,784.36	4,686.82	97.55	49.047		
3,400.00	3,221.77	17,900.00	7,845.44	20.65	269.05	-161.22	187.05	-845.27	4,697.53	4,598.41	99.12	47.392		
3,500.00	3,314.89	17,900.00	7,845.44	21.35	269.05	-161.22	187.05	-845.27	4,611.24	4,510.43	100.81	45.740		
3,600.00	3,408.01	17,900.00	7,845.44	22.06	269.05	-161.22	187.05	-845.27	4,525.51	4,422.88	102.63	44.094		
3,700.00	3,501.12	17,900.00	7,845.44	22.77	269.05	-161.22	187.05	-845.27	4,440.38	4,335.79	104.59	42.457		
3,800.00	3,594.24	17,900.00	7,845.44	23.47	269.05	-161.22	187.05	-845.27	4,355.88	4,249.20	106.68	40.832		
3,900.00	3,687.35	17,900.00	7,845.44	24.18	269.05	-161.22	187.05	-845.27	4,272.04	4,163.13	108.91	39.224		
4,000.00	3,780.47	17,900.00	7,845.44	24.89	269.05	-161.22	187.05	-845.27	4,188.92	4,077.62	111.30	37.635		
4,100.00	3,873.58	17,900.00	7,845.44	25.59	269.05	-161.22	187.05	-845.27	4,106.55	3,992.70	113.85	36.069		
4,200.00	3,966.70	17,900.00	7,845.44	26.30	269.05	-161.22	187.05	-845.27	4,024.98	3,908.42	116.57	34.529		
4,300.00	4,059.81	17,900.00	7,845.44	27.01	269.05	-161.22	187.05	-845.27	3,944.26	3,824.81	119.46	33.019		
4,400.00	4,152.93	17,900.00	7,845.44	27.71	269.05	-161.22	187.05	-845.27	3,864.44	3,741.92	122.52	31.540		
4,500.00	4,246.05	17,900.00	7,845.44	28.42	269.05	-161.22	187.05	-845.27	3,785.58	3,659.80	125.78	30.097		
4,600.00	4,339.16	17,900.00	7,845.44	29.13	269.05	-161.22	187.05	-845.27	3,707.74	3,578.51	129.22	28.692		
4,700.00	4,432.28	17,900.00	7,845.44	29.83	269.05	-161.22	187.05	-845.27	3,630.98	3,498.11	132.87	27.328		
4,800.00	4,525.39	17,900.00	7,845.44	30.54	269.05	-161.22	187.05	-845.27	3,555.38	3,418.67	136.71	26.006		
4,900.00	4,618.51	17,900.00	7,845.44	31.25	269.05	-161.22	187.05	-845.27	3,481.01	3,340.24	140.77	24.728		
5,000.00	4,711.62	17,900.00	7,845.44	31.95	269.05	-161.22	187.05	-845.27	3,407.95	3,262.91	145.04	23.497		
5,100.00	4,804.74	17,900.00	7,845.44	32.66	269.05	-161.22	187.05	-845.27	3,336.29	3,186.77	149.52	22.313		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 3AH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 66-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,200.00	4,897.86	17,900.00	7,845.44	33.37	269.05	-161.22	187.05	-845.27	3,266.12	3,111.90	154.22	21.178		
5,300.00	4,990.97	17,900.00	7,845.44	34.08	269.05	-161.22	187.05	-845.27	3,197.54	3,038.40	159.14	20.093		
5,400.00	5,084.09	17,900.00	7,845.44	34.78	269.05	-161.22	187.05	-845.27	3,130.65	2,966.38	164.27	19.057		
5,500.00	5,177.20	17,900.00	7,845.44	35.49	269.05	-161.22	187.05	-845.27	3,065.56	2,895.94	169.62	18.073		
5,600.00	5,270.32	17,900.00	7,845.44	36.20	269.05	-161.22	187.05	-845.27	3,002.40	2,827.22	175.18	17.139		
5,700.00	5,363.43	17,900.00	7,845.44	36.91	269.05	-161.22	187.05	-845.27	2,941.27	2,760.34	180.94	16.256		
5,800.00	5,456.55	17,900.00	7,845.44	37.61	269.05	-161.22	187.05	-845.27	2,882.32	2,695.44	186.89	15.423		
5,900.00	5,549.67	17,900.00	7,845.44	38.32	269.05	-161.22	187.05	-845.27	2,825.69	2,632.68	193.01	14.640		
6,000.00	5,642.78	17,900.00	7,845.44	39.03	269.05	-161.22	187.05	-845.27	2,771.50	2,572.21	199.29	13.907		
6,100.00	5,735.90	17,900.00	7,845.44	39.74	269.05	-161.22	187.05	-845.27	2,719.91	2,514.20	205.71	13.222		
6,200.00	5,829.01	17,900.00	7,845.44	40.44	269.05	-161.22	187.05	-845.27	2,671.07	2,458.83	212.25	12.585		
6,300.00	5,922.13	17,900.00	7,845.44	41.15	269.05	-161.22	187.05	-845.27	2,625.13	2,406.27	218.86	11.995		
6,400.00	6,015.24	17,900.00	7,845.44	41.86	269.05	-161.22	187.05	-845.27	2,582.25	2,356.73	225.52	11.450		
6,500.00	6,108.36	17,900.00	7,845.44	42.57	269.05	-161.22	187.05	-845.27	2,542.59	2,310.39	232.19	10.950		
6,600.00	6,201.47	17,900.00	7,845.44	43.28	269.05	-161.22	187.05	-845.27	2,506.28	2,267.45	238.83	10.494		
6,700.00	6,294.59	17,900.00	7,845.44	43.98	269.05	-161.22	187.05	-845.27	2,473.49	2,228.10	245.39	10.080		
6,800.00	6,387.71	17,900.00	7,845.44	44.69	269.05	-161.22	187.05	-845.27	2,444.35	2,192.54	251.82	9.707		
6,900.00	6,480.82	17,900.00	7,845.44	45.40	269.05	-161.22	187.05	-845.27	2,419.00	2,160.93	258.07	9.373		
7,000.00	6,573.94	17,900.00	7,845.44	46.11	269.05	-161.22	187.05	-845.27	2,397.56	2,133.46	264.09	9.078		
7,100.00	6,667.05	17,900.00	7,845.44	46.82	269.05	-161.22	187.05	-845.27	2,380.12	2,110.29	269.84	8.821		
7,200.00	6,760.17	17,900.00	7,845.44	47.52	269.05	-161.22	187.05	-845.27	2,366.79	2,091.53	275.25	8.599		
7,300.00	6,853.28	17,900.00	7,845.44	48.23	269.05	-161.22	187.05	-845.27	2,357.63	2,077.32	280.30	8.411		
7,400.00	6,946.40	17,900.00	7,845.44	48.94	269.05	-161.22	187.05	-845.27	2,352.68	2,067.74	284.94	8.257		
7,466.47	7,008.29	17,900.00	7,845.44	49.41	269.05	-161.22	187.05	-845.27	2,351.74	2,063.97	287.77	8.172 CC		
7,500.00	7,039.52	17,900.00	7,845.44	49.65	269.05	-161.22	187.05	-845.27	2,351.98	2,062.85	289.13	8.135 ES		
7,600.00	7,132.94	17,900.00	7,845.44	50.33	269.05	178.84	187.05	-845.27	2,355.71	2,062.87	292.85	8.044		
7,700.00	7,225.98	17,900.00	7,845.44	50.90	269.05	153.67	187.05	-845.27	2,364.22	2,068.22	296.00	7.987		
7,800.00	7,315.86	17,900.00	7,845.44	51.34	269.05	135.71	187.05	-845.27	2,377.22	2,078.69	298.53	7.963 SF		
7,900.00	7,399.85	17,900.00	7,845.44	51.68	269.05	123.83	187.05	-845.27	2,394.25	2,093.87	300.38	7.971		
8,000.00	7,475.41	17,900.00	7,845.44	51.91	269.05	115.49	187.05	-845.27	2,414.70	2,113.16	301.54	8.008		
8,100.00	7,540.24	17,900.00	7,845.44	52.05	269.05	109.16	187.05	-845.27	2,437.89	2,135.85	302.04	8.071		
8,200.00	7,592.37	17,900.00	7,845.44	52.11	269.05	104.06	187.05	-845.27	2,463.03	2,161.11	301.92	8.158		
8,300.00	7,630.20	17,900.00	7,845.44	52.09	269.05	99.83	187.05	-845.27	2,489.32	2,188.08	301.24	8.264		
8,400.00	7,652.61	17,900.00	7,845.44	52.01	269.05	96.31	187.05	-845.27	2,515.94	2,215.87	300.07	8.384		
8,500.00	7,659.00	17,900.00	7,845.44	51.89	269.05	93.77	187.05	-845.27	2,542.10	2,243.65	298.46	8.518		
8,600.00	7,659.00	17,900.00	7,845.44	51.77	269.05	93.77	187.05	-845.27	2,570.11	2,273.58	296.54	8.667		
8,700.00	7,659.00	17,900.00	7,845.44	51.67	269.05	93.77	187.05	-845.27	2,601.67	2,307.27	294.39	8.837		
8,800.00	7,659.00	17,900.00	7,845.44	51.61	269.05	93.77	187.05	-845.27	2,636.64	2,344.59	292.05	9.028		
8,900.00	7,659.00	17,900.00	7,845.44	51.58	269.05	93.77	187.05	-845.27	2,674.89	2,385.38	289.51	9.239		
9,000.00	7,659.00	17,900.00	7,845.44	51.59	269.05	93.77	187.05	-845.27	2,716.29	2,429.48	286.81	9.471		
9,100.00	7,659.00	17,900.00	7,845.44	51.67	269.05	93.77	187.05	-845.27	2,760.69	2,476.72	283.97	9.722		
9,200.00	7,659.00	17,900.00	7,845.44	51.83	269.05	93.77	187.05	-845.27	2,807.95	2,526.94	281.01	9.992		
9,300.00	7,659.00	17,900.00	7,845.44	52.14	269.05	93.77	187.05	-845.27	2,857.93	2,579.99	277.95	10.282		
9,400.00	7,659.00	17,900.00	7,845.44	52.67	269.05	93.77	187.05	-845.27	2,910.49	2,635.69	274.80	10.591		
9,500.00	7,659.00	17,900.00	7,845.44	53.53	269.05	93.77	187.05	-845.27	2,965.49	2,693.89	271.60	10.918		
9,600.00	7,659.00	17,900.00	7,845.44	54.75	269.05	93.77	187.05	-845.27	3,022.80	2,754.44	268.36	11.264		
9,700.00	7,659.00	17,900.00	7,845.44	56.29	269.05	93.77	187.05	-845.27	3,082.29	2,817.20	265.09	11.627		
9,800.00	7,659.00	17,900.00	7,845.44	58.05	269.05	93.77	187.05	-845.27	3,143.84	2,882.02	261.81	12.008		
9,900.00	7,659.00	17,900.00	7,845.44	59.97	269.05	93.77	187.05	-845.27	3,207.32	2,948.78	258.54	12.406		
10,000.00	7,659.00	17,900.00	7,845.44	62.00	269.05	93.77	187.05	-845.27	3,272.62	3,017.35	255.28	12.820		
10,100.00	7,659.00	17,900.00	7,845.44	64.11	269.05	93.77	187.05	-845.27	3,339.65	3,087.61	252.04	13.250		
10,200.00	7,659.00	17,900.00	7,845.44	66.28	269.05	93.77	187.05	-845.27	3,408.29	3,159.45	248.84	13.697		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 3AH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 66-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,300.00	7,659.00	17,900.00	7,845.44	68.51	269.05	93.77	187.05	-845.27	3,478.45	3,232.77	245.68	14.159		
10,400.00	7,659.00	17,900.00	7,845.44	70.77	269.05	93.77	187.05	-845.27	3,550.04	3,307.48	242.57	14.635		
10,500.00	7,659.00	17,900.00	7,845.44	73.06	269.05	93.77	187.05	-845.27	3,622.98	3,383.48	239.51	15.127		
10,600.00	7,659.00	17,900.00	7,845.44	75.39	269.05	93.77	187.05	-845.27	3,697.19	3,460.68	236.50	15.633		
10,700.00	7,659.00	17,900.00	7,845.44	77.74	269.05	93.77	187.05	-845.27	3,772.58	3,539.02	233.56	16.153		
10,800.00	7,659.00	17,900.00	7,845.44	80.12	269.05	93.77	187.05	-845.27	3,849.10	3,618.42	230.68	16.686		
10,900.00	7,659.00	17,900.00	7,845.44	82.51	269.05	93.77	187.05	-845.27	3,926.67	3,698.81	227.86	17.233		
11,000.00	7,659.00	17,900.00	7,845.44	84.93	269.05	93.77	187.05	-845.27	4,005.24	3,780.13	225.11	17.793		
11,100.00	7,659.00	17,900.00	7,845.44	87.36	269.05	93.77	187.05	-845.27	4,084.74	3,862.32	222.42	18.365		
11,200.00	7,659.00	17,900.00	7,845.44	89.81	269.05	93.77	187.05	-845.27	4,165.13	3,945.32	219.80	18.949		
11,300.00	7,659.00	17,900.00	7,845.44	92.27	269.05	93.77	187.05	-845.27	4,246.35	4,029.09	217.25	19.546		
11,400.00	7,659.00	17,900.00	7,845.44	94.75	269.05	93.77	187.05	-845.27	4,328.36	4,113.59	214.77	20.154		
11,500.00	7,659.00	17,900.00	7,845.44	97.23	269.05	93.77	187.05	-845.27	4,411.10	4,198.76	212.35	20.773		
11,600.00	7,659.00	17,900.00	7,845.44	99.73	269.05	93.77	187.05	-845.27	4,494.56	4,284.56	209.99	21.403		
11,700.00	7,659.00	17,900.00	7,845.44	102.24	269.05	93.77	187.05	-845.27	4,578.67	4,370.97	207.70	22.044		
11,800.00	7,659.00	17,900.00	7,845.44	104.75	269.05	93.77	187.05	-845.27	4,663.41	4,457.93	205.48	22.696		
11,900.00	7,659.00	17,900.00	7,845.44	107.28	269.05	93.77	187.05	-845.27	4,748.75	4,545.44	203.31	23.357		
12,000.00	7,659.00	17,900.00	7,845.44	109.81	269.05	93.77	187.05	-845.27	4,834.64	4,633.44	201.20	24.029		
12,100.00	7,659.00	17,900.00	7,845.44	112.35	269.05	93.77	187.05	-845.27	4,921.07	4,721.92	199.16	24.710		
12,200.00	7,659.00	17,900.00	7,845.44	114.90	269.05	93.77	187.05	-845.27	5,008.01	4,810.84	197.16	25.400		
12,300.00	7,659.00	17,900.00	7,845.44	117.46	269.05	93.77	187.05	-845.27	5,095.42	4,900.19	195.23	26.100		
12,400.00	7,659.00	17,900.00	7,845.44	120.02	269.05	93.77	187.05	-845.27	5,183.29	4,989.94	193.35	26.808		
12,500.00	7,659.00	17,900.00	7,845.44	122.58	269.05	93.77	187.05	-845.27	5,271.59	5,080.07	191.52	27.525		
12,600.00	7,659.00	17,900.00	7,845.44	125.15	269.05	93.77	187.05	-845.27	5,360.31	5,170.56	189.74	28.250		
12,700.00	7,659.00	17,900.00	7,845.44	127.73	269.05	93.77	187.05	-845.27	5,449.41	5,261.39	188.02	28.984		
12,800.00	7,659.00	17,900.00	7,845.44	130.31	269.05	93.77	187.05	-845.27	5,538.89	5,352.55	186.34	29.725		
12,900.00	7,659.00	17,900.00	7,845.44	132.90	269.05	93.77	187.05	-845.27	5,628.72	5,444.01	184.71	30.474		
13,000.00	7,659.00	17,900.00	7,845.44	135.49	269.05	93.77	187.05	-845.27	5,718.88	5,535.76	183.12	31.230		
13,100.00	7,659.00	17,900.00	7,845.44	138.08	269.05	93.77	187.05	-845.27	5,809.37	5,627.80	181.58	31.994		
13,200.00	7,659.00	17,900.00	7,845.44	140.68	269.05	93.67	187.05	-845.27	5,899.99	5,719.93	180.06	32.767		
13,300.00	7,659.00	17,900.00	7,845.44	143.28	269.05	93.67	187.05	-845.27	5,990.60	5,812.03	178.56	33.549		
13,400.00	7,659.00	17,900.00	7,845.44	145.88	269.05	93.67	187.05	-845.27	6,081.50	5,904.39	177.11	34.338		
13,500.00	7,659.00	17,900.00	7,845.44	148.48	269.05	93.67	187.05	-845.27	6,172.69	5,996.99	175.69	35.133		
13,600.00	7,659.00	17,900.00	7,845.44	151.09	269.05	93.67	187.05	-845.27	6,264.14	6,089.83	174.31	35.936		
13,700.00	7,659.00	17,900.00	7,845.44	153.70	269.05	93.67	187.05	-845.27	6,355.85	6,182.88	172.97	36.745		
13,800.00	7,659.00	17,900.00	7,845.44	156.32	269.05	93.67	187.05	-845.27	6,447.81	6,276.15	171.67	37.560		
13,900.00	7,659.00	17,900.00	7,845.44	158.94	269.05	93.67	187.05	-845.27	6,540.01	6,369.61	170.40	38.381		
14,000.00	7,659.00	17,900.00	7,845.44	161.56	269.05	93.67	187.05	-845.27	6,632.43	6,463.27	169.16	39.209		
14,100.00	7,659.00	17,900.00	7,845.44	164.18	269.05	93.67	187.05	-845.27	6,725.07	6,557.11	167.95	40.042		
14,200.00	7,659.00	17,900.00	7,845.44	166.80	269.05	93.67	187.05	-845.27	6,817.91	6,651.13	166.78	40.880		
14,300.00	7,659.00	17,900.00	7,845.44	169.43	269.05	93.67	187.05	-845.27	6,910.96	6,745.32	165.63	41.724		
14,400.00	7,659.00	17,900.00	7,845.44	172.06	269.05	93.67	187.05	-845.27	7,004.19	6,839.67	164.52	42.573		
14,500.00	7,659.00	17,900.00	7,845.44	174.69	269.05	93.67	187.05	-845.27	7,097.61	6,934.18	163.43	43.428		
14,600.00	7,659.00	17,900.00	7,845.44	177.33	269.05	93.67	187.05	-845.27	7,191.21	7,028.84	162.38	44.287		
14,700.00	7,659.00	17,900.00	7,845.44	179.96	269.05	93.67	187.05	-845.27	7,284.98	7,123.64	161.35	45.151		
14,800.00	7,659.00	17,900.00	7,845.44	182.60	269.05	93.67	187.05	-845.27	7,378.91	7,218.57	160.34	46.020		
14,900.00	7,659.00	17,900.00	7,845.44	185.24	269.05	93.67	187.05	-845.27	7,473.00	7,313.64	159.36	46.894		
15,000.00	7,659.00	17,900.00	7,845.44	187.88	269.05	93.67	187.05	-845.27	7,567.24	7,408.84	158.40	47.771		
15,100.00	7,659.00	17,900.00	7,845.44	190.52	269.05	93.67	187.05	-845.27	7,661.63	7,504.16	157.47	48.654		
15,200.00	7,659.00	17,900.00	7,845.44	193.16	269.05	93.67	187.05	-845.27	7,756.16	7,599.59	156.56	49.540		
15,300.00	7,659.00	17,900.00	7,845.44	195.81	269.05	93.67	187.05	-845.27	7,850.82	7,695.14	155.68	50.430		
15,400.00	7,659.00	17,900.00	7,845.44	198.45	269.05	93.67	187.05	-845.27	7,945.61	7,790.80	154.81	51.324		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 26-T4S-R65W - EXIST HZ CHICO 4-65 26-25 3AH - OWB - FINAL SURVEY												Offset Site Error:	0.00 usft
Survey Program: 66-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	
15,500.00	7,659.00	17,900.00	7,845.44	201.10	269.05	93.67	187.05	-845.27	8,040.53	7,886.57	153.97	52.222	
15,600.00	7,659.00	17,900.00	7,845.44	203.75	269.05	93.67	187.05	-845.27	8,135.58	7,982.43	153.15	53.123	
15,700.00	7,659.00	17,900.00	7,845.44	206.40	269.05	93.67	187.05	-845.27	8,230.74	8,078.39	152.34	54.028	
15,800.00	7,659.00	17,900.00	7,845.44	209.05	269.05	93.67	187.05	-845.27	8,326.01	8,174.45	151.56	54.937	
15,900.00	7,659.00	17,900.00	7,845.44	211.70	269.05	93.67	187.05	-845.27	8,421.39	8,270.60	150.79	55.848	
16,000.00	7,659.00	17,900.00	7,845.44	214.36	269.05	93.67	187.05	-845.27	8,516.88	8,366.84	150.04	56.763	
16,100.00	7,659.00	17,900.00	7,845.44	217.01	269.05	93.67	187.05	-845.27	8,612.47	8,463.16	149.31	57.681	
16,200.00	7,659.00	17,900.00	7,845.44	219.67	269.05	93.67	187.05	-845.27	8,708.16	8,559.56	148.60	58.602	
16,300.00	7,659.00	17,900.00	7,845.44	222.32	269.05	93.67	187.05	-845.27	8,803.95	8,656.04	147.90	59.525	
16,400.00	7,659.00	17,900.00	7,845.44	224.98	269.05	93.67	187.05	-845.27	8,899.82	8,752.60	147.22	60.452	
16,500.00	7,659.00	17,900.00	7,845.44	227.64	269.05	93.67	187.05	-845.27	8,995.79	8,849.23	146.56	61.381	
16,600.00	7,659.00	17,900.00	7,845.44	230.30	269.05	93.67	187.05	-845.27	9,091.85	8,945.94	145.91	62.312	
16,700.00	7,659.00	17,900.00	7,845.44	232.96	269.05	93.67	187.05	-845.27	9,187.99	9,042.71	145.27	63.246	
16,800.00	7,659.00	17,900.00	7,845.44	235.62	269.05	93.67	187.05	-845.27	9,284.21	9,139.55	144.65	64.183	
16,900.00	7,659.00	17,900.00	7,845.44	238.28	269.05	93.67	187.05	-845.27	9,380.51	9,236.46	144.05	65.121	
17,000.00	7,659.00	17,900.00	7,845.44	240.95	269.05	93.67	187.05	-845.27	9,476.88	9,333.43	143.45	66.062	
17,100.00	7,659.00	17,900.00	7,845.44	243.61	269.05	93.67	187.05	-845.27	9,573.33	9,430.46	142.87	67.005	
17,200.00	7,659.00	17,900.00	7,845.44	246.27	269.05	93.67	187.05	-845.27	9,669.86	9,527.55	142.31	67.950	
17,300.00	7,659.00	17,900.00	7,845.44	248.94	269.05	93.67	187.05	-845.27	9,766.45	9,624.69	141.75	68.897	
17,400.00	7,659.00	17,900.00	7,845.44	251.60	269.05	93.67	187.05	-845.27	9,863.11	9,721.90	141.21	69.845	
17,500.00	7,659.00	17,900.00	7,845.44	254.27	269.05	93.67	187.05	-845.27	9,959.84	9,819.15	140.68	70.796	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - ABND VERT LOWRY 11-29 - OWB - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC-ONLY													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	27.00	27.00	0.00	0.20	69.90	2,074.03	5,666.83	6,034.45					
100.00	100.00	127.00	127.00	0.13	1.21	69.90	2,074.03	5,666.83	6,034.45	6,033.10	1.35	4,478.480		
200.00	199.98	226.98	226.98	0.50	2.96	86.46	2,074.03	5,666.83	6,034.34	6,030.89	3.45	1,748.587		
300.00	299.84	326.84	326.84	0.86	4.70	86.52	2,074.03	5,666.83	6,034.02	6,028.46	5.56	1,085.703		
400.00	399.45	426.45	426.45	1.23	6.44	86.61	2,074.03	5,666.83	6,033.49	6,025.82	7.67	786.411		
500.00	498.70	525.70	525.70	1.63	8.17	86.74	2,074.03	5,666.83	6,032.78	6,022.98	9.80	615.675		
600.00	597.47	624.47	624.47	2.05	9.90	86.90	2,074.03	5,666.83	6,031.90	6,019.96	11.94	505.150		
700.00	695.62	722.62	722.62	2.49	11.61	87.10	2,074.03	5,666.83	6,030.89	6,016.79	14.10	427.665		
800.00	793.06	820.06	820.06	2.98	13.31	87.33	2,074.03	5,666.83	6,029.77	6,013.48	16.28	370.279		
900.00	889.64	916.64	916.64	3.50	14.99	87.59	2,074.03	5,666.83	6,028.58	6,010.09	18.49	326.042		
1,000.00	985.27	1,012.27	1,012.27	4.06	16.66	87.88	2,074.03	5,666.83	6,027.38	6,006.65	20.72	290.889		
1,100.00	1,079.82	1,106.82	1,106.82	4.66	18.31	88.20	2,074.03	5,666.83	6,026.20	6,003.22	22.98	262.282		
1,200.00	1,173.23	1,200.23	1,200.23	5.31	19.94	88.53	2,074.03	5,666.83	6,025.11	5,999.86	25.25	238.576		
1,300.00	1,266.35	1,306.65	1,293.35	5.98	21.80	88.85	2,074.03	5,666.83	6,024.22	5,996.44	27.78	216.842		
1,400.00	1,359.46	1,386.46	1,386.46	6.66	23.19	89.18	2,074.03	5,666.83	6,023.55	5,993.69	29.85	201.779		
1,500.00	1,452.58	1,479.58	1,479.58	7.34	24.82	89.50	2,074.03	5,666.83	6,023.09	5,990.93	32.16	187.281		
1,600.00	1,545.69	1,572.69	1,572.69	8.03	26.45	89.82	2,074.03	5,666.83	6,022.86	5,988.39	34.47	174.709		
1,654.79	1,596.71	1,623.71	1,623.71	8.41	27.34	90.00	2,074.03	5,666.83	6,022.83	5,987.09	35.74	168.506		
1,700.00	1,638.81	1,665.81	1,665.81	8.72	28.07	90.15	2,074.03	5,666.83	6,022.85	5,986.06	36.79	163.711		
1,800.00	1,731.92	1,758.92	1,758.92	9.41	29.70	90.47	2,074.03	5,666.83	6,023.06	5,983.95	39.11	154.011		
1,900.00	1,825.04	1,852.04	1,852.04	10.11	31.32	90.79	2,074.03	5,666.83	6,023.49	5,982.06	41.43	145.396		
2,000.00	1,918.15	1,945.15	1,945.15	10.81	32.95	91.11	2,074.03	5,666.83	6,024.14	5,980.39	43.75	137.696		
2,100.00	2,011.27	2,038.27	2,038.27	11.51	34.57	91.44	2,074.03	5,666.83	6,025.02	5,978.94	46.07	130.774		
2,200.00	2,104.39	2,131.39	2,131.39	12.21	36.20	91.76	2,074.03	5,666.83	6,026.11	5,977.71	48.40	124.519		
2,300.00	2,197.50	2,224.50	2,224.50	12.91	37.82	92.08	2,074.03	5,666.83	6,027.42	5,976.70	50.72	118.841		
2,400.00	2,290.62	2,317.62	2,317.62	13.61	39.45	92.41	2,074.03	5,666.83	6,028.96	5,975.91	53.04	113.663		
2,500.00	2,383.73	2,410.73	2,410.73	14.31	41.07	92.73	2,074.03	5,666.83	6,030.71	5,975.34	55.37	108.924		
2,600.00	2,476.85	2,503.85	2,503.85	15.01	42.70	93.05	2,074.03	5,666.83	6,032.68	5,974.99	57.69	104.570		
2,700.00	2,569.96	2,603.04	2,596.96	15.72	44.43	93.37	2,074.03	5,666.83	6,034.87	5,974.75	60.12	100.381		
2,800.00	2,663.08	2,709.92	2,690.08	16.42	46.29	93.69	2,074.03	5,666.83	6,037.29	5,974.60	62.68	96.314		
2,900.00	2,756.20	2,783.20	2,783.20	17.12	47.57	94.02	2,074.03	5,666.83	6,039.92	5,975.26	64.66	93.410		
3,000.00	2,849.31	2,876.31	2,876.31	17.83	49.20	94.34	2,074.03	5,666.83	6,042.77	5,975.79	66.98	90.213		
3,100.00	2,942.43	2,969.43	2,969.43	18.53	50.82	94.66	2,074.03	5,666.83	6,045.84	5,976.53	69.31	87.235		
3,200.00	3,035.54	3,062.54	3,062.54	19.24	52.45	94.98	2,074.03	5,666.83	6,049.12	5,977.50	71.63	84.454		
3,300.00	3,128.66	3,155.66	3,155.66	19.94	54.07	95.30	2,074.03	5,666.83	6,052.63	5,978.68	73.95	81.851		
3,400.00	3,221.77	3,248.77	3,248.77	20.65	55.70	95.62	2,074.03	5,666.83	6,056.35	5,980.08	76.27	79.410		
3,500.00	3,314.89	3,341.89	3,341.89	21.35	57.32	95.94	2,074.03	5,666.83	6,060.29	5,981.71	78.59	77.117		
3,600.00	3,408.01	3,435.01	3,435.01	22.06	58.95	96.26	2,074.03	5,666.83	6,064.45	5,983.54	80.90	74.959		
3,700.00	3,501.12	3,528.12	3,528.12	22.77	60.57	96.58	2,074.03	5,666.83	6,068.82	5,985.60	83.22	72.924		
3,800.00	3,594.24	3,621.24	3,621.24	23.47	62.20	96.90	2,074.03	5,666.83	6,073.41	5,987.87	85.54	71.003		
3,900.00	3,687.35	3,714.35	3,714.35	24.18	63.82	97.21	2,074.03	5,666.83	6,078.21	5,990.36	87.85	69.187		
4,000.00	3,780.47	3,807.47	3,807.47	24.89	65.45	97.53	2,074.03	5,666.83	6,083.23	5,993.06	90.17	67.467		
4,100.00	3,873.58	3,900.58	3,900.58	25.59	67.07	97.85	2,074.03	5,666.83	6,088.46	5,995.98	92.48	65.837		
4,200.00	3,966.70	4,006.30	3,993.70	26.30	68.92	98.16	2,074.03	5,666.83	6,093.91	5,998.90	95.01	64.140		
4,300.00	4,059.81	4,086.81	4,086.81	27.01	70.32	98.48	2,074.03	5,666.83	6,099.57	6,002.47	97.10	62.818		
4,400.00	4,152.93	4,179.93	4,179.93	27.71	71.95	98.80	2,074.03	5,666.83	6,105.44	6,006.03	99.41	61.418		
4,500.00	4,246.05	4,273.05	4,273.05	28.42	73.58	99.11	2,074.03	5,666.83	6,111.52	6,009.81	101.72	60.084		
4,600.00	4,339.16	4,366.16	4,366.16	29.13	75.20	99.43	2,074.03	5,666.83	6,117.82	6,013.80	104.02	58.813		
4,700.00	4,432.28	4,459.28	4,459.28	29.83	76.83	99.74	2,074.03	5,666.83	6,124.32	6,018.00	106.33	57.599		
4,800.00	4,525.39	4,552.39	4,552.39	30.54	78.45	100.05	2,074.03	5,666.83	6,131.04	6,022.41	108.63	56.440		
4,900.00	4,618.51	4,645.51	4,645.51	31.25	80.08	100.37	2,074.03	5,666.83	6,137.96	6,027.03	110.93	55.332		
5,000.00	4,711.62	4,738.62	4,738.62	31.95	81.70	100.68	2,074.03	5,666.83	6,145.10	6,031.87	113.23	54.271		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - ABND VERT LOWRY 11-29 - OWB - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC-ONLY													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)	Minimum Separation (usft)	Separation Factor		
5,100.00	4,804.74	4,831.74	4,831.74	32.66	83.33	100.99	2,074.03	5,666.83	6,152.44	6,036.91	115.53	53.255		
5,200.00	4,897.86	4,924.86	4,924.86	33.37	84.95	101.30	2,074.03	5,666.83	6,159.99	6,042.16	117.82	52.281		
5,300.00	4,990.97	5,017.97	5,017.97	34.08	86.58	101.61	2,074.03	5,666.83	6,167.74	6,047.62	120.12	51.347		
5,400.00	5,084.09	5,111.09	5,111.09	34.78	88.20	101.92	2,074.03	5,666.83	6,175.70	6,053.29	122.41	50.450		
5,500.00	5,177.20	5,204.20	5,204.20	35.49	89.83	102.23	2,074.03	5,666.83	6,183.86	6,059.16	124.70	49.589		
5,600.00	5,270.32	5,302.68	5,297.32	36.20	91.55	102.54	2,074.03	5,666.83	6,192.23	6,065.15	127.09	48.725		
5,700.00	5,363.43	5,409.57	5,390.43	36.91	93.41	102.85	2,074.03	5,666.83	6,200.81	6,071.19	129.61	47.840		
5,800.00	5,456.55	5,483.55	5,483.55	37.61	94.70	103.15	2,074.03	5,666.83	6,209.58	6,078.01	131.57	47.197		
5,900.00	5,549.67	5,576.67	5,576.67	38.32	96.33	103.46	2,074.03	5,666.83	6,218.56	6,084.71	133.85	46.459		
6,000.00	5,642.78	5,669.78	5,669.78	39.03	97.95	103.76	2,074.03	5,666.83	6,227.73	6,091.60	136.13	45.748		
6,100.00	5,735.90	5,762.90	5,762.90	39.74	99.58	104.07	2,074.03	5,666.83	6,237.11	6,098.69	138.41	45.062		
6,200.00	5,829.01	5,856.01	5,856.01	40.44	101.20	104.37	2,074.03	5,666.83	6,246.68	6,105.99	140.69	44.400		
6,300.00	5,922.13	5,949.13	5,949.13	41.15	102.83	104.67	2,074.03	5,666.83	6,256.45	6,113.49	142.97	43.762		
6,400.00	6,015.24	6,042.24	6,042.24	41.86	104.45	104.98	2,074.03	5,666.83	6,266.42	6,121.18	145.24	43.145		
6,500.00	6,108.36	6,135.36	6,135.36	42.57	106.08	105.28	2,074.03	5,666.83	6,276.59	6,129.08	147.51	42.550		
6,600.00	6,201.47	6,228.47	6,228.47	43.28	107.70	105.58	2,074.03	5,666.83	6,286.95	6,137.17	149.78	41.974		
6,700.00	6,294.59	6,321.59	6,321.59	43.98	109.33	105.88	2,074.03	5,666.83	6,297.50	6,145.45	152.05	41.417		
6,800.00	6,387.71	6,414.71	6,414.71	44.69	110.95	106.17	2,074.03	5,666.83	6,308.25	6,153.93	154.32	40.879		
6,900.00	6,480.82	6,507.82	6,507.82	45.40	112.58	106.47	2,074.03	5,666.83	6,319.19	6,162.61	156.58	40.358		
7,000.00	6,573.94	6,600.94	6,600.94	46.11	114.20	106.77	2,074.03	5,666.83	6,330.32	6,171.48	158.84	39.853		
7,100.00	6,667.05	6,705.95	6,694.05	46.82	116.04	107.06	2,074.03	5,666.83	6,341.64	6,180.33	161.31	39.314		
7,200.00	6,760.17	6,787.17	6,787.17	47.52	117.45	107.36	2,074.03	5,666.83	6,353.15	6,189.79	163.36	38.891		
7,300.00	6,853.28	6,880.28	6,880.28	48.23	119.08	107.65	2,074.03	5,666.83	6,364.85	6,199.24	165.61	38.432		
7,400.00	6,946.40	6,973.40	6,973.40	48.94	120.71	107.95	2,074.03	5,666.83	6,376.73	6,208.87	167.87	37.987		
7,500.00	7,039.52	7,066.52	7,066.52	49.65	122.33	108.24	2,074.03	5,666.83	6,388.80	6,218.69	170.12	37.555		
7,600.00	7,132.94	7,159.94	7,159.94	50.33	123.96	88.91	2,074.03	5,666.83	6,396.16	6,223.80	172.36	37.109		
7,700.00	7,225.98	7,252.98	7,252.98	50.90	125.58	64.92	2,074.03	5,666.83	6,386.85	6,212.30	174.55	36.590		
7,800.00	7,315.86	7,342.86	7,342.86	51.34	127.15	48.70	2,074.03	5,666.83	6,360.62	6,183.99	176.62	36.013		
7,900.00	7,399.85	7,426.85	7,426.85	51.68	128.62	39.10	2,074.03	5,666.83	6,318.24	6,139.73	178.52	35.393		
8,000.00	7,475.41	7,502.41	7,502.41	51.91	129.94	33.62	2,074.03	5,666.83	6,260.99	6,080.79	180.19	34.746		
8,100.00	7,540.24	7,567.24	7,567.24	52.05	131.07	30.81	2,074.03	5,666.83	6,190.56	6,008.94	181.62	34.085		
8,200.00	7,592.37	7,619.37	7,619.37	52.11	131.98	30.17	2,074.03	5,666.83	6,109.05	5,926.28	182.77	33.426		
8,300.00	7,630.20	7,657.20	7,657.20	52.09	132.64	32.27	2,074.03	5,666.83	6,018.88	5,835.27	183.61	32.781		
8,400.00	7,652.61	7,679.61	7,679.61	52.01	133.03	41.54	2,074.03	5,666.83	5,922.76	5,738.62	184.13	32.166		
8,500.00	7,659.00	7,686.00	7,686.00	51.89	133.14	90.00	2,074.03	5,666.83	5,823.55	5,639.22	184.33	31.593		
8,600.00	7,659.00	7,686.00	7,686.00	51.77	133.14	90.00	2,074.03	5,666.83	5,723.83	5,539.43	184.40	31.040		
8,700.00	7,659.00	7,686.00	7,686.00	51.67	133.14	90.00	2,074.03	5,666.83	5,624.12	5,439.65	184.47	30.488		
8,800.00	7,659.00	7,686.00	7,686.00	51.61	133.14	90.00	2,074.03	5,666.83	5,524.42	5,339.87	184.55	29.935		
8,900.00	7,659.00	7,686.00	7,686.00	51.58	133.14	90.00	2,074.03	5,666.83	5,424.74	5,240.11	184.63	29.382		
9,000.00	7,659.00	7,686.00	7,686.00	51.59	133.14	90.00	2,074.03	5,666.83	5,325.06	5,140.34	184.72	28.828		
9,100.00	7,659.00	7,686.00	7,686.00	51.67	133.14	90.00	2,074.03	5,666.83	5,225.40	5,040.59	184.81	28.275		
9,200.00	7,659.00	7,686.00	7,686.00	51.83	133.14	90.00	2,074.03	5,666.83	5,125.75	4,940.84	184.90	27.721		
9,300.00	7,659.00	7,686.00	7,686.00	52.14	133.14	90.00	2,074.03	5,666.83	5,026.11	4,841.11	185.00	27.168		
9,400.00	7,659.00	7,686.00	7,686.00	52.67	133.14	90.00	2,074.03	5,666.83	4,926.49	4,741.38	185.11	26.614		
9,500.00	7,659.00	7,686.00	7,686.00	53.53	133.14	90.00	2,074.03	5,666.83	4,826.88	4,641.66	185.22	26.060		
9,600.00	7,659.00	7,686.00	7,686.00	54.75	133.14	90.00	2,074.03	5,666.83	4,727.29	4,541.95	185.34	25.506		
9,700.00	7,659.00	7,686.00	7,686.00	56.29	133.14	90.00	2,074.03	5,666.83	4,627.72	4,442.25	185.47	24.952		
9,800.00	7,659.00	7,686.00	7,686.00	58.05	133.14	90.00	2,074.03	5,666.83	4,528.17	4,342.57	185.60	24.397		
9,900.00	7,659.00	7,686.00	7,686.00	59.97	133.14	90.00	2,074.03	5,666.83	4,428.63	4,242.89	185.74	23.843		
10,000.00	7,659.00	7,686.00	7,686.00	62.00	133.14	90.00	2,074.03	5,666.83	4,329.12	4,143.23	185.89	23.288		
10,100.00	7,659.00	7,686.00	7,686.00	64.11	133.14	90.00	2,074.03	5,666.83	4,229.63	4,043.58	186.05	22.733		
10,200.00	7,659.00	7,686.00	7,686.00	66.28	133.14	90.00	2,074.03	5,666.83	4,130.17	3,943.95	186.22	22.179		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - ABND VERT LOWRY 11-29 - OWB - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC-ONLY													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)	Minimum Separation (usft)	Separation Factor		
10,300.00	7,659.00	7,686.00	7,686.00	68.51	133.14	90.00	2,074.03	5,666.83	4,030.73	3,844.33	186.40	21.624		
10,400.00	7,659.00	7,686.00	7,686.00	70.77	133.14	90.00	2,074.03	5,666.83	3,931.33	3,744.73	186.60	21.068		
10,500.00	7,659.00	7,686.00	7,686.00	73.06	133.14	90.00	2,074.03	5,666.83	3,831.95	3,645.14	186.80	20.513		
10,600.00	7,659.00	7,686.00	7,686.00	75.39	133.14	90.00	2,074.03	5,666.83	3,732.60	3,545.58	187.02	19.958		
10,700.00	7,659.00	7,686.00	7,686.00	77.74	133.14	90.00	2,074.03	5,666.83	3,633.29	3,446.03	187.26	19.402		
10,800.00	7,659.00	7,686.00	7,686.00	80.12	133.14	90.00	2,074.03	5,666.83	3,534.02	3,346.51	187.51	18.847		
10,900.00	7,659.00	7,686.00	7,686.00	82.51	133.14	90.00	2,074.03	5,666.83	3,434.80	3,247.01	187.78	18.291		
11,000.00	7,659.00	7,686.00	7,686.00	84.93	133.14	90.00	2,074.03	5,666.83	3,335.62	3,147.54	188.08	17.735		
11,100.00	7,659.00	7,686.00	7,686.00	87.36	133.14	90.00	2,074.03	5,666.83	3,236.49	3,048.09	188.39	17.180		
11,200.00	7,659.00	7,686.00	7,686.00	89.81	133.14	90.00	2,074.03	5,666.83	3,137.41	2,948.68	188.73	16.624		
11,300.00	7,659.00	7,686.00	7,686.00	92.27	133.14	90.00	2,074.03	5,666.83	3,038.40	2,849.29	189.10	16.067		
11,400.00	7,659.00	7,686.00	7,686.00	94.75	133.14	90.00	2,074.03	5,666.83	2,939.45	2,749.94	189.50	15.511		
11,500.00	7,659.00	7,686.00	7,686.00	97.23	133.14	90.00	2,074.03	5,666.83	2,840.57	2,650.63	189.94	14.955		
11,600.00	7,659.00	7,686.00	7,686.00	99.73	133.14	90.00	2,074.03	5,666.83	2,741.78	2,551.36	190.42	14.399		
11,700.00	7,659.00	7,686.00	7,686.00	102.24	133.14	90.00	2,074.03	5,666.83	2,643.08	2,452.14	190.94	13.843		
11,800.00	7,659.00	7,686.00	7,686.00	104.75	133.14	90.00	2,074.03	5,666.83	2,544.48	2,352.97	191.51	13.286		
11,900.00	7,659.00	7,686.00	7,686.00	107.28	133.14	90.00	2,074.03	5,666.83	2,445.99	2,253.85	192.14	12.730		
12,000.00	7,659.00	7,686.00	7,686.00	109.81	133.14	90.00	2,074.03	5,666.83	2,347.63	2,154.79	192.84	12.174		
12,100.00	7,659.00	7,686.00	7,686.00	112.35	133.14	90.00	2,074.03	5,666.83	2,249.42	2,055.80	193.61	11.618		
12,200.00	7,659.00	7,686.00	7,686.00	114.90	133.14	90.00	2,074.03	5,666.83	2,151.37	1,956.89	194.47	11.063		
12,300.00	7,659.00	7,686.00	7,686.00	117.46	133.14	90.00	2,074.03	5,666.83	2,053.50	1,858.07	195.44	10.507		
12,400.00	7,659.00	7,686.00	7,686.00	120.02	133.14	90.00	2,074.03	5,666.83	1,955.86	1,759.34	196.52	9.953		
12,500.00	7,659.00	7,686.00	7,686.00	122.58	133.14	90.00	2,074.03	5,666.83	1,858.46	1,660.73	197.74	9.399		
12,600.00	7,659.00	7,686.00	7,686.00	125.15	133.14	90.00	2,074.03	5,666.83	1,761.36	1,562.24	199.12	8.846		
12,700.00	7,659.00	7,686.00	7,686.00	127.73	133.14	90.00	2,074.03	5,666.83	1,664.60	1,463.90	200.70	8.294		
12,800.00	7,659.00	7,686.00	7,686.00	130.31	133.14	90.00	2,074.03	5,666.83	1,568.25	1,365.74	202.51	7.744		
12,900.00	7,659.00	7,686.00	7,686.00	132.90	133.14	90.00	2,074.03	5,666.83	1,472.38	1,267.79	204.59	7.197		
13,000.00	7,659.00	7,686.00	7,686.00	135.49	133.14	90.00	2,074.03	5,666.83	1,377.10	1,170.09	207.01	6.652		
13,100.00	7,659.00	7,686.00	7,686.00	138.08	133.14	90.00	2,074.03	5,666.83	1,282.54	1,072.70	209.84	6.112		
13,200.00	7,659.00	7,686.00	7,686.00	140.68	133.14	90.00	2,074.03	5,666.83	1,188.71	975.58	213.13	5.577		
13,300.00	7,659.00	7,686.00	7,686.00	143.28	133.14	90.00	2,074.03	5,666.83	1,095.70	878.74	216.95	5.050		
13,400.00	7,659.00	7,686.00	7,686.00	145.88	133.14	90.00	2,074.03	5,666.83	1,004.02	782.51	221.52	4.532		
13,500.00	7,659.00	7,686.00	7,686.00	148.48	133.14	90.00	2,074.03	5,666.83	914.10	687.09	227.00	4.027		
13,600.00	7,659.00	7,686.00	7,686.00	151.09	133.14	90.00	2,074.03	5,666.83	826.49	592.86	233.63	3.538		
13,700.00	7,659.00	7,686.00	7,686.00	153.70	133.14	90.00	2,074.03	5,666.83	742.02	500.38	241.65	3.071		
13,800.00	7,659.00	7,686.00	7,686.00	156.32	133.14	90.00	2,074.03	5,666.83	661.90	410.61	251.29	2.634		
13,900.00	7,659.00	7,686.00	7,686.00	158.94	133.14	90.00	2,074.03	5,666.83	587.90	325.25	262.65	2.238		
14,000.00	7,659.00	7,686.00	7,686.00	161.56	133.14	90.00	2,074.03	5,666.83	522.62	247.23	275.39	1.898		
14,100.00	7,659.00	7,686.00	7,686.00	164.18	133.14	90.00	2,074.03	5,666.83	469.73	181.52	288.21	1.630		
14,200.00	7,659.00	7,686.00	7,686.00	166.80	133.14	90.00	2,074.03	5,666.83	433.77	135.46	298.32	1.454	Level 3	
14,300.00	7,659.00	7,686.00	7,686.00	169.43	133.14	90.00	2,074.03	5,666.83	419.13	117.10	302.03	1.388	Level 3	
14,312.44	7,659.00	7,686.00	7,686.00	169.76	133.14	90.00	2,074.03	5,666.83	418.94	117.04	301.90	1.388	Level 3, CC, ES, SF	
14,400.00	7,659.00	7,686.00	7,686.00	172.06	133.14	90.00	2,074.03	5,666.83	428.00	130.69	297.31	1.440	Level 3	
14,500.00	7,659.00	7,686.00	7,686.00	174.69	133.14	90.00	2,074.03	5,666.83	459.01	173.17	285.84	1.606		
14,600.00	7,659.00	7,686.00	7,686.00	177.33	133.14	90.00	2,074.03	5,666.83	508.14	236.70	271.44	1.872		
14,700.00	7,659.00	7,686.00	7,686.00	179.96	133.14	90.00	2,074.03	5,666.83	570.71	313.50	257.21	2.219		
14,800.00	7,659.00	7,686.00	7,686.00	182.60	133.14	90.00	2,074.03	5,666.83	642.83	398.16	244.67	2.627		
14,900.00	7,659.00	7,686.00	7,686.00	185.24	133.14	90.00	2,074.03	5,666.83	721.62	487.45	234.17	3.082		
15,000.00	7,659.00	7,686.00	7,686.00	187.88	133.14	90.00	2,074.03	5,666.83	805.14	579.53	225.60	3.569		
15,100.00	7,659.00	7,686.00	7,686.00	190.52	133.14	90.00	2,074.03	5,666.83	892.05	673.40	218.66	4.080		
15,200.00	7,659.00	7,686.00	7,686.00	193.16	133.14	90.00	2,074.03	5,666.83	981.46	768.44	213.03	4.607		
15,300.00	7,659.00	7,686.00	7,686.00	195.81	133.14	90.00	2,074.03	5,666.83	1,072.75	864.29	208.45	5.146		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - ABND VERT LOWRY 11-29 - OWB - Design #1												Offset Site Error:	0.00 usft
Survey Program: 0-INC-ONLY												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)	Minimum Separation (usft)	Separation Factor	
15,400.00	7,659.00	7,686.00	7,686.00	198.45	133.14	90.00	2,074.03	5,666.83	1,165.46	960.75	204.71	5.693	
15,500.00	7,659.00	7,686.00	7,686.00	201.10	133.14	90.00	2,074.03	5,666.83	1,259.29	1,057.65	201.64	6.245	
15,600.00	7,659.00	7,686.00	7,686.00	203.75	133.14	90.00	2,074.03	5,666.83	1,354.00	1,154.90	199.10	6.801	
15,700.00	7,659.00	7,686.00	7,686.00	206.40	133.14	90.00	2,074.03	5,666.83	1,449.42	1,252.44	196.98	7.358	
15,800.00	7,659.00	7,686.00	7,686.00	209.05	133.14	90.00	2,074.03	5,666.83	1,545.43	1,350.22	195.21	7.917	
15,900.00	7,659.00	7,686.00	7,686.00	211.70	133.14	90.00	2,074.03	5,666.83	1,641.90	1,448.19	193.72	8.476	
16,000.00	7,659.00	7,686.00	7,686.00	214.36	133.14	90.00	2,074.03	5,666.83	1,738.78	1,546.32	192.46	9.035	
16,100.00	7,659.00	7,686.00	7,686.00	217.01	133.14	90.00	2,074.03	5,666.83	1,835.99	1,644.61	191.39	9.593	
16,200.00	7,659.00	7,686.00	7,686.00	219.67	133.14	90.00	2,074.03	5,666.83	1,933.49	1,743.02	190.47	10.151	
16,300.00	7,659.00	7,686.00	7,686.00	222.32	133.14	90.00	2,074.03	5,666.83	2,031.23	1,841.54	189.69	10.708	
16,400.00	7,659.00	7,686.00	7,686.00	224.98	133.14	90.00	2,074.03	5,666.83	2,129.18	1,940.16	189.02	11.264	
16,500.00	7,659.00	7,686.00	7,686.00	227.64	133.14	90.00	2,074.03	5,666.83	2,227.31	2,038.88	188.44	11.820	
16,600.00	7,659.00	7,686.00	7,686.00	230.30	133.14	90.00	2,074.03	5,666.83	2,325.60	2,137.67	187.93	12.375	
16,700.00	7,659.00	7,686.00	7,686.00	232.96	133.14	90.00	2,074.03	5,666.83	2,424.03	2,236.54	187.50	12.928	
16,800.00	7,659.00	7,686.00	7,686.00	235.62	133.14	90.00	2,074.03	5,666.83	2,522.59	2,335.47	187.12	13.481	
16,900.00	7,659.00	7,686.00	7,686.00	238.28	133.14	90.00	2,074.03	5,666.83	2,621.25	2,434.46	186.79	14.033	
17,000.00	7,659.00	7,686.00	7,686.00	240.95	133.14	90.00	2,074.03	5,666.83	2,720.01	2,533.51	186.51	14.584	
17,100.00	7,659.00	7,686.00	7,686.00	243.61	133.14	90.00	2,074.03	5,666.83	2,818.86	2,632.61	186.26	15.134	
17,200.00	7,659.00	7,686.00	7,686.00	246.27	133.14	90.00	2,074.03	5,666.83	2,917.79	2,731.75	186.04	15.684	
17,300.00	7,659.00	7,686.00	7,686.00	248.94	133.14	90.00	2,074.03	5,666.83	3,016.79	2,830.94	185.85	16.232	
17,400.00	7,659.00	7,686.00	7,686.00	251.60	133.14	90.00	2,074.03	5,666.83	3,115.85	2,930.16	185.69	16.780	
17,500.00	7,659.00	7,686.00	7,686.00	254.27	133.14	90.00	2,074.03	5,666.83	3,214.97	3,029.43	185.54	17.327	
17,600.00	7,659.00	7,686.00	7,686.00	256.94	133.14	90.00	2,074.03	5,666.83	3,314.14	3,128.72	185.42	17.874	
17,700.00	7,659.00	7,686.00	7,686.00	259.61	133.14	90.00	2,074.03	5,666.83	3,413.36	3,228.05	185.31	18.419	
17,800.00	7,659.00	7,686.00	7,686.00	262.27	133.14	90.00	2,074.03	5,666.83	3,512.63	3,327.41	185.22	18.964	
17,900.00	7,659.00	7,686.00	7,686.00	264.94	133.14	90.00	2,074.03	5,666.83	3,611.94	3,426.79	185.14	19.509	
18,000.00	7,659.00	7,686.00	7,686.00	267.61	133.14	90.00	2,074.03	5,666.83	3,711.28	3,526.20	185.08	20.052	
18,100.00	7,659.00	7,686.00	7,686.00	270.28	133.14	90.00	2,074.03	5,666.83	3,810.66	3,625.63	185.02	20.596	
18,200.00	7,659.00	7,686.00	7,686.00	272.95	133.14	90.00	2,074.03	5,666.83	3,910.07	3,725.09	184.98	21.138	
18,300.00	7,659.00	7,686.00	7,686.00	275.62	133.14	90.00	2,074.03	5,666.83	4,009.50	3,824.56	184.94	21.680	
18,400.00	7,659.00	7,686.00	7,686.00	278.29	133.14	90.00	2,074.03	5,666.83	4,108.97	3,924.06	184.91	22.221	
18,500.00	7,659.00	7,686.00	7,686.00	280.97	133.14	90.00	2,074.03	5,666.83	4,208.46	4,023.57	184.89	22.762	
18,558.76	7,659.00	7,686.00	7,686.00	282.54	133.14	90.00	2,074.03	5,666.83	4,266.93	4,082.05	184.88	23.079	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - ABND VERT ROSENFELD 4-29 - OWB - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC-ONLY													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	31.00	31.00	0.00	0.25	69.66	2,073.65	5,594.77	5,966.70					
100.00	100.00	131.00	131.00	0.13	1.34	69.66	2,073.65	5,594.77	5,966.70	5,965.23	1.47	4,060.070		
200.00	199.98	230.98	230.98	0.50	3.08	86.23	2,073.65	5,594.77	5,966.58	5,963.01	3.57	1,669.835		
300.00	299.84	330.84	330.84	0.86	4.82	86.29	2,073.65	5,594.77	5,966.24	5,960.56	5.68	1,050.415		
400.00	399.45	430.45	430.45	1.23	6.56	86.38	2,073.65	5,594.77	5,965.68	5,957.89	7.79	765.383		
500.00	498.70	529.70	529.70	1.63	8.29	86.51	2,073.65	5,594.77	5,964.92	5,955.00	9.92	601.252		
600.00	597.47	628.47	628.47	2.05	10.02	86.68	2,073.65	5,594.77	5,963.98	5,951.92	12.06	494.403		
700.00	695.62	726.62	726.62	2.49	11.73	86.88	2,073.65	5,594.77	5,962.89	5,948.66	14.22	419.211		
800.00	793.06	824.06	824.06	2.98	13.43	87.11	2,073.65	5,594.77	5,961.68	5,945.27	16.41	363.372		
900.00	889.64	920.64	920.64	3.50	15.12	87.38	2,073.65	5,594.77	5,960.39	5,941.78	18.61	320.239		
1,000.00	985.27	1,016.27	1,016.27	4.06	16.79	87.67	2,073.65	5,594.77	5,959.07	5,938.23	20.84	285.908		
1,100.00	1,079.82	1,110.82	1,110.82	4.66	18.44	88.00	2,073.65	5,594.77	5,957.77	5,934.67	23.10	257.933		
1,200.00	1,173.23	1,204.23	1,204.23	5.31	20.07	88.33	2,073.65	5,594.77	5,956.55	5,931.17	25.38	234.727		
1,300.00	1,266.35	1,302.65	1,302.65	5.98	21.78	88.66	2,073.65	5,594.77	5,955.52	5,927.76	27.76	214.505		
1,400.00	1,359.46	1,409.54	1,409.54	6.66	23.65	88.99	2,073.65	5,594.77	5,954.72	5,924.41	30.31	196.478		
1,500.00	1,452.58	1,483.58	1,483.58	7.34	24.94	89.31	2,073.65	5,594.77	5,954.14	5,921.86	32.28	184.436		
1,600.00	1,545.69	1,576.69	1,576.69	8.03	26.57	89.64	2,073.65	5,594.77	5,953.78	5,919.19	34.60	172.095		
1,700.00	1,638.81	1,669.81	1,669.81	8.72	28.19	89.97	2,073.65	5,594.77	5,953.65	5,916.74	36.91	161.293		
1,710.06	1,648.17	1,679.17	1,679.17	8.79	28.36	90.00	2,073.65	5,594.77	5,953.65	5,916.50	37.15	160.281		
1,800.00	1,731.92	1,762.92	1,762.92	9.41	29.82	90.29	2,073.65	5,594.77	5,953.74	5,914.51	39.23	151.763		
1,900.00	1,825.04	1,856.04	1,856.04	10.11	31.44	90.62	2,073.65	5,594.77	5,954.05	5,912.50	41.55	143.296		
2,000.00	1,918.15	1,949.15	1,949.15	10.81	33.07	90.95	2,073.65	5,594.77	5,954.59	5,910.71	43.87	135.726		
2,100.00	2,011.27	2,042.27	2,042.27	11.51	34.69	91.27	2,073.65	5,594.77	5,955.34	5,909.15	46.19	128.918		
2,200.00	2,104.39	2,135.39	2,135.39	12.21	36.32	91.60	2,073.65	5,594.77	5,956.33	5,907.81	48.52	122.765		
2,300.00	2,197.50	2,228.50	2,228.50	12.91	37.94	91.93	2,073.65	5,594.77	5,957.53	5,906.69	50.84	117.178		
2,400.00	2,290.62	2,321.62	2,321.62	13.61	39.57	92.25	2,073.65	5,594.77	5,958.96	5,905.79	53.17	112.083		
2,500.00	2,383.73	2,414.73	2,414.73	14.31	41.19	92.58	2,073.65	5,594.77	5,960.61	5,905.12	55.49	107.418		
2,600.00	2,476.85	2,507.85	2,507.85	15.01	42.82	92.91	2,073.65	5,594.77	5,962.48	5,904.67	57.81	103.132		
2,700.00	2,569.96	2,600.96	2,600.96	15.72	44.44	93.23	2,073.65	5,594.77	5,964.58	5,904.44	60.14	99.182		
2,800.00	2,663.08	2,705.92	2,705.92	16.42	46.28	93.56	2,073.65	5,594.77	5,966.90	5,904.23	62.67	95.214		
2,900.00	2,756.20	2,787.20	2,787.20	17.12	47.69	93.88	2,073.65	5,594.77	5,969.44	5,904.65	64.78	92.143		
3,000.00	2,849.31	2,880.31	2,880.31	17.83	49.32	94.21	2,073.65	5,594.77	5,972.20	5,905.09	67.11	88.995		
3,100.00	2,942.43	2,973.43	2,973.43	18.53	50.94	94.53	2,073.65	5,594.77	5,975.18	5,905.75	69.43	86.061		
3,200.00	3,035.54	3,066.54	3,066.54	19.24	52.57	94.86	2,073.65	5,594.77	5,978.38	5,906.63	71.75	83.321		
3,300.00	3,128.66	3,159.66	3,159.66	19.94	54.20	95.18	2,073.65	5,594.77	5,981.81	5,907.73	74.07	80.757		
3,400.00	3,221.77	3,252.77	3,252.77	20.65	55.82	95.50	2,073.65	5,594.77	5,985.45	5,909.06	76.39	78.352		
3,500.00	3,314.89	3,345.89	3,345.89	21.35	57.45	95.83	2,073.65	5,594.77	5,989.31	5,910.60	78.71	76.092		
3,600.00	3,408.01	3,439.01	3,439.01	22.06	59.07	96.15	2,073.65	5,594.77	5,993.40	5,912.37	81.03	73.966		
3,700.00	3,501.12	3,532.12	3,532.12	22.77	60.70	96.47	2,073.65	5,594.77	5,997.70	5,914.35	83.35	71.961		
3,800.00	3,594.24	3,625.24	3,625.24	23.47	62.32	96.80	2,073.65	5,594.77	6,002.22	5,916.55	85.66	70.068		
3,900.00	3,687.35	3,718.35	3,718.35	24.18	63.95	97.12	2,073.65	5,594.77	6,006.96	5,918.98	87.98	68.278		
4,000.00	3,780.47	3,811.47	3,811.47	24.89	65.57	97.44	2,073.65	5,594.77	6,011.91	5,921.62	90.29	66.583		
4,100.00	3,873.58	3,904.58	3,904.58	25.59	67.20	97.76	2,073.65	5,594.77	6,017.08	5,924.48	92.60	64.976		
4,200.00	3,966.70	4,002.30	4,002.30	26.30	68.90	98.08	2,073.65	5,594.77	6,022.47	5,927.48	95.00	63.397		
4,300.00	4,059.81	4,109.19	4,109.19	27.01	70.77	98.40	2,073.65	5,594.77	6,028.08	5,930.53	97.55	61.797		
4,400.00	4,152.93	4,183.93	4,183.93	27.71	72.07	98.72	2,073.65	5,594.77	6,033.90	5,934.36	99.53	60.621		
4,500.00	4,246.05	4,277.05	4,277.05	28.42	73.70	99.04	2,073.65	5,594.77	6,039.93	5,938.09	101.84	59.307		
4,600.00	4,339.16	4,370.16	4,370.16	29.13	75.32	99.36	2,073.65	5,594.77	6,046.18	5,942.03	104.15	58.054		
4,700.00	4,432.28	4,463.28	4,463.28	29.83	76.95	99.68	2,073.65	5,594.77	6,052.64	5,946.19	106.45	56.858		
4,800.00	4,525.39	4,556.39	4,556.39	30.54	78.57	99.99	2,073.65	5,594.77	6,059.31	5,950.56	108.76	55.715		
4,900.00	4,618.51	4,649.51	4,649.51	31.25	80.20	100.31	2,073.65	5,594.77	6,066.20	5,955.14	111.06	54.623		
5,000.00	4,711.62	4,742.62	4,742.62	31.95	81.82	100.63	2,073.65	5,594.77	6,073.29	5,959.94	113.36	53.577		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - ABND VERT ROSENFELD 4-29 - OWB - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC-ONLY													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)	Minimum Separation (usft)	Separation Factor		
5,100.00	4,804.74	4,835.74	4,835.74	32.66	83.45	100.94	2,073.65	5,594.77	6,080.60	5,964.95	115.65	52.576		
5,200.00	4,897.86	4,928.86	4,928.86	33.37	85.07	101.26	2,073.65	5,594.77	6,088.12	5,970.17	117.95	51.616		
5,300.00	4,990.97	5,021.97	5,021.97	34.08	86.70	101.57	2,073.65	5,594.77	6,095.84	5,975.60	120.25	50.695		
5,400.00	5,084.09	5,115.09	5,115.09	34.78	88.32	101.88	2,073.65	5,594.77	6,103.78	5,981.24	122.54	49.811		
5,500.00	5,177.20	5,208.20	5,208.20	35.49	89.95	102.20	2,073.65	5,594.77	6,111.92	5,987.09	124.83	48.962		
5,600.00	5,270.32	5,301.32	5,301.32	36.20	91.57	102.51	2,073.65	5,594.77	6,120.26	5,993.15	127.12	48.146		
5,700.00	5,363.43	5,405.57	5,394.43	36.91	93.39	102.82	2,073.65	5,594.77	6,128.82	5,999.22	129.60	47.290		
5,800.00	5,456.55	5,487.55	5,487.55	37.61	94.82	103.13	2,073.65	5,594.77	6,137.57	6,005.88	131.69	46.606		
5,900.00	5,549.67	5,580.67	5,580.67	38.32	96.45	103.44	2,073.65	5,594.77	6,146.53	6,012.56	133.97	45.878		
6,000.00	5,642.78	5,673.78	5,673.78	39.03	98.07	103.75	2,073.65	5,594.77	6,155.70	6,019.44	136.26	45.177		
6,100.00	5,735.90	5,766.90	5,766.90	39.74	99.70	104.05	2,073.65	5,594.77	6,165.07	6,026.53	138.54	44.502		
6,200.00	5,829.01	5,860.01	5,860.01	40.44	101.33	104.36	2,073.65	5,594.77	6,174.63	6,033.82	140.81	43.850		
6,300.00	5,922.13	5,953.13	5,953.13	41.15	102.95	104.67	2,073.65	5,594.77	6,184.40	6,041.31	143.09	43.221		
6,400.00	6,015.24	6,046.24	6,046.24	41.86	104.58	104.97	2,073.65	5,594.77	6,194.37	6,049.00	145.36	42.613		
6,500.00	6,108.36	6,139.36	6,139.36	42.57	106.20	105.28	2,073.65	5,594.77	6,204.53	6,056.90	147.63	42.026		
6,600.00	6,201.47	6,232.47	6,232.47	43.28	107.83	105.58	2,073.65	5,594.77	6,214.89	6,064.99	149.90	41.459		
6,700.00	6,294.59	6,325.59	6,325.59	43.98	109.45	105.88	2,073.65	5,594.77	6,225.45	6,073.28	152.17	40.911		
6,800.00	6,387.71	6,418.71	6,418.71	44.69	111.08	106.19	2,073.65	5,594.77	6,236.21	6,081.77	154.44	40.380		
6,900.00	6,480.82	6,511.82	6,511.82	45.40	112.70	106.49	2,073.65	5,594.77	6,247.15	6,090.45	156.70	39.867		
7,000.00	6,573.94	6,604.94	6,604.94	46.11	114.33	106.79	2,073.65	5,594.77	6,258.29	6,099.33	158.96	39.370		
7,100.00	6,667.05	6,698.05	6,698.05	46.82	116.02	107.09	2,073.65	5,594.77	6,269.63	6,108.34	161.29	38.873		
7,200.00	6,760.17	6,808.83	6,791.17	47.52	117.89	107.38	2,073.65	5,594.77	6,281.15	6,117.37	163.78	38.350		
7,300.00	6,853.28	6,884.28	6,884.28	48.23	119.20	107.68	2,073.65	5,594.77	6,292.87	6,127.14	165.73	37.971		
7,400.00	6,946.40	6,977.40	6,977.40	48.94	120.83	107.98	2,073.65	5,594.77	6,304.77	6,136.79	167.98	37.532		
7,500.00	7,039.52	7,070.52	7,070.52	49.65	122.45	108.27	2,073.65	5,594.77	6,316.86	6,146.63	170.23	37.107		
7,600.00	7,132.94	7,163.94	7,163.94	50.33	124.08	88.95	2,073.65	5,594.77	6,324.25	6,151.77	172.48	36.667		
7,700.00	7,225.98	7,256.98	7,256.98	50.90	125.71	64.96	2,073.65	5,594.77	6,314.96	6,140.29	174.67	36.154		
7,800.00	7,315.86	7,346.86	7,346.86	51.34	127.28	48.74	2,073.65	5,594.77	6,288.75	6,112.02	176.74	35.583		
7,900.00	7,399.85	7,430.85	7,430.85	51.68	128.74	39.15	2,073.65	5,594.77	6,246.41	6,067.78	178.63	34.969		
8,000.00	7,475.41	7,506.41	7,506.41	51.91	130.06	33.69	2,073.65	5,594.77	6,189.18	6,008.88	180.31	34.326		
8,100.00	7,540.24	7,571.24	7,571.24	52.05	131.19	30.90	2,073.65	5,594.77	6,118.78	5,937.05	181.73	33.669		
8,200.00	7,592.37	7,623.37	7,623.37	52.11	132.10	30.28	2,073.65	5,594.77	6,037.30	5,854.42	182.88	33.013		
8,300.00	7,630.20	7,661.20	7,661.20	52.09	132.76	32.43	2,073.65	5,594.77	5,947.16	5,763.43	183.72	32.371		
8,400.00	7,652.61	7,683.61	7,683.61	52.01	133.15	41.81	2,073.65	5,594.77	5,851.05	5,666.80	184.25	31.757		
8,500.00	7,659.00	7,690.00	7,690.00	51.89	133.26	90.00	2,073.65	5,594.77	5,751.85	5,567.41	184.44	31.185		
8,600.00	7,659.00	7,690.00	7,690.00	51.77	133.26	90.00	2,073.65	5,594.77	5,652.15	5,467.63	184.51	30.633		
8,700.00	7,659.00	7,690.00	7,690.00	51.67	133.26	90.00	2,073.65	5,594.77	5,552.45	5,367.86	184.59	30.080		
8,800.00	7,659.00	7,690.00	7,690.00	51.61	133.26	90.00	2,073.65	5,594.77	5,452.76	5,268.09	184.67	29.527		
8,900.00	7,659.00	7,690.00	7,690.00	51.58	133.26	90.00	2,073.65	5,594.77	5,353.08	5,168.33	184.75	28.975		
9,000.00	7,659.00	7,690.00	7,690.00	51.59	133.26	90.00	2,073.65	5,594.77	5,253.42	5,068.58	184.84	28.422		
9,100.00	7,659.00	7,690.00	7,690.00	51.67	133.26	90.00	2,073.65	5,594.77	5,153.77	4,968.84	184.93	27.869		
9,200.00	7,659.00	7,690.00	7,690.00	51.83	133.26	90.00	2,073.65	5,594.77	5,054.13	4,869.10	185.03	27.316		
9,300.00	7,659.00	7,690.00	7,690.00	52.14	133.26	90.00	2,073.65	5,594.77	4,954.50	4,769.37	185.13	26.762		
9,400.00	7,659.00	7,690.00	7,690.00	52.67	133.26	90.00	2,073.65	5,594.77	4,854.90	4,669.66	185.24	26.209		
9,500.00	7,659.00	7,690.00	7,690.00	53.53	133.26	90.00	2,073.65	5,594.77	4,755.31	4,569.95	185.35	25.655		
9,600.00	7,659.00	7,690.00	7,690.00	54.75	133.26	90.00	2,073.65	5,594.77	4,655.73	4,470.26	185.48	25.102		
9,700.00	7,659.00	7,690.00	7,690.00	56.29	133.26	90.00	2,073.65	5,594.77	4,556.18	4,370.57	185.60	24.548		
9,800.00	7,659.00	7,690.00	7,690.00	58.05	133.26	90.00	2,073.65	5,594.77	4,456.64	4,270.90	185.74	23.994		
9,900.00	7,659.00	7,690.00	7,690.00	59.97	133.26	90.00	2,073.65	5,594.77	4,357.13	4,171.24	185.89	23.440		
10,000.00	7,659.00	7,690.00	7,690.00	62.00	133.26	90.00	2,073.65	5,594.77	4,257.64	4,071.60	186.04	22.885		
10,100.00	7,659.00	7,690.00	7,690.00	64.11	133.26	90.00	2,073.65	5,594.77	4,158.17	3,971.97	186.21	22.331		
10,200.00	7,659.00	7,690.00	7,690.00	66.28	133.26	90.00	2,073.65	5,594.77	4,058.73	3,872.35	186.38	21.777		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - ABND VERT ROSENFELD 4-29 - OWB - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INCL-ONLY													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)	Minimum Separation (usft)	Separation Factor		
10,300.00	7,659.00	7,690.00	7,690.00	68.51	133.26	90.00	2,073.65	5,594.77	3,959.32	3,772.75	186.57	21.222		
10,400.00	7,659.00	7,690.00	7,690.00	70.77	133.26	90.00	2,073.65	5,594.77	3,859.94	3,673.17	186.76	20.667		
10,500.00	7,659.00	7,690.00	7,690.00	73.06	133.26	90.00	2,073.65	5,594.77	3,760.59	3,573.61	186.98	20.113		
10,600.00	7,659.00	7,690.00	7,690.00	75.39	133.26	90.00	2,073.65	5,594.77	3,661.28	3,474.07	187.20	19.558		
10,700.00	7,659.00	7,690.00	7,690.00	77.74	133.26	90.00	2,073.65	5,594.77	3,562.00	3,374.55	187.45	19.003		
10,800.00	7,659.00	7,690.00	7,690.00	80.12	133.26	90.00	2,073.65	5,594.77	3,462.77	3,275.06	187.71	18.447		
10,900.00	7,659.00	7,690.00	7,690.00	82.51	133.26	90.00	2,073.65	5,594.77	3,363.58	3,175.59	187.99	17.892		
11,000.00	7,659.00	7,690.00	7,690.00	84.93	133.26	90.00	2,073.65	5,594.77	3,264.44	3,076.15	188.30	17.337		
11,100.00	7,659.00	7,690.00	7,690.00	87.36	133.26	90.00	2,073.65	5,594.77	3,165.36	2,976.74	188.62	16.781		
11,200.00	7,659.00	7,690.00	7,690.00	89.81	133.26	90.00	2,073.65	5,594.77	3,066.34	2,877.36	188.98	16.226		
11,300.00	7,659.00	7,690.00	7,690.00	92.27	133.26	90.00	2,073.65	5,594.77	2,967.38	2,778.01	189.37	15.670		
11,400.00	7,659.00	7,690.00	7,690.00	94.75	133.26	90.00	2,073.65	5,594.77	2,868.49	2,678.70	189.79	15.114		
11,500.00	7,659.00	7,690.00	7,690.00	97.23	133.26	90.00	2,073.65	5,594.77	2,769.68	2,579.44	190.24	14.559		
11,600.00	7,659.00	7,690.00	7,690.00	99.73	133.26	90.00	2,073.65	5,594.77	2,670.96	2,480.22	190.74	14.003		
11,700.00	7,659.00	7,690.00	7,690.00	102.24	133.26	90.00	2,073.65	5,594.77	2,572.35	2,381.05	191.29	13.447		
11,800.00	7,659.00	7,690.00	7,690.00	104.75	133.26	90.00	2,073.65	5,594.77	2,473.84	2,281.94	191.90	12.891		
11,900.00	7,659.00	7,690.00	7,690.00	107.28	133.26	90.00	2,073.65	5,594.77	2,375.45	2,182.89	192.57	12.336		
12,000.00	7,659.00	7,690.00	7,690.00	109.81	133.26	90.00	2,073.65	5,594.77	2,277.21	2,083.91	193.31	11.780		
12,100.00	7,659.00	7,690.00	7,690.00	112.35	133.26	90.00	2,073.65	5,594.77	2,179.13	1,985.00	194.13	11.225		
12,200.00	7,659.00	7,690.00	7,690.00	114.90	133.26	90.00	2,073.65	5,594.77	2,081.23	1,886.18	195.05	10.670		
12,300.00	7,659.00	7,690.00	7,690.00	117.46	133.26	90.00	2,073.65	5,594.77	1,983.54	1,787.46	196.08	10.116		
12,400.00	7,659.00	7,690.00	7,690.00	120.02	133.26	90.00	2,073.65	5,594.77	1,886.09	1,688.85	197.24	9.562		
12,500.00	7,659.00	7,690.00	7,690.00	122.58	133.26	90.00	2,073.65	5,594.77	1,788.92	1,590.36	198.56	9.010		
12,600.00	7,659.00	7,690.00	7,690.00	125.15	133.26	90.00	2,073.65	5,594.77	1,692.09	1,492.03	200.06	8.458		
12,700.00	7,659.00	7,690.00	7,690.00	127.73	133.26	90.00	2,073.65	5,594.77	1,595.64	1,393.87	201.77	7.908		
12,800.00	7,659.00	7,690.00	7,690.00	130.31	133.26	90.00	2,073.65	5,594.77	1,499.66	1,295.91	203.75	7.360		
12,900.00	7,659.00	7,690.00	7,690.00	132.90	133.26	90.00	2,073.65	5,594.77	1,404.24	1,198.20	206.04	6.815		
13,000.00	7,659.00	7,690.00	7,690.00	135.49	133.26	90.00	2,073.65	5,594.77	1,309.50	1,100.79	208.71	6.274		
13,100.00	7,659.00	7,690.00	7,690.00	138.08	133.26	90.00	2,073.65	5,594.77	1,215.61	1,003.76	211.85	5.738		
13,200.00	7,659.00	7,690.00	7,690.00	140.68	133.26	90.00	2,073.65	5,594.77	1,122.61	907.09	215.52	5.209		
13,300.00	7,659.00	7,690.00	7,690.00	143.28	133.26	90.00	2,073.65	5,594.77	1,030.61	810.81	219.81	4.689		
13,400.00	7,659.00	7,690.00	7,690.00	145.88	133.26	90.00	2,073.65	5,594.77	940.25	715.30	224.95	4.180		
13,500.00	7,659.00	7,690.00	7,690.00	148.48	133.26	90.00	2,073.65	5,594.77	852.05	620.89	231.16	3.686		
13,600.00	7,659.00	7,690.00	7,690.00	151.09	133.26	90.00	2,073.65	5,594.77	766.75	528.09	238.66	3.213		
13,700.00	7,659.00	7,690.00	7,690.00	153.70	133.26	90.00	2,073.65	5,594.77	685.43	437.73	247.70	2.767		
13,800.00	7,659.00	7,690.00	7,690.00	156.32	133.26	90.00	2,073.65	5,594.77	609.69	351.28	258.41	2.359		
13,900.00	7,659.00	7,690.00	7,690.00	158.94	133.26	90.00	2,073.65	5,594.77	541.88	271.26	270.63	2.002		
14,000.00	7,659.00	7,690.00	7,690.00	161.56	133.26	90.00	2,073.65	5,594.77	485.34	201.96	283.38	1.713		
14,100.00	7,659.00	7,690.00	7,690.00	164.18	133.26	90.00	2,073.65	5,594.77	444.37	150.02	294.35	1.510		
14,200.00	7,659.00	7,690.00	7,690.00	166.80	133.26	90.00	2,073.65	5,594.77	423.53	123.49	300.04	1.412	Level 3	
14,240.43	7,659.00	7,690.00	7,690.00	167.87	133.26	90.00	2,073.65	5,594.77	421.60	121.47	300.12	1.405	Level 3, CC, ES, SF	
14,300.00	7,659.00	7,690.00	7,690.00	169.43	133.26	90.00	2,073.65	5,594.77	425.78	128.06	297.73	1.430	Level 3	
14,400.00	7,659.00	7,690.00	7,690.00	172.06	133.26	90.00	2,073.65	5,594.77	450.78	162.75	288.03	1.565		
14,500.00	7,659.00	7,690.00	7,690.00	174.69	133.26	90.00	2,073.65	5,594.77	495.09	220.72	274.37	1.804		
14,600.00	7,659.00	7,690.00	7,690.00	177.33	133.26	90.00	2,073.65	5,594.77	554.10	293.94	260.16	2.130		
14,700.00	7,659.00	7,690.00	7,690.00	179.96	133.26	90.00	2,073.65	5,594.77	623.65	376.36	247.29	2.522		
14,800.00	7,659.00	7,690.00	7,690.00	182.60	133.26	90.00	2,073.65	5,594.77	700.61	464.22	236.39	2.964		
14,900.00	7,659.00	7,690.00	7,690.00	185.24	133.26	90.00	2,073.65	5,594.77	782.80	555.36	227.44	3.442		
15,000.00	7,659.00	7,690.00	7,690.00	187.88	133.26	90.00	2,073.65	5,594.77	868.72	648.56	220.16	3.946		
15,100.00	7,659.00	7,690.00	7,690.00	190.52	133.26	90.00	2,073.65	5,594.77	957.39	743.13	214.26	4.468		
15,200.00	7,659.00	7,690.00	7,690.00	193.16	133.26	90.00	2,073.65	5,594.77	1,048.10	838.62	209.47	5.003		
15,300.00	7,659.00	7,690.00	7,690.00	195.81	133.26	90.00	2,073.65	5,594.77	1,140.36	934.80	205.56	5.547		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - ABND VERT ROSENFELD 4-29 - OWB - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC-ONLY													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)	Minimum Separation (usft)	Separation Factor		
15,400.00	7,659.00	7,690.00	7,690.00	198.45	133.26	90.00	2,073.65	5,594.77	1,233.83	1,031.48	202.35	6.097		
15,500.00	7,659.00	7,690.00	7,690.00	201.10	133.26	90.00	2,073.65	5,594.77	1,328.25	1,128.55	199.70	6.651		
15,600.00	7,659.00	7,690.00	7,690.00	203.75	133.26	90.00	2,073.65	5,594.77	1,423.43	1,225.93	197.50	7.207		
15,700.00	7,659.00	7,690.00	7,690.00	206.40	133.26	90.00	2,073.65	5,594.77	1,519.23	1,323.58	195.66	7.765		
15,800.00	7,659.00	7,690.00	7,690.00	209.05	133.26	90.00	2,073.65	5,594.77	1,615.55	1,421.43	194.11	8.323		
15,900.00	7,659.00	7,690.00	7,690.00	211.70	133.26	90.00	2,073.65	5,594.77	1,712.28	1,519.47	192.80	8.881		
16,000.00	7,659.00	7,690.00	7,690.00	214.36	133.26	90.00	2,073.65	5,594.77	1,809.37	1,617.67	191.70	9.439		
16,100.00	7,659.00	7,690.00	7,690.00	217.01	133.26	90.00	2,073.65	5,594.77	1,906.76	1,716.01	190.75	9.996		
16,200.00	7,659.00	7,690.00	7,690.00	219.67	133.26	90.00	2,073.65	5,594.77	2,004.41	1,814.46	189.94	10.553		
16,300.00	7,659.00	7,690.00	7,690.00	222.32	133.26	90.00	2,073.65	5,594.77	2,102.27	1,913.03	189.24	11.109		
16,400.00	7,659.00	7,690.00	7,690.00	224.98	133.26	90.00	2,073.65	5,594.77	2,200.33	2,011.69	188.65	11.664		
16,500.00	7,659.00	7,690.00	7,690.00	227.64	133.26	90.00	2,073.65	5,594.77	2,298.56	2,110.43	188.13	12.218		
16,600.00	7,659.00	7,690.00	7,690.00	230.30	133.26	90.00	2,073.65	5,594.77	2,396.93	2,209.26	187.68	12.771		
16,700.00	7,659.00	7,690.00	7,690.00	232.96	133.26	90.00	2,073.65	5,594.77	2,495.44	2,308.15	187.29	13.324		
16,800.00	7,659.00	7,690.00	7,690.00	235.62	133.26	90.00	2,073.65	5,594.77	2,594.05	2,407.10	186.95	13.876		
16,900.00	7,659.00	7,690.00	7,690.00	238.28	133.26	90.00	2,073.65	5,594.77	2,692.77	2,506.12	186.66	14.426		
17,000.00	7,659.00	7,690.00	7,690.00	240.95	133.26	90.00	2,073.65	5,594.77	2,791.58	2,605.19	186.40	14.976		
17,100.00	7,659.00	7,690.00	7,690.00	243.61	133.26	90.00	2,073.65	5,594.77	2,890.48	2,704.30	186.17	15.526		
17,200.00	7,659.00	7,690.00	7,690.00	246.27	133.26	90.00	2,073.65	5,594.77	2,989.44	2,803.46	185.98	16.074		
17,300.00	7,659.00	7,690.00	7,690.00	248.94	133.26	90.00	2,073.65	5,594.77	3,088.48	2,902.67	185.81	16.622		
17,400.00	7,659.00	7,690.00	7,690.00	251.60	133.26	90.00	2,073.65	5,594.77	3,187.57	3,001.91	185.66	17.169		
17,500.00	7,659.00	7,690.00	7,690.00	254.27	133.26	90.00	2,073.65	5,594.77	3,286.72	3,101.18	185.54	17.715		
17,600.00	7,659.00	7,690.00	7,690.00	256.94	133.26	90.00	2,073.65	5,594.77	3,385.92	3,200.49	185.43	18.260		
17,700.00	7,659.00	7,690.00	7,690.00	259.61	133.26	90.00	2,073.65	5,594.77	3,485.16	3,299.83	185.33	18.805		
17,800.00	7,659.00	7,690.00	7,690.00	262.27	133.26	90.00	2,073.65	5,594.77	3,584.45	3,399.20	185.25	19.349		
17,900.00	7,659.00	7,690.00	7,690.00	264.94	133.26	90.00	2,073.65	5,594.77	3,683.77	3,498.59	185.18	19.893		
18,000.00	7,659.00	7,690.00	7,690.00	267.61	133.26	90.00	2,073.65	5,594.77	3,783.13	3,598.01	185.12	20.436		
18,100.00	7,659.00	7,690.00	7,690.00	270.28	133.26	90.00	2,073.65	5,594.77	3,882.52	3,697.45	185.08	20.978		
18,200.00	7,659.00	7,690.00	7,690.00	272.95	133.26	90.00	2,073.65	5,594.77	3,981.95	3,796.91	185.04	21.520		
18,300.00	7,659.00	7,690.00	7,690.00	275.62	133.26	90.00	2,073.65	5,594.77	4,081.40	3,896.39	185.01	22.061		
18,400.00	7,659.00	7,690.00	7,690.00	278.29	133.26	90.00	2,073.65	5,594.77	4,180.88	3,995.89	184.98	22.601		
18,500.00	7,659.00	7,690.00	7,690.00	280.97	133.26	90.00	2,073.65	5,594.77	4,280.38	4,095.41	184.97	23.141		
18,558.76	7,659.00	7,690.00	7,690.00	282.54	133.26	90.00	2,073.65	5,594.77	4,338.86	4,153.90	184.96	23.458		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 25-26 3BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-179.68	-99.80	-0.56	99.81					
100.00	100.00	100.00	100.00	0.13	0.13	-179.68	-99.80	-0.56	99.81	99.54	0.27	371.228	CC, ES	
200.00	199.98	200.02	199.98	0.50	0.49	-163.41	-99.80	-0.56	101.48	100.49	0.99	102.634		
300.00	299.84	300.16	299.84	0.86	0.85	-164.18	-99.80	-0.56	106.50	104.79	1.72	62.053		
400.00	399.45	400.55	399.45	1.23	1.21	-165.32	-99.80	-0.56	114.91	112.47	2.45	46.972		
500.00	498.70	501.30	498.70	1.63	1.57	-166.67	-99.80	-0.56	126.74	123.56	3.18	39.851		
600.00	597.47	602.53	597.47	2.05	1.94	-168.06	-99.80	-0.56	142.02	138.10	3.92	36.237		
700.00	695.62	704.38	695.62	2.49	2.30	-169.39	-99.80	-0.56	160.74	156.08	4.66	34.471		
800.00	793.06	806.94	793.06	2.98	2.67	-170.62	-99.80	-0.56	182.92	177.50	5.41	33.791	SF	
900.00	889.64	889.64	889.64	3.50	2.97	-171.70	-99.80	-0.56	208.51	202.41	6.10	34.207		
1,000.00	985.27	980.40	980.39	4.06	3.28	-172.39	-100.74	-1.19	238.37	231.57	6.80	35.073		
1,100.00	1,079.82	1,068.26	1,068.16	4.66	3.57	-172.56	-103.91	-3.32	273.65	266.17	7.48	36.603		
1,200.00	1,173.23	1,156.87	1,156.56	5.31	3.87	-172.46	-109.04	-6.77	313.75	305.58	8.17	38.424		
1,300.00	1,266.35	1,248.04	1,247.48	5.98	4.18	-172.42	-114.58	-10.49	354.84	345.99	8.86	40.056		
1,400.00	1,359.46	1,339.20	1,338.40	6.66	4.50	-172.39	-120.12	-14.21	395.94	386.38	9.56	41.412		
1,500.00	1,452.58	1,430.37	1,429.32	7.34	4.82	-172.36	-125.67	-17.93	437.04	426.77	10.27	42.558		
1,600.00	1,545.69	1,521.53	1,520.24	8.03	5.15	-172.34	-131.21	-21.65	478.13	467.15	10.98	43.531		
1,700.00	1,638.81	1,612.70	1,611.16	8.72	5.48	-172.32	-136.75	-25.37	519.23	507.53	11.70	44.369		
1,800.00	1,731.92	1,703.86	1,702.08	9.41	5.81	-172.30	-142.29	-29.09	560.33	547.90	12.43	45.096		
1,900.00	1,825.04	1,804.97	1,793.00	10.11	6.18	-172.29	-147.83	-32.82	601.42	588.24	13.19	45.608		
2,000.00	1,918.15	1,886.19	1,883.92	10.81	6.47	-172.28	-153.37	-36.54	642.52	628.64	13.88	46.292		
2,100.00	2,011.27	1,977.36	1,974.84	11.51	6.81	-172.27	-158.92	-40.26	683.62	669.01	14.61	46.789		
2,200.00	2,104.39	2,068.52	2,065.76	12.21	7.15	-172.26	-164.46	-43.98	724.71	709.37	15.34	47.233		
2,300.00	2,197.50	2,159.69	2,156.68	12.91	7.48	-172.25	-170.00	-47.70	765.81	749.73	16.08	47.631		
2,400.00	2,290.62	2,250.85	2,247.60	13.61	7.82	-172.24	-175.54	-51.42	806.91	790.09	16.81	47.990		
2,500.00	2,383.73	2,342.02	2,338.52	14.31	8.16	-172.24	-181.08	-55.14	848.00	830.45	17.55	48.316		
2,600.00	2,476.85	2,433.18	2,429.44	15.01	8.50	-172.23	-186.62	-58.87	889.10	870.81	18.29	48.612		
2,700.00	2,569.96	2,524.35	2,520.36	15.72	8.84	-172.22	-192.17	-62.59	930.20	911.17	19.03	48.883		
2,800.00	2,663.08	2,615.51	2,611.28	16.42	9.18	-172.22	-197.71	-66.31	971.29	951.52	19.77	49.131		
2,900.00	2,756.20	2,706.68	2,702.20	17.12	9.53	-172.22	-203.25	-70.03	1,012.39	991.88	20.51	49.359		
3,000.00	2,849.31	2,802.16	2,793.12	17.83	9.88	-172.21	-208.79	-73.75	1,053.49	1,032.22	21.27	49.532		
3,100.00	2,942.43	2,889.01	2,884.04	18.53	10.21	-172.21	-214.33	-77.47	1,094.58	1,072.59	22.00	49.763		
3,200.00	3,035.54	2,980.17	2,974.96	19.24	10.55	-172.20	-219.87	-81.19	1,135.68	1,112.94	22.74	49.944		
3,300.00	3,128.66	3,071.34	3,065.88	19.94	10.90	-172.20	-225.41	-84.92	1,176.78	1,153.29	23.48	50.111		
3,400.00	3,221.77	3,162.50	3,156.80	20.65	11.24	-172.20	-230.96	-88.64	1,217.87	1,193.65	24.23	50.268		
3,500.00	3,314.89	3,253.67	3,247.72	21.35	11.58	-172.19	-236.50	-92.36	1,258.97	1,234.00	24.97	50.414		
3,600.00	3,408.01	3,344.83	3,338.64	22.06	11.93	-172.19	-242.04	-96.08	1,300.07	1,274.35	25.72	50.550		
3,700.00	3,501.12	3,436.00	3,429.56	22.77	12.27	-172.19	-247.58	-99.80	1,341.17	1,314.70	26.46	50.678		
3,800.00	3,594.24	3,527.16	3,520.48	23.47	12.62	-172.19	-253.12	-103.52	1,382.26	1,355.05	27.21	50.799		
3,900.00	3,687.35	3,618.33	3,611.40	24.18	12.96	-172.18	-258.66	-107.24	1,423.36	1,395.40	27.96	50.912		
4,000.00	3,780.47	3,709.49	3,702.32	24.89	13.30	-172.18	-264.21	-110.97	1,464.46	1,435.75	28.70	51.018		
4,100.00	3,873.58	3,800.66	3,793.24	25.59	13.65	-172.18	-269.75	-114.69	1,505.55	1,476.10	29.45	51.119		
4,200.00	3,966.70	3,908.18	3,884.17	26.30	14.06	-172.18	-275.29	-118.41	1,546.65	1,516.39	30.26	51.112		
4,300.00	4,059.81	3,982.99	3,975.09	27.01	14.34	-172.18	-280.83	-122.13	1,587.75	1,556.80	30.95	51.304		
4,400.00	4,152.93	4,074.15	4,066.01	27.71	14.68	-172.17	-286.37	-125.85	1,628.84	1,597.15	31.70	51.389		
4,500.00	4,246.05	4,165.32	4,156.93	28.42	15.03	-172.17	-291.91	-129.57	1,669.94	1,637.49	32.45	51.470		
4,600.00	4,339.16	4,256.48	4,247.85	29.13	15.38	-172.17	-297.46	-133.29	1,711.04	1,677.84	33.19	51.546		
4,700.00	4,432.28	4,347.65	4,338.77	29.83	15.72	-172.17	-303.00	-137.02	1,752.13	1,718.19	33.94	51.619		
4,800.00	4,525.39	4,438.81	4,429.69	30.54	16.07	-172.17	-308.54	-140.74	1,793.23	1,758.54	34.69	51.688		
4,900.00	4,618.51	4,529.98	4,520.61	31.25	16.41	-172.17	-314.08	-144.46	1,834.33	1,798.88	35.44	51.754		
5,000.00	4,711.62	4,621.14	4,611.53	31.95	16.76	-172.17	-319.62	-148.18	1,875.42	1,839.23	36.19	51.817		
5,100.00	4,804.74	4,712.30	4,702.45	32.66	17.10	-172.16	-325.16	-151.90	1,916.52	1,879.58	36.94	51.877		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 25-26 3BH - OWB - PROPOSAL 1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	
5,200.00	4,897.86	4,803.47	4,793.37	33.37	17.45	-172.16	-330.71	-155.62	1,957.62	1,919.92	37.69	51.934	
5,300.00	4,990.97	4,905.37	4,884.29	34.08	17.84	-172.16	-336.25	-159.34	1,998.71	1,960.23	38.48	51.935	
5,400.00	5,084.09	4,985.80	4,975.21	34.78	18.14	-172.16	-341.79	-163.07	2,039.81	2,000.61	39.20	52.041	
5,500.00	5,177.20	5,076.96	5,066.13	35.49	18.49	-172.16	-347.33	-166.79	2,080.91	2,040.96	39.95	52.091	
5,600.00	5,270.32	5,168.13	5,157.05	36.20	18.83	-172.16	-352.87	-170.51	2,122.00	2,081.31	40.70	52.139	
5,700.00	5,363.43	5,259.29	5,247.97	36.91	19.18	-172.16	-358.41	-174.23	2,163.10	2,121.65	41.45	52.185	
5,800.00	5,456.55	5,350.46	5,338.89	37.61	19.53	-172.16	-363.96	-177.95	2,204.20	2,162.00	42.20	52.229	
5,900.00	5,549.67	5,441.62	5,429.81	38.32	19.87	-172.16	-369.50	-181.67	2,245.30	2,202.34	42.96	52.271	
6,000.00	5,642.78	5,532.79	5,520.73	39.03	20.22	-172.15	-375.04	-185.39	2,286.39	2,242.68	43.71	52.311	
6,100.00	5,735.90	5,623.95	5,611.65	39.74	20.57	-172.15	-380.58	-189.12	2,327.49	2,283.03	44.46	52.350	
6,200.00	5,829.01	5,715.12	5,702.57	40.44	20.91	-172.15	-386.12	-192.84	2,368.59	2,323.37	45.21	52.387	
6,300.00	5,922.13	5,806.28	5,793.49	41.15	21.26	-172.15	-391.66	-196.56	2,409.68	2,363.72	45.97	52.423	
6,400.00	6,015.24	5,902.55	5,884.41	41.86	21.62	-172.15	-397.21	-200.28	2,450.78	2,404.04	46.74	52.436	
6,500.00	6,108.36	5,988.61	5,975.33	42.57	21.95	-172.15	-402.75	-204.00	2,491.88	2,444.40	47.47	52.490	
6,600.00	6,201.47	6,079.78	6,066.25	43.28	22.30	-172.15	-408.29	-207.72	2,532.97	2,484.75	48.23	52.522	
6,700.00	6,294.59	6,170.94	6,157.17	43.98	22.65	-172.15	-413.83	-211.44	2,574.07	2,525.09	48.98	52.552	
6,800.00	6,387.71	6,262.11	6,248.09	44.69	22.99	-172.15	-419.37	-215.17	2,615.17	2,565.43	49.74	52.582	
6,900.00	6,480.82	6,353.27	6,339.01	45.40	23.34	-172.15	-424.91	-218.89	2,656.26	2,605.77	50.49	52.610	
7,000.00	6,573.94	6,444.44	6,429.93	46.11	23.69	-172.15	-430.46	-222.61	2,697.36	2,646.12	51.24	52.637	
7,100.00	6,667.05	6,535.60	6,520.85	46.82	24.03	-172.15	-436.00	-226.33	2,738.46	2,686.46	52.00	52.663	
7,200.00	6,760.17	6,626.77	6,611.77	47.52	24.38	-172.15	-441.54	-230.05	2,779.55	2,726.80	52.75	52.688	
7,300.00	6,853.28	6,717.93	6,702.69	48.23	24.73	-172.15	-447.08	-233.77	2,820.65	2,767.14	53.51	52.713	
7,400.00	6,946.40	6,809.10	6,793.61	48.94	25.07	-172.14	-452.62	-237.49	2,861.75	2,807.48	54.27	52.736	
7,500.00	7,039.52	6,900.26	6,884.53	49.65	25.42	-172.14	-458.16	-241.22	2,902.84	2,847.82	55.02	52.759	
7,600.00	7,132.64	7,008.46	6,995.56	50.33	25.83	165.12	-463.71	-244.94	2,943.18	2,887.35	55.83	52.716	
7,700.00	7,225.98	7,081.76	7,065.54	50.90	26.11	137.33	-469.20	-248.62	2,980.39	2,923.91	56.48	52.767	
7,800.00	7,315.86	7,302.97	7,282.31	51.34	27.01	119.70	-482.28	-284.44	3,012.67	2,954.45	58.22	51.745	
7,900.00	7,399.85	7,469.27	7,427.98	51.68	27.78	109.76	-490.80	-362.98	3,037.79	2,978.07	59.72	50.866	
8,000.00	7,475.41	7,513.59	7,462.45	51.91	28.01	102.16	-492.77	-390.76	3,060.06	2,999.80	60.26	50.780	
8,100.00	7,540.24	7,513.96	7,462.72	52.05	28.01	96.25	-492.78	-391.00	3,080.25	3,019.81	60.43	50.968	
8,200.00	7,592.37	7,495.36	7,448.53	52.11	27.92	91.71	-491.98	-379.01	3,097.84	3,037.33	60.50	51.200	
8,300.00	7,630.20	7,467.31	7,426.41	52.09	27.77	88.31	-490.71	-361.81	3,112.14	3,051.52	60.62	51.341	
8,400.00	7,652.61	7,434.06	7,399.14	52.01	27.61	85.96	-489.13	-342.87	3,122.46	3,061.62	60.84	51.321	
8,500.00	7,659.00	7,400.00	7,370.11	51.89	27.45	84.70	-487.44	-325.13	3,128.28	3,067.05	61.22	51.095	
8,600.00	7,659.00	7,365.36	7,339.57	51.77	27.29	84.14	-485.66	-308.90	3,133.82	3,072.06	61.76	50.746	
8,700.00	7,659.00	7,338.96	7,315.66	51.67	27.17	83.70	-484.25	-297.79	3,142.12	3,079.63	62.49	50.282	
8,800.00	7,659.00	7,317.17	7,295.57	51.61	27.07	83.33	-483.06	-289.46	3,153.26	3,089.89	63.38	49.753	
8,900.00	7,659.00	7,300.00	7,279.52	51.58	26.99	83.03	-482.11	-283.44	3,167.30	3,102.90	64.40	49.181	
9,000.00	7,659.00	7,283.48	7,263.91	51.59	26.92	82.75	-481.18	-278.10	3,184.24	3,118.74	65.51	48.611	
9,100.00	7,659.00	7,270.23	7,251.28	51.67	26.87	82.52	-480.43	-274.14	3,204.08	3,137.38	66.70	48.040	
9,200.00	7,659.00	7,250.00	7,231.85	51.83	26.78	82.16	-479.27	-268.67	3,226.81	3,158.94	67.87	47.546	
9,300.00	7,659.00	7,250.00	7,231.85	52.14	26.78	82.16	-479.27	-268.67	3,252.32	3,183.07	69.24	46.968	
9,400.00	7,659.00	7,250.00	7,231.85	52.67	26.78	82.16	-479.27	-268.67	3,280.67	3,210.04	70.64	46.445	
9,500.00	7,659.00	7,232.06	7,214.46	53.53	26.70	81.84	-478.22	-264.40	3,311.66	3,239.78	71.88	46.074	
9,600.00	7,659.00	7,225.07	7,207.65	54.75	26.67	81.72	-477.82	-262.89	3,345.34	3,272.14	73.21	45.697	
9,700.00	7,659.00	7,218.80	7,201.51	56.29	26.65	81.61	-477.45	-261.59	3,381.61	3,307.08	74.53	45.373	
9,800.00	7,659.00	7,200.00	7,183.08	58.05	26.57	81.27	-476.34	-258.13	3,420.47	3,344.74	75.73	45.167	
9,900.00	7,659.00	7,200.00	7,183.08	59.97	26.57	81.27	-476.34	-258.13	3,461.61	3,384.56	77.05	44.924	
10,000.00	7,659.00	7,200.00	7,183.08	62.00	26.57	81.27	-476.34	-258.13	3,505.13	3,426.78	78.35	44.738	
10,100.00	7,659.00	7,200.00	7,183.08	64.11	26.57	81.27	-476.34	-258.13	3,550.92	3,471.32	79.61	44.606	
10,200.00	7,659.00	7,200.00	7,183.08	66.28	26.57	81.27	-476.34	-258.13	3,598.92	3,518.09	80.82	44.528	
10,300.00	7,659.00	7,200.00	7,183.08	68.51	26.57	81.27	-476.34	-258.13	3,649.02	3,567.02	82.00	44.499	

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 25-26 3BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,400.00	7,659.00	7,200.00	7,183.08	70.77	26.57	81.27	-476.34	-258.13	3,701.15	3,618.01	83.14	44.518		
10,500.00	7,659.00	7,200.00	7,183.08	73.06	26.57	81.27	-476.34	-258.13	3,755.22	3,670.99	84.23	44.582		
10,600.00	7,659.00	7,200.00	7,183.08	75.39	26.57	81.27	-476.34	-258.13	3,811.14	3,725.86	85.28	44.688		
10,700.00	7,659.00	7,179.45	7,162.80	77.74	26.49	80.90	-475.11	-255.04	3,868.57	3,782.42	86.15	44.904		
10,800.00	7,659.00	7,176.94	7,160.31	80.12	26.48	80.86	-474.96	-254.71	3,927.89	3,840.79	87.10	45.094		
10,900.00	7,659.00	7,174.59	7,157.99	82.51	26.47	80.81	-474.82	-254.42	3,988.83	3,900.82	88.02	45.320		
11,000.00	7,659.00	7,172.39	7,155.81	84.93	26.46	80.77	-474.69	-254.15	4,051.32	3,962.43	88.89	45.578		
11,100.00	7,659.00	7,170.32	7,153.75	87.36	26.45	80.74	-474.56	-253.90	4,115.28	4,025.55	89.72	45.867		
11,200.00	7,659.00	7,150.00	7,133.57	89.81	26.37	80.37	-473.34	-251.89	4,180.88	4,090.49	90.40	46.251		
11,300.00	7,659.00	7,150.00	7,133.57	92.27	26.37	80.37	-473.34	-251.89	4,247.55	4,156.38	91.17	46.589		
11,400.00	7,659.00	7,150.00	7,133.57	94.75	26.37	80.37	-473.34	-251.89	4,315.51	4,223.60	91.91	46.954		
11,500.00	7,659.00	7,150.00	7,133.57	97.23	26.37	80.37	-473.34	-251.89	4,384.69	4,292.08	92.61	47.344		
11,600.00	7,659.00	7,150.00	7,133.57	99.73	26.37	80.37	-473.34	-251.89	4,455.05	4,361.76	93.28	47.758		
11,700.00	7,659.00	7,150.00	7,133.57	102.24	26.37	80.37	-473.34	-251.89	4,526.52	4,432.59	93.92	48.193		
11,800.00	7,659.00	7,150.00	7,133.57	104.75	26.37	80.37	-473.34	-251.89	4,599.05	4,504.52	94.53	48.650		
11,900.00	7,659.00	7,150.00	7,133.57	107.28	26.37	80.37	-473.34	-251.89	4,672.60	4,577.48	95.11	49.126		
12,000.00	7,659.00	7,150.00	7,133.57	109.81	26.37	80.37	-473.34	-251.89	4,747.11	4,651.45	95.67	49.621		
12,100.00	7,659.00	7,150.00	7,133.57	112.35	26.37	80.37	-473.34	-251.89	4,822.55	4,726.36	96.19	50.133		
12,200.00	7,659.00	7,150.00	7,133.57	114.90	26.37	80.37	-473.34	-251.89	4,898.87	4,802.17	96.70	50.662		
12,300.00	7,659.00	7,150.00	7,133.57	117.46	26.37	80.37	-473.34	-251.89	4,976.02	4,878.85	97.18	51.207		
12,400.00	7,659.00	7,150.00	7,133.57	120.02	26.37	80.37	-473.34	-251.89	5,053.98	4,956.35	97.63	51.766		
12,500.00	7,659.00	7,150.00	7,133.57	122.58	26.37	80.37	-473.34	-251.89	5,132.70	5,034.64	98.07	52.339		
12,600.00	7,659.00	7,150.00	7,133.57	125.15	26.37	80.37	-473.34	-251.89	5,212.15	5,113.67	98.48	52.925		
12,700.00	7,659.00	7,150.00	7,133.57	127.73	26.37	80.37	-473.34	-251.89	5,292.30	5,193.42	98.88	53.523		
12,800.00	7,659.00	7,150.00	7,133.57	130.31	26.37	80.37	-473.34	-251.89	5,373.12	5,273.86	99.26	54.134		
12,900.00	7,659.00	7,150.00	7,133.57	132.90	26.37	80.37	-473.34	-251.89	5,454.57	5,354.95	99.62	54.755		
13,000.00	7,659.00	7,150.00	7,133.57	135.49	26.37	80.37	-473.34	-251.89	5,536.62	5,436.66	99.96	55.387		
13,100.00	7,659.00	7,150.00	7,133.57	138.08	26.37	80.37	-473.34	-251.89	5,619.26	5,518.97	100.29	56.029		
13,200.00	7,659.00	7,150.00	7,133.57	140.68	26.37	80.53	-473.34	-251.89	5,702.22	5,601.61	100.61	56.677		
13,300.00	7,659.00	7,150.00	7,133.57	143.28	26.37	80.53	-473.34	-251.89	5,785.32	5,684.41	100.92	57.328		
13,400.00	7,659.00	7,150.00	7,133.57	145.88	26.37	80.53	-473.34	-251.89	5,868.95	5,767.74	101.21	57.987		
13,500.00	7,659.00	7,150.00	7,133.57	148.48	26.37	80.53	-473.34	-251.89	5,953.08	5,851.59	101.49	58.655		
13,600.00	7,659.00	7,150.00	7,133.57	151.09	26.37	80.53	-473.34	-251.89	6,037.70	5,935.94	101.76	59.331		
13,700.00	7,659.00	7,150.00	7,133.57	153.70	26.37	80.53	-473.34	-251.89	6,122.78	6,020.76	102.02	60.014		
13,800.00	7,659.00	7,150.00	7,133.57	156.32	26.37	80.53	-473.34	-251.89	6,208.31	6,106.04	102.27	60.705		
13,900.00	7,659.00	7,150.00	7,133.57	158.94	26.37	80.53	-473.34	-251.89	6,294.26	6,191.75	102.51	61.402		
14,000.00	7,659.00	7,139.32	7,122.94	161.56	26.33	80.34	-472.69	-251.11	6,380.53	6,277.85	102.68	62.139		
14,100.00	7,659.00	7,138.76	7,122.39	164.18	26.33	80.33	-472.66	-251.08	6,467.27	6,364.37	102.90	62.851		
14,200.00	7,659.00	7,138.22	7,121.85	166.80	26.33	80.32	-472.63	-251.05	6,554.39	6,451.29	103.11	63.569		
14,300.00	7,659.00	7,137.70	7,121.33	169.43	26.32	80.32	-472.60	-251.02	6,641.88	6,538.57	103.31	64.293		
14,400.00	7,659.00	7,137.20	7,120.82	172.06	26.32	80.31	-472.56	-250.99	6,729.71	6,626.21	103.50	65.022		
14,500.00	7,659.00	7,126.62	7,110.29	174.69	26.28	80.12	-471.92	-250.46	6,817.96	6,714.33	103.63	65.790		
14,600.00	7,659.00	7,126.62	7,110.29	177.33	26.28	80.12	-471.92	-250.46	6,906.45	6,802.63	103.81	66.528		
14,700.00	7,659.00	7,126.62	7,110.29	179.96	26.28	80.12	-471.92	-250.46	6,995.24	6,891.25	103.99	67.270		
14,800.00	7,659.00	7,126.62	7,110.29	182.60	26.28	80.12	-471.92	-250.46	7,084.33	6,980.17	104.16	68.016		
14,900.00	7,659.00	7,126.62	7,110.29	185.24	26.28	80.12	-471.92	-250.46	7,173.71	7,069.39	104.32	68.767		
15,000.00	7,659.00	7,126.62	7,110.29	187.88	26.28	80.12	-471.92	-250.46	7,263.36	7,158.89	104.48	69.522		
15,100.00	7,659.00	7,126.62	7,110.29	190.52	26.28	80.12	-471.92	-250.46	7,353.28	7,248.66	104.63	70.281		
15,200.00	7,659.00	7,126.62	7,110.29	193.16	26.28	80.12	-471.92	-250.46	7,443.46	7,338.69	104.77	71.044		
15,300.00	7,659.00	7,126.62	7,110.29	195.81	26.28	80.12	-471.92	-250.46	7,533.89	7,428.97	104.91	71.810		
15,400.00	7,659.00	7,126.62	7,110.29	198.45	26.28	80.12	-471.92	-250.46	7,624.55	7,519.50	105.05	72.579		
15,500.00	7,659.00	7,126.62	7,110.29	201.10	26.28	80.12	-471.92	-250.46	7,715.45	7,610.27	105.18	73.352		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 25-26 3BH - OWB - PROPOSAL 1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	Warning
15,600.00	7,659.00	7,126.62	7,110.29	203.75	26.28	80.12	-471.92	-250.46	7,806.57	7,701.26	105.31	74.128	
15,700.00	7,659.00	7,126.62	7,110.29	206.40	26.28	80.12	-471.92	-250.46	7,897.90	7,792.47	105.44	74.907	
15,800.00	7,659.00	7,126.62	7,110.29	209.05	26.28	80.12	-471.92	-250.46	7,989.45	7,883.89	105.56	75.688	
15,900.00	7,659.00	7,126.62	7,110.29	211.70	26.28	80.12	-471.92	-250.46	8,081.19	7,975.51	105.67	76.473	
16,000.00	7,659.00	7,126.62	7,110.29	214.36	26.28	80.12	-471.92	-250.46	8,173.12	8,067.34	105.79	77.259	
16,100.00	7,659.00	7,126.62	7,110.29	217.01	26.28	80.12	-471.92	-250.46	8,265.25	8,159.35	105.90	78.049	
16,200.00	7,659.00	7,126.62	7,110.29	219.67	26.28	80.12	-471.92	-250.46	8,357.55	8,251.54	106.01	78.840	
16,300.00	7,659.00	7,126.62	7,110.29	222.32	26.28	80.12	-471.92	-250.46	8,450.03	8,343.92	106.11	79.634	
16,400.00	7,659.00	7,126.62	7,110.29	224.98	26.28	80.12	-471.92	-250.46	8,542.68	8,436.47	106.21	80.430	
16,500.00	7,659.00	7,126.62	7,110.29	227.64	26.28	80.12	-471.92	-250.46	8,635.49	8,529.18	106.31	81.228	
16,600.00	7,659.00	7,126.62	7,110.29	230.30	26.28	80.12	-471.92	-250.46	8,728.46	8,622.05	106.41	82.028	
16,700.00	7,659.00	7,126.62	7,110.29	232.96	26.28	80.12	-471.92	-250.46	8,821.59	8,715.09	106.50	82.829	
16,800.00	7,659.00	7,126.62	7,110.29	235.62	26.28	80.12	-471.92	-250.46	8,914.86	8,808.27	106.60	83.633	
16,900.00	7,659.00	7,126.62	7,110.29	238.28	26.28	80.12	-471.92	-250.46	9,008.28	8,901.60	106.69	84.438	
17,000.00	7,659.00	7,126.62	7,110.29	240.95	26.28	80.12	-471.92	-250.46	9,101.84	8,995.07	106.77	85.245	
17,100.00	7,659.00	7,126.62	7,110.29	243.61	26.28	80.12	-471.92	-250.46	9,195.53	9,088.67	106.86	86.053	
17,200.00	7,659.00	7,126.62	7,110.29	246.27	26.28	80.12	-471.92	-250.46	9,289.36	9,182.42	106.94	86.862	
17,300.00	7,659.00	7,126.62	7,110.29	248.94	26.28	80.12	-471.92	-250.46	9,383.31	9,276.29	107.03	87.673	
17,400.00	7,659.00	7,126.62	7,110.29	251.60	26.28	80.12	-471.92	-250.46	9,477.39	9,370.28	107.11	88.486	
17,500.00	7,659.00	7,127.61	7,111.27	254.27	26.28	80.14	-471.98	-250.50	9,571.59	9,464.40	107.19	89.295	
17,600.00	7,659.00	7,123.72	7,107.39	256.94	26.27	80.07	-471.75	-250.34	9,665.90	9,558.65	107.25	90.125	
17,700.00	7,659.00	7,119.83	7,103.51	259.61	26.26	80.00	-471.51	-250.18	9,760.32	9,653.02	107.31	90.957	
17,800.00	7,659.00	7,115.94	7,099.63	262.27	26.24	79.93	-471.27	-250.02	9,854.86	9,747.49	107.36	91.789	
17,900.00	7,659.00	7,112.05	7,095.75	264.94	26.23	79.86	-471.04	-249.86	9,949.50	9,842.08	107.42	92.623	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 25-26 4AH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-179.65	-139.88	-0.84	139.88					
100.00	100.00	100.00	100.00	0.13	0.13	-179.65	-139.88	-0.84	139.88	139.61	0.27	520.284	CC, ES	
200.00	199.98	200.02	199.98	0.50	0.49	-163.30	-139.88	-0.84	141.55	140.56	0.99	143.165		
300.00	299.84	299.84	299.84	0.86	0.85	-163.86	-139.88	-0.84	146.57	144.86	1.72	85.458		
400.00	399.45	394.50	394.48	1.23	1.18	-164.51	-141.39	-1.23	156.54	154.12	2.42	64.627		
500.00	498.70	487.95	487.81	1.63	1.50	-165.03	-145.85	-2.38	173.00	169.88	3.12	55.396		
600.00	597.47	579.64	579.19	2.05	1.82	-165.40	-153.08	-4.25	195.83	192.01	3.82	51.236		
700.00	695.62	669.05	668.03	2.49	2.16	-165.63	-162.86	-6.77	224.85	220.33	4.51	49.802		
800.00	793.06	757.24	755.31	2.98	2.51	-165.74	-175.07	-9.92	259.80	254.60	5.20	49.938		
900.00	889.64	849.33	846.32	3.50	2.88	-165.89	-188.65	-13.43	298.75	292.84	5.91	50.522		
1,000.00	985.27	940.02	935.96	4.06	3.26	-166.09	-202.03	-16.88	340.81	334.18	6.63	51.429		
1,100.00	1,079.82	1,029.21	1,024.11	4.66	3.64	-166.32	-215.18	-20.27	385.93	378.60	7.33	52.618		
1,200.00	1,173.23	1,116.88	1,110.76	5.31	4.02	-166.63	-228.11	-23.61	433.94	425.88	8.05	53.892		
1,300.00	1,266.35	1,204.15	1,197.01	5.98	4.40	-167.05	-240.98	-26.93	482.68	473.93	8.75	55.165		
1,400.00	1,359.46	1,308.58	1,283.26	6.66	4.85	-167.39	-253.85	-30.25	531.43	521.91	9.52	55.835		
1,500.00	1,452.58	1,378.69	1,369.52	7.34	5.15	-167.67	-266.72	-33.57	580.20	570.04	10.16	57.100		
1,600.00	1,545.69	1,465.96	1,455.77	8.03	5.54	-167.91	-279.58	-36.89	628.97	618.10	10.87	57.849		
1,700.00	1,638.81	1,553.23	1,542.02	8.72	5.92	-168.12	-292.45	-40.21	677.75	666.17	11.59	58.492		
1,800.00	1,731.92	1,640.50	1,628.27	9.41	6.30	-168.29	-305.32	-43.53	726.54	714.24	12.30	59.049		
1,900.00	1,825.04	1,727.77	1,714.53	10.11	6.68	-168.45	-318.19	-46.85	775.34	762.31	13.02	59.535		
2,000.00	1,918.15	1,815.05	1,800.78	10.81	7.07	-168.58	-331.06	-50.17	824.13	810.39	13.74	59.963		
2,100.00	2,011.27	1,902.32	1,887.03	11.51	7.45	-168.71	-343.93	-53.49	872.93	858.47	14.47	60.342		
2,200.00	2,104.39	1,989.59	1,973.28	12.21	7.84	-168.81	-356.80	-56.81	921.73	906.54	15.19	60.680		
2,300.00	2,197.50	2,076.86	2,059.54	12.91	8.22	-168.91	-369.67	-60.13	970.54	954.62	15.91	60.983		
2,400.00	2,290.62	2,164.13	2,145.79	13.61	8.61	-169.00	-382.54	-63.45	1,019.35	1,002.70	16.64	61.256		
2,500.00	2,383.73	2,251.40	2,232.04	14.31	8.99	-169.08	-395.41	-66.77	1,068.15	1,050.79	17.37	61.503		
2,600.00	2,476.85	2,338.67	2,318.29	15.01	9.38	-169.15	-408.28	-70.09	1,116.96	1,098.87	18.10	61.727		
2,700.00	2,569.96	2,425.94	2,404.54	15.72	9.77	-169.22	-421.15	-73.41	1,165.77	1,146.95	18.82	61.932		
2,800.00	2,663.08	2,513.21	2,490.80	16.42	10.15	-169.28	-434.01	-76.73	1,214.59	1,195.03	19.55	62.119		
2,900.00	2,756.20	2,600.48	2,577.05	17.12	10.54	-169.34	-446.88	-80.05	1,263.40	1,243.12	20.28	62.292		
3,000.00	2,849.31	2,687.75	2,663.30	17.83	10.93	-169.39	-459.75	-83.37	1,312.21	1,291.20	21.01	62.450		
3,100.00	2,942.43	2,775.02	2,749.55	18.53	11.31	-169.44	-472.62	-86.69	1,361.03	1,339.29	21.74	62.597		
3,200.00	3,035.54	2,862.29	2,835.81	19.24	11.70	-169.49	-485.49	-90.01	1,409.84	1,387.37	22.47	62.732		
3,300.00	3,128.66	2,949.56	2,922.06	19.94	12.09	-169.53	-498.36	-93.33	1,458.66	1,435.45	23.21	62.858		
3,400.00	3,221.77	3,036.83	3,008.31	20.65	12.47	-169.57	-511.23	-96.65	1,507.48	1,483.54	23.94	62.975		
3,500.00	3,314.89	3,124.10	3,094.56	21.35	12.86	-169.60	-524.10	-99.97	1,556.29	1,531.62	24.67	63.085		
3,600.00	3,408.01	3,211.37	3,180.82	22.06	13.25	-169.64	-536.97	-103.29	1,605.11	1,579.71	25.40	63.187		
3,700.00	3,501.12	3,301.36	3,267.07	22.77	13.65	-169.67	-549.84	-106.61	1,653.93	1,627.78	26.15	63.257		
3,800.00	3,594.24	3,385.91	3,353.32	23.47	14.02	-169.70	-562.71	-109.93	1,702.75	1,675.88	26.87	63.371		
3,900.00	3,687.35	3,473.18	3,439.57	24.18	14.41	-169.73	-575.58	-113.25	1,751.57	1,723.96	27.60	63.455		
4,000.00	3,780.47	3,560.45	3,525.83	24.89	14.80	-169.76	-588.45	-116.57	1,800.39	1,772.05	28.34	63.534		
4,100.00	3,873.58	3,647.72	3,612.08	25.59	15.18	-169.79	-601.31	-119.89	1,849.21	1,820.13	29.07	63.608		
4,200.00	3,966.70	3,734.99	3,698.33	26.30	15.57	-169.81	-614.18	-123.21	1,898.03	1,868.22	29.81	63.678		
4,300.00	4,059.81	3,822.26	3,784.58	27.01	15.96	-169.83	-627.05	-126.53	1,946.85	1,916.30	30.54	63.744		
4,400.00	4,152.93	3,909.54	3,870.84	27.71	16.35	-169.86	-639.92	-129.85	1,995.67	1,964.39	31.28	63.806		
4,500.00	4,246.05	4,003.19	3,957.09	28.42	16.76	-169.88	-652.79	-133.17	2,044.49	2,012.45	32.04	63.816		
4,600.00	4,339.16	4,084.08	4,043.34	29.13	17.12	-169.90	-665.66	-136.49	2,093.31	2,060.56	32.75	63.921		
4,700.00	4,432.28	4,171.35	4,129.59	29.83	17.51	-169.92	-678.53	-139.81	2,142.13	2,108.64	33.48	63.973		
4,800.00	4,525.39	4,258.62	4,215.85	30.54	17.90	-169.94	-691.40	-143.13	2,190.95	2,156.73	34.22	64.023		
4,900.00	4,618.51	4,345.89	4,302.10	31.25	18.29	-169.95	-704.27	-146.45	2,239.77	2,204.81	34.96	64.071		
5,000.00	4,711.62	4,433.16	4,388.35	31.95	18.67	-169.97	-717.14	-149.77	2,288.59	2,252.90	35.69	64.115		
5,100.00	4,804.74	4,520.43	4,474.60	32.66	19.06	-169.99	-730.01	-153.10	2,337.41	2,300.98	36.43	64.158		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 25-26 4AH - OWB - PROPOSAL 1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	
5,200.00	4,897.86	4,607.70	4,560.86	33.37	19.45	-170.00	-742.88	-156.42	2,386.24	2,349.07	37.17	64.198	
5,300.00	4,990.97	4,694.97	4,647.11	34.08	19.84	-170.02	-755.74	-159.74	2,435.06	2,397.15	37.91	64.237	
5,400.00	5,084.09	4,782.24	4,733.36	34.78	20.22	-170.03	-768.61	-163.06	2,483.88	2,445.23	38.65	64.273	
5,500.00	5,177.20	4,869.51	4,819.61	35.49	20.61	-170.05	-781.48	-166.38	2,532.70	2,493.32	39.38	64.308	
5,600.00	5,270.32	4,956.78	4,905.87	36.20	21.00	-170.06	-794.35	-169.70	2,581.52	2,541.40	40.12	64.341	
5,700.00	5,363.43	5,044.05	4,992.12	36.91	21.39	-170.07	-807.22	-173.02	2,630.35	2,589.48	40.86	64.373	
5,800.00	5,456.55	5,131.32	5,078.37	37.61	21.78	-170.09	-820.09	-176.34	2,679.17	2,637.57	41.60	64.403	
5,900.00	5,549.67	5,218.59	5,164.62	38.32	22.16	-170.10	-832.96	-179.66	2,727.99	2,685.65	42.34	64.431	
6,000.00	5,642.78	5,305.86	5,250.88	39.03	22.55	-170.11	-845.83	-182.98	2,776.81	2,733.73	43.08	64.458	
6,100.00	5,735.90	5,406.87	5,337.13	39.74	23.00	-170.12	-858.70	-186.30	2,825.64	2,781.76	43.87	64.406	
6,200.00	5,829.01	5,480.40	5,423.38	40.44	23.33	-170.13	-871.57	-189.62	2,874.46	2,829.90	44.56	64.508	
6,300.00	5,922.13	5,567.67	5,509.63	41.15	23.72	-170.14	-884.44	-192.94	2,923.28	2,877.98	45.30	64.532	
6,400.00	6,015.24	5,654.94	5,595.89	41.86	24.10	-170.15	-897.31	-196.26	2,972.10	2,926.06	46.04	64.554	
6,500.00	6,108.36	5,742.21	5,682.14	42.57	24.49	-170.16	-910.17	-199.58	3,020.93	2,974.15	46.78	64.575	
6,600.00	6,201.47	5,829.48	5,768.39	43.28	24.88	-170.17	-923.04	-202.90	3,069.75	3,022.23	47.52	64.595	
6,700.00	6,294.59	5,916.75	5,854.64	43.98	25.27	-170.18	-935.91	-206.22	3,118.57	3,070.31	48.26	64.614	
6,800.00	6,387.71	6,004.03	5,940.90	44.69	25.66	-170.19	-948.78	-209.54	3,167.40	3,118.39	49.01	64.633	
6,900.00	6,480.82	6,108.70	6,027.15	45.40	26.12	-170.20	-961.65	-212.86	3,216.22	3,166.40	49.82	64.563	
7,000.00	6,573.94	6,178.57	6,113.40	46.11	26.43	-170.20	-974.52	-216.18	3,265.04	3,214.55	50.49	64.666	
7,100.00	6,667.05	6,265.84	6,199.65	46.82	26.82	-170.21	-987.39	-219.50	3,313.87	3,262.63	51.23	64.682	
7,200.00	6,760.17	6,353.11	6,285.91	47.52	27.21	-170.22	-1,000.26	-222.82	3,362.69	3,310.71	51.98	64.697	
7,300.00	6,853.28	6,440.38	6,372.16	48.23	27.60	-170.23	-1,013.13	-226.14	3,411.51	3,358.79	52.72	64.711	
7,400.00	6,946.40	6,527.65	6,458.41	48.94	27.98	-170.24	-1,026.00	-229.46	3,460.34	3,406.87	53.46	64.724	
7,500.00	7,039.52	6,614.92	6,544.66	49.65	28.37	-170.24	-1,038.87	-232.78	3,509.16	3,454.95	54.21	64.737	
7,600.00	7,132.94	6,702.31	6,631.03	50.33	28.76	166.17	-1,051.75	-236.10	3,557.38	3,502.44	54.94	64.753	
7,700.00	7,225.98	6,788.74	6,716.45	50.90	29.15	137.24	-1,064.50	-239.39	3,602.84	3,547.22	55.62	64.779	
7,800.00	7,315.86	6,871.62	6,798.37	51.34	29.51	116.82	-1,076.72	-242.55	3,644.41	3,588.17	56.24	64.805	
7,900.00	7,399.85	6,948.45	6,874.31	51.68	29.86	103.67	-1,088.05	-245.47	3,681.29	3,624.49	56.80	64.816	
8,000.00	7,475.41	7,016.88	6,941.94	51.91	30.16	95.12	-1,098.14	-248.07	3,712.96	3,655.65	57.31	64.788	
8,100.00	7,540.24	7,074.84	6,999.22	52.05	30.42	89.45	-1,106.69	-250.28	3,739.11	3,681.31	57.80	64.688	
8,200.00	7,592.37	7,120.57	7,044.41	52.11	30.62	85.69	-1,113.43	-252.02	3,759.60	3,701.29	58.31	64.474	
8,300.00	7,630.20	7,152.66	7,076.13	52.09	30.76	83.27	-1,118.16	-253.24	3,774.36	3,715.49	58.87	64.113	
8,400.00	7,652.61	7,170.16	7,093.43	52.01	30.84	81.91	-1,120.74	-253.90	3,783.36	3,723.87	59.49	63.593	
8,500.00	7,659.00	7,172.63	7,095.87	51.89	30.85	81.45	-1,121.11	-254.00	3,786.64	3,726.47	60.17	62.930	
8,600.00	7,659.00	7,169.12	7,092.40	51.77	30.84	81.39	-1,120.59	-253.86	3,789.25	3,728.29	60.96	62.159	
8,700.00	7,659.00	7,165.60	7,088.93	51.67	30.82	81.34	-1,120.07	-253.73	3,794.49	3,732.60	61.89	61.315	
8,800.00	7,659.00	7,162.09	7,085.45	51.61	30.81	81.29	-1,119.56	-253.60	3,802.35	3,739.42	62.93	60.419	
8,900.00	7,659.00	7,158.58	7,081.98	51.58	30.79	81.23	-1,119.04	-253.46	3,812.81	3,748.73	64.09	59.496	
9,000.00	7,659.00	7,155.07	7,078.51	51.59	30.77	81.18	-1,118.52	-253.33	3,825.86	3,760.53	65.33	58.564	
9,100.00	7,659.00	7,151.56	7,075.04	51.67	30.76	81.13	-1,118.00	-253.20	3,841.46	3,774.81	66.65	57.641	
9,200.00	7,659.00	7,148.05	7,071.57	51.83	30.74	81.08	-1,117.48	-253.06	3,859.59	3,791.57	68.02	56.740	
9,300.00	7,659.00	7,144.54	7,068.10	52.14	30.73	81.02	-1,116.97	-252.93	3,880.21	3,810.76	69.45	55.873	
9,400.00	7,659.00	7,141.02	7,064.63	52.67	30.71	80.97	-1,116.45	-252.80	3,903.28	3,832.37	70.91	55.049	
9,500.00	7,659.00	7,137.51	7,061.16	53.53	30.70	80.92	-1,115.93	-252.66	3,928.75	3,856.36	72.39	54.274	
9,600.00	7,659.00	7,134.00	7,057.69	54.75	30.68	80.86	-1,115.41	-252.53	3,956.59	3,882.71	73.88	53.551	
9,700.00	7,659.00	7,130.49	7,054.22	56.29	30.67	80.81	-1,114.89	-252.39	3,986.74	3,911.35	75.39	52.885	
9,800.00	7,659.00	7,126.98	7,050.75	58.05	30.65	80.76	-1,114.38	-252.26	4,019.15	3,942.26	76.88	52.275	
9,900.00	7,659.00	7,123.47	7,047.28	59.97	30.63	80.70	-1,113.86	-252.13	4,053.76	3,975.39	78.37	51.723	
10,000.00	7,659.00	7,119.96	7,043.81	62.00	30.62	80.65	-1,113.34	-251.99	4,090.52	4,010.67	79.85	51.227	
10,100.00	7,659.00	7,116.45	7,040.34	64.11	30.60	80.60	-1,112.82	-251.86	4,129.38	4,048.07	81.31	50.788	
10,200.00	7,659.00	7,112.93	7,036.87	66.28	30.59	80.54	-1,112.31	-251.73	4,170.27	4,087.53	82.74	50.403	
10,300.00	7,659.00	7,109.42	7,033.40	68.51	30.57	80.49	-1,111.79	-251.59	4,213.13	4,128.99	84.14	50.071	

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 25-26 4AH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,400.00	7,659.00	7,105.91	7,029.93	70.77	30.56	80.44	-1,111.27	-251.46	4,257.91	4,172.39	85.52	49.789		
10,500.00	7,659.00	7,102.40	7,026.46	73.06	30.54	80.38	-1,110.75	-251.33	4,304.54	4,217.68	86.86	49.556		
10,600.00	7,659.00	7,101.11	7,022.99	75.39	30.53	80.33	-1,110.23	-251.19	4,352.97	4,264.79	88.18	49.365		
10,700.00	7,659.00	7,095.38	7,019.52	77.74	30.51	80.28	-1,109.72	-251.06	4,403.13	4,313.69	89.44	49.228		
10,800.00	7,659.00	7,108.13	7,016.05	80.12	30.57	80.23	-1,109.20	-250.93	4,454.97	4,364.23	90.74	49.095		
10,900.00	7,659.00	7,088.35	7,012.58	82.51	30.48	80.17	-1,108.68	-250.79	4,508.43	4,416.55	91.88	49.069		
11,000.00	7,659.00	7,084.84	7,009.11	84.93	30.46	80.12	-1,108.16	-250.66	4,563.45	4,470.41	93.04	49.048 SF		
11,100.00	7,659.00	7,081.33	7,005.64	87.36	30.45	80.07	-1,107.65	-250.52	4,619.98	4,525.82	94.17	49.062		
11,200.00	7,659.00	7,077.82	7,002.17	89.81	30.43	80.01	-1,107.13	-250.39	4,677.96	4,582.71	95.25	49.111		
11,300.00	7,659.00	7,074.31	6,998.69	92.27	30.42	79.96	-1,106.61	-250.26	4,737.35	4,641.04	96.30	49.193		
11,400.00	7,659.00	7,070.80	6,995.22	94.75	30.40	79.91	-1,106.09	-250.12	4,798.07	4,700.76	97.31	49.305		
11,500.00	7,659.00	7,067.29	6,991.75	97.23	30.38	79.85	-1,105.57	-249.99	4,860.10	4,761.81	98.29	49.446		
11,600.00	7,659.00	7,063.77	6,988.28	99.73	30.37	79.80	-1,105.06	-249.86	4,923.37	4,824.14	99.23	49.615		
11,700.00	7,659.00	7,060.26	6,984.81	102.24	30.35	79.75	-1,104.54	-249.72	4,987.84	4,887.70	100.14	49.810		
11,800.00	7,659.00	7,056.75	6,981.34	104.75	30.34	79.69	-1,104.02	-249.59	5,053.47	4,952.46	101.01	50.029		
11,900.00	7,659.00	7,053.24	6,977.87	107.28	30.32	79.64	-1,103.50	-249.46	5,120.20	5,018.35	101.85	50.272		
12,000.00	7,659.00	7,049.73	6,974.40	109.81	30.31	79.59	-1,102.99	-249.32	5,188.00	5,085.35	102.66	50.537		
12,100.00	7,659.00	7,046.22	6,970.93	112.35	30.29	79.54	-1,102.47	-249.19	5,256.83	5,153.40	103.43	50.823		
12,200.00	7,659.00	7,042.71	6,967.46	114.90	30.28	79.48	-1,101.95	-249.06	5,326.64	5,222.46	104.18	51.129		
12,300.00	7,659.00	7,039.20	6,963.99	117.46	30.26	79.43	-1,101.43	-248.92	5,397.40	5,292.51	104.90	51.454		
12,400.00	7,659.00	7,035.68	6,960.52	120.02	30.24	79.38	-1,100.91	-248.79	5,469.07	5,363.49	105.59	51.797		
12,500.00	7,659.00	7,032.17	6,957.05	122.58	30.23	79.32	-1,100.40	-248.65	5,541.62	5,435.37	106.25	52.157		
12,600.00	7,659.00	7,028.66	6,953.58	125.15	30.21	79.27	-1,099.88	-248.52	5,615.01	5,508.12	106.89	52.533		
12,700.00	7,659.00	7,025.15	6,950.11	127.73	30.20	79.22	-1,099.36	-248.39	5,689.21	5,581.71	107.50	52.925		
12,800.00	7,659.00	7,021.64	6,946.64	130.31	30.18	79.16	-1,098.84	-248.25	5,764.18	5,656.10	108.08	53.331		
12,900.00	7,659.00	7,018.13	6,943.17	132.90	30.17	79.11	-1,098.33	-248.12	5,839.91	5,731.26	108.65	53.751		
13,000.00	7,659.00	7,014.62	6,939.70	135.49	30.15	79.06	-1,097.81	-247.99	5,916.35	5,807.16	109.19	54.184		
13,100.00	7,659.00	7,011.10	6,936.23	138.08	30.13	79.01	-1,097.29	-247.85	5,993.48	5,883.77	109.71	54.630		
13,200.00	7,659.00	7,007.66	6,932.82	140.68	30.12	79.11	-1,096.78	-247.72	6,071.01	5,960.80	110.21	55.084		
13,300.00	7,659.00	7,004.32	6,929.52	143.28	30.10	79.06	-1,096.29	-247.59	6,148.74	6,038.04	110.70	55.542		
13,400.00	7,659.00	7,000.98	6,926.22	145.88	30.09	79.01	-1,095.80	-247.47	6,227.11	6,115.93	111.18	56.011		
13,500.00	7,659.00	6,997.64	6,922.92	148.48	30.07	78.96	-1,095.30	-247.34	6,306.08	6,194.45	111.63	56.491		
13,600.00	7,659.00	6,994.30	6,919.62	151.09	30.06	78.91	-1,094.81	-247.21	6,385.65	6,273.58	112.07	56.981		
13,700.00	7,659.00	6,990.96	6,916.32	153.70	30.04	78.86	-1,094.32	-247.09	6,465.78	6,353.29	112.49	57.481		
13,800.00	7,659.00	6,987.63	6,913.02	156.32	30.03	78.81	-1,093.83	-246.96	6,546.45	6,433.56	112.89	57.991		
13,900.00	7,659.00	6,984.29	6,909.72	158.94	30.02	78.76	-1,093.34	-246.83	6,627.65	6,514.37	113.28	58.509		
14,000.00	7,659.00	6,980.95	6,906.42	161.56	30.00	78.71	-1,092.84	-246.71	6,709.36	6,595.71	113.65	59.036		
14,100.00	7,659.00	6,977.61	6,903.13	164.18	29.99	78.66	-1,092.35	-246.58	6,791.55	6,677.54	114.01	59.571		
14,200.00	7,659.00	6,974.27	6,899.83	166.80	29.97	78.61	-1,091.86	-246.45	6,874.21	6,759.86	114.35	60.114		
14,300.00	7,659.00	6,970.93	6,896.53	169.43	29.96	78.56	-1,091.37	-246.32	6,957.33	6,842.64	114.69	60.664		
14,400.00	7,659.00	6,967.60	6,893.23	172.06	29.94	78.51	-1,090.87	-246.20	7,040.88	6,925.88	115.01	61.222		
14,500.00	7,659.00	6,964.26	6,889.93	174.69	29.93	78.46	-1,090.38	-246.07	7,124.86	7,009.55	115.31	61.786		
14,600.00	7,659.00	6,960.92	6,886.63	177.33	29.91	78.41	-1,089.89	-245.94	7,209.25	7,093.63	115.61	62.357		
14,700.00	7,659.00	6,957.58	6,883.33	179.96	29.90	78.36	-1,089.40	-245.82	7,294.02	7,178.12	115.90	62.935		
14,800.00	7,659.00	6,954.24	6,880.03	182.60	29.88	78.31	-1,088.90	-245.69	7,379.18	7,263.01	116.17	63.518		
14,900.00	7,659.00	6,950.90	6,876.73	185.24	29.87	78.27	-1,088.41	-245.56	7,464.70	7,348.26	116.44	64.108		
15,000.00	7,659.00	6,947.57	6,873.43	187.88	29.85	78.22	-1,087.92	-245.44	7,550.58	7,433.89	116.70	64.703		
15,100.00	7,659.00	6,944.23	6,870.13	190.52	29.84	78.17	-1,087.43	-245.31	7,636.80	7,519.86	116.94	65.303		
15,200.00	7,659.00	6,940.89	6,866.83	193.16	29.82	78.12	-1,086.94	-245.18	7,723.35	7,606.17	117.18	65.909		
15,300.00	7,659.00	6,937.55	6,863.53	195.81	29.81	78.07	-1,086.44	-245.05	7,810.22	7,692.81	117.41	66.519		
15,400.00	7,659.00	6,934.21	6,860.23	198.45	29.79	78.02	-1,085.95	-244.93	7,897.40	7,779.77	117.63	67.135		
15,500.00	7,659.00	6,930.87	6,856.93	201.10	29.78	77.97	-1,085.46	-244.80	7,984.88	7,867.03	117.85	67.755		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 25-26 4AH - OWB - PROPOSAL 1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	
15,600.00	7,659.00	6,927.53	6,853.63	203.75	29.76	77.92	-1,084.97	-244.67	8,072.65	7,954.60	118.06	68.379	
15,700.00	7,659.00	6,924.20	6,850.33	206.40	29.75	77.87	-1,084.47	-244.55	8,160.70	8,042.44	118.26	69.008	
15,800.00	7,659.00	6,920.86	6,847.03	209.05	29.73	77.82	-1,083.98	-244.42	8,249.02	8,130.57	118.45	69.641	
15,900.00	7,659.00	6,917.52	6,843.73	211.70	29.72	77.77	-1,083.49	-244.29	8,337.60	8,218.97	118.64	70.277	
16,000.00	7,659.00	6,914.18	6,840.43	214.36	29.70	77.72	-1,083.00	-244.17	8,426.44	8,307.62	118.82	70.918	
16,100.00	7,659.00	6,910.84	6,837.14	217.01	29.69	77.67	-1,082.50	-244.04	8,515.52	8,396.53	118.99	71.562	
16,200.00	7,659.00	6,907.50	6,833.84	219.67	29.67	77.62	-1,082.01	-243.91	8,604.84	8,485.68	119.16	72.210	
16,300.00	7,659.00	6,904.17	6,830.54	222.32	29.66	77.57	-1,081.52	-243.78	8,694.40	8,575.07	119.33	72.861	
16,400.00	7,659.00	6,900.83	6,827.24	224.98	29.64	77.52	-1,081.03	-243.66	8,784.17	8,664.69	119.49	73.516	
16,500.00	7,659.00	6,902.51	6,823.94	227.64	29.65	77.47	-1,080.54	-243.53	8,874.17	8,754.51	119.66	74.160	
16,600.00	7,659.00	6,905.85	6,820.64	230.30	29.67	77.42	-1,080.04	-243.40	8,964.37	8,844.53	119.84	74.803	
16,700.00	7,659.00	6,909.19	6,817.34	232.96	29.68	77.37	-1,079.55	-243.28	9,054.78	8,934.77	120.01	75.449	
16,800.00	7,659.00	6,887.47	6,814.04	235.62	29.58	77.32	-1,079.06	-243.15	9,145.39	9,025.32	120.07	76.164	
16,900.00	7,659.00	6,884.14	6,810.74	238.28	29.57	77.27	-1,078.57	-243.02	9,236.19	9,115.98	120.21	76.833	
17,000.00	7,659.00	6,880.80	6,807.44	240.95	29.55	77.22	-1,078.07	-242.90	9,327.18	9,206.84	120.34	77.505	
17,100.00	7,659.00	6,877.46	6,804.14	243.61	29.54	77.17	-1,077.58	-242.77	9,418.35	9,297.88	120.47	78.180	
17,200.00	7,659.00	6,874.12	6,800.84	246.27	29.53	77.13	-1,077.09	-242.64	9,509.69	9,389.10	120.59	78.857	
17,300.00	7,659.00	6,870.78	6,797.54	248.94	29.51	77.08	-1,076.60	-242.51	9,601.21	9,480.50	120.72	79.536	
17,400.00	7,659.00	6,867.44	6,794.24	251.60	29.50	77.03	-1,076.11	-242.39	9,692.89	9,572.06	120.83	80.218	
17,500.00	7,659.00	6,864.10	6,790.94	254.27	29.48	76.98	-1,075.61	-242.26	9,784.74	9,663.79	120.95	80.901	
17,600.00	7,659.00	6,860.77	6,787.64	256.94	29.47	76.93	-1,075.12	-242.13	9,876.74	9,755.68	121.06	81.587	
17,700.00	7,659.00	6,857.43	6,784.34	259.61	29.45	76.88	-1,074.63	-242.01	9,968.90	9,847.73	121.16	82.275	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 25-26 4BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	2.00	2.00	0.00	0.00	-179.70	-159.91	-0.84	159.91					
100.00	100.00	102.00	102.00	0.13	0.14	-179.70	-159.91	-0.84	159.91	159.64	0.27	588.913	CC, ES	
200.00	199.98	196.56	196.54	0.50	0.47	-163.21	-161.52	-1.10	163.28	162.30	0.98	166.706		
300.00	299.84	290.61	290.47	0.86	0.81	-163.39	-166.17	-1.84	173.23	171.54	1.70	102.005		
400.00	399.45	383.43	382.97	1.23	1.16	-163.63	-173.75	-3.06	189.70	187.28	2.42	78.545		
500.00	498.70	474.47	473.41	1.63	1.52	-163.90	-184.05	-4.70	212.56	209.43	3.13	68.007		
600.00	597.47	563.21	561.19	2.05	1.89	-164.15	-196.81	-6.74	241.65	237.82	3.83	63.161		
700.00	695.62	649.17	645.81	2.49	2.27	-164.35	-211.73	-9.13	276.77	272.26	4.51	61.319		
800.00	793.06	731.96	726.84	2.98	2.67	-164.49	-228.46	-11.80	317.69	312.51	5.19	61.262		
900.00	889.64	814.09	806.75	3.50	3.08	-164.60	-247.23	-14.80	364.05	358.19	5.86	62.162		
1,000.00	985.27	900.70	890.87	4.06	3.52	-164.73	-267.58	-18.05	413.96	407.41	6.55	63.165		
1,100.00	1,079.82	985.55	973.28	4.66	3.97	-164.89	-287.52	-21.24	466.79	459.54	7.25	64.404		
1,200.00	1,173.23	1,068.62	1,053.97	5.31	4.41	-165.14	-307.04	-24.36	522.33	514.38	7.95	65.698		
1,300.00	1,266.35	1,151.24	1,134.22	5.98	4.84	-165.56	-326.45	-27.46	578.57	569.94	8.63	67.040		
1,400.00	1,359.46	1,233.86	1,214.46	6.66	5.28	-165.91	-345.86	-30.56	634.83	625.51	9.32	68.145		
1,500.00	1,452.58	1,316.48	1,294.71	7.34	5.73	-166.20	-365.27	-33.66	691.10	681.09	10.01	69.067		
1,600.00	1,545.69	1,399.10	1,374.95	8.03	6.17	-166.44	-384.69	-36.76	747.38	736.68	10.70	69.846		
1,700.00	1,638.81	1,481.72	1,455.20	8.72	6.61	-166.66	-404.10	-39.87	803.67	792.27	11.40	70.510		
1,800.00	1,731.92	1,564.34	1,535.44	9.41	7.05	-166.84	-423.51	-42.97	859.97	847.87	12.10	71.083		
1,900.00	1,825.04	1,646.95	1,615.69	10.11	7.50	-167.00	-442.92	-46.07	916.27	903.47	12.80	71.580		
2,000.00	1,918.15	1,729.57	1,695.94	10.81	7.94	-167.15	-462.34	-49.17	972.57	959.07	13.51	72.016		
2,100.00	2,011.27	1,812.19	1,776.18	11.51	8.39	-167.27	-481.75	-52.27	1,028.88	1,014.67	14.21	72.400		
2,200.00	2,104.39	1,894.81	1,856.43	12.21	8.84	-167.39	-501.16	-55.38	1,085.20	1,070.28	14.92	72.741		
2,300.00	2,197.50	1,977.43	1,936.67	12.91	9.28	-167.49	-520.57	-58.48	1,141.51	1,125.88	15.63	73.045		
2,400.00	2,290.62	2,060.05	2,016.92	13.61	9.73	-167.58	-539.98	-61.58	1,197.83	1,181.49	16.34	73.317		
2,500.00	2,383.73	2,142.67	2,097.17	14.31	10.17	-167.67	-559.40	-64.68	1,254.15	1,237.10	17.05	73.563		
2,600.00	2,476.85	2,225.29	2,177.41	15.01	10.62	-167.75	-578.81	-67.79	1,310.47	1,292.71	17.76	73.785		
2,700.00	2,569.96	2,307.90	2,257.66	15.72	11.07	-167.82	-598.22	-70.89	1,366.79	1,348.32	18.47	73.987		
2,800.00	2,663.08	2,390.52	2,337.90	16.42	11.51	-167.88	-617.63	-73.99	1,423.12	1,403.93	19.19	74.171		
2,900.00	2,756.20	2,473.14	2,418.15	17.12	11.96	-167.94	-637.05	-77.09	1,479.44	1,459.54	19.90	74.340		
3,000.00	2,849.31	2,555.76	2,498.39	17.83	12.41	-168.00	-656.46	-80.19	1,535.77	1,515.15	20.62	74.494		
3,100.00	2,942.43	2,638.38	2,578.64	18.53	12.86	-168.05	-675.87	-83.30	1,592.10	1,570.77	21.33	74.636		
3,200.00	3,035.54	2,721.00	2,658.89	19.24	13.30	-168.10	-695.28	-86.40	1,648.42	1,626.38	22.05	74.767		
3,300.00	3,128.66	2,803.62	2,739.13	19.94	13.75	-168.15	-714.70	-89.50	1,704.75	1,681.99	22.76	74.888		
3,400.00	3,221.77	2,886.24	2,819.38	20.65	14.20	-168.19	-734.11	-92.60	1,761.08	1,737.60	23.48	75.000		
3,500.00	3,314.89	2,968.85	2,899.62	21.35	14.65	-168.23	-753.52	-95.71	1,817.41	1,793.21	24.20	75.104		
3,600.00	3,408.01	3,051.47	2,979.87	22.06	15.09	-168.27	-772.93	-98.81	1,873.74	1,848.83	24.92	75.201		
3,700.00	3,501.12	3,134.09	3,060.11	22.77	15.54	-168.30	-792.35	-101.91	1,930.08	1,904.44	25.64	75.291		
3,800.00	3,594.24	3,216.71	3,140.36	23.47	15.99	-168.33	-811.76	-105.01	1,986.41	1,960.05	26.35	75.374		
3,900.00	3,687.35	3,300.67	3,220.61	24.18	16.44	-168.37	-831.17	-108.11	2,042.74	2,015.66	27.08	75.437		
4,000.00	3,780.47	3,381.95	3,300.85	24.89	16.88	-168.40	-850.58	-111.22	2,099.07	2,071.28	27.79	75.526		
4,100.00	3,873.58	3,464.57	3,381.10	25.59	17.33	-168.42	-869.99	-114.32	2,155.40	2,126.89	28.51	75.594		
4,200.00	3,966.70	3,547.19	3,461.34	26.30	17.78	-168.45	-889.41	-117.42	2,211.74	2,182.50	29.23	75.658		
4,300.00	4,059.81	3,629.80	3,541.59	27.01	18.23	-168.48	-908.82	-120.52	2,268.07	2,238.12	29.95	75.718		
4,400.00	4,152.93	3,712.42	3,621.84	27.71	18.68	-168.50	-928.23	-123.62	2,324.41	2,293.73	30.68	75.775		
4,500.00	4,246.05	3,804.96	3,702.08	28.42	19.18	-168.52	-947.64	-126.73	2,380.74	2,349.30	31.44	75.730		
4,600.00	4,339.16	3,877.66	3,782.33	29.13	19.57	-168.55	-967.06	-129.83	2,437.07	2,404.96	32.12	75.877		
4,700.00	4,432.28	3,960.28	3,862.57	29.83	20.02	-168.57	-986.47	-132.93	2,493.41	2,460.57	32.84	75.924		
4,800.00	4,525.39	4,042.90	3,942.82	30.54	20.47	-168.59	-1,005.88	-136.03	2,549.74	2,516.18	33.56	75.968		
4,900.00	4,618.51	4,125.52	4,023.06	31.25	20.92	-168.61	-1,025.29	-139.14	2,606.08	2,571.79	34.29	76.009		
5,000.00	4,711.62	4,208.14	4,103.31	31.95	21.37	-168.62	-1,044.71	-142.24	2,662.41	2,627.40	35.01	76.048		
5,100.00	4,804.74	4,309.25	4,183.56	32.66	21.91	-168.64	-1,064.12	-145.34	2,718.75	2,682.94	35.81	75.924		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 25-26 4BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,200.00	4,897.86	4,373.37	4,263.80	33.37	22.26	-168.66	-1,083.53	-148.44	2,775.08	2,738.63	36.46	76.119		
5,300.00	4,990.97	4,455.99	4,344.05	34.08	22.71	-168.68	-1,102.94	-151.54	2,831.42	2,794.24	37.18	76.151		
5,400.00	5,084.09	4,538.61	4,424.29	34.78	23.16	-168.69	-1,122.35	-154.65	2,887.76	2,849.85	37.91	76.181		
5,500.00	5,177.20	4,621.23	4,504.54	35.49	23.61	-168.71	-1,141.77	-157.75	2,944.09	2,905.46	38.63	76.210		
5,600.00	5,270.32	4,703.85	4,584.79	36.20	24.06	-168.72	-1,161.18	-160.85	3,000.43	2,961.07	39.36	76.237		
5,700.00	5,363.43	4,786.47	4,665.03	36.91	24.50	-168.73	-1,180.59	-163.95	3,056.76	3,016.68	40.08	76.262		
5,800.00	5,456.55	4,869.08	4,745.28	37.61	24.95	-168.75	-1,200.00	-167.05	3,113.10	3,072.29	40.81	76.286		
5,900.00	5,549.67	4,951.70	4,825.52	38.32	25.40	-168.76	-1,219.42	-170.16	3,169.44	3,127.90	41.53	76.308		
6,000.00	5,642.78	5,034.32	4,905.77	39.03	25.85	-168.77	-1,238.83	-173.26	3,225.77	3,183.51	42.26	76.329		
6,100.00	5,735.90	5,116.94	4,986.01	39.74	26.30	-168.79	-1,258.24	-176.36	3,282.11	3,239.12	42.99	76.348		
6,200.00	5,829.01	5,200.44	5,066.26	40.44	26.75	-168.80	-1,277.65	-179.46	3,338.45	3,294.73	43.72	76.360		
6,300.00	5,922.13	5,282.18	5,146.51	41.15	27.19	-168.81	-1,297.07	-182.57	3,394.78	3,350.34	44.44	76.383		
6,400.00	6,015.24	5,364.80	5,226.75	41.86	27.64	-168.82	-1,316.48	-185.67	3,451.12	3,405.95	45.17	76.399		
6,500.00	6,108.36	5,447.42	5,307.00	42.57	28.09	-168.83	-1,335.89	-188.77	3,507.46	3,461.56	45.90	76.414		
6,600.00	6,201.47	5,530.03	5,387.24	43.28	28.54	-168.84	-1,355.30	-191.87	3,563.80	3,517.17	46.63	76.428		
6,700.00	6,294.59	5,612.65	5,467.49	43.98	28.99	-168.85	-1,374.72	-194.97	3,620.13	3,572.77	47.36	76.440		
6,800.00	6,387.71	5,704.73	5,547.74	44.69	29.49	-168.86	-1,394.13	-198.08	3,676.47	3,628.34	48.13	76.391		
6,900.00	6,480.82	5,777.89	5,627.98	45.40	29.88	-168.87	-1,413.54	-201.18	3,732.81	3,683.99	48.82	76.463		
7,000.00	6,573.94	5,860.51	5,708.23	46.11	30.33	-168.88	-1,432.95	-204.28	3,789.15	3,739.60	49.55	76.473		
7,100.00	6,667.05	5,943.13	5,788.47	46.82	30.78	-168.89	-1,452.36	-207.38	3,845.48	3,795.20	50.28	76.481		
7,200.00	6,760.17	6,025.75	5,868.72	47.52	31.23	-168.89	-1,471.78	-210.48	3,901.82	3,850.81	51.01	76.490		
7,300.00	6,853.28	6,108.37	5,948.96	48.23	31.68	-168.90	-1,491.19	-213.59	3,958.16	3,906.42	51.74	76.497		
7,400.00	6,946.40	6,209.02	6,029.21	48.94	32.22	-168.91	-1,510.60	-216.69	4,014.50	3,961.95	52.55	76.396		
7,500.00	7,039.52	6,273.60	6,109.46	49.65	32.58	-168.92	-1,530.01	-219.79	4,070.83	4,017.63	53.21	76.509		
7,600.00	7,132.94	6,356.33	6,189.81	50.33	33.02	166.57	-1,549.45	-222.90	4,126.67	4,072.74	53.92	76.529		
7,700.00	7,225.98	6,438.17	6,269.29	50.90	33.47	136.44	-1,568.68	-225.97	4,179.98	4,125.40	54.58	76.591		
7,800.00	7,315.86	6,516.65	6,345.52	51.34	33.89	114.94	-1,587.12	-228.92	4,229.35	4,174.19	55.16	76.680		
7,900.00	7,399.85	6,589.40	6,416.18	51.68	34.29	100.86	-1,604.22	-231.65	4,273.69	4,218.03	55.66	76.777		
8,000.00	7,475.41	6,654.21	6,479.13	51.91	34.64	91.54	-1,619.44	-234.08	4,312.18	4,256.07	56.12	76.844		
8,100.00	7,540.24	6,709.11	6,532.45	52.05	34.94	85.26	-1,632.34	-236.14	4,344.21	4,287.66	56.54	76.833		
8,200.00	7,592.37	6,752.43	6,574.53	52.11	35.17	81.03	-1,642.52	-237.77	4,369.35	4,312.37	56.98	76.684		
8,300.00	7,630.20	6,782.85	6,604.07	52.09	35.34	78.32	-1,649.67	-238.91	4,387.32	4,329.85	57.47	76.346		
8,400.00	7,652.61	6,800.55	6,620.20	52.01	35.44	76.81	-1,653.57	-239.54	4,397.95	4,339.92	58.03	75.788		
8,500.00	7,659.00	6,801.82	6,622.50	51.89	35.44	76.35	-1,654.13	-239.62	4,401.19	4,342.54	58.65	75.040		
8,600.00	7,659.00	6,801.47	6,619.31	51.77	35.44	76.31	-1,653.35	-239.50	4,402.86	4,343.45	59.41	74.109		
8,700.00	7,659.00	6,804.76	6,616.11	51.67	35.46	76.27	-1,652.58	-239.38	4,406.81	4,346.47	60.34	73.039		
8,800.00	7,659.00	6,808.05	6,612.92	51.61	35.48	76.22	-1,651.81	-239.25	4,413.01	4,351.62	61.40	71.878		
8,900.00	7,659.00	6,788.67	6,609.73	51.58	35.37	76.18	-1,651.04	-239.13	4,421.47	4,358.98	62.49	70.760		
9,000.00	7,659.00	6,785.38	6,606.53	51.59	35.35	76.14	-1,650.26	-239.01	4,432.16	4,368.42	63.74	69.530		
9,100.00	7,659.00	6,782.09	6,603.34	51.67	35.34	76.09	-1,649.49	-238.88	4,445.08	4,379.99	65.09	68.289		
9,200.00	7,659.00	6,778.80	6,600.15	51.83	35.32	76.05	-1,648.72	-238.76	4,460.20	4,393.68	66.52	67.056		
9,300.00	7,659.00	6,775.51	6,596.95	52.14	35.30	76.01	-1,647.94	-238.64	4,477.50	4,409.50	68.00	65.846		
9,400.00	7,659.00	6,772.23	6,593.76	52.67	35.28	75.97	-1,647.17	-238.51	4,496.95	4,427.42	69.53	64.672		
9,500.00	7,659.00	6,768.94	6,590.56	53.53	35.26	75.92	-1,646.40	-238.39	4,518.53	4,447.43	71.11	63.545		
9,600.00	7,659.00	6,765.65	6,587.37	54.75	35.25	75.88	-1,645.63	-238.27	4,542.21	4,469.50	72.71	62.470		
9,700.00	7,659.00	6,762.36	6,584.18	56.29	35.23	75.84	-1,644.85	-238.14	4,567.96	4,493.62	74.33	61.453		
9,800.00	7,659.00	6,759.07	6,580.98	58.05	35.21	75.80	-1,644.08	-238.02	4,595.73	4,519.76	75.97	60.496		
9,900.00	7,659.00	6,755.79	6,577.79	59.97	35.19	75.75	-1,643.31	-237.90	4,625.50	4,547.89	77.61	59.602		
10,000.00	7,659.00	6,752.50	6,574.60	62.00	35.17	75.71	-1,642.54	-237.77	4,657.22	4,577.97	79.24	58.770		
10,100.00	7,659.00	6,749.21	6,571.40	64.11	35.16	75.67	-1,641.76	-237.65	4,690.86	4,609.98	80.88	58.001		
10,200.00	7,659.00	6,745.92	6,568.21	66.28	35.14	75.62	-1,640.99	-237.53	4,726.37	4,643.87	82.50	57.292		
10,300.00	7,659.00	6,742.63	6,565.01	68.51	35.12	75.58	-1,640.22	-237.40	4,763.71	4,679.61	84.10	56.644		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 25-26 4BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,400.00	7,659.00	6,739.34	6,561.82	70.77	35.10	75.54	-1,639.45	-237.28	4,802.85	4,717.16	85.68	56.054		
10,500.00	7,659.00	6,736.06	6,558.63	73.06	35.09	75.50	-1,638.67	-237.16	4,843.73	4,756.48	87.24	55.519		
10,600.00	7,659.00	6,732.77	6,555.43	75.39	35.07	75.45	-1,637.90	-237.03	4,886.31	4,797.53	88.78	55.038		
10,700.00	7,659.00	6,729.48	6,552.24	77.74	35.05	75.41	-1,637.13	-236.91	4,930.55	4,840.26	90.29	54.609		
10,800.00	7,659.00	6,726.19	6,549.05	80.12	35.03	75.37	-1,636.36	-236.79	4,976.41	4,884.64	91.77	54.229		
10,900.00	7,659.00	6,722.90	6,545.85	82.51	35.01	75.32	-1,635.58	-236.66	5,023.83	4,930.62	93.21	53.896		
11,000.00	7,659.00	6,719.62	6,542.66	84.93	35.00	75.28	-1,634.81	-236.54	5,072.78	4,978.16	94.63	53.607		
11,100.00	7,659.00	6,716.33	6,539.46	87.36	34.98	75.24	-1,634.04	-236.41	5,123.22	5,027.21	96.01	53.361		
11,200.00	7,659.00	6,713.04	6,536.27	89.81	34.96	75.20	-1,633.27	-236.29	5,175.09	5,077.74	97.36	53.156		
11,300.00	7,659.00	6,709.75	6,533.08	92.27	34.94	75.15	-1,632.49	-236.17	5,228.36	5,129.69	98.67	52.989		
11,400.00	7,659.00	6,706.46	6,529.88	94.75	34.92	75.11	-1,631.72	-236.04	5,282.98	5,183.04	99.95	52.858		
11,500.00	7,659.00	6,703.17	6,526.69	97.23	34.91	75.07	-1,630.95	-235.92	5,338.92	5,237.73	101.19	52.762		
11,600.00	7,659.00	6,699.89	6,523.50	99.73	34.89	75.03	-1,630.17	-235.80	5,396.13	5,293.73	102.40	52.699		
11,700.00	7,659.00	6,696.60	6,520.30	102.24	34.87	74.98	-1,629.40	-235.67	5,454.56	5,351.00	103.57	52.667		
11,800.00	7,659.00	6,706.69	6,517.11	104.75	34.93	74.94	-1,628.63	-235.55	5,514.20	5,409.43	104.76	52.635 SF		
11,900.00	7,659.00	6,690.02	6,513.91	107.28	34.84	74.90	-1,627.86	-235.43	5,574.98	5,469.17	105.81	52.690		
12,000.00	7,659.00	6,686.73	6,510.72	109.81	34.82	74.85	-1,627.08	-235.30	5,636.88	5,530.01	106.88	52.742		
12,100.00	7,659.00	6,683.44	6,507.53	112.35	34.80	74.81	-1,626.31	-235.18	5,699.86	5,591.95	107.91	52.819		
12,200.00	7,659.00	6,680.16	6,504.33	114.90	34.78	74.77	-1,625.54	-235.06	5,763.89	5,654.97	108.92	52.921		
12,300.00	7,659.00	6,676.87	6,501.14	117.46	34.76	74.73	-1,624.77	-234.93	5,828.93	5,719.04	109.89	53.045		
12,400.00	7,659.00	6,673.58	6,497.95	120.02	34.75	74.68	-1,623.99	-234.81	5,894.94	5,784.12	110.83	53.191		
12,500.00	7,659.00	6,670.29	6,494.75	122.58	34.73	74.64	-1,623.22	-234.69	5,961.90	5,850.17	111.74	53.357		
12,600.00	7,659.00	6,667.00	6,491.56	125.15	34.71	74.60	-1,622.45	-234.56	6,029.77	5,917.16	112.62	53.543		
12,700.00	7,659.00	6,663.72	6,488.36	127.73	34.69	74.56	-1,621.68	-234.44	6,098.53	5,985.06	113.47	53.748		
12,800.00	7,659.00	6,660.43	6,485.17	130.31	34.67	74.51	-1,620.90	-234.32	6,168.14	6,053.85	114.29	53.970		
12,900.00	7,659.00	6,657.14	6,481.98	132.90	34.66	74.47	-1,620.13	-234.19	6,238.57	6,123.49	115.08	54.210		
13,000.00	7,659.00	6,653.85	6,478.78	135.49	34.64	74.43	-1,619.36	-234.07	6,309.80	6,193.95	115.85	54.465		
13,100.00	7,659.00	6,650.56	6,475.59	138.08	34.62	74.38	-1,618.59	-233.95	6,381.80	6,265.21	116.59	54.736		
13,200.00	7,659.00	6,647.38	6,472.49	140.68	34.60	74.53	-1,617.84	-233.83	6,454.26	6,336.94	117.31	55.017		
13,300.00	7,659.00	6,644.36	6,469.57	143.28	34.59	74.49	-1,617.13	-233.71	6,526.96	6,408.94	118.02	55.304		
13,400.00	7,659.00	6,641.35	6,466.64	145.88	34.57	74.45	-1,616.42	-233.60	6,600.38	6,481.68	118.70	55.605		
13,500.00	7,659.00	6,638.34	6,463.71	148.48	34.56	74.42	-1,615.71	-233.49	6,674.49	6,555.13	119.36	55.919		
13,600.00	7,659.00	6,635.32	6,460.79	151.09	34.54	74.38	-1,615.01	-233.37	6,749.26	6,629.27	120.00	56.245		
13,700.00	7,659.00	6,632.31	6,457.86	153.70	34.52	74.34	-1,614.30	-233.26	6,824.68	6,704.07	120.61	56.583		
13,800.00	7,659.00	6,629.30	6,454.93	156.32	34.51	74.30	-1,613.59	-233.15	6,900.72	6,779.52	121.21	56.933		
13,900.00	7,659.00	6,626.28	6,452.01	158.94	34.49	74.26	-1,612.88	-233.03	6,977.37	6,855.59	121.78	57.294		
14,000.00	7,659.00	6,623.27	6,449.08	161.56	34.47	74.22	-1,612.17	-232.92	7,054.60	6,932.26	122.34	57.665		
14,100.00	7,659.00	6,620.26	6,446.15	164.18	34.46	74.18	-1,611.47	-232.81	7,132.39	7,009.52	122.87	58.046		
14,200.00	7,659.00	6,617.24	6,443.23	166.80	34.44	74.14	-1,610.76	-232.69	7,210.73	7,087.34	123.39	58.437		
14,300.00	7,659.00	6,614.23	6,440.30	169.43	34.42	74.11	-1,610.05	-232.58	7,289.60	7,165.71	123.89	58.837		
14,400.00	7,659.00	6,611.22	6,437.37	172.06	34.41	74.07	-1,609.34	-232.47	7,368.98	7,244.60	124.38	59.246		
14,500.00	7,659.00	6,608.20	6,434.45	174.69	34.39	74.03	-1,608.63	-232.35	7,448.86	7,324.01	124.85	59.664		
14,600.00	7,659.00	6,605.19	6,431.52	177.33	34.38	73.99	-1,607.92	-232.24	7,529.21	7,403.91	125.30	60.089		
14,700.00	7,659.00	6,602.18	6,428.59	179.96	34.36	73.95	-1,607.22	-232.13	7,610.03	7,484.30	125.74	60.522		
14,800.00	7,659.00	6,600.84	6,425.67	182.60	34.35	73.91	-1,606.51	-232.02	7,691.30	7,565.13	126.17	60.959		
14,900.00	7,659.00	6,603.85	6,422.74	185.24	34.37	73.87	-1,605.80	-231.90	7,773.01	7,646.40	126.61	61.393		
15,000.00	7,659.00	6,593.14	6,419.81	187.88	34.31	73.83	-1,605.09	-231.79	7,855.14	7,728.17	126.97	61.867		
15,100.00	7,659.00	6,609.88	6,416.89	190.52	34.40	73.80	-1,604.38	-231.68	7,937.67	7,810.22	127.45	62.282		
15,200.00	7,659.00	6,587.11	6,413.96	193.16	34.28	73.76	-1,603.68	-231.56	8,020.61	7,892.88	127.72	62.797		
15,300.00	7,659.00	6,584.10	6,411.03	195.81	34.26	73.72	-1,602.97	-231.45	8,103.92	7,975.84	128.08	63.271		
15,400.00	7,659.00	6,581.08	6,408.11	198.45	34.24	73.68	-1,602.26	-231.34	8,187.61	8,059.18	128.43	63.751		
15,500.00	7,659.00	6,578.07	6,405.18	201.10	34.23	73.64	-1,601.55	-231.22	8,271.66	8,142.89	128.77	64.238		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 25-26 4BH - OWB - PROPOSAL 1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	
15,600.00	7,659.00	6,575.06	6,402.25	203.75	34.21	73.60	-1,600.84	-231.11	8,356.06	8,226.97	129.09	64.729	
15,700.00	7,659.00	6,572.04	6,399.33	206.40	34.20	73.56	-1,600.14	-231.00	8,440.80	8,311.39	129.41	65.226	
15,800.00	7,659.00	6,569.03	6,396.40	209.05	34.18	73.53	-1,599.43	-230.88	8,525.87	8,396.16	129.71	65.728	
15,900.00	7,659.00	6,566.02	6,393.47	211.70	34.16	73.49	-1,598.72	-230.77	8,611.26	8,481.25	130.01	66.236	
16,000.00	7,659.00	6,563.00	6,390.55	214.36	34.15	73.45	-1,598.01	-230.66	8,696.96	8,566.67	130.30	66.748	
16,100.00	7,659.00	6,559.99	6,387.62	217.01	34.13	73.41	-1,597.30	-230.54	8,782.96	8,652.39	130.57	67.264	
16,200.00	7,659.00	6,556.98	6,384.69	219.67	34.11	73.37	-1,596.60	-230.43	8,869.26	8,738.41	130.84	67.785	
16,300.00	7,659.00	6,553.96	6,381.76	222.32	34.10	73.33	-1,595.89	-230.32	8,955.84	8,824.73	131.10	68.311	
16,400.00	7,659.00	6,550.95	6,378.84	224.98	34.08	73.29	-1,595.18	-230.21	9,042.69	8,911.33	131.36	68.840	
16,500.00	7,659.00	6,547.94	6,375.91	227.64	34.06	73.26	-1,594.47	-230.09	9,129.81	8,998.21	131.60	69.374	
16,600.00	7,659.00	6,544.92	6,372.98	230.30	34.05	73.22	-1,593.76	-229.98	9,217.19	9,085.35	131.84	69.911	
16,700.00	7,659.00	6,541.91	6,370.06	232.96	34.03	73.18	-1,593.06	-229.87	9,304.83	9,172.76	132.07	70.452	
16,800.00	7,659.00	6,538.90	6,367.13	235.62	34.02	73.14	-1,592.35	-229.75	9,392.71	9,260.41	132.30	70.997	
16,900.00	7,659.00	6,535.88	6,364.20	238.28	34.00	73.10	-1,591.64	-229.64	9,480.83	9,348.32	132.51	71.546	
17,000.00	7,659.00	6,532.87	6,361.28	240.95	33.98	73.06	-1,590.93	-229.53	9,569.19	9,436.46	132.73	72.097	
17,100.00	7,659.00	6,529.86	6,358.35	243.61	33.97	73.02	-1,590.22	-229.41	9,657.76	9,524.83	132.93	72.652	
17,200.00	7,659.00	6,526.84	6,355.42	246.27	33.95	72.98	-1,589.52	-229.30	9,746.56	9,613.43	133.13	73.211	
17,300.00	7,659.00	6,523.83	6,352.50	248.94	33.93	72.95	-1,588.81	-229.19	9,835.58	9,702.25	133.32	73.772	
17,400.00	7,659.00	6,520.82	6,349.57	251.60	33.92	72.91	-1,588.10	-229.07	9,924.80	9,791.29	133.51	74.337	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 26-25 1AH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-12.53	611.97	-135.96	626.89					
100.00	100.00	100.00	100.00	0.13	0.13	-12.53	611.97	-135.96	626.89	626.62	0.27	2,331.702		
200.00	199.98	182.25	182.24	0.50	0.43	4.05	613.15	-136.02	626.56	625.63	0.93	675.467		
300.00	299.84	264.51	264.42	0.86	0.73	4.13	616.68	-136.20	625.59	624.00	1.59	394.314		
400.00	399.45	346.77	346.47	1.23	1.04	4.27	622.57	-136.51	623.97	621.72	2.25	277.885		
500.00	498.70	429.05	428.33	1.63	1.35	4.46	630.82	-136.94	621.71	618.80	2.91	213.841		
600.00	597.47	511.35	509.93	2.05	1.67	4.72	641.41	-137.50	618.82	615.25	3.57	173.143		
700.00	695.62	593.67	591.23	2.49	2.02	5.03	654.34	-138.18	615.31	611.06	4.25	144.866		
800.00	793.06	676.02	672.14	2.98	2.38	5.40	669.60	-138.98	611.20	606.27	4.93	123.982		
900.00	889.64	758.40	752.62	3.50	2.77	5.84	687.19	-139.90	606.50	600.88	5.62	107.893		
1,000.00	985.27	840.82	832.59	4.06	3.18	6.34	707.09	-140.94	601.23	594.91	6.32	95.103		
1,100.00	1,079.82	934.92	923.37	4.66	3.67	6.98	731.83	-142.24	594.76	587.66	7.10	83.809		
1,200.00	1,173.23	1,034.18	1,019.10	5.31	4.20	7.72	758.06	-143.61	585.22	577.31	7.91	73.992		
1,300.00	1,266.35	1,133.36	1,114.74	5.98	4.74	8.48	784.26	-144.98	574.96	566.23	8.73	65.852		
1,400.00	1,359.46	1,232.53	1,210.38	6.66	5.28	9.27	810.46	-146.35	564.81	555.25	9.56	59.074		
1,500.00	1,452.58	1,331.71	1,306.02	7.34	5.82	10.09	836.66	-147.73	554.76	544.36	10.40	53.350		
1,600.00	1,545.69	1,430.89	1,401.67	8.03	6.37	10.93	862.86	-149.10	544.83	533.59	11.24	48.455		
1,700.00	1,638.81	1,530.06	1,497.31	8.72	6.92	11.81	889.06	-150.47	535.02	522.92	12.10	44.225		
1,800.00	1,731.92	1,629.24	1,592.95	9.41	7.46	12.72	915.26	-151.84	525.34	512.38	12.96	40.536		
1,900.00	1,825.04	1,728.41	1,688.59	10.11	8.01	13.66	941.46	-153.22	515.80	501.97	13.83	37.291		
2,000.00	1,918.15	1,827.59	1,784.24	10.81	8.57	14.64	967.66	-154.59	506.41	491.69	14.71	34.416		
2,100.00	2,011.27	1,926.76	1,879.88	11.51	9.12	15.65	993.86	-155.96	497.16	481.55	15.61	31.852		
2,200.00	2,104.39	2,025.94	1,975.52	12.21	9.67	16.70	1,020.06	-157.33	488.08	471.56	16.52	29.553		
2,300.00	2,197.50	2,125.12	2,071.16	12.91	10.22	17.79	1,046.26	-158.71	479.17	461.73	17.44	27.480		
2,400.00	2,290.62	2,224.29	2,166.81	13.61	10.77	18.92	1,072.46	-160.08	470.43	452.06	18.37	25.603		
2,500.00	2,383.73	2,323.47	2,262.45	14.31	11.33	20.09	1,098.66	-161.45	461.89	442.56	19.33	23.896		
2,600.00	2,476.85	2,422.64	2,358.09	15.01	11.88	21.31	1,124.86	-162.82	453.55	433.25	20.30	22.338		
2,700.00	2,569.96	2,521.82	2,453.73	15.72	12.44	22.57	1,151.06	-164.19	445.42	424.12	21.30	20.911		
2,800.00	2,663.08	2,620.99	2,549.37	16.42	12.99	23.88	1,177.26	-165.57	437.52	415.20	22.32	19.601		
2,900.00	2,756.20	2,720.17	2,645.02	17.12	13.54	25.23	1,203.46	-166.94	429.85	406.49	23.37	18.395		
3,000.00	2,849.31	2,819.34	2,740.66	17.83	14.10	26.63	1,229.66	-168.31	422.44	397.99	24.44	17.283		
3,100.00	2,942.43	2,918.52	2,836.30	18.53	14.65	28.08	1,255.86	-169.68	415.28	389.74	25.55	16.256		
3,200.00	3,035.54	3,017.70	2,931.94	19.24	15.21	29.58	1,282.06	-171.06	408.40	381.72	26.68	15.306		
3,300.00	3,128.66	3,116.87	3,027.59	19.94	15.76	31.13	1,308.26	-172.43	401.82	373.96	27.85	14.427		
3,400.00	3,221.77	3,216.05	3,123.23	20.65	16.32	32.73	1,334.47	-173.80	395.54	366.48	29.06	13.612		
3,500.00	3,314.89	3,315.22	3,218.87	21.35	16.87	34.38	1,360.67	-175.17	389.58	359.27	30.30	12.856		
3,600.00	3,408.01	3,414.40	3,314.51	22.06	17.43	36.07	1,386.87	-176.55	383.95	352.37	31.58	12.156		
3,700.00	3,501.12	3,513.57	3,410.16	22.77	17.98	37.82	1,413.07	-177.92	378.67	345.77	32.91	11.508		
3,800.00	3,594.24	3,612.75	3,505.80	23.47	18.54	39.61	1,439.27	-179.29	373.76	339.50	34.27	10.907		
3,900.00	3,687.35	3,711.93	3,601.44	24.18	19.09	41.45	1,465.47	-180.66	369.23	333.57	35.67	10.352		
4,000.00	3,780.47	3,811.10	3,697.08	24.89	19.65	43.33	1,491.67	-182.03	365.10	327.99	37.11	9.839		
4,100.00	3,873.58	3,910.28	3,792.73	25.59	20.21	45.25	1,517.87	-183.41	361.37	322.78	38.58	9.366		
4,200.00	3,966.70	4,009.45	3,888.37	26.30	20.76	47.20	1,544.07	-184.78	358.06	317.96	40.10	8.930		
4,300.00	4,059.81	4,108.63	3,984.01	27.01	21.32	49.20	1,570.27	-186.15	355.18	313.53	41.64	8.529		
4,400.00	4,152.93	4,207.80	4,079.65	27.71	21.87	51.22	1,596.47	-187.52	352.74	309.52	43.22	8.162		
4,500.00	4,246.05	4,306.98	4,175.30	28.42	22.43	53.26	1,622.67	-188.90	350.76	305.94	44.82	7.826		
4,600.00	4,339.16	4,406.16	4,270.94	29.13	22.98	55.33	1,648.87	-190.27	349.23	302.79	46.45	7.519		
4,700.00	4,432.28	4,505.33	4,366.58	29.83	23.54	57.41	1,675.07	-191.64	348.17	300.08	48.09	7.240		
4,800.00	4,525.39	4,604.51	4,462.22	30.54	24.10	59.50	1,701.27	-193.01	347.58	297.84	49.74	6.988		
4,875.16	4,595.38	4,679.05	4,534.11	31.07	24.51	61.08	1,720.96	-194.04	347.45	296.46	50.99	6.814		
4,900.00	4,618.51	4,703.68	4,557.87	31.25	24.65	61.60	1,727.47	-194.39	347.46	296.06	51.40	6.759		
5,000.00	4,711.62	4,802.86	4,653.51	31.95	25.21	63.69	1,753.67	-195.76	347.81	294.75	53.07	6.554		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 26-25 1AH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,100.00	4,804.74	4,902.03	4,749.15	32.66	25.76	65.78	1,779.87	-197.13	348.64	293.91	54.73	6.370		
5,200.00	4,897.86	5,001.21	4,844.79	33.37	26.32	67.85	1,806.07	-198.50	349.93	293.55	56.38	6.206		
5,300.00	4,990.97	5,100.38	4,940.43	34.08	26.88	69.91	1,832.27	-199.87	351.69	293.66	58.03	6.061		
5,400.00	5,084.09	5,200.44	5,036.08	34.78	27.44	71.94	1,858.47	-201.25	353.90	294.24	59.66	5.932		
5,500.00	5,177.20	5,301.26	5,131.72	35.49	28.00	73.95	1,884.67	-202.62	356.55	295.28	61.27	5.819		
5,600.00	5,270.32	5,402.09	5,227.36	36.20	28.57	75.92	1,910.87	-203.99	359.65	296.79	62.86	5.721		
5,700.00	5,363.43	5,502.91	5,323.00	36.91	29.13	77.86	1,937.07	-205.36	363.17	298.74	64.43	5.637		
5,800.00	5,456.55	5,603.74	5,418.65	37.61	29.70	79.76	1,963.27	-206.74	367.10	301.14	65.96	5.565		
5,900.00	5,549.67	5,704.56	5,514.29	38.32	30.26	81.62	1,989.47	-208.11	371.44	303.97	67.47	5.505		
6,000.00	5,642.78	5,805.39	5,609.93	39.03	30.83	83.44	2,015.67	-209.48	376.16	307.21	68.95	5.456		
6,100.00	5,735.90	5,893.79	5,705.57	39.74	31.32	85.21	2,041.87	-210.85	381.25	310.93	70.32	5.421		
6,200.00	5,829.01	6,007.03	5,801.22	40.44	31.96	86.93	2,068.07	-212.23	386.70	314.90	71.80	5.386		
6,300.00	5,922.13	6,107.86	5,896.86	41.15	32.52	88.60	2,094.28	-213.60	392.50	319.31	73.19	5.363		
6,400.00	6,015.24	6,208.68	5,992.50	41.86	33.09	90.23	2,120.48	-214.97	398.62	324.08	74.54	5.348		
6,500.00	6,108.36	6,309.51	6,088.14	42.57	33.66	91.80	2,146.68	-216.34	405.05	329.19	75.86	5.340		
6,600.00	6,201.47	6,389.67	6,183.79	43.28	34.11	93.32	2,172.88	-217.71	411.78	334.75	77.04	5.345		
6,700.00	6,294.59	6,488.84	6,279.43	43.98	34.66	94.80	2,199.08	-219.09	418.80	340.51	78.29	5.349		
6,800.00	6,387.71	6,588.02	6,375.07	44.69	35.22	96.22	2,225.28	-220.46	426.09	346.57	79.52	5.358		
6,900.00	6,480.82	6,687.20	6,470.71	45.40	35.77	97.60	2,251.48	-221.83	433.63	352.90	80.73	5.372		
7,000.00	6,573.94	6,786.37	6,566.36	46.11	36.33	98.93	2,277.68	-223.20	441.42	359.51	81.91	5.389		
7,100.00	6,667.05	6,885.55	6,662.00	46.82	36.89	100.21	2,303.88	-224.58	449.43	366.37	83.07	5.410		
7,200.00	6,760.17	6,984.72	6,757.64	47.52	37.44	101.45	2,330.08	-225.95	457.67	373.46	84.21	5.435		
7,300.00	6,853.28	7,083.90	6,853.28	48.23	38.00	102.65	2,356.28	-227.32	466.11	380.78	85.33	5.463		
7,400.00	6,946.40	7,183.07	6,948.93	48.94	38.56	103.80	2,382.48	-228.69	474.75	388.32	86.43	5.493		
7,500.00	7,039.52	7,282.25	7,044.57	49.65	39.11	104.91	2,408.68	-230.07	483.57	396.06	87.52	5.525		
7,600.00	7,132.94	7,325.97	7,276.80	50.33	40.48	87.96	2,472.50	-258.57	483.74	397.01	86.73	5.577		
7,700.00	7,225.98	7,874.22	7,546.49	50.90	42.27	73.69	2,547.95	-456.49	414.36	351.54	62.82	6.596		
7,800.00	7,315.86	7,954.04	7,588.63	51.34	42.66	87.77	2,560.04	-523.11	319.20	264.85	54.35	5.873		
7,900.00	7,399.85	7,961.83	7,592.26	51.68	42.70	138.67	2,561.08	-529.93	220.61	167.32	53.30	4.139		
8,000.00	7,475.41	7,944.23	7,583.94	51.91	42.61	147.31	2,558.68	-514.60	124.30	69.42	54.88	2.265		
8,100.00	7,540.24	7,915.09	7,569.18	52.05	42.47	122.51	2,554.44	-489.83	43.62	-18.14	61.77	0.706	Level 1	
8,123.44	7,553.67	7,907.24	7,565.01	52.06	42.43	111.29	2,553.24	-483.30	37.61	-29.36	66.97	0.562	Level 1, CC, ES, SF	
8,200.00	7,592.37	7,879.80	7,549.72	52.11	42.30	71.31	2,548.88	-460.94	79.99	12.94	67.05	1.193	Level 2	
8,300.00	7,630.20	7,840.88	7,526.31	52.09	42.11	43.18	2,542.22	-430.58	163.12	94.58	68.53	2.380		
8,400.00	7,652.61	7,800.00	7,499.62	52.01	41.91	32.45	2,534.67	-400.55	244.40	172.61	71.79	3.404		
8,500.00	7,659.00	7,756.95	7,469.37	51.89	41.69	27.81	2,526.15	-371.15	320.52	245.41	75.11	4.267		
8,600.00	7,659.00	7,717.90	7,440.15	51.77	41.49	26.21	2,517.95	-346.59	397.26	319.20	78.06	5.089		
8,700.00	7,659.00	7,684.77	7,414.14	51.67	41.33	25.08	2,510.67	-327.41	478.03	397.66	80.37	5.948		
8,800.00	7,659.00	7,650.00	7,385.74	51.61	41.15	24.09	2,502.74	-309.00	562.02	480.34	81.67	6.881		
8,900.00	7,659.00	7,632.15	7,370.75	51.58	41.05	23.64	2,498.57	-300.25	648.32	564.71	83.61	7.754		
9,000.00	7,659.00	7,600.00	7,343.12	51.59	40.88	22.92	2,490.88	-285.73	736.85	652.70	84.16	8.756		
9,100.00	7,659.00	7,600.00	7,343.12	51.67	40.88	22.92	2,490.88	-285.73	826.67	740.69	85.98	9.615		
9,200.00	7,659.00	7,576.57	7,322.51	51.83	40.75	22.46	2,485.16	-276.18	917.82	831.42	86.40	10.623		
9,300.00	7,659.00	7,550.00	7,298.69	52.14	40.61	21.99	2,478.56	-266.41	1,010.32	923.73	86.59	11.668		
9,400.00	7,659.00	7,550.00	7,298.69	52.67	40.61	21.99	2,478.56	-266.41	1,103.30	1,015.79	87.51	12.607		
9,500.00	7,659.00	7,550.00	7,298.69	53.53	40.61	21.99	2,478.56	-266.41	1,197.41	1,109.19	88.22	13.573		
9,600.00	7,659.00	7,528.09	7,278.75	54.75	40.49	21.64	2,473.04	-259.22	1,291.80	1,203.54	88.26	14.636		
9,700.00	7,659.00	7,518.89	7,270.29	56.29	40.44	21.51	2,470.70	-256.44	1,386.91	1,298.36	88.55	15.662		
9,800.00	7,659.00	7,500.00	7,252.81	58.05	40.34	21.24	2,465.87	-251.18	1,482.63	1,394.03	88.60	16.735		
9,900.00	7,659.00	7,500.00	7,252.81	59.97	40.34	21.24	2,465.87	-251.18	1,578.48	1,489.52	88.96	17.743		
10,000.00	7,659.00	7,500.00	7,252.81	62.00	40.34	21.24	2,465.87	-251.18	1,674.82	1,585.55	89.27	18.762		
10,100.00	7,659.00	7,500.00	7,252.81	64.11	40.34	21.24	2,465.87	-251.18	1,771.57	1,682.05	89.52	19.789		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 26-25 1AH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,200.00	7,659.00	7,500.00	7,252.81	66.28	40.34	21.24	2,465.87	-251.18	1,868.66	1,778.92	89.74	20.824		
10,300.00	7,659.00	7,478.29	7,232.51	68.51	40.21	20.96	2,460.27	-245.87	1,965.51	1,875.89	89.62	21.932		
10,400.00	7,659.00	7,473.26	7,227.79	70.77	40.19	20.90	2,458.97	-244.75	2,062.87	1,973.15	89.73	22.991		
10,500.00	7,659.00	7,450.00	7,205.81	73.06	40.06	20.63	2,452.91	-240.15	2,160.81	2,071.22	89.59	24.120		
10,600.00	7,659.00	7,450.00	7,205.81	75.39	40.06	20.63	2,452.91	-240.15	2,258.38	2,168.64	89.73	25.167		
10,700.00	7,659.00	7,450.00	7,205.81	77.74	40.06	20.63	2,452.91	-240.15	2,356.15	2,266.29	89.86	26.219		
10,800.00	7,659.00	7,450.00	7,205.81	80.12	40.06	20.63	2,452.91	-240.15	2,454.10	2,364.12	89.98	27.274		
10,900.00	7,659.00	7,450.00	7,205.81	82.51	40.06	20.63	2,452.91	-240.15	2,552.21	2,462.13	90.08	28.332		
11,000.00	7,659.00	7,450.00	7,205.81	84.93	40.06	20.63	2,452.91	-240.15	2,650.46	2,560.29	90.18	29.392		
11,100.00	7,659.00	7,450.00	7,205.81	87.36	40.06	20.63	2,452.91	-240.15	2,748.84	2,658.58	90.26	30.455		
11,200.00	7,659.00	7,450.00	7,205.81	89.81	40.06	20.63	2,452.91	-240.15	2,847.33	2,757.00	90.33	31.520		
11,300.00	7,659.00	7,450.00	7,205.81	92.27	40.06	20.63	2,452.91	-240.15	2,945.92	2,855.52	90.40	32.587		
11,400.00	7,659.00	7,450.00	7,205.81	94.75	40.06	20.63	2,452.91	-240.15	3,044.61	2,954.14	90.47	33.655		
11,500.00	7,659.00	7,450.00	7,205.81	97.23	40.06	20.63	2,452.91	-240.15	3,143.37	3,052.85	90.53	34.724		
11,600.00	7,659.00	7,450.00	7,205.81	99.73	40.06	20.63	2,452.91	-240.15	3,242.22	3,151.64	90.58	35.794		
11,700.00	7,659.00	7,450.00	7,205.81	102.24	40.06	20.63	2,452.91	-240.15	3,341.13	3,250.50	90.63	36.865		
11,800.00	7,659.00	7,428.70	7,185.53	104.75	39.94	20.41	2,447.33	-236.76	3,439.64	3,349.14	90.50	38.007		
11,900.00	7,659.00	7,426.66	7,183.59	107.28	39.92	20.39	2,446.80	-236.47	3,538.58	3,448.05	90.53	39.086		
12,000.00	7,659.00	7,424.72	7,181.73	109.81	39.91	20.37	2,446.29	-236.21	3,637.58	3,547.01	90.56	40.166		
12,100.00	7,659.00	7,422.86	7,179.96	112.35	39.90	20.35	2,445.80	-235.96	3,736.61	3,646.02	90.59	41.246		
12,200.00	7,659.00	7,400.00	7,158.05	114.90	39.77	20.13	2,439.78	-233.42	3,836.14	3,745.69	90.46	42.409		
12,300.00	7,659.00	7,400.00	7,158.05	117.46	39.77	20.13	2,439.78	-233.42	3,935.20	3,844.70	90.50	43.483		
12,400.00	7,659.00	7,400.00	7,158.05	120.02	39.77	20.13	2,439.78	-233.42	4,034.29	3,943.75	90.54	44.557		
12,500.00	7,659.00	7,400.00	7,158.05	122.58	39.77	20.13	2,439.78	-233.42	4,133.44	4,042.86	90.58	45.632		
12,600.00	7,659.00	7,400.00	7,158.05	125.15	39.77	20.13	2,439.78	-233.42	4,232.62	4,142.00	90.62	46.706		
12,700.00	7,659.00	7,400.00	7,158.05	127.73	39.77	20.13	2,439.78	-233.42	4,331.84	4,241.18	90.66	47.781		
12,800.00	7,659.00	7,400.00	7,158.05	130.31	39.77	20.13	2,439.78	-233.42	4,431.10	4,340.40	90.70	48.855		
12,900.00	7,659.00	7,400.00	7,158.05	132.90	39.77	20.13	2,439.78	-233.42	4,530.39	4,439.65	90.73	49.930		
13,000.00	7,659.00	7,400.00	7,158.05	135.49	39.77	20.13	2,439.78	-233.42	4,629.70	4,538.93	90.77	51.004		
13,100.00	7,659.00	7,400.00	7,158.05	138.08	39.77	20.13	2,439.78	-233.42	4,729.05	4,638.25	90.81	52.078		
13,200.00	7,659.00	7,400.00	7,158.05	140.68	39.77	25.52	2,439.78	-233.42	4,828.41	4,737.57	90.84	53.152		
13,300.00	7,659.00	7,400.00	7,158.05	143.28	39.77	25.52	2,439.78	-233.42	4,927.76	4,836.88	90.87	54.226		
13,400.00	7,659.00	7,400.00	7,158.05	145.88	39.77	25.52	2,439.78	-233.42	5,027.14	4,936.23	90.91	55.299		
13,500.00	7,659.00	7,400.00	7,158.05	148.48	39.77	25.52	2,439.78	-233.42	5,126.54	5,035.59	90.94	56.372		
13,600.00	7,659.00	7,400.00	7,158.05	151.09	39.77	25.52	2,439.78	-233.42	5,225.96	5,134.98	90.97	57.444		
13,700.00	7,659.00	7,400.00	7,158.05	153.70	39.77	25.52	2,439.78	-233.42	5,325.40	5,234.40	91.01	58.516		
13,800.00	7,659.00	7,400.00	7,158.05	156.32	39.77	25.52	2,439.78	-233.42	5,424.87	5,333.83	91.04	59.587		
13,900.00	7,659.00	7,400.00	7,158.05	158.94	39.77	25.52	2,439.78	-233.42	5,524.35	5,433.28	91.07	60.658		
14,000.00	7,659.00	7,400.00	7,158.05	161.56	39.77	25.52	2,439.78	-233.42	5,623.86	5,532.75	91.11	61.728		
14,100.00	7,659.00	7,400.00	7,158.05	164.18	39.77	25.52	2,439.78	-233.42	5,723.38	5,632.24	91.14	62.798		
14,200.00	7,659.00	7,400.00	7,158.05	166.80	39.77	25.52	2,439.78	-233.42	5,822.91	5,731.74	91.17	63.867		
14,300.00	7,659.00	7,400.00	7,158.05	169.43	39.77	25.52	2,439.78	-233.42	5,922.47	5,831.26	91.21	64.935		
14,400.00	7,659.00	7,400.00	7,158.05	172.06	39.77	25.52	2,439.78	-233.42	6,022.03	5,930.79	91.24	66.003		
14,500.00	7,659.00	7,400.00	7,158.05	174.69	39.77	25.52	2,439.78	-233.42	6,121.61	6,030.34	91.27	67.070		
14,600.00	7,659.00	7,400.00	7,158.05	177.33	39.77	25.52	2,439.78	-233.42	6,221.21	6,129.90	91.31	68.136		
14,700.00	7,659.00	7,400.00	7,158.05	179.96	39.77	25.52	2,439.78	-233.42	6,320.82	6,229.48	91.34	69.201		
14,800.00	7,659.00	7,400.00	7,158.05	182.60	39.77	25.52	2,439.78	-233.42	6,420.44	6,329.06	91.37	70.265		
14,900.00	7,659.00	7,400.00	7,158.05	185.24	39.77	25.52	2,439.78	-233.42	6,520.07	6,428.66	91.41	71.329		
15,000.00	7,659.00	7,400.00	7,158.05	187.88	39.77	25.52	2,439.78	-233.42	6,619.71	6,528.27	91.44	72.391		
15,100.00	7,659.00	7,400.00	7,158.05	190.52	39.77	25.52	2,439.78	-233.42	6,719.36	6,627.88	91.48	73.453		
15,200.00	7,659.00	7,400.00	7,158.05	193.16	39.77	25.52	2,439.78	-233.42	6,819.03	6,727.51	91.51	74.514		
15,300.00	7,659.00	7,400.00	7,158.05	195.81	39.77	25.52	2,439.78	-233.42	6,918.70	6,827.15	91.55	75.574		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 26-25 1AH - OWB - PROPOSAL 1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	
15,400.00	7,659.00	7,400.00	7,158.05	198.45	39.77	25.52	2,439.78	-233.42	7,018.38	6,926.80	91.58	76.633	
15,500.00	7,659.00	7,400.00	7,158.05	201.10	39.77	25.52	2,439.78	-233.42	7,118.07	7,026.45	91.62	77.690	
15,600.00	7,659.00	7,400.00	7,158.05	203.75	39.77	25.52	2,439.78	-233.42	7,217.77	7,126.11	91.66	78.747	
15,700.00	7,659.00	7,400.00	7,158.05	206.40	39.77	25.52	2,439.78	-233.42	7,317.48	7,225.79	91.69	79.803	
15,800.00	7,659.00	7,400.00	7,158.05	209.05	39.77	25.52	2,439.78	-233.42	7,417.20	7,325.46	91.73	80.858	
15,900.00	7,659.00	7,400.00	7,158.05	211.70	39.77	25.52	2,439.78	-233.42	7,516.92	7,425.15	91.77	81.911	
16,000.00	7,659.00	7,400.00	7,158.05	214.36	39.77	25.52	2,439.78	-233.42	7,616.65	7,524.84	91.81	82.963	
16,100.00	7,659.00	7,400.00	7,158.05	217.01	39.77	25.52	2,439.78	-233.42	7,716.39	7,624.54	91.85	84.015	
16,200.00	7,659.00	7,400.00	7,158.05	219.67	39.77	25.52	2,439.78	-233.42	7,816.13	7,724.25	91.88	85.065	
16,300.00	7,659.00	7,400.00	7,158.05	222.32	39.77	25.52	2,439.78	-233.42	7,915.88	7,823.96	91.92	86.114	
16,400.00	7,659.00	7,400.00	7,158.05	224.98	39.77	25.52	2,439.78	-233.42	8,015.64	7,923.68	91.96	87.162	
16,500.00	7,659.00	7,400.00	7,158.05	227.64	39.77	25.52	2,439.78	-233.42	8,115.40	8,023.40	92.00	88.208	
16,600.00	7,659.00	7,400.00	7,158.05	230.30	39.77	25.52	2,439.78	-233.42	8,215.17	8,123.13	92.04	89.253	
16,700.00	7,659.00	7,400.00	7,158.05	232.96	39.77	25.52	2,439.78	-233.42	8,314.94	8,222.86	92.08	90.297	
16,800.00	7,659.00	7,400.00	7,158.05	235.62	39.77	25.52	2,439.78	-233.42	8,414.72	8,322.60	92.13	91.340	
16,900.00	7,659.00	7,400.00	7,158.05	238.28	39.77	25.52	2,439.78	-233.42	8,514.51	8,422.34	92.17	92.382	
17,000.00	7,659.00	7,400.00	7,158.05	240.95	39.77	25.52	2,439.78	-233.42	8,614.30	8,522.09	92.21	93.422	
17,100.00	7,659.00	7,400.00	7,158.05	243.61	39.77	25.52	2,439.78	-233.42	8,714.09	8,621.84	92.25	94.461	
17,200.00	7,659.00	7,400.00	7,158.05	246.27	39.77	25.52	2,439.78	-233.42	8,813.89	8,721.60	92.29	95.498	
17,300.00	7,659.00	7,379.29	7,138.13	248.94	39.66	25.15	2,434.31	-231.90	8,913.30	8,821.09	92.21	96.662	
17,400.00	7,659.00	7,378.91	7,137.77	251.60	39.65	25.14	2,434.21	-231.88	9,013.09	8,920.84	92.25	97.700	
17,500.00	7,659.00	7,378.53	7,137.41	254.27	39.65	25.13	2,434.12	-231.86	9,112.89	9,020.59	92.29	98.737	
17,600.00	7,659.00	7,378.17	7,137.06	256.94	39.65	25.13	2,434.02	-231.84	9,212.69	9,120.35	92.34	99.773	
17,700.00	7,659.00	7,377.81	7,136.71	259.61	39.65	25.12	2,433.93	-231.82	9,312.50	9,220.12	92.38	100.807	
17,800.00	7,659.00	7,377.46	7,136.38	262.27	39.65	25.12	2,433.83	-231.80	9,412.31	9,319.88	92.42	101.839	
17,900.00	7,659.00	7,377.12	7,136.05	264.94	39.64	25.11	2,433.74	-231.79	9,512.12	9,419.65	92.47	102.871	
18,000.00	7,659.00	7,376.78	7,135.72	267.61	39.64	25.10	2,433.65	-231.77	9,611.94	9,519.43	92.51	103.900	
18,100.00	7,659.00	7,376.45	7,135.40	270.28	39.64	25.10	2,433.57	-231.75	9,711.76	9,619.20	92.56	104.929	
18,200.00	7,659.00	7,355.51	7,115.22	272.95	39.52	24.76	2,428.03	-231.08	9,811.98	9,719.50	92.48	106.101	
18,300.00	7,659.00	7,355.51	7,115.22	275.62	39.52	24.76	2,428.03	-231.08	9,911.79	9,819.27	92.53	107.126	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 26-25 1BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-12.94	591.94	-135.96	607.35					
100.00	100.00	100.00	100.00	0.13	0.13	-12.94	591.94	-135.96	607.35	607.08	0.27	2,259.030		
200.00	199.98	182.66	182.64	0.50	0.43	3.64	593.12	-136.06	607.04	606.11	0.93	653.371		
300.00	299.84	265.32	265.22	0.86	0.74	3.71	596.69	-136.35	606.10	604.51	1.59	381.328		
400.00	399.45	347.99	347.68	1.23	1.04	3.84	602.63	-136.85	604.53	602.28	2.25	268.719		
500.00	498.70	430.68	429.95	1.63	1.35	4.01	610.93	-137.55	602.35	599.44	2.91	206.782		
600.00	597.47	513.40	511.97	2.05	1.68	4.24	621.61	-138.44	599.56	595.98	3.58	167.431		
700.00	695.62	605.62	592.80	2.49	2.07	4.52	634.49	-139.51	596.16	591.87	4.29	138.965		
800.00	793.06	704.96	691.06	2.98	2.50	4.91	651.77	-140.96	590.89	585.85	5.04	117.135		
900.00	889.64	805.44	789.06	3.50	2.95	5.35	669.01	-142.40	582.18	576.37	5.81	100.123		
1,000.00	985.27	906.30	886.70	4.06	3.39	5.85	686.18	-143.83	570.05	563.46	6.59	86.456		
1,100.00	1,079.82	1,007.65	983.85	4.66	3.85	6.42	703.26	-145.26	554.53	547.14	7.39	75.078		
1,200.00	1,173.23	1,090.42	1,080.42	5.31	4.22	7.05	720.25	-146.68	535.80	527.68	8.12	65.986		
1,300.00	1,266.35	1,188.32	1,176.83	5.98	4.66	7.71	737.20	-148.10	516.32	507.41	8.91	57.955		
1,400.00	1,359.46	1,286.22	1,273.24	6.66	5.10	8.43	754.16	-149.51	496.92	487.21	9.71	51.201		
1,500.00	1,452.58	1,384.12	1,369.65	7.34	5.55	9.20	771.12	-150.93	477.59	467.08	10.51	45.448		
1,600.00	1,545.69	1,482.02	1,466.07	8.03	5.99	10.04	788.07	-152.35	458.36	447.04	11.32	40.494		
1,700.00	1,638.81	1,579.93	1,562.48	8.72	6.43	10.95	805.03	-153.76	439.22	427.09	12.14	36.187		
1,800.00	1,731.92	1,677.83	1,658.89	9.41	6.88	11.94	821.98	-155.18	420.21	407.24	12.97	32.410		
1,900.00	1,825.04	1,775.73	1,755.30	10.11	7.32	13.02	838.94	-156.60	401.33	387.52	13.80	29.072		
2,000.00	1,918.15	1,873.63	1,851.72	10.81	7.76	14.21	855.90	-158.01	382.60	367.94	14.66	26.104		
2,100.00	2,011.27	1,971.54	1,948.13	11.51	8.21	15.52	872.85	-159.43	364.05	348.52	15.52	23.449		
2,200.00	2,104.39	2,069.44	2,044.54	12.21	8.65	16.97	889.81	-160.85	345.70	329.29	16.41	21.062		
2,300.00	2,197.50	2,167.34	2,140.95	12.91	9.10	18.58	906.77	-162.26	327.59	310.26	17.33	18.906		
2,400.00	2,290.62	2,265.24	2,237.37	13.61	9.54	20.38	923.72	-163.68	309.77	291.49	18.27	16.952		
2,500.00	2,383.73	2,363.15	2,333.78	14.31	9.99	22.39	940.68	-165.10	292.28	273.02	19.26	15.176		
2,600.00	2,476.85	2,461.05	2,430.19	15.01	10.43	24.65	957.63	-166.51	275.18	254.89	20.29	13.560		
2,700.00	2,569.96	2,558.95	2,526.60	15.72	10.87	27.20	974.59	-167.93	258.56	237.17	21.39	12.087		
2,800.00	2,663.08	2,656.85	2,623.02	16.42	11.32	30.08	991.55	-169.35	242.52	219.95	22.57	10.747		
2,900.00	2,756.20	2,754.76	2,719.43	17.12	11.76	33.36	1,008.50	-170.76	227.17	203.33	23.83	9.531		
3,000.00	2,849.31	2,852.66	2,815.84	17.83	12.21	37.09	1,025.46	-172.18	212.66	187.45	25.21	8.435		
3,100.00	2,942.43	2,950.56	2,912.25	18.53	12.65	41.34	1,042.42	-173.60	199.19	172.47	26.72	7.455		
3,200.00	3,035.54	3,048.46	3,008.67	19.24	13.10	46.15	1,059.37	-175.01	186.97	158.61	28.36	6.592		
3,300.00	3,128.66	3,146.37	3,105.08	19.94	13.54	51.57	1,076.33	-176.43	176.26	146.13	30.14	5.849		
3,400.00	3,221.77	3,244.27	3,201.49	20.65	13.99	57.61	1,093.29	-177.85	167.36	135.35	32.01	5.228		
3,500.00	3,314.89	3,342.17	3,297.90	21.35	14.44	64.21	1,110.24	-179.26	160.57	126.63	33.94	4.731		
3,600.00	3,408.01	3,440.07	3,394.31	22.06	14.88	71.28	1,127.20	-180.68	156.15	120.33	35.82	4.359		
3,700.00	3,501.12	3,537.97	3,490.73	22.77	15.33	78.62	1,144.15	-182.10	154.33	116.76	37.56	4.108		
3,718.37	3,518.22	3,555.96	3,508.43	22.90	15.41	79.98	1,147.27	-182.36	154.28	116.42	37.86	4.075 CC		
3,800.00	3,594.24	3,635.88	3,587.14	23.47	15.77	86.00	1,161.11	-183.51	155.17	116.10	39.07	3.971 ES		
3,900.00	3,687.35	3,733.78	3,683.55	24.18	16.22	93.19	1,178.07	-184.93	158.66	118.35	40.30	3.937 SF		
4,000.00	3,780.47	3,831.68	3,779.96	24.89	16.66	99.99	1,195.02	-186.35	164.61	123.35	41.25	3.990		
4,100.00	3,873.58	3,929.58	3,876.38	25.59	17.11	106.24	1,211.98	-187.76	172.77	130.80	41.97	4.116		
4,200.00	3,966.70	4,027.49	3,972.79	26.30	17.55	111.89	1,228.94	-189.18	182.85	140.33	42.51	4.301		
4,300.00	4,059.81	4,125.39	4,069.20	27.01	18.00	116.92	1,245.89	-190.60	194.54	151.60	42.94	4.530		
4,400.00	4,152.93	4,223.29	4,165.61	27.71	18.44	121.37	1,262.85	-192.01	207.58	164.26	43.32	4.792		
4,500.00	4,246.05	4,321.19	4,262.03	28.42	18.89	125.28	1,279.80	-193.43	221.73	178.06	43.67	5.077		
4,600.00	4,339.16	4,419.10	4,358.44	29.13	19.33	128.72	1,296.76	-194.85	236.79	192.76	44.03	5.378		
4,700.00	4,432.28	4,517.00	4,454.85	29.83	19.78	131.74	1,313.72	-196.26	252.60	208.18	44.41	5.688		
4,800.00	4,525.39	4,614.90	4,551.26	30.54	20.22	134.41	1,330.67	-197.68	269.02	224.20	44.82	6.002		
4,900.00	4,618.51	4,712.80	4,647.68	31.25	20.67	136.77	1,347.63	-199.10	285.95	240.69	45.26	6.318		
5,000.00	4,711.62	4,810.71	4,744.09	31.95	21.12	138.87	1,364.59	-200.51	303.30	257.57	45.73	6.633		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 26-25 1BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,100.00	4,804.74	4,908.61	4,840.50	32.66	21.56	140.74	1,381.54	-201.93	321.01	274.78	46.23	6.944		
5,200.00	4,897.86	5,006.51	4,936.91	33.37	22.01	142.41	1,398.50	-203.35	339.02	292.26	46.76	7.251		
5,300.00	4,990.97	5,104.41	5,033.33	34.08	22.45	143.92	1,415.46	-204.76	357.28	309.97	47.31	7.551		
5,400.00	5,084.09	5,202.31	5,129.74	34.78	22.90	145.28	1,432.41	-206.18	375.76	327.87	47.89	7.846		
5,500.00	5,177.20	5,300.22	5,226.15	35.49	23.34	146.51	1,449.37	-207.60	394.43	345.93	48.49	8.134		
5,600.00	5,270.32	5,398.12	5,322.56	36.20	23.79	147.63	1,466.32	-209.02	413.26	364.14	49.11	8.414		
5,700.00	5,363.43	5,503.98	5,418.97	36.91	24.27	148.66	1,483.28	-210.43	432.22	382.44	49.79	8.682		
5,800.00	5,456.55	5,606.08	5,515.39	37.61	24.74	149.60	1,500.24	-211.85	451.32	400.86	50.46	8.945		
5,900.00	5,549.67	5,691.83	5,611.80	38.32	25.13	150.46	1,517.19	-213.27	470.51	419.44	51.07	9.213		
6,000.00	5,642.78	5,789.73	5,708.21	39.03	25.57	151.25	1,534.15	-214.68	489.81	438.06	51.75	9.464		
6,100.00	5,735.90	5,887.63	5,804.62	39.74	26.02	151.99	1,551.11	-216.10	509.19	456.74	52.44	9.709		
6,200.00	5,829.01	5,985.53	5,901.04	40.44	26.46	152.67	1,568.06	-217.52	528.64	475.49	53.15	9.947		
6,300.00	5,922.13	6,083.44	5,997.45	41.15	26.91	153.30	1,585.02	-218.93	548.16	494.30	53.86	10.178		
6,400.00	6,015.24	6,181.34	6,093.86	41.86	27.35	153.89	1,601.98	-220.35	567.74	513.16	54.57	10.403		
6,500.00	6,108.36	6,279.24	6,190.27	42.57	27.80	154.44	1,618.93	-221.77	587.37	532.07	55.30	10.621		
6,600.00	6,201.47	6,377.14	6,286.69	43.28	28.24	154.95	1,635.89	-223.18	607.06	551.02	56.03	10.834		
6,700.00	6,294.59	6,475.05	6,383.10	43.98	28.69	155.44	1,652.84	-224.60	626.78	570.01	56.77	11.040		
6,800.00	6,387.71	6,572.95	6,479.51	44.69	29.14	155.89	1,669.80	-226.02	646.55	589.03	57.52	11.241		
6,900.00	6,480.82	6,670.85	6,575.92	45.40	29.58	156.32	1,686.76	-227.43	666.35	608.09	58.27	11.436		
7,000.00	6,573.94	6,768.75	6,672.34	46.11	30.03	156.72	1,703.71	-228.85	686.19	627.17	59.02	11.626		
7,100.00	6,667.05	6,866.65	6,768.75	46.82	30.47	157.10	1,720.67	-230.27	706.06	646.28	59.78	11.811		
7,200.00	6,760.17	6,964.56	6,865.16	47.52	30.92	157.45	1,737.63	-231.68	725.96	665.41	60.54	11.991		
7,300.00	6,853.28	7,062.46	6,961.57	48.23	31.36	157.79	1,754.58	-233.10	745.88	684.57	61.31	12.166		
7,400.00	6,946.40	7,160.36	7,057.99	48.94	31.81	158.11	1,771.54	-234.52	765.82	703.74	62.08	12.336		
7,500.00	7,039.52	7,250.34	7,154.12	49.65	32.26	158.43	1,788.49	-235.94	785.76	722.90	62.84	12.506		
7,600.00	7,132.64	7,347.63	7,250.12	50.36	32.71	158.75	1,805.45	-237.36	805.69	742.06	63.60	12.676		
7,700.00	7,225.76	7,443.56	7,346.12	51.07	33.16	159.07	1,822.41	-238.78	825.62	761.22	64.36	12.846		
7,800.00	7,318.88	7,540.33	7,442.87	51.78	33.61	159.39	1,839.37	-240.20	845.55	780.38	65.12	13.016		
7,900.00	7,399.85	7,625.41	7,620.73	51.68	35.16	121.43	1,873.41	-599.92	698.06	633.54	64.52	10.820		
7,904.91	7,403.78	7,884.29	7,620.33	51.69	35.15	120.96	1,873.33	-598.87	698.04	633.47	64.57	10.811		
8,000.00	7,475.41	7,858.14	7,610.41	51.91	35.01	112.48	1,871.39	-574.75	703.39	638.19	65.20	10.788		
8,100.00	7,540.24	7,824.21	7,595.95	52.05	34.83	104.36	1,868.60	-544.19	719.22	653.96	65.26	11.021		
8,200.00	7,592.37	7,786.32	7,577.73	52.11	34.64	96.77	1,865.13	-511.17	742.97	677.87	65.10	11.413		
8,300.00	7,630.20	7,750.00	7,558.28	52.09	34.46	90.00	1,861.47	-480.72	771.84	706.59	65.24	11.830		
8,400.00	7,652.61	7,700.00	7,528.47	52.01	34.23	83.32	1,855.90	-440.98	803.14	737.94	65.20	12.318		
8,500.00	7,659.00	7,660.84	7,502.81	51.89	34.05	78.61	1,851.16	-411.80	834.60	768.51	66.09	12.629		
8,600.00	7,659.00	7,620.97	7,474.72	51.77	33.88	76.71	1,845.99	-383.98	869.93	802.81	67.11	12.962		
8,700.00	7,659.00	7,586.35	7,448.84	51.67	33.73	75.00	1,841.26	-361.50	912.12	843.80	68.32	13.351		
8,800.00	7,659.00	7,550.00	7,420.27	51.61	33.57	73.17	1,836.06	-339.64	960.81	891.45	69.36	13.853		
8,900.00	7,659.00	7,529.92	7,403.92	51.58	33.48	72.15	1,833.10	-328.36	1,015.32	944.42	70.90	14.320		
9,000.00	7,659.00	7,500.00	7,378.86	51.59	33.35	70.62	1,828.57	-312.67	1,075.20	1,003.30	71.90	14.954		
9,100.00	7,659.00	7,486.46	7,367.26	51.67	33.29	69.92	1,826.47	-306.00	1,139.65	1,066.37	73.28	15.552		
9,200.00	7,659.00	7,468.41	7,351.56	51.83	33.21	69.00	1,823.65	-297.56	1,208.21	1,133.90	74.31	16.259		
9,300.00	7,659.00	7,450.00	7,335.29	52.14	33.13	68.06	1,820.72	-289.47	1,280.32	1,205.15	75.17	17.032		
9,400.00	7,659.00	7,450.00	7,335.29	52.67	33.13	68.06	1,820.72	-289.47	1,355.63	1,279.30	76.33	17.760		
9,500.00	7,659.00	7,424.99	7,312.79	53.53	33.01	66.79	1,816.68	-279.34	1,433.28	1,356.52	76.75	18.674		
9,600.00	7,659.00	7,400.00	7,289.88	54.75	32.90	65.54	1,812.59	-270.22	1,513.57	1,436.47	77.10	19.631		
9,700.00	7,659.00	7,400.00	7,289.88	56.29	32.90	65.54	1,812.59	-270.22	1,595.47	1,517.61	77.86	20.491		
9,800.00	7,659.00	7,400.00	7,289.88	58.05	32.90	65.54	1,812.59	-270.22	1,679.34	1,600.84	78.50	21.392		
9,900.00	7,659.00	7,400.00	7,289.88	59.97	32.90	65.54	1,812.59	-270.22	1,764.89	1,685.84	79.04	22.329		
10,000.00	7,659.00	7,376.14	7,267.67	62.00	32.79	64.36	1,808.62	-262.46	1,851.27	1,772.12	79.15	23.389		
10,100.00	7,659.00	7,368.70	7,260.68	64.11	32.76	63.99	1,807.37	-260.24	1,939.08	1,859.62	79.46	24.402		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 26-25 1BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,200.00	7,659.00	7,350.00	7,242.99	66.28	32.68	63.09	1,804.22	-255.06	2,028.07	1,948.49	79.59	25.483		
10,300.00	7,659.00	7,350.00	7,242.99	68.51	32.68	63.09	1,804.22	-255.06	2,117.70	2,037.79	79.91	26.500		
10,400.00	7,659.00	7,350.00	7,242.99	70.77	32.68	63.09	1,804.22	-255.06	2,208.22	2,128.02	80.19	27.536		
10,500.00	7,659.00	7,350.00	7,242.99	73.06	32.68	63.09	1,804.22	-255.06	2,299.52	2,219.08	80.44	28.587		
10,600.00	7,659.00	7,350.00	7,242.99	75.39	32.68	63.09	1,804.22	-255.06	2,391.52	2,310.87	80.65	29.652		
10,700.00	7,659.00	7,350.00	7,242.99	77.74	32.68	63.09	1,804.22	-255.06	2,484.14	2,403.30	80.84	30.729		
10,800.00	7,659.00	7,329.75	7,223.66	80.12	32.58	62.12	1,800.78	-250.11	2,576.89	2,496.06	80.82	31.883		
10,900.00	7,659.00	7,325.56	7,219.64	82.51	32.56	61.92	1,800.07	-249.17	2,670.36	2,589.42	80.94	32.991		
11,000.00	7,659.00	7,321.61	7,215.85	84.93	32.55	61.73	1,799.39	-248.32	2,764.26	2,683.21	81.05	34.106		
11,100.00	7,659.00	7,300.00	7,194.97	87.36	32.45	60.73	1,795.69	-244.10	2,858.87	2,777.87	81.00	35.293		
11,200.00	7,659.00	7,300.00	7,194.97	89.81	32.45	60.73	1,795.69	-244.10	2,953.39	2,872.26	81.12	36.407		
11,300.00	7,659.00	7,300.00	7,194.97	92.27	32.45	60.73	1,795.69	-244.10	3,048.25	2,967.02	81.23	37.526		
11,400.00	7,659.00	7,300.00	7,194.97	94.75	32.45	60.73	1,795.69	-244.10	3,143.44	3,062.11	81.33	38.652		
11,500.00	7,659.00	7,300.00	7,194.97	97.23	32.45	60.73	1,795.69	-244.10	3,238.91	3,157.50	81.41	39.783		
11,600.00	7,659.00	7,300.00	7,194.97	99.73	32.45	60.73	1,795.69	-244.10	3,334.65	3,253.16	81.49	40.919		
11,700.00	7,659.00	7,300.00	7,194.97	102.24	32.45	60.73	1,795.69	-244.10	3,430.63	3,349.07	81.57	42.059		
11,800.00	7,659.00	7,300.00	7,194.97	104.75	32.45	60.73	1,795.69	-244.10	3,526.84	3,445.21	81.64	43.202		
11,900.00	7,659.00	7,300.00	7,194.97	107.28	32.45	60.73	1,795.69	-244.10	3,623.25	3,541.56	81.70	44.349		
12,000.00	7,659.00	7,300.00	7,194.97	109.81	32.45	60.73	1,795.69	-244.10	3,719.85	3,638.10	81.76	45.500		
12,100.00	7,659.00	7,300.00	7,194.97	112.35	32.45	60.73	1,795.69	-244.10	3,816.63	3,734.82	81.81	46.653		
12,200.00	7,659.00	7,300.00	7,194.97	114.90	32.45	60.73	1,795.69	-244.10	3,913.57	3,831.71	81.86	47.808		
12,300.00	7,659.00	7,300.00	7,194.97	117.46	32.45	60.73	1,795.69	-244.10	4,010.66	3,928.75	81.91	48.966		
12,400.00	7,659.00	7,300.00	7,194.97	120.02	32.45	60.73	1,795.69	-244.10	4,107.89	4,025.93	81.95	50.125		
12,500.00	7,659.00	7,300.00	7,194.97	122.58	32.45	60.73	1,795.69	-244.10	4,205.25	4,123.25	82.00	51.286		
12,600.00	7,659.00	7,300.00	7,194.97	125.15	32.45	60.73	1,795.69	-244.10	4,302.72	4,220.69	82.04	52.449		
12,700.00	7,659.00	7,300.00	7,194.97	127.73	32.45	60.73	1,795.69	-244.10	4,400.32	4,318.24	82.08	53.613		
12,800.00	7,659.00	7,277.04	7,172.65	130.31	32.34	59.68	1,791.74	-240.51	4,497.50	4,415.50	82.01	54.843		
12,900.00	7,659.00	7,275.47	7,171.12	132.90	32.33	59.61	1,791.47	-240.30	4,595.23	4,513.19	82.04	56.014		
13,000.00	7,659.00	7,273.96	7,169.64	135.49	32.33	59.54	1,791.21	-240.10	4,693.05	4,610.98	82.07	57.185		
13,100.00	7,659.00	7,272.51	7,168.22	138.08	32.32	59.48	1,790.96	-239.91	4,790.95	4,708.85	82.10	58.357		
13,200.00	7,659.00	7,250.00	7,146.19	140.68	32.22	60.10	1,787.07	-237.45	4,889.29	4,807.25	82.04	59.600		
13,300.00	7,659.00	7,250.00	7,146.19	143.28	32.22	60.10	1,787.07	-237.45	4,987.10	4,905.02	82.07	60.765		
13,400.00	7,659.00	7,250.00	7,146.19	145.88	32.22	60.10	1,787.07	-237.45	5,084.99	5,002.88	82.11	61.931		
13,500.00	7,659.00	7,250.00	7,146.19	148.48	32.22	60.10	1,787.07	-237.45	5,182.96	5,100.82	82.14	63.097		
13,600.00	7,659.00	7,250.00	7,146.19	151.09	32.22	60.10	1,787.07	-237.45	5,281.01	5,198.83	82.18	64.264		
13,700.00	7,659.00	7,250.00	7,146.19	153.70	32.22	60.10	1,787.07	-237.45	5,379.13	5,296.92	82.21	65.431		
13,800.00	7,659.00	7,250.00	7,146.19	156.32	32.22	60.10	1,787.07	-237.45	5,477.32	5,395.07	82.24	66.598		
13,900.00	7,659.00	7,250.00	7,146.19	158.94	32.22	60.10	1,787.07	-237.45	5,575.57	5,493.29	82.28	67.766		
14,000.00	7,659.00	7,250.00	7,146.19	161.56	32.22	60.10	1,787.07	-237.45	5,673.88	5,591.57	82.31	68.933		
14,100.00	7,659.00	7,250.00	7,146.19	164.18	32.22	60.10	1,787.07	-237.45	5,772.25	5,689.91	82.34	70.101		
14,200.00	7,659.00	7,250.00	7,146.19	166.80	32.22	60.10	1,787.07	-237.45	5,870.68	5,788.31	82.37	71.268		
14,300.00	7,659.00	7,250.00	7,146.19	169.43	32.22	60.10	1,787.07	-237.45	5,969.16	5,886.75	82.41	72.435		
14,400.00	7,659.00	7,250.00	7,146.19	172.06	32.22	60.10	1,787.07	-237.45	6,067.69	5,985.25	82.44	73.601		
14,500.00	7,659.00	7,250.00	7,146.19	174.69	32.22	60.10	1,787.07	-237.45	6,166.26	6,083.79	82.47	74.768		
14,600.00	7,659.00	7,250.00	7,146.19	177.33	32.22	60.10	1,787.07	-237.45	6,264.89	6,182.38	82.50	75.934		
14,700.00	7,659.00	7,250.00	7,146.19	179.96	32.22	60.10	1,787.07	-237.45	6,363.55	6,281.01	82.54	77.099		
14,800.00	7,659.00	7,250.00	7,146.19	182.60	32.22	60.10	1,787.07	-237.45	6,462.25	6,379.68	82.57	78.264		
14,900.00	7,659.00	7,250.00	7,146.19	185.24	32.22	60.10	1,787.07	-237.45	6,561.00	6,478.40	82.60	79.428		
15,000.00	7,659.00	7,250.00	7,146.19	187.88	32.22	60.10	1,787.07	-237.45	6,659.78	6,577.15	82.64	80.592		
15,100.00	7,659.00	7,250.00	7,146.19	190.52	32.22	60.10	1,787.07	-237.45	6,758.60	6,675.93	82.67	81.754		
15,200.00	7,659.00	7,250.00	7,146.19	193.16	32.22	60.10	1,787.07	-237.45	6,857.45	6,774.75	82.70	82.917		
15,300.00	7,659.00	7,250.00	7,146.19	195.81	32.22	60.10	1,787.07	-237.45	6,956.34	6,873.60	82.74	84.078		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - CHICO 4-65 26-25 1BH - OWB - PROPOSAL 1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	
15,400.00	7,659.00	7,250.00	7,146.19	198.45	32.22	60.10	1,787.07	-237.45	7,055.25	6,972.48	82.77	85.238	
15,500.00	7,659.00	7,250.00	7,146.19	201.10	32.22	60.10	1,787.07	-237.45	7,154.20	7,071.39	82.81	86.398	
15,600.00	7,659.00	7,250.00	7,146.19	203.75	32.22	60.10	1,787.07	-237.45	7,253.17	7,170.33	82.84	87.556	
15,700.00	7,659.00	7,250.00	7,146.19	206.40	32.22	60.10	1,787.07	-237.45	7,352.18	7,269.30	82.88	88.714	
15,800.00	7,659.00	7,250.00	7,146.19	209.05	32.22	60.10	1,787.07	-237.45	7,451.21	7,368.30	82.91	89.870	
15,900.00	7,659.00	7,250.00	7,146.19	211.70	32.22	60.10	1,787.07	-237.45	7,550.26	7,467.32	82.95	91.026	
16,000.00	7,659.00	7,250.00	7,146.19	214.36	32.22	60.10	1,787.07	-237.45	7,649.34	7,566.36	82.98	92.180	
16,100.00	7,659.00	7,250.00	7,146.19	217.01	32.22	60.10	1,787.07	-237.45	7,748.45	7,665.43	83.02	93.333	
16,200.00	7,659.00	7,250.00	7,146.19	219.67	32.22	60.10	1,787.07	-237.45	7,847.57	7,764.52	83.06	94.485	
16,300.00	7,659.00	7,250.00	7,146.19	222.32	32.22	60.10	1,787.07	-237.45	7,946.72	7,863.63	83.09	95.636	
16,400.00	7,659.00	7,250.00	7,146.19	224.98	32.22	60.10	1,787.07	-237.45	8,045.89	7,962.76	83.13	96.786	
16,500.00	7,659.00	7,250.00	7,146.19	227.64	32.22	60.10	1,787.07	-237.45	8,145.08	8,061.91	83.17	97.934	
16,600.00	7,659.00	7,250.00	7,146.19	230.30	32.22	60.10	1,787.07	-237.45	8,244.29	8,161.08	83.21	99.081	
16,700.00	7,659.00	7,250.00	7,146.19	232.96	32.22	60.10	1,787.07	-237.45	8,343.52	8,260.27	83.25	100.227	
16,800.00	7,659.00	7,250.00	7,146.19	235.62	32.22	60.10	1,787.07	-237.45	8,442.76	8,359.48	83.29	101.371	
16,900.00	7,659.00	7,250.00	7,146.19	238.28	32.22	60.10	1,787.07	-237.45	8,542.03	8,458.70	83.33	102.514	
17,000.00	7,659.00	7,250.00	7,146.19	240.95	32.22	60.10	1,787.07	-237.45	8,641.31	8,557.94	83.37	103.655	
17,100.00	7,659.00	7,250.00	7,146.19	243.61	32.22	60.10	1,787.07	-237.45	8,740.60	8,657.20	83.41	104.795	
17,200.00	7,659.00	7,250.00	7,146.19	246.27	32.22	60.10	1,787.07	-237.45	8,839.92	8,756.47	83.45	105.934	
17,300.00	7,659.00	7,250.00	7,146.19	248.94	32.22	60.10	1,787.07	-237.45	8,939.25	8,855.76	83.49	107.071	
17,400.00	7,659.00	7,250.00	7,146.19	251.60	32.22	60.10	1,787.07	-237.45	9,038.59	8,955.06	83.53	108.206	
17,500.00	7,659.00	7,250.00	7,146.19	254.27	32.22	60.10	1,787.07	-237.45	9,137.95	9,054.37	83.57	109.340	
17,600.00	7,659.00	7,250.00	7,146.19	256.94	32.22	60.10	1,787.07	-237.45	9,237.32	9,153.70	83.62	110.472	
17,700.00	7,659.00	7,250.00	7,146.19	259.61	32.22	60.10	1,787.07	-237.45	9,336.70	9,253.04	83.66	111.603	
17,800.00	7,659.00	7,250.00	7,146.19	262.27	32.22	60.10	1,787.07	-237.45	9,436.10	9,352.40	83.70	112.732	
17,900.00	7,659.00	7,250.00	7,146.19	264.94	32.22	60.10	1,787.07	-237.45	9,535.51	9,451.76	83.75	113.859	
18,000.00	7,659.00	7,250.00	7,146.19	267.61	32.22	60.10	1,787.07	-237.45	9,634.93	9,551.14	83.79	114.985	
18,100.00	7,659.00	7,250.00	7,146.19	270.28	32.22	60.10	1,787.07	-237.45	9,734.37	9,650.53	83.84	116.109	
18,200.00	7,659.00	7,250.00	7,146.19	272.95	32.22	60.10	1,787.07	-237.45	9,833.81	9,749.93	83.88	117.231	
18,300.00	7,659.00	7,250.00	7,146.19	275.62	32.22	60.10	1,787.07	-237.45	9,933.27	9,849.34	83.93	118.352	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ TEBO 29-1H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 2122-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	2,034.00	2,033.58	0.00	0.00	103.48	-2,251.47	9,393.28	9,852.94					
100.00	100.00	2,034.00	2,033.58	0.13	0.00	103.48	-2,251.47	9,393.28	9,833.70	9,833.25	0.45	N/A		
200.00	199.98	2,034.00	2,033.58	0.50	0.00	120.33	-2,251.47	9,393.28	9,816.31	9,815.68	0.62	N/A		
300.00	299.84	2,034.00	2,033.58	0.86	0.00	120.59	-2,251.47	9,393.28	9,801.65	9,800.74	0.91	N/A		
400.00	399.45	2,034.00	2,033.58	1.23	0.00	120.79	-2,251.47	9,393.28	9,789.75	9,788.50	1.25	7,856.044		
500.00	498.70	2,034.00	2,033.58	1.63	0.00	120.95	-2,251.47	9,393.28	9,780.63	9,779.02	1.62	6,051.174		
600.00	597.47	2,034.00	2,033.58	2.05	0.00	121.06	-2,251.47	9,393.28	9,774.33	9,772.31	2.01	4,852.840		
700.00	695.62	2,034.00	2,033.58	2.49	0.00	121.12	-2,251.47	9,393.28	9,770.84	9,768.40	2.44	4,004.599		
773.39	767.20	2,034.00	2,033.58	2.85	0.00	121.13	-2,251.47	9,393.28	9,770.08	9,767.31	2.77	3,521.724		
800.00	793.06	2,034.00	2,033.58	2.98	0.00	121.13	-2,251.47	9,393.28	9,770.18	9,767.28	2.90	3,374.553		
900.00	889.64	2,034.00	2,033.58	3.50	0.00	121.09	-2,251.47	9,393.28	9,772.35	9,768.96	3.38	2,889.421		
1,000.00	985.27	2,034.00	2,033.58	4.06	0.00	121.01	-2,251.47	9,393.28	9,777.33	9,773.43	3.90	2,505.547		
1,100.00	1,079.82	2,034.00	2,033.58	4.66	0.00	120.87	-2,251.47	9,393.28	9,785.14	9,780.68	4.46	2,195.336		
1,200.00	1,173.23	2,034.00	2,033.58	5.31	0.00	120.75	-2,251.47	9,393.28	9,795.65	9,790.60	5.05	1,941.348		
1,300.00	1,266.35	2,034.00	2,033.58	5.98	0.00	120.75	-2,251.47	9,393.28	9,807.60	9,801.95	5.65	1,736.404		
1,400.00	1,359.46	2,034.00	2,033.58	6.66	0.00	120.75	-2,251.47	9,393.28	9,820.55	9,814.29	6.26	1,569.771		
1,500.00	1,452.58	2,034.00	2,033.58	7.34	0.00	120.75	-2,251.47	9,393.28	9,834.50	9,827.63	6.87	1,432.126		
1,600.00	1,545.69	2,034.00	2,033.58	8.03	0.00	120.75	-2,251.47	9,393.28	9,849.45	9,841.97	7.48	1,316.811		
1,700.00	1,638.81	2,067.45	2,067.01	8.72	0.07	120.81	-2,251.42	9,392.11	9,865.33	9,857.18	8.15	1,209.885		
1,800.00	1,731.92	2,172.23	2,171.73	9.41	0.36	121.01	-2,250.98	9,388.45	9,881.46	9,872.40	9.05	1,091.308		
1,900.00	1,825.04	2,218.00	2,217.47	10.11	0.52	121.09	-2,250.60	9,386.86	9,897.71	9,887.88	9.83	1,006.978		
2,000.00	1,918.15	2,218.00	2,217.47	10.81	0.52	121.09	-2,250.60	9,386.86	9,914.86	9,904.42	10.44	949.330		
2,100.00	2,011.27	2,267.67	2,267.12	11.51	0.69	121.18	-2,250.20	9,385.61	9,932.38	9,921.15	11.23	884.218		
2,200.00	2,104.39	2,312.00	2,311.45	12.21	0.84	121.27	-2,249.99	9,385.30	9,951.08	9,939.08	12.00	829.247		
2,300.00	2,197.50	2,312.00	2,311.45	12.91	0.84	121.27	-2,249.99	9,385.30	9,970.26	9,957.65	12.61	790.603		
2,400.00	2,290.62	2,412.47	2,411.91	13.61	1.19	121.45	-2,249.78	9,385.23	9,990.09	9,976.52	13.58	735.838		
9,300.00	7,659.00	7,722.50	7,721.25	52.14	19.82	89.66	-2,222.24	9,402.54	9,979.21	9,907.52	71.70	139.188		
9,400.00	7,659.00	7,722.84	7,721.59	52.67	19.82	89.66	-2,222.24	9,402.54	9,890.86	9,818.41	72.45	136.517		
9,500.00	7,659.00	7,723.18	7,721.94	53.53	19.82	89.67	-2,222.24	9,402.54	9,802.74	9,729.49	73.24	133.835		
9,600.00	7,659.00	7,723.53	7,722.28	54.75	19.82	89.67	-2,222.24	9,402.54	9,714.84	9,640.77	74.08	131.147		
9,700.00	7,659.00	7,723.88	7,722.63	56.29	19.83	89.68	-2,222.24	9,402.55	9,627.18	9,552.23	74.95	128.455		
9,800.00	7,659.00	7,724.22	7,722.98	58.05	19.83	89.68	-2,222.24	9,402.55	9,539.76	9,463.91	75.86	125.763		
9,900.00	7,659.00	7,724.57	7,723.33	59.97	19.83	89.68	-2,222.24	9,402.55	9,452.60	9,375.79	76.80	123.075		
10,000.00	7,659.00	7,724.92	7,723.68	62.00	19.83	89.69	-2,222.24	9,402.55	9,365.68	9,287.89	77.79	120.394		
10,100.00	7,659.00	7,725.28	7,724.03	64.11	19.83	89.69	-2,222.24	9,402.55	9,279.04	9,200.21	78.82	117.723		
10,200.00	7,659.00	7,725.63	7,724.38	66.28	19.83	89.70	-2,222.24	9,402.55	9,192.66	9,112.77	79.89	115.066		
10,300.00	7,659.00	7,725.98	7,724.74	68.51	19.83	89.70	-2,222.24	9,402.55	9,106.56	9,025.56	81.00	112.426		
10,400.00	7,659.00	7,726.38	7,725.13	70.77	19.83	89.71	-2,222.24	9,402.56	9,020.75	8,938.60	82.15	109.805		
10,500.00	7,659.00	7,726.77	7,725.53	73.06	19.84	89.71	-2,222.24	9,402.56	8,935.23	8,851.89	83.35	107.206		
10,600.00	7,659.00	7,727.17	7,725.92	75.39	19.84	89.72	-2,222.24	9,402.56	8,850.02	8,765.44	84.58	104.632		
10,700.00	7,659.00	7,727.57	7,726.32	77.74	19.84	89.72	-2,222.24	9,402.56	8,765.12	8,679.26	85.86	102.085		
10,800.00	7,659.00	7,727.96	7,726.72	80.12	19.84	89.73	-2,222.24	9,402.56	8,680.54	8,593.36	87.18	99.567		
10,900.00	7,659.00	7,728.36	7,727.11	82.51	19.84	89.73	-2,222.23	9,402.56	8,596.29	8,507.74	88.55	97.080		
11,000.00	7,659.00	7,728.76	7,727.51	84.93	19.84	89.74	-2,222.23	9,402.57	8,512.39	8,422.43	89.96	94.626		
11,100.00	7,659.00	7,729.15	7,727.91	87.36	19.84	89.74	-2,222.23	9,402.57	8,428.83	8,337.42	91.41	92.208		
11,200.00	7,659.00	7,729.55	7,728.31	89.81	19.85	89.75	-2,222.23	9,402.57	8,345.64	8,252.73	92.91	89.825		
11,300.00	7,659.00	7,729.95	7,728.70	92.27	19.85	89.75	-2,222.23	9,402.57	8,262.81	8,168.36	94.45	87.480		
11,400.00	7,659.00	7,730.35	7,729.10	94.75	19.85	89.76	-2,222.23	9,402.57	8,180.38	8,084.33	96.04	85.175		
11,500.00	7,659.00	7,730.75	7,729.50	97.23	19.85	89.76	-2,222.23	9,402.57	8,098.33	8,000.66	97.68	82.909		
11,600.00	7,659.00	7,731.15	7,729.90	99.73	19.85	89.76	-2,222.23	9,402.58	8,016.70	7,917.34	99.36	80.684		
11,700.00	7,659.00	7,731.55	7,730.30	102.24	19.85	89.77	-2,222.23	9,402.58	7,935.49	7,834.40	101.09	78.501		
11,800.00	7,659.00	7,731.95	7,730.70	104.75	19.85	89.77	-2,222.23	9,402.58	7,854.71	7,751.84	102.86	76.360		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ TEBO 29-1H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 2122-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
11,900.00	7,659.00	7,732.35	7,731.10	107.28	19.85	89.78	-2,222.23	9,402.58	7,774.37	7,669.68	104.69	74.262		
12,000.00	7,659.00	7,732.75	7,731.50	109.81	19.86	89.78	-2,222.23	9,402.58	7,694.50	7,587.94	106.56	72.207		
12,100.00	7,659.00	7,733.15	7,731.90	112.35	19.86	89.79	-2,222.23	9,402.58	7,615.10	7,506.62	108.48	70.196		
12,200.00	7,659.00	7,733.55	7,732.30	114.90	19.86	89.79	-2,222.23	9,402.59	7,536.20	7,425.74	110.45	68.229		
12,300.00	7,659.00	7,733.95	7,732.70	117.46	19.86	89.80	-2,222.23	9,402.59	7,457.80	7,345.32	112.47	66.306		
12,400.00	7,659.00	7,734.35	7,733.11	120.02	19.86	89.80	-2,222.22	9,402.59	7,379.92	7,265.37	114.55	64.428		
12,500.00	7,659.00	7,734.75	7,733.51	122.58	19.86	89.81	-2,222.22	9,402.59	7,302.58	7,185.91	116.67	62.593		
12,600.00	7,659.00	7,735.16	7,733.91	125.15	19.86	89.81	-2,222.22	9,402.59	7,225.80	7,106.96	118.84	60.803		
12,700.00	7,659.00	7,735.56	7,734.31	127.73	19.87	89.82	-2,222.22	9,402.60	7,149.59	7,028.52	121.06	59.056		
12,800.00	7,659.00	7,735.96	7,734.71	130.31	19.87	89.82	-2,222.22	9,402.60	7,073.97	6,950.63	123.34	57.353		
12,900.00	7,659.00	7,736.36	7,735.12	132.90	19.87	89.83	-2,222.22	9,402.60	6,998.96	6,873.29	125.67	55.693		
13,000.00	7,659.00	7,736.77	7,735.52	135.49	19.87	89.83	-2,222.22	9,402.60	6,924.59	6,796.54	128.05	54.076		
13,100.00	7,659.00	7,737.17	7,735.92	138.08	19.87	89.84	-2,222.22	9,402.60	6,850.87	6,720.38	130.49	52.502		
13,200.00	7,659.00	7,737.57	7,736.33	140.68	19.87	89.84	-2,222.22	9,402.60	6,777.53	6,644.56	132.96	50.973		
13,300.00	7,659.00	7,737.98	7,736.73	143.28	19.87	89.85	-2,222.22	9,402.61	6,704.37	6,568.89	135.47	49.488		
13,400.00	7,659.00	7,738.38	7,737.13	145.88	19.88	89.85	-2,222.22	9,402.61	6,631.91	6,493.87	138.04	48.044		
13,500.00	7,659.00	7,738.78	7,737.54	148.48	19.88	89.86	-2,222.22	9,402.61	6,560.18	6,419.52	140.66	46.639		
13,600.00	7,659.00	7,739.18	7,737.94	151.09	19.88	89.86	-2,222.22	9,402.61	6,489.19	6,345.86	143.33	45.275		
13,700.00	7,659.00	7,739.59	7,738.34	153.70	19.88	89.87	-2,222.22	9,402.61	6,418.98	6,272.92	146.06	43.949		
13,800.00	7,659.00	7,739.99	7,738.75	156.32	19.88	89.87	-2,222.22	9,402.61	6,349.56	6,200.72	148.84	42.661		
13,900.00	7,659.00	7,740.40	7,739.15	158.94	19.88	89.88	-2,222.21	9,402.62	6,280.97	6,129.30	151.67	41.412		
14,000.00	7,659.00	7,740.80	7,739.55	161.56	19.88	89.88	-2,222.21	9,402.62	6,213.23	6,058.68	154.56	40.200		
14,100.00	7,659.00	7,741.20	7,739.96	164.18	19.89	89.89	-2,222.21	9,402.62	6,146.38	5,988.88	157.50	39.025		
14,200.00	7,659.00	7,741.61	7,740.36	166.80	19.89	89.89	-2,222.21	9,402.62	6,080.43	5,919.94	160.49	37.886		
14,300.00	7,659.00	7,742.01	7,740.77	169.43	19.89	89.90	-2,222.21	9,402.62	6,015.42	5,851.88	163.54	36.783		
14,400.00	7,659.00	7,742.42	7,741.17	172.06	19.89	89.90	-2,222.21	9,402.62	5,951.39	5,784.75	166.64	35.715		
14,500.00	7,659.00	7,742.83	7,741.58	174.69	19.89	89.91	-2,222.21	9,402.63	5,888.35	5,718.56	169.79	34.681		
14,600.00	7,659.00	7,743.23	7,741.99	177.33	19.89	89.91	-2,222.21	9,402.63	5,826.35	5,653.37	172.98	33.682		
14,700.00	7,659.00	7,743.64	7,742.39	179.96	19.89	89.92	-2,222.21	9,402.63	5,765.42	5,589.19	176.23	32.716		
14,800.00	7,659.00	7,744.04	7,742.80	182.60	19.90	89.92	-2,222.21	9,402.63	5,705.58	5,526.07	179.52	31.783		
14,900.00	7,659.00	7,744.45	7,743.21	185.24	19.90	89.93	-2,222.21	9,402.63	5,646.89	5,464.03	182.86	30.882		
15,000.00	7,659.00	7,744.86	7,743.61	187.88	19.90	89.93	-2,222.21	9,402.63	5,589.37	5,403.13	186.23	30.013		
15,100.00	7,659.00	7,745.27	7,744.02	190.52	19.90	89.94	-2,222.21	9,402.64	5,533.06	5,343.40	189.65	29.174		
15,200.00	7,659.00	7,745.67	7,744.43	193.16	19.90	89.94	-2,222.21	9,402.64	5,477.99	5,284.88	193.11	28.367		
15,300.00	7,659.00	7,746.08	7,744.84	195.81	19.90	89.95	-2,222.21	9,402.64	5,424.21	5,227.60	196.61	27.589		
15,400.00	7,659.00	7,746.49	7,745.24	198.45	19.90	89.95	-2,222.20	9,402.64	5,371.75	5,171.62	200.13	26.841		
15,500.00	7,659.00	7,746.90	7,745.65	201.10	19.91	89.96	-2,222.20	9,402.64	5,320.66	5,116.97	203.69	26.121		
15,600.00	7,659.00	7,747.31	7,746.06	203.75	19.91	89.96	-2,222.20	9,402.65	5,270.96	5,063.69	207.27	25.430		
15,700.00	7,659.00	7,747.72	7,746.47	206.40	19.91	89.97	-2,222.20	9,402.65	5,222.71	5,011.84	210.88	24.767		
15,800.00	7,659.00	7,748.13	7,746.88	209.05	19.91	89.97	-2,222.20	9,402.65	5,175.95	4,961.45	214.50	24.130		
15,900.00	7,659.00	7,748.54	7,747.29	211.70	19.91	89.98	-2,222.20	9,402.65	5,130.70	4,912.57	218.13	23.521		
16,000.00	7,659.00	7,748.95	7,747.70	214.36	19.91	89.98	-2,222.20	9,402.65	5,087.02	4,865.24	221.78	22.937		
16,100.00	7,659.00	7,749.36	7,748.11	217.01	19.91	89.99	-2,222.20	9,402.65	5,044.94	4,819.51	225.43	22.379		
16,200.00	7,659.00	7,749.77	7,748.52	219.67	19.92	89.99	-2,222.20	9,402.66	5,004.51	4,775.43	229.08	21.846		
16,300.00	7,659.00	7,750.18	7,748.93	222.32	19.92	90.00	-2,222.20	9,402.66	4,965.76	4,733.04	232.72	21.338		
16,400.00	7,659.00	7,750.59	7,749.35	224.98	19.92	90.00	-2,222.20	9,402.66	4,928.73	4,692.39	236.35	20.854		
16,500.00	7,659.00	7,751.00	7,749.76	227.64	19.92	90.01	-2,222.20	9,402.66	4,893.47	4,653.52	239.96	20.393		
16,600.00	7,659.00	7,751.42	7,750.17	230.30	19.92	90.01	-2,222.20	9,402.66	4,860.02	4,616.48	243.54	19.956		
16,700.00	7,659.00	7,751.83	7,750.58	232.96	19.92	90.02	-2,222.20	9,402.66	4,828.40	4,581.30	247.10	19.541		
16,800.00	7,659.00	7,752.24	7,751.00	235.62	19.93	90.02	-2,222.20	9,402.67	4,798.66	4,548.04	250.61	19.148		
16,900.00	7,659.00	7,752.65	7,751.41	238.28	19.93	90.03	-2,222.19	9,402.67	4,770.82	4,516.74	254.08	18.777		
17,000.00	7,659.00	7,753.07	7,751.82	240.95	19.93	90.04	-2,222.19	9,402.67	4,744.94	4,487.43	257.50	18.427		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ TEBO 29-1H - OWB - FINAL SURVEY												Offset Site Error:	0.00 usft
Survey Program: 2122-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	
17,100.00	7,659.00	7,753.48	7,752.24	243.61	19.93	90.04	-2,222.19	9,402.67	4,721.03	4,460.16	260.87	18.098	
17,200.00	7,659.00	7,753.90	7,752.65	246.27	19.93	90.05	-2,222.19	9,402.67	4,699.12	4,434.96	264.16	17.789	
17,300.00	7,659.00	7,754.31	7,753.06	248.94	19.93	90.05	-2,222.19	9,402.68	4,679.25	4,411.87	267.39	17.500	
17,400.00	7,659.00	7,754.72	7,753.48	251.60	19.93	90.06	-2,222.19	9,402.68	4,661.45	4,390.91	270.54	17.230	
17,500.00	7,659.00	7,755.14	7,753.89	254.27	19.94	90.06	-2,222.19	9,402.68	4,645.72	4,372.13	273.60	16.980	
17,600.00	7,659.00	7,755.55	7,754.31	256.94	19.94	90.07	-2,222.19	9,402.68	4,632.11	4,355.54	276.57	16.749	
17,700.00	7,659.00	7,755.97	7,754.72	259.61	19.94	90.07	-2,222.19	9,402.68	4,620.62	4,341.17	279.44	16.535	
17,800.00	7,659.00	7,756.39	7,755.14	262.27	19.94	90.08	-2,222.19	9,402.68	4,611.26	4,329.05	282.21	16.340	
17,900.00	7,659.00	7,756.80	7,755.56	264.94	19.94	90.08	-2,222.19	9,402.69	4,604.06	4,319.19	284.88	16.162	
18,000.00	7,659.00	7,757.22	7,755.97	267.61	19.94	90.09	-2,222.19	9,402.69	4,599.03	4,311.60	287.43	16.001	
18,100.00	7,659.00	7,757.64	7,756.39	270.28	19.94	90.09	-2,222.19	9,402.69	4,596.17	4,306.31	289.86	15.857	
18,181.69	7,659.00	7,757.98	7,756.73	272.46	19.95	90.10	-2,222.19	9,402.69	4,595.44	4,303.69	291.75	15.751 CC	
18,200.00	7,659.00	7,758.05	7,756.81	272.95	19.95	90.10	-2,222.19	9,402.69	4,595.48	4,303.31	292.17	15.729	
18,300.00	7,659.00	7,758.47	7,757.22	275.62	19.95	90.10	-2,222.19	9,402.69	4,596.96	4,302.61	294.35	15.617 ES	
18,400.00	7,659.00	7,758.89	7,757.64	278.29	19.95	90.11	-2,222.18	9,402.70	4,600.62	4,304.21	296.41	15.521	
18,500.00	7,659.00	7,759.31	7,758.06	280.97	19.95	90.11	-2,222.18	9,402.70	4,606.45	4,308.11	298.34	15.440	
18,558.76	7,659.00	7,759.55	7,758.31	282.54	19.95	90.12	-2,222.18	9,402.70	4,610.88	4,311.48	299.41	15.400 SF	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ TEBO 29-1H - STK 1 - STK 1													Offset Site Error:	0.00 usft
Survey Program: 2122-MWD OWSG, 7180-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	11,496.00	7,822.51	0.00	105.53	107.07	-1,673.81	5,450.83	9,607.55					
100.00	100.00	11,496.00	7,822.51	0.13	105.53	107.07	-1,673.81	5,450.83	9,527.25	9,494.30	32.95	289.177		
200.00	199.98	11,496.00	7,822.51	0.50	105.53	125.76	-1,673.81	5,450.83	9,447.92	9,415.00	32.92	287.005		
300.00	299.84	11,496.00	7,822.51	0.86	105.53	127.73	-1,673.81	5,450.83	9,370.27	9,337.35	32.92	284.640		
400.00	399.45	11,496.00	7,822.51	1.23	105.53	129.55	-1,673.81	5,450.83	9,294.42	9,261.46	32.97	281.945		
500.00	498.70	11,496.00	7,822.51	1.63	105.53	131.22	-1,673.81	5,450.83	9,220.52	9,187.46	33.06	278.894		
600.00	597.47	11,496.00	7,822.51	2.05	105.53	132.76	-1,673.81	5,450.83	9,148.70	9,115.49	33.21	275.477		
700.00	695.62	11,496.00	7,822.51	2.49	105.53	134.17	-1,673.81	5,450.83	9,079.11	9,045.69	33.42	271.693		
800.00	793.06	11,496.00	7,822.51	2.98	105.53	135.46	-1,673.81	5,450.83	9,011.87	8,978.19	33.68	267.555		
900.00	889.64	11,496.00	7,822.51	3.50	105.53	136.63	-1,673.81	5,450.83	8,947.12	8,913.12	34.01	263.085		
1,000.00	985.27	11,496.00	7,822.51	4.06	105.53	137.71	-1,673.81	5,450.83	8,885.01	8,850.61	34.40	258.310		
1,100.00	1,079.82	11,496.00	7,822.51	4.66	105.53	138.70	-1,673.81	5,450.83	8,825.66	8,790.81	34.85	253.264		
1,200.00	1,173.23	11,496.00	7,822.51	5.31	105.53	139.32	-1,673.81	5,450.83	8,769.09	8,733.73	35.36	248.015		
1,300.00	1,266.35	11,496.00	7,822.51	5.98	105.53	139.32	-1,673.81	5,450.83	8,713.83	8,677.90	35.92	242.570		
1,400.00	1,359.46	11,496.00	7,822.51	6.66	105.53	139.32	-1,673.81	5,450.83	8,659.37	8,622.86	36.51	237.167		
1,500.00	1,452.58	11,496.00	7,822.51	7.34	105.53	139.32	-1,673.81	5,450.83	8,605.73	8,568.60	37.12	231.828		
1,600.00	1,545.69	11,496.00	7,822.51	8.03	105.53	139.32	-1,673.81	5,450.83	8,552.92	8,515.17	37.75	226.570		
1,700.00	1,638.81	11,496.00	7,822.51	8.72	105.53	139.32	-1,673.81	5,450.83	8,500.96	8,462.56	38.40	221.403		
1,800.00	1,731.92	11,496.00	7,822.51	9.41	105.53	139.32	-1,673.81	5,450.83	8,449.86	8,410.80	39.06	216.335		
1,900.00	1,825.04	11,496.00	7,822.51	10.11	105.53	139.32	-1,673.81	5,450.83	8,399.64	8,359.90	39.74	211.373		
2,000.00	1,918.15	11,496.00	7,822.51	10.81	105.53	139.32	-1,673.81	5,450.83	8,350.32	8,309.89	40.43	206.519		
2,100.00	2,011.27	11,496.00	7,822.51	11.51	105.53	139.32	-1,673.81	5,450.83	8,301.91	8,260.77	41.14	201.777		
2,200.00	2,104.39	11,496.00	7,822.51	12.21	105.53	139.32	-1,673.81	5,450.83	8,254.43	8,212.56	41.87	197.148		
2,300.00	2,197.50	11,496.00	7,822.51	12.91	105.53	139.32	-1,673.81	5,450.83	8,207.89	8,165.28	42.61	192.633		
2,400.00	2,290.62	11,496.00	7,822.51	13.61	105.53	139.32	-1,673.81	5,450.83	8,162.31	8,118.95	43.36	188.233		
2,500.00	2,383.73	11,496.00	7,822.51	14.31	105.53	139.32	-1,673.81	5,450.83	8,117.71	8,073.58	44.13	183.947		
2,600.00	2,476.85	11,496.00	7,822.51	15.01	105.53	139.32	-1,673.81	5,450.83	8,074.10	8,029.19	44.91	179.776		
2,700.00	2,569.96	11,496.00	7,822.51	15.72	105.53	139.32	-1,673.81	5,450.83	8,031.50	7,985.79	45.71	175.718		
2,800.00	2,663.08	11,496.00	7,822.51	16.42	105.53	139.32	-1,673.81	5,450.83	7,989.92	7,943.40	46.51	171.774		
2,900.00	2,756.20	11,496.00	7,822.51	17.12	105.53	139.32	-1,673.81	5,450.83	7,949.38	7,902.05	47.33	167.941		
3,000.00	2,849.31	11,496.00	7,822.51	17.83	105.53	139.32	-1,673.81	5,450.83	7,909.90	7,861.73	48.17	164.219		
3,100.00	2,942.43	11,496.00	7,822.51	18.53	105.53	139.32	-1,673.81	5,450.83	7,871.49	7,822.48	49.01	160.607		
3,200.00	3,035.54	11,496.00	7,822.51	19.24	105.53	139.32	-1,673.81	5,450.83	7,834.17	7,784.31	49.87	157.102		
3,300.00	3,128.66	11,496.00	7,822.51	19.94	105.53	139.32	-1,673.81	5,450.83	7,797.96	7,747.22	50.73	153.704		
3,400.00	3,221.77	11,496.00	7,822.51	20.65	105.53	139.32	-1,673.81	5,450.83	7,762.86	7,711.25	51.61	150.411		
3,500.00	3,314.89	11,496.00	7,822.51	21.35	105.53	139.32	-1,673.81	5,450.83	7,728.90	7,676.40	52.50	147.222		
3,600.00	3,408.01	11,496.00	7,822.51	22.06	105.53	139.32	-1,673.81	5,450.83	7,696.09	7,642.69	53.40	144.133		
3,700.00	3,501.12	11,496.00	7,822.51	22.77	105.53	139.32	-1,673.81	5,450.83	7,664.44	7,610.14	54.30	141.145		
3,800.00	3,594.24	11,496.00	7,822.51	23.47	105.53	139.32	-1,673.81	5,450.83	7,633.97	7,578.75	55.22	138.254		
3,900.00	3,687.35	11,496.00	7,822.51	24.18	105.53	139.32	-1,673.81	5,450.83	7,604.69	7,548.55	56.14	135.459		
4,000.00	3,780.47	11,496.00	7,822.51	24.89	105.53	139.32	-1,673.81	5,450.83	7,576.62	7,519.55	57.07	132.759		
4,100.00	3,873.58	11,496.00	7,822.51	25.59	105.53	139.32	-1,673.81	5,450.83	7,549.77	7,491.77	58.01	130.151		
4,200.00	3,966.70	11,496.00	7,822.51	26.30	105.53	139.32	-1,673.81	5,450.83	7,524.16	7,465.21	58.95	127.633		
4,300.00	4,059.81	11,496.00	7,822.51	27.01	105.53	139.32	-1,673.81	5,450.83	7,499.79	7,439.89	59.90	125.204		
4,400.00	4,152.93	11,496.00	7,822.51	27.71	105.53	139.32	-1,673.81	5,450.83	7,476.68	7,415.82	60.85	122.861		
4,500.00	4,246.05	11,496.00	7,822.51	28.42	105.53	139.32	-1,673.81	5,450.83	7,454.83	7,393.02	61.81	120.602		
4,600.00	4,339.16	11,496.00	7,822.51	29.13	105.53	139.32	-1,673.81	5,450.83	7,434.27	7,371.50	62.78	118.427		
4,700.00	4,432.28	11,496.00	7,822.51	29.83	105.53	139.32	-1,673.81	5,450.83	7,415.00	7,351.26	63.74	116.332		
4,800.00	4,525.39	11,496.00	7,822.51	30.54	105.53	139.32	-1,673.81	5,450.83	7,397.04	7,332.33	64.71	114.316		
4,900.00	4,618.51	11,496.00	7,822.51	31.25	105.53	139.32	-1,673.81	5,450.83	7,380.38	7,314.71	65.68	112.376		
5,000.00	4,711.62	11,496.00	7,822.51	31.95	105.53	139.32	-1,673.81	5,450.83	7,365.05	7,298.40	66.64	110.512		
5,100.00	4,804.74	11,496.00	7,822.51	32.66	105.53	139.32	-1,673.81	5,450.83	7,351.04	7,283.42	67.61	108.721		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 2122-MWD OWSG, 7180-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,200.00	4,897.86	11,496.00	7,822.51	33.37	105.53	139.32	-1,673.81	5,450.83	7,338.37	7,269.79	68.58	107.001		
5,300.00	4,990.97	11,496.00	7,822.51	34.08	105.53	139.32	-1,673.81	5,450.83	7,327.04	7,257.49	69.55	105.351		
5,400.00	5,084.09	11,496.00	7,822.51	34.78	105.53	139.32	-1,673.81	5,450.83	7,317.06	7,246.55	70.51	103.768		
5,500.00	5,177.20	11,496.00	7,822.51	35.49	105.53	139.32	-1,673.81	5,450.83	7,308.44	7,236.96	71.47	102.252		
5,600.00	5,270.32	11,496.00	7,822.51	36.20	105.53	139.32	-1,673.81	5,450.83	7,301.17	7,228.74	72.43	100.800		
5,700.00	5,363.43	11,496.00	7,822.51	36.91	105.53	139.32	-1,673.81	5,450.83	7,295.27	7,221.88	73.39	99.410		
5,800.00	5,456.55	11,496.00	7,822.51	37.61	105.53	139.32	-1,673.81	5,450.83	7,290.74	7,216.40	74.33	98.081		
5,900.00	5,549.67	11,496.00	7,822.51	38.32	105.53	139.32	-1,673.81	5,450.83	7,287.57	7,212.30	75.28	96.811		
6,000.00	5,642.78	11,496.00	7,822.51	39.03	105.53	139.32	-1,673.81	5,450.83	7,285.78	7,209.57	76.21	95.599		
6,080.66	5,717.89	11,496.00	7,822.51	39.60	105.53	139.32	-1,673.81	5,450.83	7,285.33	7,208.37	76.96	94.662		
6,100.00	5,735.90	11,496.00	7,822.51	39.74	105.53	139.32	-1,673.81	5,450.83	7,285.36	7,208.22	77.14	94.443		
6,200.00	5,829.01	11,496.00	7,822.51	40.44	105.53	139.32	-1,673.81	5,450.83	7,286.31	7,208.25	78.06	93.341		
6,300.00	5,922.13	11,496.00	7,822.51	41.15	105.53	139.32	-1,673.81	5,450.83	7,288.63	7,209.66	78.97	92.292		
6,400.00	6,015.24	11,496.00	7,822.51	41.86	105.53	139.32	-1,673.81	5,450.83	7,292.33	7,212.45	79.88	91.295		
6,500.00	6,108.36	11,496.00	7,822.51	42.57	105.53	139.32	-1,673.81	5,450.83	7,297.39	7,216.62	80.77	90.348		
6,600.00	6,201.47	11,496.00	7,822.51	43.28	105.53	139.32	-1,673.81	5,450.83	7,303.82	7,222.17	81.65	89.449		
6,700.00	6,294.59	11,496.00	7,822.51	43.98	105.53	139.32	-1,673.81	5,450.83	7,311.61	7,229.08	82.53	88.598		
6,800.00	6,387.71	11,496.00	7,822.51	44.69	105.53	139.32	-1,673.81	5,450.83	7,320.76	7,237.37	83.39	87.792		
6,900.00	6,480.82	11,496.00	7,822.51	45.40	105.53	139.32	-1,673.81	5,450.83	7,331.26	7,247.02	84.24	87.032		
7,000.00	6,573.94	11,496.00	7,822.51	46.11	105.53	139.32	-1,673.81	5,450.83	7,343.11	7,258.03	85.07	86.314		
7,100.00	6,667.05	11,496.00	7,822.51	46.82	105.53	139.32	-1,673.81	5,450.83	7,356.30	7,270.40	85.90	85.639		
7,200.00	6,760.17	11,496.00	7,822.51	47.52	105.53	139.32	-1,673.81	5,450.83	7,370.82	7,284.11	86.71	85.004		
7,300.00	6,853.28	11,496.00	7,822.51	48.23	105.53	139.32	-1,673.81	5,450.83	7,386.67	7,299.16	87.51	84.409		
7,400.00	6,946.40	11,496.00	7,822.51	48.94	105.53	139.32	-1,673.81	5,450.83	7,403.83	7,315.54	88.30	83.853		
7,500.00	7,039.52	11,496.00	7,822.51	49.65	105.53	139.32	-1,673.81	5,450.83	7,422.30	7,333.24	89.07	83.334		
7,600.00	7,132.94	11,496.00	7,822.51	50.33	105.53	119.12	-1,673.81	5,450.83	7,437.99	7,348.13	89.86	82.769		
7,700.00	7,225.98	11,496.00	7,822.51	50.90	105.53	94.66	-1,673.81	5,450.83	7,440.78	7,350.01	90.77	81.976		
7,800.00	7,315.86	11,496.00	7,822.51	51.34	105.53	78.58	-1,673.81	5,450.83	7,430.16	7,338.42	91.74	80.990		
7,900.00	7,399.85	11,496.00	7,822.51	51.68	105.53	69.77	-1,673.81	5,450.83	7,406.39	7,313.62	92.77	79.839		
8,000.00	7,475.41	11,496.00	7,822.51	51.91	105.53	65.77	-1,673.81	5,450.83	7,370.08	7,276.24	93.83	78.543		
8,100.00	7,540.24	11,496.00	7,822.51	52.05	105.53	65.17	-1,673.81	5,450.83	7,322.14	7,227.19	94.95	77.116		
8,200.00	7,592.37	11,496.00	7,822.51	52.11	105.53	67.46	-1,673.81	5,450.83	7,263.84	7,167.72	96.12	75.572		
8,300.00	7,630.20	11,496.00	7,822.51	52.09	105.53	72.61	-1,673.81	5,450.83	7,196.70	7,099.35	97.34	73.933		
8,400.00	7,652.61	11,496.00	7,822.51	52.01	105.53	80.91	-1,673.81	5,450.83	7,122.54	7,023.93	98.61	72.230		
8,500.00	7,659.00	11,496.00	7,822.51	51.89	105.53	91.01	-1,673.81	5,450.83	7,043.47	6,943.56	99.91	70.501		
8,600.00	7,659.00	11,496.00	7,822.51	51.77	105.53	91.01	-1,673.81	5,450.83	6,963.28	6,862.04	101.25	68.775		
8,700.00	7,659.00	11,496.00	7,822.51	51.67	105.53	91.01	-1,673.81	5,450.83	6,883.61	6,780.95	102.67	67.049		
8,800.00	7,659.00	11,496.00	7,822.51	51.61	105.53	91.01	-1,673.81	5,450.83	6,804.48	6,700.32	104.16	65.326		
8,900.00	7,659.00	11,496.00	7,822.51	51.58	105.53	91.01	-1,673.81	5,450.83	6,725.91	6,620.17	105.74	63.608		
9,000.00	7,659.00	11,496.00	7,822.51	51.59	105.53	91.01	-1,673.81	5,450.83	6,647.90	6,540.51	107.40	61.900		
9,100.00	7,659.00	11,496.00	7,822.51	51.67	105.53	91.01	-1,673.81	5,450.83	6,570.50	6,461.36	109.14	60.204		
9,200.00	7,659.00	11,496.00	7,822.51	51.83	105.53	91.01	-1,673.81	5,450.83	6,493.71	6,382.75	110.96	58.524		
9,300.00	7,659.00	11,496.00	7,822.51	52.14	105.53	91.01	-1,673.81	5,450.83	6,417.56	6,304.70	112.86	56.861		
9,400.00	7,659.00	11,496.00	7,822.51	52.67	105.53	91.01	-1,673.81	5,450.83	6,342.08	6,227.22	114.85	55.218		
9,500.00	7,659.00	11,496.00	7,822.51	53.53	105.53	91.01	-1,673.81	5,450.83	6,267.28	6,150.35	116.93	53.599		
9,600.00	7,659.00	11,496.00	7,822.51	54.75	105.53	91.01	-1,673.81	5,450.83	6,193.19	6,074.10	119.09	52.005		
9,700.00	7,659.00	11,496.00	7,822.51	56.29	105.53	91.01	-1,673.81	5,450.83	6,119.84	5,998.51	121.33	50.439		
9,800.00	7,659.00	11,496.00	7,822.51	58.05	105.53	91.01	-1,673.81	5,450.83	6,047.26	5,923.60	123.66	48.903		
9,900.00	7,659.00	11,496.00	7,822.51	59.97	105.53	91.01	-1,673.81	5,450.83	5,975.46	5,849.39	126.07	47.397		
10,000.00	7,659.00	11,496.00	7,822.51	62.00	105.53	91.01	-1,673.81	5,450.83	5,904.49	5,775.92	128.57	45.925		
10,100.00	7,659.00	11,496.00	7,822.51	64.11	105.53	91.01	-1,673.81	5,450.83	5,834.36	5,703.21	131.15	44.486		
10,200.00	7,659.00	11,496.00	7,822.51	66.28	105.53	91.01	-1,673.81	5,450.83	5,765.12	5,631.31	133.81	43.083		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ TEBO 29-1H - STK 1 - STK 1													Offset Site Error:	0.00 usft
Survey Program: 2122-MWD OWSG, 7180-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,300.00	7,659.00	11,496.00	7,822.51	68.51	105.53	91.01	-1,673.81	5,450.83	5,696.79	5,560.23	136.56	41.716		
10,400.00	7,659.00	11,496.00	7,822.51	70.77	105.53	91.01	-1,673.81	5,450.83	5,629.41	5,490.02	139.39	40.386		
10,500.00	7,659.00	11,496.00	7,822.51	73.06	105.53	91.01	-1,673.81	5,450.83	5,563.01	5,420.72	142.30	39.094		
10,600.00	7,659.00	11,496.00	7,822.51	75.39	105.53	91.01	-1,673.81	5,450.83	5,497.63	5,352.35	145.29	37.840		
10,700.00	7,659.00	11,496.00	7,822.51	77.74	105.53	91.01	-1,673.81	5,450.83	5,433.30	5,284.95	148.35	36.625		
10,800.00	7,659.00	11,496.00	7,822.51	80.12	105.53	91.01	-1,673.81	5,450.83	5,370.07	5,218.57	151.49	35.448		
10,900.00	7,659.00	11,496.00	7,822.51	82.51	105.53	91.01	-1,673.81	5,450.83	5,307.96	5,153.25	154.71	34.309		
11,000.00	7,659.00	11,496.00	7,822.51	84.93	105.53	91.01	-1,673.81	5,450.83	5,247.03	5,089.03	158.00	33.210		
11,100.00	7,659.00	11,496.00	7,822.51	87.36	105.53	91.01	-1,673.81	5,450.83	5,187.30	5,025.95	161.35	32.149		
11,200.00	7,659.00	11,496.00	7,822.51	89.81	105.53	91.01	-1,673.81	5,450.83	5,128.83	4,964.06	164.78	31.126		
11,300.00	7,659.00	11,496.00	7,822.51	92.27	105.53	91.01	-1,673.81	5,450.83	5,071.66	4,903.40	168.27	30.141		
11,400.00	7,659.00	11,496.00	7,822.51	94.75	105.53	91.01	-1,673.81	5,450.83	5,015.84	4,844.02	171.81	29.194		
11,500.00	7,659.00	11,496.00	7,822.51	97.23	105.53	91.01	-1,673.81	5,450.83	4,961.40	4,785.98	175.42	28.283		
11,600.00	7,659.00	11,496.00	7,822.51	99.73	105.53	91.01	-1,673.81	5,450.83	4,908.39	4,729.31	179.08	27.410		
11,700.00	7,659.00	11,496.00	7,822.51	102.24	105.53	91.01	-1,673.81	5,450.83	4,856.86	4,674.08	182.78	26.572		
11,800.00	7,659.00	11,496.00	7,822.51	104.75	105.53	91.01	-1,673.81	5,450.83	4,806.86	4,620.33	186.53	25.770		
11,900.00	7,659.00	11,496.00	7,822.51	107.28	105.53	91.01	-1,673.81	5,450.83	4,758.44	4,568.12	190.32	25.002		
12,000.00	7,659.00	11,496.00	7,822.51	109.81	105.53	91.01	-1,673.81	5,450.83	4,711.65	4,517.51	194.14	24.269		
12,100.00	7,659.00	11,496.00	7,822.51	112.35	105.53	91.01	-1,673.81	5,450.83	4,666.52	4,468.54	197.99	23.570		
12,200.00	7,659.00	11,496.00	7,822.51	114.90	105.53	91.01	-1,673.81	5,450.83	4,623.12	4,421.27	201.85	22.903		
12,300.00	7,659.00	11,496.00	7,822.51	117.46	105.53	91.01	-1,673.81	5,450.83	4,581.50	4,375.76	205.73	22.269		
12,400.00	7,659.00	11,496.00	7,822.51	120.02	105.53	91.01	-1,673.81	5,450.83	4,541.69	4,332.07	209.62	21.666		
12,500.00	7,659.00	11,496.00	7,822.51	122.58	105.53	91.01	-1,673.81	5,450.83	4,503.75	4,290.25	213.50	21.095		
12,600.00	7,659.00	11,496.00	7,822.51	125.15	105.53	91.01	-1,673.81	5,450.83	4,467.73	4,250.35	217.38	20.553		
12,700.00	7,659.00	11,496.00	7,822.51	127.73	105.53	91.01	-1,673.81	5,450.83	4,433.67	4,212.44	221.23	20.041		
12,800.00	7,659.00	11,496.00	7,822.51	130.31	105.53	91.01	-1,673.81	5,450.83	4,401.62	4,176.56	225.06	19.557		
12,900.00	7,659.00	11,496.00	7,822.51	132.90	105.53	91.01	-1,673.81	5,450.83	4,371.62	4,142.76	228.86	19.102		
13,000.00	7,659.00	11,496.00	7,822.51	135.49	105.53	91.01	-1,673.81	5,450.83	4,343.72	4,111.11	232.61	18.674		
13,100.00	7,659.00	11,496.00	7,822.51	138.08	105.53	91.01	-1,673.81	5,450.83	4,317.96	4,081.65	236.31	18.273		
13,200.00	7,659.00	11,496.00	7,822.51	140.68	105.53	91.01	-1,673.81	5,450.83	4,293.95	4,054.01	239.94	17.896		
13,300.00	7,659.00	11,496.00	7,822.51	143.28	105.53	91.01	-1,673.81	5,450.83	4,271.42	4,027.93	243.49	17.542		
13,400.00	7,659.00	11,496.00	7,822.51	145.88	105.53	91.01	-1,673.81	5,450.83	4,251.14	4,004.16	246.97	17.213		
13,500.00	7,659.00	11,496.00	7,822.51	148.48	105.53	91.01	-1,673.81	5,450.83	4,233.11	3,982.75	250.36	16.908		
13,600.00	7,659.00	11,496.00	7,822.51	151.09	105.53	91.01	-1,673.81	5,450.83	4,217.39	3,963.73	253.65	16.627		
13,700.00	7,659.00	11,496.00	7,822.51	153.70	105.53	91.01	-1,673.81	5,450.83	4,203.98	3,947.14	256.84	16.368		
13,800.00	7,659.00	11,496.00	7,822.51	156.32	105.53	91.01	-1,673.81	5,450.83	4,192.91	3,933.00	259.92	16.132		
13,900.00	7,659.00	11,496.00	7,822.51	158.94	105.53	91.01	-1,673.81	5,450.83	4,184.21	3,921.34	262.87	15.917		
14,000.00	7,659.00	11,496.00	7,822.51	161.56	105.53	91.01	-1,673.81	5,450.83	4,177.88	3,912.18	265.70	15.724		
14,100.00	7,659.00	11,496.00	7,822.51	164.18	105.53	91.01	-1,673.81	5,450.83	4,173.94	3,905.55	268.39	15.552		
14,200.00	7,659.00	11,401.80	7,822.34	166.80	103.05	91.01	-1,674.46	5,545.03	4,171.47	3,902.94	268.54	15.534		
14,300.00	7,659.00	11,320.26	7,821.44	169.43	100.91	91.00	-1,675.00	5,626.56	4,168.99	3,899.98	269.01	15.497		
14,400.00	7,659.00	11,201.97	7,819.43	172.06	97.81	90.97	-1,676.13	5,744.83	4,166.80	3,898.27	268.53	15.517		
14,500.00	7,659.00	11,093.34	7,818.40	174.69	94.97	90.96	-1,676.63	5,853.45	4,164.09	3,895.79	268.31	15.520		
14,600.00	7,659.00	10,988.88	7,817.44	177.33	92.25	90.94	-1,676.92	5,957.91	4,161.20	3,893.01	268.20	15.515		
14,700.00	7,659.00	10,884.31	7,815.74	179.96	89.52	90.92	-1,677.20	6,062.46	4,158.31	3,890.22	268.09	15.511		
14,800.00	7,659.00	10,754.93	7,812.50	182.60	86.17	90.88	-1,676.94	6,191.80	4,154.92	3,887.59	267.33	15.542		
14,900.00	7,659.00	10,680.50	7,809.86	185.24	84.24	90.84	-1,676.63	6,266.19	4,151.35	3,883.32	268.03	15.488		
15,000.00	7,659.00	10,528.61	7,805.24	187.88	80.32	90.78	-1,676.58	6,418.00	4,148.39	3,881.72	266.67	15.556		
15,100.00	7,659.00	10,453.90	7,803.51	190.52	78.40	90.75	-1,675.91	6,492.69	4,144.32	3,876.93	267.39	15.499		
15,200.00	7,659.00	10,389.36	7,802.38	193.16	76.75	90.74	-1,675.79	6,557.22	4,140.97	3,872.60	268.37	15.430		
15,300.00	7,659.00	10,306.68	7,801.95	195.81	74.63	90.73	-1,676.32	6,639.89	4,138.43	3,869.56	268.87	15.392		
15,400.00	7,659.00	10,176.54	7,801.30	198.45	71.30	90.72	-1,676.74	6,770.03	4,135.61	3,867.46	268.14	15.423		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ TEBO 29-1H - STK 1 - STK 1												Offset Site Error:	0.00 usft
Survey Program: 2122-MWD OWSG, 7180-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	Warning
15,500.00	7,659.00	10,105.88	7,800.60	201.10	69.51	90.72	-1,676.84	6,840.69	4,132.63	3,863.66	268.97	15.365	
15,600.00	7,659.00	10,016.55	7,800.51	203.75	67.24	90.71	-1,677.79	6,930.01	4,130.51	3,861.19	269.32	15.337	
15,700.00	7,659.00	9,886.83	7,797.51	206.40	63.97	90.67	-1,678.37	7,059.70	4,127.75	3,859.12	268.63	15.366	
15,800.00	7,659.00	9,783.42	7,796.38	209.05	61.38	90.66	-1,678.57	7,163.09	4,124.78	3,856.13	268.65	15.354	
15,900.00	7,659.00	15,900.00	7,796.54	211.70	215.46	90.66	-1,678.18	7,317.34	4,121.56	3,695.82	425.75	9.681 ES, SF	
16,000.00	7,659.00	9,535.66	7,795.20	214.36	55.29	90.64	-1,676.85	7,410.83	4,116.99	3,849.33	267.66	15.381	
16,100.00	7,659.00	9,448.27	7,792.41	217.01	53.18	90.61	-1,676.30	7,498.17	4,113.14	3,845.00	268.14	15.339	
16,200.00	7,659.00	9,348.25	7,789.47	219.67	50.78	90.56	-1,675.51	7,598.15	4,109.18	3,840.86	268.31	15.315	
16,300.00	7,659.00	9,243.98	7,787.68	222.32	48.32	90.54	-1,674.29	7,702.39	4,104.83	3,836.43	268.40	15.294	
16,400.00	7,659.00	9,178.64	7,785.48	224.98	46.79	90.51	-1,674.14	7,767.69	4,101.36	3,831.88	269.48	15.220	
16,500.00	7,659.00	9,095.59	7,782.61	227.64	44.87	90.47	-1,674.05	7,850.70	4,098.13	3,828.00	270.13	15.171	
16,600.00	7,659.00	9,048.00	7,781.81	230.30	43.78	90.46	-1,674.58	7,898.27	4,096.04	3,824.41	271.63	15.080	
16,691.78	7,659.00	9,017.00	7,781.41	232.74	43.07	90.45	-1,675.30	7,929.26	4,095.33	3,822.08	273.25	14.987 CC	
16,700.00	7,659.00	9,017.00	7,781.41	232.96	43.07	90.45	-1,675.30	7,929.26	4,095.34	3,821.88	273.45	14.976	
16,800.00	7,659.00	8,985.00	7,781.00	235.62	42.33	90.45	-1,676.64	7,961.23	4,096.36	3,821.17	275.19	14.886	
16,900.00	7,659.00	8,967.62	7,780.82	238.28	41.93	90.45	-1,677.71	7,978.58	4,099.26	3,822.11	277.14	14.791	
17,000.00	7,659.00	8,954.00	7,780.71	240.95	41.62	90.44	-1,678.76	7,992.16	4,104.13	3,825.07	279.06	14.707	
17,100.00	7,659.00	8,922.00	7,780.61	243.61	40.88	90.44	-1,681.84	8,024.01	4,110.83	3,830.29	280.54	14.653	
17,200.00	7,659.00	8,890.00	7,780.75	246.27	40.13	90.44	-1,685.77	8,055.76	4,119.50	3,837.55	281.95	14.611	
17,300.00	7,659.00	8,890.00	7,780.75	248.94	40.13	90.44	-1,685.77	8,055.76	4,129.96	3,846.21	283.75	14.555	
17,400.00	7,659.00	8,859.00	7,781.06	251.60	39.41	90.45	-1,690.42	8,086.41	4,142.26	3,857.28	284.98	14.535	
17,500.00	7,659.00	8,827.00	7,781.17	254.27	38.67	90.45	-1,696.05	8,117.91	4,156.48	3,870.35	286.13	14.527	
17,600.00	7,659.00	8,810.77	7,781.04	256.94	38.30	90.45	-1,699.20	8,133.83	4,172.42	3,885.05	287.37	14.520	
17,700.00	7,659.00	8,782.72	7,780.61	259.61	37.65	90.44	-1,705.05	8,161.26	4,190.12	3,901.74	288.38	14.530	
17,800.00	7,659.00	8,751.13	7,779.67	262.27	36.92	90.43	-1,712.10	8,192.03	4,209.39	3,920.10	289.29	14.551	
17,900.00	7,659.00	8,732.00	7,778.97	264.94	36.48	90.42	-1,716.63	8,210.61	4,230.29	3,940.09	290.21	14.577	
18,000.00	7,659.00	8,700.00	7,777.95	267.61	35.75	90.40	-1,724.80	8,241.53	4,252.87	3,961.91	290.95	14.617	
18,100.00	7,659.00	8,684.90	7,777.64	270.28	35.40	90.40	-1,728.95	8,256.05	4,277.21	3,985.50	291.71	14.662	
18,200.00	7,659.00	8,669.00	7,777.43	272.95	35.04	90.39	-1,733.58	8,271.26	4,303.35	4,010.99	292.36	14.719	
18,300.00	7,659.00	8,637.00	7,777.19	275.62	34.32	90.39	-1,743.32	8,301.74	4,331.01	4,038.12	292.88	14.788	
18,400.00	7,659.00	8,571.95	7,776.61	278.29	32.87	90.38	-1,763.85	8,363.46	4,359.65	4,066.32	293.33	14.862	
18,500.00	7,659.00	8,542.00	7,776.22	280.97	32.21	90.37	-1,773.57	8,391.79	4,389.39	4,095.62	293.77	14.942	
18,558.76	7,659.00	8,496.86	7,775.56	282.54	31.23	90.36	-1,788.58	8,434.35	4,407.23	4,113.19	294.04	14.988	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ TEBO 29-2H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 2181-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	12,436.00	7,884.20	0.00	132.18	80.10	948.91	5,437.57	9,566.28					
100.00	100.00	12,436.00	7,884.20	0.13	132.18	80.10	948.91	5,437.57	9,484.78	9,443.90	40.88	232.012		
200.00	199.98	12,436.00	7,884.20	0.50	132.18	99.38	948.91	5,437.57	9,403.77	9,362.91	40.87	230.109		
300.00	299.84	12,436.00	7,884.20	0.86	132.18	102.03	948.91	5,437.57	9,323.47	9,282.62	40.86	228.196		
400.00	399.45	12,436.00	7,884.20	1.23	132.18	104.58	948.91	5,437.57	9,244.00	9,203.14	40.86	226.255		
500.00	498.70	12,436.00	7,884.20	1.63	132.18	107.02	948.91	5,437.57	9,165.47	9,124.61	40.87	224.276		
600.00	597.47	12,436.00	7,884.20	2.05	132.18	109.35	948.91	5,437.57	9,088.01	9,047.12	40.89	222.249		
700.00	695.62	12,436.00	7,884.20	2.49	132.18	111.56	948.91	5,437.57	9,011.74	8,970.81	40.93	220.163		
800.00	793.06	12,436.00	7,884.20	2.98	132.18	113.65	948.91	5,437.57	8,936.78	8,895.79	40.99	218.012		
900.00	889.64	12,436.00	7,884.20	3.50	132.18	115.62	948.91	5,437.57	8,863.26	8,822.19	41.07	215.788		
1,000.00	985.27	12,436.00	7,884.20	4.06	132.18	117.47	948.91	5,437.57	8,791.31	8,750.13	41.18	213.490		
1,100.00	1,079.82	12,436.00	7,884.20	4.66	132.18	119.21	948.91	5,437.57	8,721.05	8,679.74	41.31	211.114		
1,200.00	1,173.23	12,436.00	7,884.20	5.31	132.18	120.35	948.91	5,437.57	8,652.55	8,611.09	41.46	208.676		
1,300.00	1,266.35	12,436.00	7,884.20	5.98	132.18	120.35	948.91	5,437.57	8,584.98	8,543.32	41.66	206.092		
1,400.00	1,359.46	12,436.00	7,884.20	6.66	132.18	120.35	948.91	5,437.57	8,518.05	8,476.18	41.87	203.461		
1,500.00	1,452.58	12,436.00	7,884.20	7.34	132.18	120.35	948.91	5,437.57	8,451.76	8,409.67	42.09	200.803		
1,600.00	1,545.69	12,436.00	7,884.20	8.03	132.18	120.35	948.91	5,437.57	8,386.15	8,343.83	42.33	198.129		
1,700.00	1,638.81	12,436.00	7,884.20	8.72	132.18	120.35	948.91	5,437.57	8,321.22	8,278.65	42.57	195.450		
1,800.00	1,731.92	12,436.00	7,884.20	9.41	132.18	120.35	948.91	5,437.57	8,257.00	8,214.16	42.83	192.770		
1,900.00	1,825.04	12,436.00	7,884.20	10.11	132.18	120.35	948.91	5,437.57	8,193.49	8,150.39	43.10	190.097		
2,000.00	1,918.15	12,436.00	7,884.20	10.81	132.18	120.35	948.91	5,437.57	8,130.71	8,087.33	43.38	187.433		
2,100.00	2,011.27	12,436.00	7,884.20	11.51	132.18	120.35	948.91	5,437.57	8,068.69	8,025.02	43.67	184.782		
2,200.00	2,104.39	12,436.00	7,884.20	12.21	132.18	120.35	948.91	5,437.57	8,007.43	7,963.47	43.96	182.146		
2,300.00	2,197.50	12,436.00	7,884.20	12.91	132.18	120.35	948.91	5,437.57	7,946.96	7,902.69	44.27	179.526		
2,400.00	2,290.62	12,436.00	7,884.20	13.61	132.18	120.35	948.91	5,437.57	7,887.29	7,842.71	44.58	176.925		
2,500.00	2,383.73	12,436.00	7,884.20	14.31	132.18	120.35	948.91	5,437.57	7,828.45	7,783.55	44.90	174.342		
2,600.00	2,476.85	12,436.00	7,884.20	15.01	132.18	120.35	948.91	5,437.57	7,770.45	7,725.21	45.23	171.780		
2,700.00	2,569.96	12,436.00	7,884.20	15.72	132.18	120.35	948.91	5,437.57	7,713.30	7,667.73	45.58	169.239		
2,800.00	2,663.08	12,436.00	7,884.20	16.42	132.18	120.35	948.91	5,437.57	7,657.04	7,611.11	45.93	166.719		
2,900.00	2,756.20	12,436.00	7,884.20	17.12	132.18	120.35	948.91	5,437.57	7,601.68	7,555.39	46.29	164.222		
3,000.00	2,849.31	12,436.00	7,884.20	17.83	132.18	120.35	948.91	5,437.57	7,547.23	7,500.57	46.66	161.746		
3,100.00	2,942.43	12,436.00	7,884.20	18.53	132.18	120.35	948.91	5,437.57	7,493.73	7,446.68	47.04	159.294		
3,200.00	3,035.54	12,436.00	7,884.20	19.24	132.18	120.35	948.91	5,437.57	7,441.18	7,393.74	47.44	156.864		
3,300.00	3,128.66	12,436.00	7,884.20	19.94	132.18	120.35	948.91	5,437.57	7,389.62	7,341.77	47.84	154.457		
3,400.00	3,221.77	12,436.00	7,884.20	20.65	132.18	120.35	948.91	5,437.57	7,339.05	7,290.79	48.26	152.074		
3,500.00	3,314.89	12,436.00	7,884.20	21.35	132.18	120.35	948.91	5,437.57	7,289.50	7,240.81	48.69	149.714		
3,600.00	3,408.01	12,436.00	7,884.20	22.06	132.18	120.35	948.91	5,437.57	7,241.00	7,191.87	49.13	147.378		
3,700.00	3,501.12	12,436.00	7,884.20	22.77	132.18	120.35	948.91	5,437.57	7,193.56	7,143.97	49.59	145.066		
3,800.00	3,594.24	12,436.00	7,884.20	23.47	132.18	120.35	948.91	5,437.57	7,147.21	7,097.15	50.06	142.777		
3,900.00	3,687.35	12,436.00	7,884.20	24.18	132.18	120.35	948.91	5,437.57	7,101.96	7,051.41	50.54	140.513		
4,000.00	3,780.47	12,436.00	7,884.20	24.89	132.18	120.35	948.91	5,437.57	7,057.83	7,006.79	51.04	138.273		
4,100.00	3,873.58	12,436.00	7,884.20	25.59	132.18	120.35	948.91	5,437.57	7,014.86	6,963.30	51.56	136.057		
4,200.00	3,966.70	12,436.00	7,884.20	26.30	132.18	120.35	948.91	5,437.57	6,973.05	6,920.96	52.09	133.867		
4,300.00	4,059.81	12,436.00	7,884.20	27.01	132.18	120.35	948.91	5,437.57	6,932.44	6,879.80	52.64	131.701		
4,400.00	4,152.93	12,436.00	7,884.20	27.71	132.18	120.35	948.91	5,437.57	6,893.03	6,839.83	53.20	129.561		
4,500.00	4,246.05	12,436.00	7,884.20	28.42	132.18	120.35	948.91	5,437.57	6,854.86	6,801.08	53.79	127.447		
4,600.00	4,339.16	12,436.00	7,884.20	29.13	132.18	120.35	948.91	5,437.57	6,817.94	6,763.56	54.39	125.359		
4,700.00	4,432.28	12,436.00	7,884.20	29.83	132.18	120.35	948.91	5,437.57	6,782.30	6,727.29	55.01	123.298		
4,800.00	4,525.39	12,436.00	7,884.20	30.54	132.18	120.35	948.91	5,437.57	6,747.95	6,692.30	55.65	121.265		
4,900.00	4,618.51	12,436.00	7,884.20	31.25	132.18	120.35	948.91	5,437.57	6,714.91	6,658.61	56.30	119.260		
5,000.00	4,711.62	12,436.00	7,884.20	31.95	132.18	120.35	948.91	5,437.57	6,683.21	6,626.23	56.98	117.285		
5,100.00	4,804.74	12,436.00	7,884.20	32.66	132.18	120.35	948.91	5,437.57	6,652.86	6,595.18	57.68	115.339		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ TEBO 29-2H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 2181-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,200.00	4,897.86	12,436.00	7,884.20	33.37	132.18	120.35	948.91	5,437.57	6,623.88	6,565.48	58.40	113.425		
5,300.00	4,990.97	12,436.00	7,884.20	34.08	132.18	120.35	948.91	5,437.57	6,596.28	6,537.15	59.14	111.542		
5,400.00	5,084.09	12,436.00	7,884.20	34.78	132.18	120.35	948.91	5,437.57	6,570.10	6,510.20	59.90	109.692		
5,500.00	5,177.20	12,436.00	7,884.20	35.49	132.18	120.35	948.91	5,437.57	6,545.34	6,484.66	60.67	107.877		
5,600.00	5,270.32	12,436.00	7,884.20	36.20	132.18	120.35	948.91	5,437.57	6,522.01	6,460.54	61.47	106.096		
5,700.00	5,363.43	12,436.00	7,884.20	36.91	132.18	120.35	948.91	5,437.57	6,500.14	6,437.85	62.29	104.352		
5,800.00	5,456.55	12,436.00	7,884.20	37.61	132.18	120.35	948.91	5,437.57	6,479.74	6,416.62	63.13	102.645		
5,900.00	5,549.67	12,436.00	7,884.20	38.32	132.18	120.35	948.91	5,437.57	6,460.83	6,396.85	63.98	100.977		
6,000.00	5,642.78	12,436.00	7,884.20	39.03	132.18	120.35	948.91	5,437.57	6,443.41	6,378.55	64.86	99.348		
6,100.00	5,735.90	12,436.00	7,884.20	39.74	132.18	120.35	948.91	5,437.57	6,427.50	6,361.75	65.75	97.760		
6,200.00	5,829.01	12,436.00	7,884.20	40.44	132.18	120.35	948.91	5,437.57	6,413.11	6,346.46	66.66	96.213		
6,300.00	5,922.13	12,436.00	7,884.20	41.15	132.18	120.35	948.91	5,437.57	6,400.25	6,332.67	67.58	94.710		
6,400.00	6,015.24	12,436.00	7,884.20	41.86	132.18	120.35	948.91	5,437.57	6,388.93	6,320.42	68.51	93.249		
6,500.00	6,108.36	12,436.00	7,884.20	42.57	132.18	120.35	948.91	5,437.57	6,379.16	6,309.69	69.47	91.833		
6,600.00	6,201.47	12,436.00	7,884.20	43.28	132.18	120.35	948.91	5,437.57	6,370.94	6,300.51	70.43	90.461		
6,700.00	6,294.59	12,436.00	7,884.20	43.98	132.18	120.35	948.91	5,437.57	6,364.29	6,292.89	71.40	89.134		
6,800.00	6,387.71	12,436.00	7,884.20	44.69	132.18	120.35	948.91	5,437.57	6,359.20	6,286.81	72.38	87.854		
6,900.00	6,480.82	12,436.00	7,884.20	45.40	132.18	120.35	948.91	5,437.57	6,355.67	6,282.30	73.37	86.619		
7,000.00	6,573.94	12,436.00	7,884.20	46.11	132.18	120.35	948.91	5,437.57	6,353.72	6,279.35	74.37	85.431		
7,073.86	6,642.72	12,436.00	7,884.20	46.63	132.18	120.35	948.91	5,437.57	6,353.30	6,278.18	75.11	84.583		
7,100.00	6,667.05	12,436.00	7,884.20	46.82	132.18	120.35	948.91	5,437.57	6,353.35	6,277.97	75.38	84.289		
7,200.00	6,760.17	12,436.00	7,884.20	47.52	132.18	120.35	948.91	5,437.57	6,354.55	6,278.16	76.38	83.193		
7,300.00	6,853.28	12,436.00	7,884.20	48.23	132.18	120.35	948.91	5,437.57	6,357.32	6,279.93	77.39	82.144		
7,400.00	6,946.40	12,436.00	7,884.20	48.94	132.18	120.35	948.91	5,437.57	6,361.66	6,283.26	78.40	81.140		
7,500.00	7,039.52	12,436.00	7,884.20	49.65	132.18	120.35	948.91	5,437.57	6,367.57	6,288.16	79.41	80.182		
7,600.00	7,132.94	12,436.00	7,884.20	50.33	132.18	100.72	948.91	5,437.57	6,370.27	6,289.83	80.44	79.194		
7,700.00	7,225.98	12,436.00	7,884.20	50.90	132.18	76.69	948.91	5,437.57	6,358.17	6,276.67	81.50	78.017		
7,800.00	7,315.86	12,436.00	7,884.20	51.34	132.18	60.75	948.91	5,437.57	6,331.00	6,248.45	82.56	76.687		
7,900.00	7,399.85	12,436.00	7,884.20	51.68	132.18	51.81	948.91	5,437.57	6,289.42	6,205.82	83.60	75.234		
8,000.00	7,475.41	12,436.00	7,884.20	51.91	132.18	47.49	948.91	5,437.57	6,234.41	6,149.80	84.61	73.681		
8,100.00	7,540.24	12,436.00	7,884.20	52.05	132.18	46.56	948.91	5,437.57	6,167.32	6,081.72	85.60	72.049		
8,200.00	7,592.37	12,436.00	7,884.20	52.11	132.18	48.93	948.91	5,437.57	6,089.81	6,003.26	86.55	70.365		
8,300.00	7,630.20	12,436.00	7,884.20	52.09	132.18	55.82	948.91	5,437.57	6,003.89	5,916.44	87.45	68.658		
8,400.00	7,652.61	12,436.00	7,884.20	52.01	132.18	70.82	948.91	5,437.57	5,911.86	5,823.57	88.29	66.960		
8,500.00	7,659.00	12,436.00	7,884.20	51.89	132.18	95.64	948.91	5,437.57	5,816.30	5,727.25	89.06	65.310		
8,600.00	7,659.00	12,436.00	7,884.20	51.77	132.18	95.64	948.91	5,437.57	5,720.08	5,630.26	89.81	63.689		
8,700.00	7,659.00	12,436.00	7,884.20	51.67	132.18	95.64	948.91	5,437.57	5,623.98	5,533.37	90.61	62.071		
8,800.00	7,659.00	12,436.00	7,884.20	51.61	132.18	95.64	948.91	5,437.57	5,528.02	5,436.58	91.44	60.456		
8,900.00	7,659.00	12,436.00	7,884.20	51.58	132.18	95.64	948.91	5,437.57	5,432.21	5,339.89	92.32	58.843		
9,000.00	7,659.00	12,436.00	7,884.20	51.59	132.18	95.64	948.91	5,437.57	5,336.55	5,243.31	93.24	57.235		
9,100.00	7,659.00	12,436.00	7,884.20	51.67	132.18	95.64	948.91	5,437.57	5,241.06	5,146.85	94.21	55.632		
9,200.00	7,659.00	12,436.00	7,884.20	51.83	132.18	95.64	948.91	5,437.57	5,145.73	5,050.50	95.23	54.033		
9,300.00	7,659.00	12,436.00	7,884.20	52.14	132.18	95.64	948.91	5,437.57	5,050.59	4,954.28	96.31	52.441		
9,400.00	7,659.00	12,436.00	7,884.20	52.67	132.18	95.64	948.91	5,437.57	4,955.64	4,858.19	97.44	50.857		
9,500.00	7,659.00	12,436.00	7,884.20	53.53	132.18	95.64	948.91	5,437.57	4,860.89	4,762.25	98.64	49.280		
9,600.00	7,659.00	12,436.00	7,884.20	54.75	132.18	95.64	948.91	5,437.57	4,766.35	4,666.45	99.90	47.712		
9,700.00	7,659.00	12,436.00	7,884.20	56.29	132.18	95.64	948.91	5,437.57	4,672.04	4,570.81	101.23	46.153		
9,800.00	7,659.00	12,436.00	7,884.20	58.05	132.18	95.64	948.91	5,437.57	4,577.98	4,475.35	102.63	44.606		
9,900.00	7,659.00	12,436.00	7,884.20	59.97	132.18	95.64	948.91	5,437.57	4,484.17	4,380.05	104.11	43.071		
10,000.00	7,659.00	12,436.00	7,884.20	62.00	132.18	95.64	948.91	5,437.57	4,390.63	4,284.96	105.68	41.548		
10,100.00	7,659.00	12,436.00	7,884.20	64.11	132.18	95.64	948.91	5,437.57	4,297.39	4,190.06	107.33	40.040		
10,200.00	7,659.00	12,436.00	7,884.20	66.28	132.18	95.64	948.91	5,437.57	4,204.45	4,095.38	109.07	38.548		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ TEBO 29-2H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 2181-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,300.00	7,659.00	12,436.00	7,884.20	68.51	132.18	95.64	948.91	5,437.57	4,111.85	4,000.93	110.92	37.072		
10,400.00	7,659.00	12,436.00	7,884.20	70.77	132.18	95.64	948.91	5,437.57	4,019.60	3,906.73	112.87	35.614		
10,500.00	7,659.00	12,436.00	7,884.20	73.06	132.18	95.64	948.91	5,437.57	3,927.73	3,812.80	114.93	34.175		
10,600.00	7,659.00	12,436.00	7,884.20	75.39	132.18	95.64	948.91	5,437.57	3,836.27	3,719.15	117.11	32.757		
10,700.00	7,659.00	12,436.00	7,884.20	77.74	132.18	95.64	948.91	5,437.57	3,745.24	3,625.82	119.42	31.361		
10,800.00	7,659.00	12,436.00	7,884.20	80.12	132.18	95.64	948.91	5,437.57	3,654.68	3,532.81	121.87	29.988		
10,900.00	7,659.00	12,436.00	7,884.20	82.51	132.18	95.64	948.91	5,437.57	3,564.63	3,440.17	124.46	28.640		
11,000.00	7,659.00	12,436.00	7,884.20	84.93	132.18	95.64	948.91	5,437.57	3,475.12	3,347.91	127.21	27.318		
11,100.00	7,659.00	12,436.00	7,884.20	87.36	132.18	95.64	948.91	5,437.57	3,386.20	3,256.08	130.12	26.024		
11,200.00	7,659.00	12,436.00	7,884.20	89.81	132.18	95.64	948.91	5,437.57	3,297.91	3,164.71	133.20	24.759		
11,300.00	7,659.00	12,436.00	7,884.20	92.27	132.18	95.64	948.91	5,437.57	3,210.32	3,073.85	136.47	23.524		
11,400.00	7,659.00	12,436.00	7,884.20	94.75	132.18	95.64	948.91	5,437.57	3,123.46	2,983.53	139.93	22.322		
11,500.00	7,659.00	12,436.00	7,884.20	97.23	132.18	95.64	948.91	5,437.57	3,037.42	2,893.81	143.60	21.152		
11,600.00	7,659.00	12,436.00	7,884.20	99.73	132.18	95.64	948.91	5,437.57	2,952.25	2,804.76	147.49	20.016		
11,700.00	7,659.00	12,436.00	7,884.20	102.24	132.18	95.64	948.91	5,437.57	2,868.04	2,716.43	151.61	18.917		
11,800.00	7,659.00	12,436.00	7,884.20	104.75	132.18	95.64	948.91	5,437.57	2,784.88	2,628.90	155.98	17.854		
11,900.00	7,659.00	12,436.00	7,884.20	107.28	132.18	95.64	948.91	5,437.57	2,702.86	2,542.26	160.60	16.830		
12,000.00	7,659.00	12,436.00	7,884.20	109.81	132.18	95.64	948.91	5,437.57	2,622.08	2,456.60	165.48	15.845		
12,100.00	7,659.00	12,436.00	7,884.20	112.35	132.18	95.64	948.91	5,437.57	2,542.67	2,372.03	170.65	14.900		
12,200.00	7,659.00	12,436.00	7,884.20	114.90	132.18	95.64	948.91	5,437.57	2,464.77	2,288.67	176.09	13.997		
12,300.00	7,659.00	12,436.00	7,884.20	117.46	132.18	95.64	948.91	5,437.57	2,388.51	2,206.67	181.83	13.136		
12,400.00	7,659.00	12,436.00	7,884.20	120.02	132.18	95.64	948.91	5,437.57	2,314.05	2,126.18	187.87	12.317		
12,500.00	7,659.00	12,436.00	7,884.20	122.58	132.18	95.64	948.91	5,437.57	2,241.59	2,047.39	194.20	11.543		
12,600.00	7,659.00	12,436.00	7,884.20	125.15	132.18	95.64	948.91	5,437.57	2,171.32	1,970.50	200.81	10.813		
12,700.00	7,659.00	12,436.00	7,884.20	127.73	132.18	95.64	948.91	5,437.57	2,103.45	1,895.75	207.70	10.127		
12,800.00	7,659.00	12,436.00	7,884.20	130.31	132.18	95.64	948.91	5,437.57	2,038.23	1,823.39	214.84	9.487		
12,900.00	7,659.00	12,436.00	7,884.20	132.90	132.18	95.64	948.91	5,437.57	1,975.92	1,753.73	222.19	8.893		
13,000.00	7,659.00	12,436.00	7,884.20	135.49	132.18	95.64	948.91	5,437.57	1,916.81	1,687.10	229.71	8.345		
13,100.00	7,659.00	12,436.00	7,884.20	138.08	132.18	95.64	948.91	5,437.57	1,861.19	1,623.86	237.33	7.842		
13,200.00	7,659.00	12,436.00	7,884.20	140.68	132.18	95.68	948.91	5,437.57	1,809.02	1,564.06	244.96	7.385		
13,300.00	7,659.00	12,436.00	7,884.20	143.28	132.18	95.68	948.91	5,437.57	1,760.35	1,507.84	252.50	6.972		
13,400.00	7,659.00	12,436.00	7,884.20	145.88	132.18	95.68	948.91	5,437.57	1,716.12	1,456.25	259.87	6.604		
13,500.00	7,659.00	12,436.00	7,884.20	148.48	132.18	95.68	948.91	5,437.57	1,676.70	1,409.77	266.94	6.281		
13,600.00	7,659.00	12,436.00	7,884.20	151.09	132.18	95.68	948.91	5,437.57	1,642.43	1,368.87	273.56	6.004		
13,700.00	7,659.00	12,436.00	7,884.20	153.70	132.18	95.68	948.91	5,437.57	1,613.64	1,334.05	279.59	5.771		
13,800.00	7,659.00	12,436.00	7,884.20	156.32	132.18	95.68	948.91	5,437.57	1,590.63	1,305.75	284.88	5.584		
13,900.00	7,659.00	12,436.00	7,884.20	158.94	132.18	95.68	948.91	5,437.57	1,573.64	1,284.36	289.29	5.440		
14,000.00	7,659.00	12,436.00	7,884.20	161.56	132.18	95.68	948.91	5,437.57	1,562.89	1,270.19	292.69	5.340		
14,100.00	7,659.00	12,391.02	7,884.61	164.18	130.99	95.70	949.45	5,482.55	1,557.77	1,263.67	294.10	5.297		
14,200.00	7,659.00	12,317.20	7,885.17	166.80	129.03	95.73	949.71	5,556.36	1,554.40	1,259.77	294.63	5.276		
14,300.00	7,659.00	12,228.02	7,884.99	169.43	126.66	95.73	948.48	5,645.54	1,552.59	1,257.77	294.82	5.266		
14,390.11	7,659.00	12,164.48	7,883.68	171.80	124.97	95.68	947.18	5,709.05	1,551.53	1,256.26	295.27	5.255 CC		
14,400.00	7,659.00	12,159.15	7,883.57	172.06	124.83	95.68	947.00	5,714.37	1,551.55	1,256.20	295.34	5.253 ES		
14,500.00	7,659.00	12,102.00	7,882.56	174.69	123.31	95.64	944.03	5,771.43	1,553.33	1,257.45	295.88	5.250		
14,600.00	7,659.00	12,052.14	7,881.95	177.33	121.99	95.61	939.96	5,821.12	1,558.09	1,261.86	296.24	5.260		
14,700.00	7,659.00	11,996.96	7,881.58	179.96	120.52	95.58	933.88	5,875.97	1,565.84	1,269.54	296.31	5.285		
14,800.00	7,659.00	11,929.29	7,880.24	182.60	118.73	95.50	924.76	5,943.00	1,575.96	1,279.73	296.23	5.320		
14,900.00	7,659.00	11,879.99	7,878.33	185.24	117.43	95.41	916.91	5,991.63	1,588.51	1,292.63	295.88	5.369		
15,000.00	7,659.00	11,817.00	7,875.14	187.88	115.79	95.26	904.04	6,053.20	1,604.81	1,309.32	295.49	5.431		
15,100.00	7,659.00	11,717.80	7,869.37	190.52	113.21	95.00	882.68	6,149.90	1,622.73	1,327.17	295.56	5.490		
15,200.00	7,659.00	11,305.06	7,858.83	193.16	102.34	94.54	840.20	6,559.36	1,629.74	1,334.93	294.81	5.528		
15,300.00	7,659.00	11,212.87	7,857.72	195.81	99.91	94.50	839.55	6,651.54	1,627.23	1,332.25	294.98	5.516		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ TEBO 29-2H - OWB - FINAL SURVEY												Offset Site Error:	0.00 usft
Survey Program: 2181-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	
15,400.00	7,659.00	11,126.89	7,857.57	198.45	97.65	94.50	838.32	6,737.50	1,625.50	1,330.25	295.25	5.506	
15,500.00	7,659.00	10,991.21	7,855.98	201.10	94.08	94.45	836.95	6,873.14	1,623.34	1,328.72	294.62	5.510	
15,600.00	7,659.00	10,917.62	7,851.87	203.75	92.15	94.31	836.60	6,946.61	1,620.36	1,325.16	295.19	5.489	
15,680.15	7,659.00	10,868.00	7,851.00	205.87	90.85	94.28	835.43	6,996.21	1,619.61	1,323.90	295.71	5.477	
15,700.00	7,659.00	10,855.25	7,851.03	206.40	90.52	94.29	835.00	7,008.95	1,619.66	1,323.84	295.82	5.475	
15,800.00	7,659.00	10,788.47	7,851.59	209.05	88.77	94.30	831.96	7,075.65	1,621.12	1,324.88	296.25	5.472	
15,900.00	7,659.00	10,678.00	7,851.63	211.70	85.87	94.30	825.84	7,185.95	1,623.53	1,327.36	296.17	5.482	
16,000.00	7,659.00	10,624.91	7,850.79	214.36	84.49	94.26	822.40	7,238.92	1,626.77	1,330.15	296.63	5.484	
16,100.00	7,659.00	10,520.45	7,850.29	217.01	81.76	94.23	812.98	7,342.95	1,632.67	1,336.01	296.65	5.504	
16,200.00	7,659.00	10,316.56	7,855.02	219.67	76.47	94.39	804.76	7,546.55	1,633.50	1,338.04	295.46	5.529	
16,300.00	7,659.00	10,145.51	7,860.81	222.32	72.06	94.61	806.20	7,717.47	1,630.05	1,336.02	294.03	5.544	
16,400.00	7,659.00	10,037.42	7,856.73	224.98	69.30	94.49	810.24	7,825.40	1,622.84	1,328.89	293.96	5.521	
16,500.00	7,659.00	9,937.12	7,851.08	227.64	66.74	94.31	813.30	7,925.49	1,616.23	1,322.14	294.09	5.496	
16,600.00	7,659.00	9,815.37	7,844.47	230.30	63.65	94.09	818.14	8,046.96	1,608.72	1,315.04	293.68	5.478	
16,700.00	7,659.00	9,734.52	7,841.70	232.96	61.61	94.01	821.52	8,127.69	1,601.17	1,306.83	294.34	5.440	
16,800.00	7,659.00	9,646.62	7,840.10	235.62	59.40	93.97	824.44	8,215.53	1,594.59	1,299.80	294.79	5.409	
16,900.00	7,659.00	9,574.23	7,839.09	238.28	57.59	93.94	826.05	8,287.89	1,589.16	1,293.58	295.58	5.376	
17,000.00	7,659.00	9,477.23	7,839.14	240.95	55.17	93.95	826.85	8,384.88	1,585.18	1,289.38	295.81	5.359	
17,100.00	7,659.00	9,396.54	7,837.60	243.61	53.17	93.90	827.58	8,465.56	1,581.11	1,284.72	296.38	5.335	
17,200.00	7,659.00	9,327.42	7,837.98	246.27	51.46	93.92	826.80	8,534.67	1,579.08	1,281.99	297.10	5.315	
17,290.53	7,659.00	9,255.00	7,837.35	248.69	49.68	93.90	824.90	8,607.05	1,578.56	1,281.01	297.54	5.305	
17,300.00	7,659.00	9,255.00	7,837.35	248.94	49.68	93.90	824.90	8,607.05	1,578.59	1,280.91	297.68	5.303	
17,400.00	7,659.00	9,184.00	7,835.32	251.60	47.95	93.82	821.66	8,677.95	1,579.89	1,281.67	298.21	5.298	
17,500.00	7,659.00	9,112.04	7,832.54	254.27	46.21	93.72	816.74	8,749.69	1,583.30	1,284.63	298.66	5.301	
17,600.00	7,659.00	9,035.65	7,829.30	256.94	44.38	93.59	810.35	8,825.73	1,588.25	1,289.22	299.03	5.311	
17,700.00	7,659.00	8,957.22	7,825.28	259.61	42.52	93.43	802.60	8,903.68	1,594.67	1,295.30	299.37	5.327	
17,800.00	7,659.00	8,863.85	7,819.97	262.27	40.35	93.23	792.50	8,996.35	1,602.02	1,302.31	299.72	5.345	
17,900.00	7,659.00	8,575.40	7,811.19	264.94	33.93	92.90	778.03	9,284.01	1,603.97	1,305.18	298.79	5.368	
18,000.00	7,659.00	8,449.92	7,812.79	267.61	31.36	92.97	780.91	9,409.44	1,598.52	1,299.55	298.97	5.347	
18,100.00	7,659.00	8,348.92	7,811.65	270.28	29.40	92.94	783.88	9,510.38	1,592.38	1,292.70	299.68	5.314	
18,200.00	7,659.00	8,265.21	7,810.26	272.95	27.89	92.90	785.81	9,594.06	1,586.87	1,286.06	300.81	5.275	
18,300.00	7,659.00	8,185.78	7,808.12	275.62	26.54	92.83	786.61	9,673.46	1,582.58	1,280.53	302.05	5.239	
18,400.00	7,659.00	8,106.35	7,805.05	278.29	25.20	92.72	786.34	9,752.82	1,579.59	1,276.34	303.25	5.209	
18,500.00	7,659.00	7,984.25	7,787.66	280.97	23.47	92.10	784.87	9,873.41	1,577.15	1,272.77	304.38	5.181	
18,558.76	7,659.00	7,921.57	7,767.16	282.54	22.70	91.35	784.84	9,932.60	1,574.72	1,269.52	305.20	5.160 SF	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ WATKINS 30-5-4H - OWB - FINAL SURVEY												Offset Site Error:	0.00 usft
Survey Program: 2053-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-9.88	771.16	-134.27	782.76				
100.00	100.00	97.78	97.78	0.13	0.17	-9.87	771.18	-134.20	782.77	782.46	0.31	2,528.035	
200.00	199.98	197.54	197.54	0.50	0.35	6.71	771.26	-133.98	781.08	780.23	0.85	919.192	
300.00	299.84	297.17	297.17	0.86	0.53	6.80	771.40	-133.61	775.95	774.56	1.40	555.498	
400.00	399.45	396.56	396.56	1.23	0.71	6.93	771.59	-133.10	767.40	765.46	1.94	394.639	
500.00	498.70	495.59	495.59	1.63	0.89	7.13	771.83	-132.44	755.44	752.94	2.49	302.929	
600.00	597.47	594.14	594.13	2.05	1.06	7.38	772.13	-131.64	740.08	737.03	3.05	243.036	
700.00	695.62	692.08	692.07	2.49	1.24	7.71	772.47	-130.70	721.35	717.75	3.60	200.418	
800.00	793.06	789.31	789.29	2.98	1.41	8.11	772.87	-129.62	699.29	695.13	4.16	168.234	
900.00	889.64	885.70	885.67	3.50	1.59	8.61	773.32	-128.42	673.93	669.21	4.72	142.842	
1,000.00	985.27	981.13	981.09	4.06	1.76	9.22	773.81	-127.09	645.32	640.03	5.28	122.127	
1,100.00	1,079.82	1,075.49	1,075.43	4.66	1.93	9.97	774.34	-125.64	613.51	607.66	5.86	104.775	
1,200.00	1,173.23	1,168.72	1,168.65	5.31	2.09	10.84	774.92	-124.08	578.74	572.30	6.44	89.912	
1,300.00	1,266.35	1,261.66	1,261.58	5.98	2.26	11.75	775.54	-122.40	543.34	536.32	7.01	77.503	
1,400.00	1,359.46	1,354.60	1,354.50	6.66	2.43	12.81	776.21	-120.59	508.11	500.51	7.60	66.894	
1,500.00	1,452.58	1,447.54	1,447.42	7.34	2.59	14.04	776.93	-118.65	473.10	464.91	8.19	57.738	
1,600.00	1,545.69	1,540.49	1,540.33	8.03	2.76	15.47	777.69	-116.57	438.36	429.55	8.81	49.770	
1,700.00	1,638.81	1,633.43	1,633.25	8.72	2.93	17.17	778.51	-114.38	403.96	394.51	9.44	42.783	
1,800.00	1,731.92	1,726.37	1,726.16	9.41	3.09	19.20	779.37	-112.05	369.98	359.88	10.10	36.619	
1,900.00	1,825.04	1,819.32	1,819.06	10.11	3.26	21.65	780.27	-109.59	336.57	325.76	10.80	31.155	
2,000.00	1,918.15	1,912.26	1,911.96	10.81	3.43	24.63	781.23	-107.01	303.90	292.34	11.56	26.297	
2,100.00	2,011.27	2,005.20	2,004.86	11.51	3.59	28.33	782.23	-104.29	272.24	259.86	12.39	21.980	
2,200.00	2,104.39	2,099.19	2,098.80	12.21	3.84	32.97	783.24	-101.59	241.90	228.50	13.40	18.048	
2,300.00	2,197.50	2,189.53	2,189.12	12.91	4.17	38.33	784.45	-99.89	213.39	198.75	14.64	14.575	
2,400.00	2,290.62	2,278.14	2,277.63	13.61	4.48	44.45	788.27	-98.80	189.59	173.58	16.01	11.839	
2,500.00	2,383.73	2,369.92	2,369.15	14.31	4.81	51.53	795.18	-98.42	171.00	153.51	17.49	9.776	
2,600.00	2,476.85	2,464.78	2,463.58	15.01	5.14	59.70	804.22	-98.53	157.01	137.96	19.05	8.243	
2,700.00	2,569.96	2,559.08	2,557.31	15.72	5.48	68.60	814.56	-98.83	147.72	127.12	20.60	7.171	
2,800.00	2,663.08	2,655.72	2,653.05	16.42	5.84	77.59	827.65	-99.80	143.43	121.40	22.03	6.511	
2,870.01	2,728.27	2,723.85	2,720.28	16.91	6.09	83.38	838.53	-101.35	142.60	119.67	22.92	6.220 CC	
2,900.00	2,756.20	2,753.17	2,749.14	17.12	6.21	85.69	843.68	-102.18	142.73	119.45	23.28	6.131 ES	
3,000.00	2,849.31	2,851.44	2,845.58	17.83	6.60	92.76	862.29	-105.38	144.80	120.42	24.38	5.939	
3,100.00	2,942.43	2,950.08	2,942.37	18.53	7.00	99.56	880.97	-108.75	148.91	123.57	25.34	5.876	
3,200.00	3,035.54	3,048.96	3,039.52	19.24	7.40	106.17	899.06	-112.30	154.86	128.71	26.16	5.921	
3,300.00	3,128.66	3,144.06	3,132.95	19.94	7.80	111.94	916.57	-114.97	163.49	136.66	26.83	6.093	
3,400.00	3,221.77	3,241.56	3,229.00	20.65	8.21	117.62	933.19	-116.85	174.87	147.46	27.41	6.380	
3,500.00	3,314.89	3,340.28	3,326.39	21.35	8.63	122.90	949.23	-119.03	187.76	159.85	27.91	6.727	
3,600.00	3,408.01	3,439.45	3,424.10	22.06	9.05	127.37	965.99	-121.64	201.39	172.97	28.42	7.086	
3,700.00	3,501.12	3,538.14	3,521.36	22.77	9.47	131.37	982.40	-124.84	215.64	186.73	28.91	7.460	
3,800.00	3,594.24	3,636.31	3,618.08	23.47	9.88	134.91	998.77	-128.56	230.31	200.92	29.39	7.836	
3,900.00	3,687.35	3,730.26	3,710.74	24.18	10.29	137.83	1,014.09	-131.06	246.87	217.00	29.86	8.267	
4,000.00	3,780.47	3,826.93	3,806.16	24.89	10.70	140.45	1,029.48	-132.95	264.82	234.43	30.39	8.715	
4,100.00	3,873.58	3,923.14	3,901.07	25.59	11.11	142.54	1,045.22	-133.85	283.78	252.81	30.97	9.163	
4,200.00	3,966.70	4,021.03	3,997.57	26.30	11.54	144.27	1,061.63	-134.21	303.27	271.65	31.62	9.591	
4,300.00	4,059.81	4,120.47	4,095.54	27.01	11.97	145.78	1,078.63	-134.67	322.70	290.39	32.32	9.986	
4,400.00	4,152.93	4,217.76	4,191.33	27.71	12.40	147.08	1,095.67	-135.47	341.79	308.79	33.01	10.356	
4,500.00	4,246.05	4,311.64	4,283.98	28.42	12.81	148.35	1,110.75	-136.07	362.12	328.48	33.64	10.764	
4,600.00	4,339.16	4,409.80	4,380.95	29.13	13.23	149.59	1,126.04	-136.71	382.96	348.63	34.33	11.156	
4,700.00	4,432.28	4,509.33	4,479.11	29.83	13.66	150.58	1,142.49	-137.02	403.52	368.45	35.07	11.506	
4,800.00	4,525.39	4,608.72	4,577.04	30.54	14.10	151.43	1,159.45	-137.36	423.77	387.94	35.83	11.827	
4,900.00	4,618.51	4,705.86	4,672.77	31.25	14.53	152.25	1,175.85	-138.24	443.85	407.29	36.56	12.140	
5,000.00	4,711.62	4,800.88	4,766.56	31.95	14.94	153.08	1,191.04	-139.35	464.50	427.24	37.26	12.468	

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ WATKINS 30-5-4H - OWB - FINAL SURVEY												Offset Site Error:	0.00 usft
Survey Program: 2053-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	
5,100.00	4,804.74	4,898.43	4,862.86	32.66	15.37	153.81	1,206.63	-139.90	485.64	447.64	38.00	12.781	
5,200.00	4,897.86	4,993.23	4,956.22	33.37	15.79	154.23	1,223.08	-139.00	506.80	468.03	38.77	13.072	
5,300.00	4,990.97	5,089.89	5,051.47	34.08	16.21	154.61	1,239.44	-137.43	528.74	489.16	39.57	13.361	
5,400.00	5,084.09	5,189.20	5,149.23	34.78	16.66	154.91	1,256.80	-135.66	550.38	509.96	40.42	13.616	
5,500.00	5,177.20	5,296.82	5,255.07	35.49	17.14	155.21	1,276.26	-134.26	571.29	529.94	41.36	13.813	
5,600.00	5,270.32	5,394.08	5,350.76	36.20	17.58	155.64	1,293.58	-135.17	591.00	548.86	42.14	14.024	
5,700.00	5,363.43	5,480.27	5,435.94	36.91	17.95	156.25	1,306.55	-137.38	611.83	569.08	42.75	14.312	
5,800.00	5,456.55	5,563.05	5,518.08	37.61	18.28	156.98	1,316.48	-139.79	634.87	591.60	43.27	14.673	
5,900.00	5,549.67	5,643.16	5,597.82	38.32	18.59	157.71	1,324.04	-141.66	660.32	616.60	43.72	15.103	
6,000.00	5,642.78	5,722.00	5,676.45	39.03	18.88	158.43	1,329.63	-142.60	688.36	644.22	44.14	15.594	
6,100.00	5,735.90	5,801.09	5,755.46	39.74	19.15	159.20	1,333.10	-143.34	718.77	674.23	44.54	16.138	
6,200.00	5,829.01	5,879.92	5,834.27	40.44	19.41	159.98	1,334.68	-143.82	751.33	706.42	44.91	16.730	
6,300.00	5,922.13	5,976.51	5,930.85	41.15	19.71	160.92	1,335.55	-144.52	784.86	739.34	45.52	17.242	
6,400.00	6,015.24	6,057.79	6,012.13	41.86	19.97	161.64	1,336.02	-144.71	819.06	773.12	45.94	17.827	
6,500.00	6,108.36	6,147.76	6,102.09	42.57	20.25	162.31	1,336.20	-143.77	854.34	807.83	46.51	18.369	
6,600.00	6,201.47	6,243.34	6,197.66	43.28	20.55	162.97	1,336.43	-142.72	889.72	842.55	47.17	18.862	
6,700.00	6,294.59	6,343.84	6,298.17	43.98	20.86	163.65	1,336.81	-142.44	924.68	876.79	47.90	19.306	
6,800.00	6,387.71	6,440.91	6,395.24	44.69	21.18	164.27	1,337.64	-142.61	959.13	910.54	48.59	19.741	
6,900.00	6,480.82	6,531.75	6,486.07	45.40	21.47	164.81	1,338.44	-142.84	993.61	944.40	49.21	20.193	
7,000.00	6,573.94	6,613.05	6,567.37	46.11	21.73	165.26	1,338.65	-142.79	1,028.81	979.11	49.71	20.698	
7,100.00	6,667.05	6,696.22	6,650.54	46.82	21.98	165.68	1,338.18	-142.02	1,065.15	1,014.92	50.23	21.205	
7,200.00	6,760.17	6,793.19	6,747.49	47.52	22.28	166.13	1,337.40	-140.66	1,101.97	1,051.03	50.94	21.631	
7,300.00	6,853.28	6,888.68	6,842.97	48.23	22.58	166.54	1,337.16	-139.70	1,138.19	1,086.55	51.65	22.039	
7,400.00	6,946.40	6,986.67	6,940.95	48.94	22.89	166.91	1,337.21	-138.36	1,174.38	1,121.99	52.39	22.416	
7,500.00	7,039.52	7,083.61	7,037.89	49.65	23.20	167.26	1,337.69	-137.34	1,210.11	1,156.98	53.13	22.777	
7,600.00	7,132.94	7,165.11	7,119.38	50.33	23.47	167.58	1,338.06	-136.04	1,243.85	1,190.20	53.66	23.181	
7,700.00	7,225.98	7,216.71	7,170.93	50.90	23.63	167.82	1,337.87	-134.02	1,271.40	1,217.68	53.72	23.669	
7,800.00	7,315.86	7,259.69	7,213.64	51.34	23.77	168.09	1,337.22	-129.30	1,293.98	1,240.41	53.57	24.155	
7,900.00	7,399.85	7,321.28	7,274.11	51.68	23.95	168.32	1,336.47	-117.75	1,310.79	1,257.11	53.68	24.418	
8,000.00	7,475.41	7,375.82	7,326.82	51.91	24.12	168.51	1,336.41	-103.77	1,320.99	1,267.25	53.74	24.582	
8,100.00	7,540.24	7,424.00	7,372.56	52.05	24.26	168.66	1,335.89	-88.66	1,325.81	1,271.99	53.82	24.632	
8,200.00	7,592.37	7,465.79	7,411.53	52.11	24.38	168.78	1,334.94	-73.60	1,325.75	1,271.71	54.04	24.533	
8,300.00	7,630.20	7,511.47	7,453.16	52.09	24.51	168.86	1,333.69	-54.87	1,321.26	1,266.60	54.67	24.170	
8,400.00	7,652.61	7,555.15	7,491.77	52.01	24.63	168.92	1,332.34	-34.50	1,313.13	1,257.48	55.65	23.595	
8,500.00	7,659.00	7,597.20	7,527.40	51.89	24.74	168.96	1,331.04	-12.22	1,302.28	1,245.29	57.00	22.849	
8,600.00	7,659.00	7,644.32	7,565.12	51.77	24.86	168.99	1,329.53	15.94	1,294.01	1,235.37	58.64	22.069	
8,700.00	7,659.00	7,727.64	7,624.43	51.67	25.08	169.00	1,327.54	74.30	1,290.32	1,229.52	60.80	21.221	
8,800.00	7,659.00	7,837.51	7,690.21	51.61	25.47	169.01	1,327.69	162.14	1,288.12	1,224.90	63.31	20.347	
8,858.53	7,659.00	7,883.63	7,713.38	51.59	25.72	169.01	1,328.04	202.01	1,287.74	1,223.13	64.61	19.930	
8,900.00	7,659.00	7,911.85	7,725.84	51.58	25.90	169.01	1,327.99	227.32	1,288.00	1,222.53	65.47	19.673	
9,000.00	7,659.00	7,987.38	7,752.78	51.59	26.52	169.01	1,326.44	297.82	1,290.58	1,222.85	67.73	19.056	
9,100.00	7,659.00	8,162.08	7,781.86	51.67	28.52	169.01	1,325.33	469.47	1,290.24	1,218.56	71.68	18.001	
9,200.00	7,659.00	8,276.08	7,780.75	51.83	30.14	169.01	1,325.44	583.45	1,288.12	1,213.11	75.01	17.173	
9,300.00	7,659.00	8,371.24	7,778.70	52.14	31.66	169.01	1,326.24	678.58	1,285.12	1,206.86	78.25	16.423	
9,400.00	7,659.00	8,466.23	7,778.18	52.67	33.31	169.01	1,326.72	773.58	1,282.59	1,200.89	81.70	15.699	
9,500.00	7,659.00	8,563.19	7,778.12	53.53	35.10	169.01	1,326.95	870.53	1,280.37	1,194.99	85.38	14.996	
9,600.00	7,659.00	8,660.75	7,778.67	54.75	37.00	169.01	1,327.03	968.09	1,278.36	1,189.12	89.24	14.325	
9,700.00	7,659.00	8,764.13	7,780.25	56.29	39.11	169.01	1,327.26	1,071.45	1,276.32	1,182.90	93.42	13.663	
9,800.00	7,659.00	8,856.69	7,781.09	58.05	41.07	169.01	1,327.25	1,164.01	1,274.45	1,177.05	97.40	13.084	
9,900.00	7,659.00	8,944.93	7,780.88	59.97	42.98	169.01	1,326.48	1,252.25	1,273.31	1,171.98	101.33	12.565	
9,968.66	7,659.00	9,005.00	7,780.45	61.36	44.31	169.01	1,325.45	1,312.31	1,273.08	1,169.01	104.07	12.233	
10,000.00	7,659.00	9,032.42	7,780.23	62.00	44.92	169.01	1,324.85	1,339.72	1,273.13	1,167.81	105.32	12.088	

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ WATKINS 30-5-4H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 2053-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,100.00	7,659.00	9,137.75	7,778.67	64.11	47.30	95.48	1,322.44	1,445.01	1,273.29	1,163.33	109.96	11.579		
10,140.13	7,659.00	9,176.50	7,777.85	64.98	48.20	95.45	1,321.61	1,483.74	1,273.27	1,161.53	111.74	11.395		
10,200.00	7,659.00	9,234.74	7,776.69	66.28	49.54	95.39	1,320.31	1,541.96	1,273.31	1,158.90	114.41	11.129		
10,300.00	7,659.00	9,338.80	7,775.08	68.51	51.98	95.32	1,317.92	1,645.97	1,273.49	1,154.31	119.17	10.686		
10,400.00	7,659.00	9,473.26	7,773.29	70.77	55.19	95.25	1,317.69	1,780.41	1,271.43	1,146.36	125.06	10.166		
10,500.00	7,659.00	9,569.84	7,771.51	73.06	57.52	95.18	1,318.47	1,876.98	1,268.49	1,138.80	129.69	9.781		
10,600.00	7,659.00	9,668.63	7,770.67	75.39	59.93	95.15	1,318.84	1,975.77	1,266.06	1,131.61	134.45	9.417		
10,700.00	7,659.00	9,792.63	7,770.76	77.74	62.99	95.17	1,320.51	2,099.74	1,262.80	1,122.66	140.13	9.011		
10,800.00	7,659.00	9,890.82	7,771.09	80.12	65.42	95.21	1,322.93	2,197.91	1,258.39	1,113.44	144.95	8.681		
10,900.00	7,659.00	9,975.65	7,770.82	82.51	67.54	95.21	1,324.38	2,282.72	1,254.70	1,105.37	149.33	8.402		
11,000.00	7,659.00	10,078.13	7,770.08	84.93	70.11	95.19	1,325.49	2,385.19	1,251.57	1,097.21	154.36	8.108		
11,100.00	7,659.00	10,175.53	7,769.66	87.36	72.57	95.18	1,326.66	2,482.59	1,248.37	1,089.13	159.23	7.840		
11,200.00	7,659.00	10,268.36	7,768.93	89.81	74.92	95.16	1,327.37	2,575.41	1,245.56	1,081.60	163.96	7.597		
11,300.00	7,659.00	10,360.84	7,767.83	92.27	77.28	95.11	1,327.51	2,667.88	1,243.33	1,074.64	168.69	7.370		
11,400.00	7,659.00	10,458.55	7,766.51	94.75	79.77	95.06	1,327.24	2,765.58	1,241.51	1,067.86	173.64	7.150		
11,500.00	7,659.00	10,561.15	7,764.10	97.23	82.40	94.96	1,326.86	2,868.15	1,239.70	1,060.90	178.81	6.933		
11,600.00	7,659.00	10,673.83	7,761.70	99.73	85.30	94.86	1,327.28	2,980.80	1,237.16	1,052.78	184.38	6.710		
11,700.00	7,659.00	10,775.47	7,760.37	102.24	87.92	94.81	1,328.34	3,082.43	1,234.03	1,044.50	189.53	6.511		
11,800.00	7,659.00	10,885.03	7,759.76	104.75	90.75	94.79	1,329.63	3,191.98	1,230.86	1,035.86	195.00	6.312		
11,900.00	7,659.00	10,992.46	7,759.63	107.28	93.53	94.81	1,332.33	3,299.37	1,226.36	1,025.96	200.39	6.120		
12,000.00	7,659.00	11,085.76	7,758.33	109.81	95.95	94.76	1,334.37	3,392.64	1,222.09	1,016.81	205.28	5.953		
12,100.00	7,659.00	11,168.52	7,756.17	112.35	98.10	94.67	1,335.39	3,475.37	1,218.70	1,008.92	209.78	5.810		
12,200.00	7,659.00	11,251.83	7,754.33	114.90	100.27	94.59	1,335.02	3,558.66	1,216.96	1,002.69	214.27	5.680		
12,300.00	7,659.00	11,340.56	7,753.18	117.46	102.59	94.54	1,333.85	3,647.37	1,216.20	997.24	218.96	5.554		
12,322.40	7,659.00	11,359.86	7,752.88	118.03	103.09	94.52	1,333.47	3,666.67	1,216.17	996.18	219.99	5.528		
12,400.00	7,659.00	11,432.15	7,751.54	120.02	104.98	94.46	1,331.66	3,738.92	1,216.45	992.67	223.78	5.436		
12,500.00	7,659.00	11,533.44	7,752.15	122.58	107.63	94.49	1,329.39	3,840.18	1,216.76	987.73	229.02	5.313		
12,600.00	7,659.00	11,631.73	7,753.04	125.15	110.21	94.53	1,327.07	3,938.44	1,217.20	983.06	234.14	5.199		
12,700.00	7,659.00	11,734.97	7,751.33	127.73	112.92	94.44	1,324.48	4,041.63	1,217.60	978.10	239.50	5.084		
12,800.00	7,659.00	11,848.10	7,749.71	130.31	115.90	94.37	1,322.37	4,154.73	1,217.39	972.10	245.29	4.963		
12,900.00	7,659.00	11,952.31	7,747.84	132.90	118.64	94.28	1,321.38	4,258.91	1,216.22	965.52	250.70	4.851		
13,000.00	7,659.00	12,067.87	7,744.76	135.49	121.68	94.15	1,320.90	4,374.43	1,214.47	957.90	256.57	4.733		
13,100.00	7,659.00	12,167.26	7,742.61	138.08	124.30	94.05	1,321.21	4,473.80	1,212.03	950.24	261.79	4.630		
13,136.49	7,659.00	12,169.00	7,742.57	139.03	124.35	94.05	1,321.21	4,475.54	1,211.56	949.34	262.22	4.620 SF		
13,200.00	7,659.00	12,169.00	7,742.57	140.68	124.35	94.05	1,321.21	4,475.54	1,213.14	950.81	262.33	4.624		
13,300.00	7,659.00	12,169.00	7,742.57	143.28	124.35	94.05	1,321.21	4,475.54	1,221.73	960.54	261.19	4.678		
13,400.00	7,659.00	12,169.00	7,742.57	145.88	124.35	94.05	1,321.21	4,475.54	1,238.36	979.85	258.51	4.790		
13,500.00	7,659.00	12,169.00	7,742.57	148.48	124.35	94.05	1,321.21	4,475.54	1,262.71	1,008.23	254.48	4.962		
13,600.00	7,659.00	12,169.00	7,742.57	151.09	124.35	94.05	1,321.21	4,475.54	1,294.36	1,045.03	249.32	5.191		
13,700.00	7,659.00	12,169.00	7,742.57	153.70	124.35	94.05	1,321.21	4,475.54	1,332.77	1,089.47	243.30	5.478		
13,800.00	7,659.00	12,169.00	7,742.57	156.32	124.35	94.05	1,321.21	4,475.54	1,377.38	1,140.72	236.66	5.820		
13,900.00	7,659.00	12,169.00	7,742.57	158.94	124.35	94.05	1,321.21	4,475.54	1,427.62	1,197.97	229.65	6.217		
14,000.00	7,659.00	12,169.00	7,742.57	161.56	124.35	94.05	1,321.21	4,475.54	1,482.91	1,260.45	222.46	6.666		
14,100.00	7,659.00	12,169.00	7,742.57	164.18	124.35	94.05	1,321.21	4,475.54	1,542.70	1,327.44	215.26	7.167		
14,200.00	7,659.00	12,169.00	7,742.57	166.80	124.35	94.05	1,321.21	4,475.54	1,606.50	1,398.33	208.17	7.717		
14,300.00	7,659.00	12,169.00	7,742.57	169.43	124.35	94.05	1,321.21	4,475.54	1,673.84	1,472.56	201.28	8.316		
14,400.00	7,659.00	12,169.00	7,742.57	172.06	124.35	94.05	1,321.21	4,475.54	1,744.32	1,549.66	194.66	8.961		
14,500.00	7,659.00	12,169.00	7,742.57	174.69	124.35	94.05	1,321.21	4,475.54	1,817.57	1,629.23	188.35	9.650		
14,600.00	7,659.00	12,169.00	7,742.57	177.33	124.35	94.05	1,321.21	4,475.54	1,893.27	1,710.91	182.36	10.382		
14,700.00	7,659.00	12,169.00	7,742.57	179.96	124.35	94.05	1,321.21	4,475.54	1,971.14	1,794.44	176.71	11.155		
14,800.00	7,659.00	12,169.00	7,742.57	182.60	124.35	94.05	1,321.21	4,475.54	2,050.93	1,879.54	171.39	11.967		
14,900.00	7,659.00	12,169.00	7,742.57	185.24	124.35	94.05	1,321.21	4,475.54	2,132.42	1,966.03	166.39	12.816		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ WATKINS 30-5-4H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 2053-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
15,000.00	7,659.00	12,169.00	7,742.57	187.88	124.35	94.05	1,321.21	4,475.54	2,215.43	2,053.72	161.72	13.700		
15,100.00	7,659.00	12,169.00	7,742.57	190.52	124.35	94.05	1,321.21	4,475.54	2,299.79	2,142.46	157.34	14.617		
15,200.00	7,659.00	12,169.00	7,742.57	193.16	124.35	94.05	1,321.21	4,475.54	2,385.36	2,232.12	153.24	15.566		
15,300.00	7,659.00	12,169.00	7,742.57	195.81	124.35	94.05	1,321.21	4,475.54	2,472.02	2,322.61	149.41	16.545		
15,400.00	7,659.00	12,169.00	7,742.57	198.45	124.35	94.05	1,321.21	4,475.54	2,559.65	2,413.82	145.83	17.552		
15,500.00	7,659.00	12,169.00	7,742.57	201.10	124.35	94.05	1,321.21	4,475.54	2,648.15	2,505.67	142.48	18.586		
15,600.00	7,659.00	12,169.00	7,742.57	203.75	124.35	94.05	1,321.21	4,475.54	2,737.45	2,598.10	139.35	19.645		
15,700.00	7,659.00	12,169.00	7,742.57	206.40	124.35	94.05	1,321.21	4,475.54	2,827.46	2,691.04	136.42	20.727		
15,800.00	7,659.00	12,169.00	7,742.57	209.05	124.35	94.05	1,321.21	4,475.54	2,918.12	2,784.45	133.67	21.830		
15,900.00	7,659.00	12,169.00	7,742.57	211.70	124.35	94.05	1,321.21	4,475.54	3,009.38	2,878.27	131.10	22.954		
16,000.00	7,659.00	12,169.00	7,742.57	214.36	124.35	94.05	1,321.21	4,475.54	3,101.17	2,972.48	128.69	24.097		
16,100.00	7,659.00	12,169.00	7,742.57	217.01	124.35	94.05	1,321.21	4,475.54	3,193.46	3,067.02	126.43	25.258		
16,200.00	7,659.00	12,169.00	7,742.57	219.67	124.35	94.05	1,321.21	4,475.54	3,286.20	3,161.88	124.31	26.435		
16,300.00	7,659.00	12,169.00	7,742.57	222.32	124.35	94.05	1,321.21	4,475.54	3,379.35	3,257.03	122.32	27.627		
16,400.00	7,659.00	12,169.00	7,742.57	224.98	124.35	94.05	1,321.21	4,475.54	3,472.88	3,352.43	120.45	28.833		
16,500.00	7,659.00	12,169.00	7,742.57	227.64	124.35	94.05	1,321.21	4,475.54	3,566.77	3,448.08	118.69	30.051		
16,600.00	7,659.00	12,169.00	7,742.57	230.30	124.35	94.05	1,321.21	4,475.54	3,660.97	3,543.94	117.03	31.282		
16,700.00	7,659.00	12,169.00	7,742.57	232.96	124.35	94.05	1,321.21	4,475.54	3,755.48	3,640.01	115.47	32.523		
16,800.00	7,659.00	12,169.00	7,742.57	235.62	124.35	94.05	1,321.21	4,475.54	3,850.27	3,736.27	114.00	33.774		
16,900.00	7,659.00	12,169.00	7,742.57	238.28	124.35	94.05	1,321.21	4,475.54	3,945.31	3,832.70	112.61	35.034		
17,000.00	7,659.00	12,169.00	7,742.57	240.95	124.35	94.05	1,321.21	4,475.54	4,040.59	3,929.29	111.31	36.302		
17,100.00	7,659.00	12,169.00	7,742.57	243.61	124.35	94.05	1,321.21	4,475.54	4,136.10	4,026.03	110.07	37.577		
17,200.00	7,659.00	12,169.00	7,742.57	246.27	124.35	94.05	1,321.21	4,475.54	4,231.81	4,122.91	108.90	38.858		
17,300.00	7,659.00	12,169.00	7,742.57	248.94	124.35	94.05	1,321.21	4,475.54	4,327.72	4,219.92	107.80	40.146		
17,400.00	7,659.00	12,169.00	7,742.57	251.60	124.35	94.05	1,321.21	4,475.54	4,423.80	4,317.05	106.76	41.439		
17,500.00	7,659.00	12,169.00	7,742.57	254.27	124.35	94.05	1,321.21	4,475.54	4,520.06	4,414.29	105.77	42.736		
17,600.00	7,659.00	12,169.00	7,742.57	256.94	124.35	94.05	1,321.21	4,475.54	4,616.48	4,511.65	104.83	44.037		
17,700.00	7,659.00	12,169.00	7,742.57	259.61	124.35	94.05	1,321.21	4,475.54	4,713.04	4,609.10	103.94	45.342		
17,800.00	7,659.00	12,169.00	7,742.57	262.27	124.35	94.05	1,321.21	4,475.54	4,809.75	4,706.64	103.10	46.649		
17,900.00	7,659.00	12,169.00	7,742.57	264.94	124.35	94.05	1,321.21	4,475.54	4,906.59	4,804.28	102.31	47.959		
18,000.00	7,659.00	12,169.00	7,742.57	267.61	124.35	94.05	1,321.21	4,475.54	5,003.55	4,902.00	101.55	49.271		
18,100.00	7,659.00	12,169.00	7,742.57	270.28	124.35	94.05	1,321.21	4,475.54	5,100.63	4,999.80	100.83	50.585		
18,200.00	7,659.00	12,169.00	7,742.57	272.95	124.35	94.05	1,321.21	4,475.54	5,197.82	5,097.67	100.15	51.899		
18,300.00	7,659.00	12,169.00	7,742.57	275.62	124.35	94.05	1,321.21	4,475.54	5,295.12	5,195.61	99.50	53.215		
18,400.00	7,659.00	12,169.00	7,742.57	278.29	124.35	94.05	1,321.21	4,475.54	5,392.51	5,293.62	98.89	54.531		
18,500.00	7,659.00	12,169.00	7,742.57	280.97	124.35	94.05	1,321.21	4,475.54	5,490.00	5,391.69	98.30	55.847		
18,558.76	7,659.00	12,169.00	7,742.57	282.54	124.35	94.05	1,321.21	4,475.54	5,547.32	5,449.35	97.97	56.621		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ WATKINS 30-5-5H - OWB - FINAL SURVEY												Offset Site Error:	0.00 usft
Survey Program: 1997-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-10.40	731.81	-134.27	744.03				
100.00	100.00	98.27	98.27	0.13	0.17	-10.40	731.79	-134.27	744.01	743.70	0.31	2,411.799	
200.00	199.98	198.52	198.52	0.50	0.35	6.17	731.74	-134.28	742.22	741.37	0.85	875.615	
300.00	299.84	298.64	298.64	0.86	0.53	6.22	731.64	-134.29	736.93	735.53	1.39	528.667	
400.00	399.45	398.51	398.51	1.23	0.71	6.31	731.51	-134.31	728.14	726.20	1.94	375.199	
500.00	498.70	498.00	498.00	1.63	0.88	6.44	731.34	-134.34	715.86	713.37	2.49	287.641	
600.00	597.47	596.99	596.99	2.05	1.06	6.62	731.13	-134.37	700.12	697.08	3.04	230.400	
700.00	695.62	695.35	695.35	2.49	1.23	6.84	730.89	-134.41	680.94	677.35	3.59	189.618	
800.00	793.06	792.96	792.96	2.98	1.41	7.12	730.61	-134.45	658.34	654.19	4.15	158.777	
900.00	889.64	889.70	889.70	3.50	1.58	7.48	730.31	-134.50	632.35	627.65	4.70	134.407	
1,000.00	985.27	985.45	985.45	4.06	1.75	7.91	729.96	-134.55	603.03	597.76	5.27	114.495	
1,100.00	1,079.82	1,080.08	1,080.08	4.66	1.92	8.45	729.59	-134.60	570.41	564.58	5.83	97.788	
1,200.00	1,173.23	1,173.55	1,173.54	5.31	2.08	9.08	729.19	-134.66	534.71	528.30	6.41	83.457	
1,300.00	1,266.35	1,266.68	1,266.68	5.98	2.25	9.73	728.76	-134.73	498.25	491.28	6.97	71.479	
1,400.00	1,359.46	1,359.80	1,359.79	6.66	2.41	10.47	728.29	-134.80	461.83	454.28	7.54	61.231	
1,500.00	1,452.58	1,452.88	1,452.88	7.34	2.58	11.35	727.80	-134.87	425.45	417.33	8.12	52.377	
1,600.00	1,545.69	1,545.95	1,545.94	8.03	2.74	12.38	727.27	-134.95	389.14	380.43	8.71	44.660	
1,700.00	1,638.81	1,638.99	1,638.98	8.72	2.91	13.62	726.70	-135.04	352.93	343.62	9.32	37.880	
1,800.00	1,731.92	1,732.01	1,732.00	9.41	3.07	15.15	726.11	-135.13	316.87	306.93	9.94	31.884	
1,900.00	1,825.04	1,825.00	1,824.99	10.11	3.24	17.05	725.48	-135.22	281.02	270.44	10.59	26.548	
2,000.00	1,918.15	1,917.97	1,917.95	10.81	3.40	19.51	724.82	-135.32	245.49	234.22	11.27	21.778	
2,100.00	2,011.27	2,010.91	2,010.89	11.51	3.57	22.77	724.12	-135.43	210.46	198.44	12.03	17.502	
2,200.00	2,104.39	2,102.26	2,102.24	12.21	3.91	27.22	723.57	-135.45	176.43	163.34	13.09	13.477	
2,300.00	2,197.50	2,190.94	2,190.90	12.91	4.21	33.10	725.00	-135.66	145.80	131.48	14.32	10.183	
2,400.00	2,290.62	2,281.49	2,281.31	13.61	4.51	40.86	729.85	-136.66	120.52	104.75	15.77	7.641	
2,500.00	2,383.73	2,375.62	2,375.10	14.31	4.82	51.33	737.69	-138.26	100.81	83.31	17.49	5.762	
2,600.00	2,476.85	2,471.35	2,470.38	15.01	5.15	65.43	746.76	-139.99	86.79	67.37	19.43	4.467	
2,700.00	2,569.96	2,567.62	2,566.17	15.72	5.49	82.93	756.22	-141.74	80.13	58.99	21.14	3.790	
2,726.62	2,594.75	2,593.25	2,591.67	15.90	5.58	87.86	758.78	-142.23	79.81	58.33	21.48	3.716 CC, ES, SF	
2,800.00	2,663.08	2,663.94	2,661.97	16.42	5.83	101.13	766.01	-143.61	82.20	60.16	22.04	3.730	
2,900.00	2,756.20	2,760.51	2,757.98	17.12	6.18	116.84	776.18	-145.56	92.15	69.98	22.17	4.156	
3,000.00	2,849.31	2,855.63	2,852.59	17.83	6.52	128.82	785.92	-147.08	108.26	86.21	22.04	4.911	
3,100.00	2,942.43	2,951.63	2,948.14	18.53	6.87	137.72	795.17	-148.06	128.76	106.74	22.02	5.848	
3,200.00	3,035.54	3,048.25	3,044.30	19.24	7.23	144.17	804.54	-149.11	151.39	129.20	22.20	6.821	
3,300.00	3,128.66	3,144.99	3,140.54	19.94	7.59	148.87	814.28	-150.27	175.07	152.53	22.54	7.768	
3,400.00	3,221.77	3,242.22	3,237.24	20.65	7.95	152.46	824.33	-151.69	199.24	176.24	23.00	8.662	
3,500.00	3,314.89	3,334.67	3,329.24	21.35	8.30	155.18	833.33	-152.69	224.65	201.18	23.47	9.571	
3,600.00	3,408.01	3,430.59	3,424.77	22.06	8.65	157.43	842.04	-153.21	251.31	227.26	24.05	10.449	
3,700.00	3,501.12	3,528.72	3,522.44	22.77	9.02	159.23	851.41	-153.75	277.88	253.17	24.71	11.246	
3,800.00	3,594.24	3,621.58	3,614.92	23.47	9.37	160.72	859.86	-154.51	304.87	279.55	25.32	12.042	
3,900.00	3,687.35	3,713.97	3,706.99	24.18	9.71	161.95	867.54	-154.65	333.01	307.06	25.95	12.835	
4,000.00	3,780.47	3,809.75	3,802.44	24.89	10.07	162.94	875.42	-154.06	361.74	335.09	26.65	13.575	
4,100.00	3,873.58	3,908.74	3,901.09	25.59	10.44	163.91	883.63	-154.24	390.10	362.71	27.39	14.242	
4,200.00	3,966.70	4,004.44	3,996.46	26.30	10.79	164.83	891.45	-155.29	418.20	390.10	28.09	14.885	
4,300.00	4,059.81	4,100.54	4,092.22	27.01	11.15	165.62	899.45	-156.22	446.31	417.50	28.81	15.489	
4,400.00	4,152.93	4,196.49	4,187.83	27.71	11.52	166.27	907.60	-156.94	474.47	444.92	29.54	16.060	
4,500.00	4,246.05	4,293.44	4,284.40	28.42	11.88	166.84	916.08	-157.58	502.49	472.20	30.29	16.588	
4,600.00	4,339.16	4,387.69	4,378.28	29.13	12.24	167.31	924.34	-157.97	530.65	499.64	31.02	17.108	
4,700.00	4,432.28	4,482.86	4,473.10	29.83	12.60	167.73	932.51	-158.25	559.05	527.29	31.76	17.603	
4,800.00	4,525.39	4,578.14	4,568.05	30.54	12.95	168.14	940.55	-158.71	587.52	555.02	32.50	18.077	
4,900.00	4,618.51	4,670.15	4,659.75	31.25	13.30	168.52	947.89	-159.24	616.37	583.16	33.21	18.561	
5,000.00	4,711.62	4,760.66	4,750.03	31.95	13.64	168.90	954.36	-159.80	645.93	612.03	33.90	19.056	

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ WATKINS 30-5-5H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 1997-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,100.00	4,804.74	4,851.25	4,840.45	32.66	13.97	169.29	960.00	-160.42	676.27	641.68	34.59	19.554		
5,200.00	4,897.86	4,953.54	4,942.50	33.37	14.35	169.62	966.92	-160.50	706.44	671.03	35.41	19.949		
5,300.00	4,990.97	5,041.60	5,030.33	34.08	14.67	169.80	973.26	-159.63	736.69	700.60	36.09	20.411		
5,400.00	5,084.09	5,123.99	5,112.56	34.78	14.98	169.97	978.18	-158.55	768.14	731.43	36.71	20.926		
5,500.00	5,177.20	5,214.85	5,203.32	35.49	15.30	170.19	982.46	-157.44	800.64	763.23	37.41	21.400		
5,600.00	5,270.32	5,305.94	5,294.32	36.20	15.63	170.41	986.35	-156.31	833.53	795.41	38.12	21.864		
5,700.00	5,363.43	5,400.58	5,388.87	36.91	15.97	170.62	990.20	-155.09	866.63	827.76	38.87	22.294		
5,800.00	5,456.55	5,486.88	5,475.12	37.61	16.27	170.84	993.20	-154.38	900.06	860.53	39.53	22.771		
5,900.00	5,549.67	5,566.86	5,555.08	38.32	16.55	171.11	994.53	-154.57	934.64	894.54	40.09	23.311		
6,000.00	5,642.78	5,652.44	5,640.65	39.03	16.84	171.45	994.47	-155.10	970.53	929.82	40.72	23.836		
6,100.00	5,735.90	5,744.66	5,732.87	39.74	17.14	171.81	994.03	-155.91	1,006.73	965.32	41.41	24.308		
6,200.00	5,829.01	5,839.48	5,827.69	40.44	17.46	172.16	993.58	-156.77	1,042.94	1,000.80	42.15	24.746		
6,300.00	5,922.13	5,935.62	5,923.82	41.15	17.78	172.51	993.23	-158.09	1,078.92	1,036.02	42.89	25.154		
6,400.00	6,015.24	6,019.61	6,007.80	41.86	18.06	172.80	992.89	-159.28	1,114.96	1,071.46	43.51	25.628		
6,500.00	6,108.36	6,093.98	6,082.17	42.57	18.31	172.98	991.95	-158.96	1,152.42	1,108.41	44.01	26.184		
6,600.00	6,201.47	6,172.86	6,161.00	43.28	18.56	173.14	990.16	-157.58	1,191.21	1,146.64	44.57	26.726		
6,700.00	6,294.59	6,300.47	6,288.60	43.98	18.99	173.36	988.80	-155.91	1,228.74	1,183.05	45.69	26.895		
6,800.00	6,387.71	6,401.34	6,389.46	44.69	19.33	173.53	989.19	-155.06	1,264.96	1,218.46	46.50	27.202		
6,900.00	6,480.82	6,501.90	6,490.01	45.40	19.68	173.67	990.09	-154.31	1,300.72	1,253.40	47.32	27.490		
7,000.00	6,573.94	6,600.44	6,588.54	46.11	20.02	173.80	991.59	-153.58	1,335.94	1,287.83	48.11	27.768		
7,100.00	6,667.05	6,691.70	6,679.78	46.82	20.34	173.90	993.11	-152.80	1,371.08	1,322.25	48.83	28.077		
7,200.00	6,760.17	6,779.00	6,767.07	47.52	20.64	173.99	994.29	-151.92	1,406.56	1,357.04	49.51	28.407		
7,300.00	6,853.28	6,866.40	6,854.47	48.23	20.95	174.10	994.90	-151.34	1,442.47	1,392.28	50.19	28.738		
7,400.00	6,946.40	6,955.51	6,943.57	48.94	21.25	174.20	995.31	-150.52	1,478.70	1,427.81	50.89	29.056		
7,500.00	7,039.52	7,043.80	7,031.85	49.65	21.56	174.28	995.64	-149.24	1,515.18	1,463.60	51.58	29.374		
7,600.00	7,132.94	7,131.74	7,119.77	50.33	21.86	152.37	995.75	-147.55	1,550.24	1,497.99	52.26	29.667		
7,700.00	7,225.98	7,187.03	7,175.01	50.90	22.04	125.68	995.63	-145.46	1,579.85	1,527.30	52.55	30.064		
7,800.00	7,315.86	7,238.00	7,225.64	51.34	22.22	107.32	995.22	-139.64	1,605.00	1,552.24	52.76	30.421		
7,900.00	7,399.85	7,309.53	7,295.65	51.68	22.45	96.37	995.55	-125.18	1,624.47	1,571.26	53.21	30.529		
8,000.00	7,475.41	7,364.00	7,347.54	51.91	22.63	89.74	996.80	-108.70	1,637.78	1,584.28	53.50	30.610		
8,100.00	7,540.24	7,411.06	7,391.59	52.05	22.78	85.91	997.36	-92.15	1,645.87	1,592.06	53.82	30.583		
8,200.00	7,592.37	7,459.00	7,435.50	52.11	22.94	84.10	997.76	-72.97	1,648.75	1,594.42	54.33	30.350		
8,300.00	7,630.20	7,490.00	7,463.01	52.09	23.03	83.37	997.66	-58.68	1,647.44	1,592.56	54.88	30.020		
8,400.00	7,652.61	7,522.00	7,490.37	52.01	23.13	83.78	997.15	-42.10	1,642.59	1,586.85	55.74	29.469		
8,500.00	7,659.00	7,553.00	7,515.54	51.89	23.22	85.02	996.27	-24.04	1,634.78	1,577.91	56.87	28.744		
8,600.00	7,659.00	7,585.00	7,540.09	51.77	23.32	85.88	995.00	-3.56	1,628.86	1,570.65	58.21	27.982		
8,700.00	7,659.00	7,684.54	7,609.45	51.67	23.73	88.32	991.90	67.70	1,626.24	1,565.91	60.33	26.955		
8,800.00	7,659.00	7,838.68	7,697.10	51.61	24.76	91.42	993.61	194.08	1,622.53	1,559.36	63.17	25.685		
8,900.00	7,659.00	7,900.00	7,722.82	51.58	25.30	92.33	994.72	249.70	1,620.21	1,555.04	65.16	24.864		
8,929.89	7,659.00	7,918.38	7,729.61	51.58	25.48	92.57	994.80	266.78	1,620.03	1,554.23	65.80	24.620		
9,000.00	7,659.00	7,947.62	7,739.96	51.59	25.78	92.93	994.41	294.12	1,620.93	1,553.84	67.10	24.159		
9,100.00	7,659.00	8,146.14	7,781.01	51.67	28.24	94.38	989.45	487.56	1,624.90	1,553.46	71.45	22.743		
9,200.00	7,659.00	8,325.24	7,782.90	51.83	31.04	94.47	996.52	666.43	1,618.86	1,542.72	76.14	21.262		
9,300.00	7,659.00	8,393.05	7,781.33	52.14	32.21	94.43	999.83	734.14	1,611.84	1,532.87	78.98	20.409		
9,400.00	7,659.00	8,460.14	7,779.52	52.67	33.43	94.38	1,001.72	801.18	1,606.84	1,524.92	81.91	19.616		
9,500.00	7,659.00	8,529.70	7,778.00	53.53	34.75	94.33	1,002.34	870.72	1,603.81	1,518.80	85.01	18.866		
9,600.00	7,659.00	8,596.60	7,777.53	54.75	36.07	94.31	1,001.74	937.61	1,602.70	1,514.57	88.12	18.187		
9,601.22	7,659.00	8,597.37	7,777.53	54.77	36.08	94.31	1,001.73	938.38	1,602.70	1,514.54	88.16	18.179		
9,700.00	7,659.00	8,661.00	7,778.21	56.29	37.36	94.34	999.78	1,001.98	1,603.82	1,512.59	91.23	17.581		
9,800.00	7,659.00	8,760.27	7,779.12	58.05	39.44	94.36	995.59	1,101.15	1,606.11	1,510.75	95.36	16.842		
9,900.00	7,659.00	8,870.34	7,779.44	59.97	41.82	94.37	991.51	1,211.15	1,607.84	1,507.91	99.93	16.089		
10,000.00	7,659.00	8,956.98	7,778.74	62.00	43.74	94.34	987.91	1,297.70	1,609.93	1,506.02	103.92	15.493		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ WATKINS 30-5-5H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 1997-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,100.00	7,659.00	9,074.63	7,778.87	64.11	46.41	94.34	983.02	1,415.25	1,612.16	1,503.23	108.93	14.800		
10,200.00	7,659.00	9,226.39	7,782.34	66.28	49.95	94.46	980.87	1,566.94	1,611.71	1,496.60	115.10	14.002		
10,300.00	7,659.00	9,343.34	7,784.79	68.51	52.73	94.56	981.60	1,683.86	1,609.27	1,488.98	120.29	13.378		
10,400.00	7,659.00	9,453.06	7,785.72	70.77	55.37	94.60	983.07	1,793.57	1,606.03	1,480.72	125.31	12.816		
10,500.00	7,659.00	9,560.00	7,784.51	73.06	57.98	94.57	984.88	1,900.49	1,602.27	1,471.97	130.30	12.297		
10,600.00	7,659.00	9,668.90	7,782.99	75.39	60.65	94.53	987.19	2,009.35	1,598.07	1,462.68	135.39	11.803		
10,700.00	7,659.00	9,763.56	7,781.30	77.74	62.99	94.48	989.46	2,103.97	1,593.57	1,453.49	140.08	11.376		
10,800.00	7,659.00	9,850.04	7,778.72	80.12	65.14	94.39	990.84	2,190.40	1,589.78	1,445.23	144.54	10.999		
10,900.00	7,659.00	9,951.02	7,776.98	82.51	67.67	94.34	991.91	2,291.35	1,586.62	1,437.12	149.50	10.613		
11,000.00	7,659.00	10,057.03	7,775.57	84.93	70.34	94.30	993.60	2,397.35	1,582.95	1,428.29	154.65	10.235		
11,100.00	7,659.00	10,133.70	7,774.74	87.36	72.28	94.28	994.54	2,474.00	1,579.72	1,420.85	158.86	9.944		
11,200.00	7,659.00	10,208.16	7,773.85	89.81	74.18	94.25	994.05	2,548.46	1,578.28	1,415.30	162.99	9.683		
11,256.10	7,659.00	10,253.13	7,773.01	91.19	75.32	94.22	993.25	2,593.41	1,578.09	1,412.68	165.41	9.540		
11,300.00	7,659.00	10,294.73	7,772.15	92.27	76.38	94.18	992.30	2,634.99	1,578.16	1,410.62	167.53	9.420		
11,400.00	7,659.00	10,398.58	7,771.90	94.75	79.04	94.18	990.23	2,738.82	1,578.15	1,405.43	172.72	9.137		
11,500.00	7,659.00	10,567.81	7,769.83	97.23	83.39	94.11	989.35	2,908.02	1,577.11	1,396.94	180.16	8.754		
11,600.00	7,659.00	10,641.88	7,768.47	99.73	85.30	94.06	990.15	2,982.06	1,573.80	1,389.41	184.39	8.535		
11,700.00	7,659.00	10,736.67	7,765.85	102.24	87.75	93.97	990.61	3,076.82	1,571.14	1,381.82	189.32	8.299		
11,800.00	7,659.00	10,818.10	7,763.04	104.75	89.85	93.88	990.39	3,158.20	1,569.20	1,375.41	193.79	8.098		
11,900.00	7,659.00	10,928.28	7,761.01	107.28	92.71	93.80	989.70	3,268.36	1,567.75	1,368.46	199.28	7.867		
12,000.00	7,659.00	11,019.47	7,759.64	109.81	95.09	93.76	989.36	3,359.53	1,566.04	1,361.92	204.11	7.672		
12,100.00	7,659.00	11,135.77	7,758.25	112.35	98.12	93.71	989.30	3,475.82	1,564.02	1,354.17	209.85	7.453		
12,200.00	7,659.00	11,243.70	7,757.22	114.90	100.94	93.68	989.69	3,583.75	1,561.65	1,346.36	215.29	7.254		
12,300.00	7,659.00	11,364.72	7,756.99	117.46	104.10	93.68	992.24	3,704.73	1,557.46	1,336.28	221.18	7.042		
12,400.00	7,659.00	11,459.84	7,755.51	120.02	106.59	93.64	994.20	3,799.82	1,553.33	1,327.13	226.20	6.867		
12,500.00	7,659.00	11,557.99	7,755.15	122.58	109.16	93.63	996.10	3,897.95	1,549.40	1,318.06	231.33	6.698		
12,600.00	7,659.00	11,638.45	7,754.27	125.15	111.27	93.61	997.28	3,978.40	1,545.93	1,310.06	235.87	6.554		
12,700.00	7,659.00	11,711.80	7,753.16	127.73	113.20	93.57	997.01	4,051.74	1,544.20	1,304.09	240.11	6.431		
12,762.15	7,659.00	11,759.89	7,752.46	129.33	114.46	93.54	996.23	4,099.82	1,543.92	1,301.10	242.82	6.358		
12,800.00	7,659.00	11,790.79	7,752.05	130.31	115.28	93.53	995.51	4,130.71	1,544.02	1,299.49	244.52	6.314		
12,900.00	7,659.00	11,882.50	7,750.69	132.90	117.69	93.48	992.93	4,222.37	1,544.76	1,295.34	249.42	6.193		
13,000.00	7,659.00	11,981.81	7,750.31	135.49	120.31	93.46	989.96	4,321.64	1,545.75	1,291.11	254.63	6.071		
13,100.00	7,659.00	12,077.28	7,749.79	138.08	122.83	93.44	986.87	4,417.05	1,546.96	1,287.27	259.69	5.957		
13,200.00	7,659.00	12,115.00	7,749.42	140.68	123.83	93.42	985.60	4,454.75	1,549.11	1,286.94	262.17	5.909		
13,300.00	7,659.00	12,115.00	7,749.42	143.28	123.83	93.42	985.60	4,454.75	1,556.50	1,294.33	262.16	5.937		
13,400.00	7,659.00	12,115.00	7,749.42	145.88	123.83	93.42	985.60	4,454.75	1,570.24	1,309.05	261.18	6.012		
13,500.00	7,659.00	12,115.00	7,749.42	148.48	123.83	93.42	985.60	4,454.75	1,590.16	1,330.86	259.29	6.133		
13,600.00	7,659.00	12,115.00	7,749.42	151.09	123.83	93.42	985.60	4,454.75	1,616.03	1,359.45	256.58	6.298		
13,700.00	7,659.00	12,115.00	7,749.42	153.70	123.83	93.42	985.60	4,454.75	1,647.58	1,394.42	253.15	6.508		
13,800.00	7,659.00	12,115.00	7,749.42	156.32	123.83	93.42	985.60	4,454.75	1,684.48	1,435.34	249.13	6.761		
13,900.00	7,659.00	12,115.00	7,749.42	158.94	123.83	93.42	985.60	4,454.75	1,726.39	1,481.75	244.64	7.057		
14,000.00	7,659.00	12,115.00	7,749.42	161.56	123.83	93.42	985.60	4,454.75	1,772.96	1,533.16	239.80	7.393		
14,100.00	7,659.00	12,115.00	7,749.42	164.18	123.83	93.42	985.60	4,454.75	1,823.82	1,589.11	234.71	7.770		
14,200.00	7,659.00	12,115.00	7,749.42	166.80	123.83	93.42	985.60	4,454.75	1,878.64	1,649.16	229.48	8.187		
14,300.00	7,659.00	12,115.00	7,749.42	169.43	123.83	93.42	985.60	4,454.75	1,937.07	1,712.89	224.18	8.641		
14,400.00	7,659.00	12,115.00	7,749.42	172.06	123.83	93.42	985.60	4,454.75	1,998.80	1,779.92	218.88	9.132		
14,500.00	7,659.00	12,115.00	7,749.42	174.69	123.83	93.42	985.60	4,454.75	2,063.53	1,849.89	213.64	9.659		
14,600.00	7,659.00	12,115.00	7,749.42	177.33	123.83	93.42	985.60	4,454.75	2,130.99	1,922.49	208.50	10.221		
14,700.00	7,659.00	12,115.00	7,749.42	179.96	123.83	93.42	985.60	4,454.75	2,200.92	1,997.43	203.49	10.816		
14,800.00	7,659.00	12,115.00	7,749.42	182.60	123.83	93.42	985.60	4,454.75	2,273.11	2,074.47	198.63	11.444		
14,900.00	7,659.00	12,115.00	7,749.42	185.24	123.83	93.42	985.60	4,454.75	2,347.33	2,153.38	193.95	12.103		
15,000.00	7,659.00	12,115.00	7,749.42	187.88	123.83	93.42	985.60	4,454.75	2,423.41	2,233.97	189.45	12.792		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ WATKINS 30-5-5H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 1997-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
15,100.00	7,659.00	12,115.00	7,749.42	190.52	123.83	93.42	985.60	4,454.75	2,501.18	2,316.05	185.13	13.510		
15,200.00	7,659.00	12,115.00	7,749.42	193.16	123.83	93.42	985.60	4,454.75	2,580.47	2,399.47	181.00	14.257		
15,300.00	7,659.00	12,115.00	7,749.42	195.81	123.83	93.42	985.60	4,454.75	2,661.16	2,484.11	177.06	15.030		
15,400.00	7,659.00	12,115.00	7,749.42	198.45	123.83	93.42	985.60	4,454.75	2,743.13	2,569.83	173.30	15.829		
15,500.00	7,659.00	12,115.00	7,749.42	201.10	123.83	93.42	985.60	4,454.75	2,826.25	2,656.54	169.71	16.653		
15,600.00	7,659.00	12,115.00	7,749.42	203.75	123.83	93.42	985.60	4,454.75	2,910.44	2,744.13	166.31	17.501		
15,700.00	7,659.00	12,115.00	7,749.42	206.40	123.83	93.42	985.60	4,454.75	2,995.60	2,832.54	163.06	18.371		
15,800.00	7,659.00	12,115.00	7,749.42	209.05	123.83	93.42	985.60	4,454.75	3,081.65	2,921.67	159.98	19.263		
15,900.00	7,659.00	12,115.00	7,749.42	211.70	123.83	93.42	985.60	4,454.75	3,168.52	3,011.48	157.04	20.176		
16,000.00	7,659.00	12,115.00	7,749.42	214.36	123.83	93.42	985.60	4,454.75	3,256.14	3,101.89	154.25	21.109		
16,100.00	7,659.00	12,115.00	7,749.42	217.01	123.83	93.42	985.60	4,454.75	3,344.46	3,192.86	151.60	22.061		
16,200.00	7,659.00	12,115.00	7,749.42	219.67	123.83	93.42	985.60	4,454.75	3,433.42	3,284.34	149.08	23.030		
16,300.00	7,659.00	12,115.00	7,749.42	222.32	123.83	93.42	985.60	4,454.75	3,522.97	3,376.29	146.68	24.018		
16,400.00	7,659.00	12,115.00	7,749.42	224.98	123.83	93.42	985.60	4,454.75	3,613.07	3,468.67	144.40	25.021		
16,500.00	7,659.00	12,115.00	7,749.42	227.64	123.83	93.42	985.60	4,454.75	3,703.68	3,561.45	142.23	26.040		
16,600.00	7,659.00	12,115.00	7,749.42	230.30	123.83	93.42	985.60	4,454.75	3,794.76	3,654.60	140.16	27.074		
16,700.00	7,659.00	12,115.00	7,749.42	232.96	123.83	93.42	985.60	4,454.75	3,886.28	3,748.08	138.20	28.122		
16,800.00	7,659.00	12,115.00	7,749.42	235.62	123.83	93.42	985.60	4,454.75	3,978.21	3,841.89	136.32	29.183		
16,900.00	7,659.00	12,115.00	7,749.42	238.28	123.83	93.42	985.60	4,454.75	4,070.51	3,935.98	134.53	30.257		
17,000.00	7,659.00	12,115.00	7,749.42	240.95	123.83	93.42	985.60	4,454.75	4,163.18	4,030.35	132.83	31.342		
17,100.00	7,659.00	12,115.00	7,749.42	243.61	123.83	93.42	985.60	4,454.75	4,256.17	4,124.97	131.20	32.439		
17,200.00	7,659.00	12,115.00	7,749.42	246.27	123.83	93.42	985.60	4,454.75	4,349.48	4,219.82	129.65	33.547		
17,300.00	7,659.00	12,115.00	7,749.42	248.94	123.83	93.42	985.60	4,454.75	4,443.07	4,314.90	128.17	34.665		
17,400.00	7,659.00	12,115.00	7,749.42	251.60	123.83	93.42	985.60	4,454.75	4,536.94	4,410.18	126.76	35.792		
17,500.00	7,659.00	12,115.00	7,749.42	254.27	123.83	93.42	985.60	4,454.75	4,631.07	4,505.66	125.41	36.928		
17,600.00	7,659.00	12,115.00	7,749.42	256.94	123.83	93.42	985.60	4,454.75	4,725.44	4,601.32	124.12	38.072		
17,700.00	7,659.00	12,115.00	7,749.42	259.61	123.83	93.42	985.60	4,454.75	4,820.03	4,697.15	122.88	39.224		
17,800.00	7,659.00	12,115.00	7,749.42	262.27	123.83	93.42	985.60	4,454.75	4,914.84	4,793.14	121.70	40.384		
17,900.00	7,659.00	12,115.00	7,749.42	264.94	123.83	93.42	985.60	4,454.75	5,009.85	4,889.28	120.57	41.550		
18,000.00	7,659.00	12,115.00	7,749.42	267.61	123.83	93.42	985.60	4,454.75	5,105.06	4,985.56	119.49	42.723		
18,100.00	7,659.00	12,115.00	7,749.42	270.28	123.83	93.42	985.60	4,454.75	5,200.44	5,081.98	118.46	43.902		
18,200.00	7,659.00	12,115.00	7,749.42	272.95	123.83	93.42	985.60	4,454.75	5,295.99	5,178.52	117.46	45.086		
18,300.00	7,659.00	12,115.00	7,749.42	275.62	123.83	93.42	985.60	4,454.75	5,391.70	5,275.19	116.51	46.275		
18,400.00	7,659.00	12,115.00	7,749.42	278.29	123.83	93.42	985.60	4,454.75	5,487.57	5,371.97	115.60	47.470		
18,500.00	7,659.00	12,115.00	7,749.42	280.97	123.83	93.42	985.60	4,454.75	5,583.58	5,468.85	114.73	48.668		
18,558.76	7,659.00	12,115.00	7,749.42	282.54	123.83	93.42	985.60	4,454.75	5,640.06	5,525.83	114.23	49.375		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ WATKINS 30-5-8H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 2112-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	2,036.00	2,035.74	0.00	0.00	-11.40	721.56	-145.51	2,166.61					
100.00	100.00	2,036.00	2,035.74	0.13	0.00	-11.40	721.56	-145.51	2,072.84	2,070.69	2.15	964.086		
200.00	199.98	2,036.00	2,035.74	0.50	0.00	5.65	721.56	-145.51	1,979.05	1,976.88	2.16	914.410		
300.00	299.84	2,036.00	2,035.74	0.86	0.00	6.25	721.56	-145.51	1,884.66	1,882.45	2.21	854.692		
400.00	399.45	2,036.00	2,035.74	1.23	0.00	6.94	721.56	-145.51	1,789.71	1,787.45	2.26	792.989		
500.00	498.70	2,036.00	2,035.74	1.63	0.00	7.76	721.56	-145.51	1,694.21	1,691.89	2.32	730.520		
600.00	597.47	2,036.00	2,035.74	2.05	0.00	8.75	721.56	-145.51	1,598.22	1,595.82	2.39	668.354		
700.00	695.62	2,036.00	2,035.74	2.49	0.00	9.94	721.56	-145.51	1,501.74	1,499.27	2.47	607.376		
800.00	793.06	2,036.00	2,035.74	2.98	0.00	11.39	721.56	-145.51	1,404.82	1,402.26	2.56	548.273		
900.00	889.64	2,036.00	2,035.74	3.50	0.00	13.19	721.56	-145.51	1,307.50	1,304.84	2.66	491.544		
1,000.00	985.27	2,036.00	2,035.74	4.06	0.00	15.46	721.56	-145.51	1,209.79	1,207.02	2.77	437.518		
1,100.00	1,079.82	2,036.00	2,035.74	4.66	0.00	18.36	721.56	-145.51	1,111.74	1,108.86	2.88	386.381		
1,200.00	1,173.23	2,036.00	2,035.74	5.31	0.00	20.85	721.56	-145.51	1,013.42	1,010.42	3.00	337.894		
1,300.00	1,266.35	2,036.00	2,035.74	5.98	0.00	20.85	721.56	-145.51	915.29	912.16	3.13	292.822		
1,400.00	1,359.46	2,036.00	2,035.74	6.66	0.00	20.85	721.56	-145.51	817.61	814.34	3.28	249.288		
1,500.00	1,452.58	2,036.00	2,035.74	7.34	0.00	20.85	721.56	-145.51	720.58	717.11	3.47	207.484		
1,600.00	1,545.69	2,036.00	2,035.74	8.03	0.00	20.85	721.56	-145.51	624.48	620.75	3.72	167.669		
1,700.00	1,638.81	2,036.00	2,035.74	8.72	0.00	20.85	721.56	-145.51	529.82	525.76	4.07	130.249		
1,800.00	1,731.92	2,036.00	2,035.74	9.41	0.00	20.85	721.56	-145.51	437.56	432.99	4.56	95.905		
1,900.00	1,825.04	2,036.00	2,035.74	10.11	0.00	20.85	721.56	-145.51	349.56	344.25	5.31	65.785		
2,000.00	1,918.15	2,036.00	2,035.74	10.81	0.00	20.85	721.56	-145.51	270.06	263.58	6.48	41.668		
2,100.00	2,011.27	2,036.00	2,035.74	11.51	0.00	20.85	721.56	-145.51	208.99	200.90	8.08	25.854		
2,200.00	2,104.39	2,099.42	2,099.15	12.21	0.13	23.51	722.75	-146.02	174.29	165.16	9.13	19.095		
2,300.00	2,197.50	2,194.92	2,194.63	12.91	0.44	29.02	724.14	-146.83	142.39	132.17	10.22	13.930		
2,400.00	2,290.62	2,290.75	2,290.46	13.61	0.77	38.10	723.74	-147.25	110.78	99.13	11.65	9.507		
2,500.00	2,383.73	2,384.45	2,384.12	14.31	1.09	54.26	721.10	-147.10	81.94	68.16	13.79	5.943		
2,600.00	2,476.85	2,475.92	2,475.51	15.01	1.41	81.56	717.35	-146.49	64.72	48.40	16.32	3.965		
2,627.21	2,502.19	2,500.82	2,500.39	15.20	1.50	90.48	716.34	-146.28	63.79	47.09	16.70	3.819 CC, ES, SF		
2,700.00	2,569.96	2,567.51	2,567.02	15.72	1.74	113.36	713.60	-145.75	70.17	53.59	16.58	4.233		
2,800.00	2,663.08	2,659.04	2,658.47	16.42	2.07	135.58	709.80	-145.10	94.34	78.80	15.53	6.073		
2,900.00	2,756.20	2,750.81	2,750.16	17.12	2.40	148.25	706.12	-144.45	126.89	111.77	15.12	8.392		
3,000.00	2,849.31	2,842.48	2,841.76	17.83	2.73	155.74	702.56	-143.88	162.76	147.53	15.24	10.683		
3,100.00	2,942.43	2,933.62	2,932.83	18.53	3.07	160.51	698.99	-143.23	200.31	184.69	15.62	12.828		
3,200.00	3,035.54	3,024.31	3,023.43	19.24	3.40	163.82	695.08	-142.57	239.00	222.88	16.12	14.825		
3,300.00	3,128.66	3,115.08	3,114.10	19.94	3.73	166.29	690.77	-142.04	278.49	261.78	16.71	16.671		
3,400.00	3,221.77	3,207.02	3,205.93	20.65	4.07	168.24	686.21	-141.79	318.35	301.00	17.35	18.348		
3,500.00	3,314.89	3,300.95	3,299.76	21.35	4.41	169.77	682.02	-141.64	358.01	339.95	18.06	19.828		
3,600.00	3,408.01	3,393.36	3,392.10	22.06	4.75	170.99	678.39	-141.89	397.22	378.47	18.75	21.182		
3,700.00	3,501.12	3,483.17	3,481.84	22.77	5.08	171.91	674.83	-141.68	436.76	417.33	19.43	22.481		
3,800.00	3,594.24	3,574.67	3,573.25	23.47	5.41	172.67	670.96	-141.17	476.74	456.60	20.14	23.676		
3,900.00	3,687.35	3,671.09	3,669.60	24.18	5.76	173.39	667.18	-141.15	516.32	495.41	20.91	24.690		
4,000.00	3,780.47	3,774.53	3,773.00	24.89	6.13	174.02	664.61	-141.53	554.62	532.85	21.77	25.475		
4,100.00	3,873.58	3,875.99	3,874.46	25.59	6.48	174.46	664.41	-141.88	590.95	568.36	22.59	26.159		
4,200.00	3,966.70	3,967.89	3,966.36	26.30	6.79	174.81	664.78	-142.30	626.77	603.47	23.30	26.901		
4,300.00	4,059.81	4,054.04	4,052.51	27.01	7.09	175.11	664.46	-142.67	663.30	639.34	23.95	27.692		
4,400.00	4,152.93	4,142.33	4,140.79	27.71	7.40	175.40	663.21	-142.76	700.84	676.20	24.64	28.446		
4,500.00	4,246.05	4,235.23	4,233.68	28.42	7.74	175.65	661.88	-142.49	738.55	713.17	25.38	29.102		
4,600.00	4,339.16	4,329.01	4,327.45	29.13	8.07	175.87	660.64	-142.22	776.17	750.04	26.13	29.706		
4,700.00	4,432.28	4,422.41	4,420.85	29.83	8.40	176.07	659.56	-141.96	813.64	786.77	26.87	30.275		
4,800.00	4,525.39	4,513.66	4,512.09	30.54	8.73	176.23	658.56	-141.51	851.15	823.55	27.60	30.840		
4,900.00	4,618.51	4,604.84	4,603.26	31.25	9.05	176.37	657.36	-140.91	888.91	860.58	28.32	31.384		
5,000.00	4,711.62	4,697.84	4,696.25	31.95	9.39	176.48	656.22	-140.08	926.65	897.59	29.07	31.880		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ WATKINS 30-5-8H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 2112-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,100.00	4,804.74	4,791.79	4,790.19	32.66	9.72	176.60	655.08	-139.28	964.39	934.57	29.82	32.342		
5,200.00	4,897.86	4,886.88	4,885.27	33.37	10.05	176.68	654.34	-138.20	1,001.83	971.25	30.58	32.760		
5,300.00	4,990.97	4,984.43	4,982.81	34.08	10.39	176.74	653.78	-136.87	1,039.17	1,007.81	31.36	33.134		
5,400.00	5,084.09	5,086.12	5,084.48	34.78	10.74	176.76	654.31	-135.31	1,075.60	1,043.42	32.18	33.426		
5,500.00	5,177.20	5,180.32	5,178.67	35.49	11.06	176.77	655.13	-133.78	1,111.76	1,078.84	32.92	33.773		
5,600.00	5,270.32	5,276.33	5,274.67	36.20	11.38	176.83	655.81	-132.97	1,147.80	1,114.13	33.67	34.086		
5,700.00	5,363.43	5,372.85	5,371.18	36.91	11.70	176.90	656.66	-132.66	1,183.54	1,149.11	34.43	34.374		
5,800.00	5,456.55	5,468.39	5,466.72	37.61	12.02	176.96	657.66	-132.40	1,219.12	1,183.94	35.18	34.654		
5,900.00	5,549.67	5,561.52	5,559.84	38.32	12.33	177.03	658.75	-132.25	1,254.57	1,218.66	35.91	34.939		
6,000.00	5,642.78	5,653.53	5,651.85	39.03	12.63	177.09	659.67	-132.08	1,290.16	1,253.54	36.63	35.225		
6,100.00	5,735.90	5,751.16	5,749.48	39.74	12.96	177.15	660.65	-132.05	1,325.71	1,288.31	37.40	35.451		
6,200.00	5,829.01	5,849.03	5,847.34	40.44	13.29	177.24	661.91	-132.60	1,360.82	1,322.65	38.17	35.655		
6,300.00	5,922.13	5,940.64	5,938.94	41.15	13.60	177.32	663.11	-133.26	1,395.88	1,356.99	38.88	35.898		
6,400.00	6,015.24	6,023.80	6,022.08	41.86	13.88	177.40	663.82	-133.99	1,431.29	1,391.76	39.53	36.206		
6,500.00	6,108.36	6,102.34	6,100.63	42.57	14.16	177.49	663.61	-134.75	1,467.66	1,427.52	40.14	36.563		
6,600.00	6,201.47	6,187.60	6,185.87	43.28	14.46	177.58	662.75	-135.39	1,504.75	1,463.93	40.81	36.869		
6,700.00	6,294.59	6,284.52	6,282.79	43.98	14.80	177.68	661.78	-136.03	1,541.86	1,500.27	41.59	37.071		
6,800.00	6,387.71	6,376.58	6,374.85	44.69	15.12	177.73	661.15	-135.87	1,578.96	1,536.63	42.33	37.303		
6,900.00	6,480.82	6,477.66	6,475.92	45.40	15.48	177.75	661.04	-134.94	1,615.76	1,572.62	43.14	37.453		
7,000.00	6,573.94	6,569.43	6,567.69	46.11	15.79	177.77	661.25	-133.97	1,652.32	1,608.45	43.87	37.663		
7,100.00	6,667.05	6,647.40	6,645.65	46.82	16.07	177.78	661.00	-132.97	1,689.42	1,644.93	44.48	37.980		
7,200.00	6,760.17	6,736.26	6,734.50	47.52	16.38	177.79	660.25	-131.69	1,727.02	1,681.83	45.19	38.216		
7,300.00	6,853.28	6,841.18	6,839.41	48.23	16.75	177.80	659.58	-130.24	1,764.44	1,718.40	46.04	38.322		
7,400.00	6,946.40	6,950.12	6,948.34	48.94	17.13	177.80	659.83	-128.90	1,801.03	1,754.10	46.92	38.384		
7,500.00	7,039.52	7,052.45	7,050.66	49.65	17.48	177.81	660.57	-127.98	1,837.11	1,789.37	47.74	38.483		
7,600.00	7,132.94	7,148.77	7,146.97	50.33	17.82	155.85	661.85	-127.40	1,871.00	1,822.50	48.50	38.580		
7,700.00	7,225.98	7,220.03	7,218.22	50.90	18.06	129.21	662.27	-126.70	1,900.00	1,850.97	49.02	38.756		
7,800.00	7,315.86	7,293.79	7,291.98	51.34	18.32	111.19	661.91	-126.08	1,923.70	1,874.13	49.56	38.814		
7,900.00	7,399.85	7,370.64	7,368.82	51.68	18.60	100.56	660.93	-125.71	1,941.86	1,891.72	50.13	38.733		
8,000.00	7,475.41	7,454.74	7,452.91	51.91	18.89	94.78	659.83	-125.25	1,954.47	1,903.65	50.82	38.455		
8,100.00	7,540.24	7,527.88	7,526.05	52.05	19.15	91.76	659.33	-124.98	1,961.87	1,910.34	51.53	38.074		
8,200.00	7,592.37	7,580.48	7,578.65	52.11	19.34	90.21	659.04	-124.78	1,965.46	1,913.24	52.22	37.640		
8,300.00	7,630.20	7,618.31	7,616.48	52.09	19.48	89.60	658.83	-124.62	1,966.28	1,913.30	52.99	37.109		
8,400.00	7,652.61	7,640.77	7,638.94	52.01	19.56	89.50	658.70	-124.53	1,965.19	1,911.34	53.85	36.494		
8,500.00	7,659.00	7,647.46	7,645.63	51.89	19.58	89.67	658.66	-124.51	1,962.78	1,908.00	54.78	35.830		
8,545.35	7,659.00	7,647.64	7,645.81	51.83	19.58	89.67	658.66	-124.51	1,962.26	1,907.00	55.26	35.513		
8,600.00	7,659.00	7,647.86	7,646.03	51.77	19.58	89.68	658.66	-124.50	1,963.02	1,907.21	55.81	35.172		
8,700.00	7,659.00	7,648.27	7,646.44	51.67	19.58	89.69	658.66	-124.50	1,968.34	1,911.38	56.96	34.556		
8,800.00	7,659.00	7,648.67	7,646.84	51.61	19.58	89.70	658.66	-124.50	1,978.71	1,920.52	58.19	34.002		
8,900.00	7,659.00	7,649.07	7,647.24	51.58	19.58	89.72	658.66	-124.50	1,994.05	1,934.57	59.48	33.522		
9,000.00	7,659.00	7,649.47	7,647.64	51.59	19.59	89.73	658.65	-124.50	2,014.24	1,953.44	60.80	33.126		
9,100.00	7,659.00	7,649.87	7,648.04	51.67	19.59	89.74	658.65	-124.50	2,039.14	1,977.01	62.13	32.821		
9,200.00	7,659.00	7,650.27	7,648.44	51.83	19.59	89.75	658.65	-124.49	2,068.58	2,005.14	63.44	32.608		
9,300.00	7,659.00	7,650.67	7,648.84	52.14	19.59	89.76	658.65	-124.49	2,102.37	2,037.65	64.71	32.488		
9,400.00	7,659.00	7,651.07	7,649.24	52.67	19.59	89.77	658.64	-124.49	2,140.30	2,074.36	65.94	32.458		
9,500.00	7,659.00	7,651.47	7,649.64	53.53	19.59	89.79	658.64	-124.49	2,182.16	2,115.05	67.11	32.516		
9,600.00	7,659.00	7,651.87	7,650.04	54.75	19.59	89.80	658.64	-124.49	2,227.72	2,159.50	68.22	32.657		
9,700.00	7,659.00	7,652.27	7,650.44	56.29	19.60	89.81	658.64	-124.49	2,276.76	2,207.51	69.25	32.875		
9,800.00	7,659.00	7,652.67	7,650.84	58.05	19.60	89.82	658.63	-124.49	2,329.07	2,258.85	70.22	33.167		
9,900.00	7,659.00	7,653.07	7,651.24	59.97	19.60	89.83	658.63	-124.48	2,384.43	2,313.31	71.12	33.526		
10,000.00	7,659.00	7,653.47	7,651.64	62.00	19.60	89.84	658.63	-124.48	2,442.63	2,370.67	71.95	33.947		
10,100.00	7,659.00	7,653.87	7,652.04	64.11	19.60	89.86	658.63	-124.48	2,503.47	2,430.75	72.72	34.426		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ WATKINS 30-5-8H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 2112-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,200.00	7,659.00	7,654.26	7,652.43	66.28	19.60	89.87	658.63	-124.48	2,566.77	2,493.34	73.43	34.957		
10,300.00	7,659.00	7,654.66	7,652.83	68.51	19.60	89.88	658.62	-124.48	2,632.34	2,558.27	74.07	35.538		
10,400.00	7,659.00	7,655.06	7,653.23	70.77	19.61	89.89	658.62	-124.48	2,700.02	2,625.36	74.66	36.163		
10,500.00	7,659.00	7,655.46	7,653.63	73.06	19.61	89.90	658.62	-124.47	2,769.67	2,694.46	75.20	36.829		
10,600.00	7,659.00	7,655.85	7,654.02	75.39	19.61	89.91	658.62	-124.47	2,841.12	2,765.43	75.70	37.533		
10,700.00	7,659.00	7,656.25	7,654.42	77.74	19.61	89.92	658.61	-124.47	2,914.26	2,838.11	76.15	38.272		
10,800.00	7,659.00	7,656.64	7,654.82	80.12	19.61	89.94	658.61	-124.47	2,988.95	2,912.39	76.56	39.042		
10,900.00	7,659.00	7,657.04	7,655.21	82.51	19.61	89.95	658.61	-124.47	3,065.09	2,988.15	76.93	39.841		
11,000.00	7,659.00	7,657.44	7,655.61	84.93	19.61	89.96	658.61	-124.47	3,142.56	3,065.28	77.27	40.668		
11,100.00	7,659.00	7,657.83	7,656.00	87.36	19.62	89.97	658.60	-124.47	3,221.27	3,143.69	77.59	41.519		
11,200.00	7,659.00	7,658.23	7,656.40	89.81	19.62	89.98	658.60	-124.46	3,301.14	3,223.27	77.87	42.393		
11,300.00	7,659.00	7,658.62	7,656.79	92.27	19.62	89.99	658.60	-124.46	3,382.08	3,303.94	78.13	43.287		
11,400.00	7,659.00	7,659.02	7,657.19	94.75	19.62	90.01	658.60	-124.46	3,464.01	3,385.64	78.37	44.202		
11,500.00	7,659.00	7,659.41	7,657.58	97.23	19.62	90.02	658.60	-124.46	3,546.87	3,468.28	78.59	45.134		
11,600.00	7,659.00	7,659.80	7,657.97	99.73	19.62	90.03	658.59	-124.46	3,630.59	3,551.81	78.78	46.082		
11,700.00	7,659.00	7,660.20	7,658.37	102.24	19.62	90.04	658.59	-124.46	3,715.12	3,636.15	78.97	47.046		
11,800.00	7,659.00	7,660.59	7,658.76	104.75	19.63	90.05	658.59	-124.45	3,800.40	3,721.27	79.13	48.024		
11,900.00	7,659.00	7,660.98	7,659.15	107.28	19.63	90.06	658.59	-124.45	3,886.38	3,807.09	79.29	49.016		
12,000.00	7,659.00	7,661.38	7,659.55	109.81	19.63	90.07	658.58	-124.45	3,973.02	3,893.59	79.43	50.019		
12,100.00	7,659.00	7,661.77	7,659.94	112.35	19.63	90.09	658.58	-124.45	4,060.27	3,980.71	79.56	51.034		
12,200.00	7,659.00	7,662.16	7,660.33	114.90	19.63	90.10	658.58	-124.45	4,148.10	4,068.42	79.68	52.060		
12,300.00	7,659.00	7,662.55	7,660.72	117.46	19.63	90.11	658.58	-124.45	4,236.46	4,156.67	79.79	53.095		
12,400.00	7,659.00	7,662.95	7,661.12	120.02	19.63	90.12	658.57	-124.45	4,325.34	4,245.45	79.89	54.139		
12,500.00	7,659.00	7,663.34	7,661.51	122.58	19.64	90.13	658.57	-124.44	4,414.69	4,334.70	79.99	55.192		
12,600.00	7,659.00	7,663.73	7,661.90	125.15	19.64	90.14	658.57	-124.44	4,504.48	4,424.41	80.08	56.252		
12,700.00	7,659.00	7,664.12	7,662.29	127.73	19.64	90.15	658.57	-124.44	4,594.70	4,514.55	80.16	57.320		
12,800.00	7,659.00	7,664.51	7,662.68	130.31	19.64	90.17	658.57	-124.44	4,685.32	4,605.08	80.23	58.395		
12,900.00	7,659.00	7,664.90	7,663.07	132.90	19.64	90.18	658.56	-124.44	4,776.31	4,696.00	80.31	59.477		
13,000.00	7,659.00	7,665.29	7,663.46	135.49	19.64	90.19	658.56	-124.44	4,867.65	4,787.28	80.37	60.564		
13,100.00	7,659.00	7,665.68	7,663.85	138.08	19.64	90.20	658.56	-124.43	4,959.33	4,878.90	80.43	61.656		
13,200.00	7,659.00	7,666.07	7,664.24	140.68	19.65	90.21	658.56	-124.43	5,051.15	4,970.66	80.49	62.752		
13,300.00	7,659.00	7,666.47	7,664.64	143.28	19.65	90.22	658.55	-124.43	5,143.00	5,062.45	80.55	63.848		
13,400.00	7,659.00	7,666.86	7,665.03	145.88	19.65	90.23	658.55	-124.43	5,235.14	5,154.54	80.61	64.948		
13,500.00	7,659.00	7,667.26	7,665.43	148.48	19.65	90.24	658.55	-124.43	5,327.57	5,246.91	80.66	66.052		
13,600.00	7,659.00	7,667.65	7,665.82	151.09	19.65	90.25	658.55	-124.43	5,420.26	5,339.56	80.71	67.161		
13,700.00	7,659.00	7,668.05	7,666.22	153.70	19.65	90.26	658.54	-124.43	5,513.22	5,432.46	80.75	68.274		
13,800.00	7,659.00	7,668.44	7,666.61	156.32	19.65	90.27	658.54	-124.42	5,606.41	5,525.61	80.79	69.391		
13,900.00	7,659.00	7,668.84	7,667.01	158.94	19.66	90.28	658.54	-124.42	5,699.83	5,619.00	80.84	70.510		
14,000.00	7,659.00	7,669.23	7,667.40	161.56	19.66	90.30	658.54	-124.42	5,793.48	5,712.60	80.88	71.633		
14,100.00	7,659.00	7,669.62	7,667.79	164.18	19.66	90.31	658.53	-124.42	5,887.33	5,806.41	80.92	72.759		
14,200.00	7,659.00	7,670.02	7,668.19	166.80	19.66	90.32	658.53	-124.42	5,981.38	5,900.43	80.95	73.888		
14,300.00	7,659.00	7,670.41	7,668.58	169.43	19.66	90.33	658.53	-124.42	6,075.62	5,994.64	80.99	75.019		
14,400.00	7,659.00	7,670.80	7,668.97	172.06	19.66	90.34	658.53	-124.41	6,170.05	6,089.02	81.02	76.152		
14,500.00	7,659.00	7,671.20	7,669.37	174.69	19.66	90.35	658.53	-124.41	6,264.64	6,183.59	81.06	77.288		
14,600.00	7,659.00	7,671.59	7,669.76	177.33	19.66	90.36	658.52	-124.41	6,359.40	6,278.32	81.09	78.425		
14,700.00	7,659.00	7,671.98	7,670.15	179.96	19.67	90.37	658.52	-124.41	6,454.32	6,373.20	81.12	79.565		
14,800.00	7,659.00	7,672.37	7,670.54	182.60	19.67	90.38	658.52	-124.41	6,549.40	6,468.24	81.15	80.706		
14,900.00	7,659.00	7,672.76	7,670.93	185.24	19.67	90.40	658.52	-124.41	6,644.61	6,563.43	81.18	81.849		
15,000.00	7,659.00	7,673.16	7,671.33	187.88	19.67	90.41	658.51	-124.41	6,739.96	6,658.75	81.21	82.993		
15,100.00	7,659.00	7,673.55	7,671.72	190.52	19.67	90.42	658.51	-124.40	6,835.45	6,754.21	81.24	84.138		
15,200.00	7,659.00	7,673.94	7,672.11	193.16	19.67	90.43	658.51	-124.40	6,931.07	6,849.80	81.27	85.284		
15,300.00	7,659.00	7,674.33	7,672.50	195.81	19.67	90.44	658.51	-124.40	7,026.80	6,945.50	81.30	86.432		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 2112-MWD OWSG												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)	Minimum Separation (usft)	Separation Factor	Warning
15,400.00	7,659.00	7,674.72	7,672.89	198.45	19.68	90.45	658.50	-124.40	7,122.65	7,041.33	81.33	87.580	
15,500.00	7,659.00	7,675.11	7,673.28	201.10	19.68	90.46	658.50	-124.40	7,218.62	7,137.27	81.36	88.729	
15,600.00	7,659.00	7,675.50	7,673.67	203.75	19.68	90.47	658.50	-124.40	7,314.69	7,233.31	81.38	89.879	
15,700.00	7,659.00	7,675.89	7,674.06	206.40	19.68	90.48	658.50	-124.39	7,410.87	7,329.46	81.41	91.030	
15,800.00	7,659.00	7,676.28	7,674.45	209.05	19.68	90.50	658.50	-124.39	7,507.15	7,425.71	81.44	92.181	
15,900.00	7,659.00	7,676.66	7,674.83	211.70	19.68	90.51	658.49	-124.39	7,603.52	7,522.06	81.47	93.332	
16,000.00	7,659.00	7,677.05	7,675.22	214.36	19.68	90.52	658.49	-124.39	7,699.99	7,618.49	81.50	94.484	
16,100.00	7,659.00	7,677.44	7,675.61	217.01	19.69	90.53	658.49	-124.39	7,796.54	7,715.02	81.52	95.636	
16,200.00	7,659.00	7,677.83	7,676.00	219.67	19.69	90.54	658.49	-124.39	7,893.19	7,811.63	81.55	96.788	
16,300.00	7,659.00	7,678.22	7,676.39	222.32	19.69	90.55	658.48	-124.39	7,989.91	7,908.33	81.58	97.941	
16,400.00	7,659.00	7,678.61	7,676.77	224.98	19.69	90.56	658.48	-124.38	8,086.71	8,005.10	81.61	99.093	
16,500.00	7,659.00	7,678.99	7,677.16	227.64	19.69	90.57	658.48	-124.38	8,183.59	8,101.96	81.64	100.246	
16,600.00	7,659.00	7,679.38	7,677.55	230.30	19.69	90.58	658.48	-124.38	8,280.55	8,198.88	81.66	101.398	
16,700.00	7,659.00	7,679.77	7,677.94	232.96	19.69	90.59	658.47	-124.38	8,377.57	8,295.88	81.69	102.550	
16,800.00	7,659.00	7,680.15	7,678.32	235.62	19.70	90.61	658.47	-124.38	8,474.67	8,392.95	81.72	103.702	
16,900.00	7,659.00	7,680.54	7,678.71	238.28	19.70	90.62	658.47	-124.38	8,571.83	8,490.08	81.75	104.853	
17,000.00	7,659.00	7,680.92	7,679.09	240.95	19.70	90.63	658.47	-124.38	8,669.06	8,587.27	81.78	106.004	
17,100.00	7,659.00	7,681.31	7,679.48	243.61	19.70	90.64	658.47	-124.37	8,766.34	8,684.53	81.81	107.155	
17,200.00	7,659.00	7,681.70	7,679.87	246.27	19.70	90.65	658.46	-124.37	8,863.69	8,781.85	81.84	108.305	
17,300.00	7,659.00	7,682.08	7,680.25	248.94	19.70	90.66	658.46	-124.37	8,961.10	8,879.23	81.87	109.455	
17,400.00	7,659.00	7,682.47	7,680.64	251.60	19.70	90.67	658.46	-124.37	9,058.56	8,976.66	81.90	110.604	
17,500.00	7,659.00	7,682.85	7,681.02	254.27	19.71	90.68	658.46	-124.37	9,156.08	9,074.15	81.93	111.753	
17,600.00	7,659.00	7,683.24	7,681.40	256.94	19.71	90.69	658.45	-124.37	9,253.65	9,171.69	81.96	112.901	
17,700.00	7,659.00	7,683.62	7,681.79	259.61	19.71	90.70	658.45	-124.37	9,351.28	9,269.28	81.99	114.048	
17,800.00	7,659.00	7,684.00	7,682.17	262.27	19.71	90.72	658.45	-124.36	9,448.95	9,366.92	82.03	115.194	
17,900.00	7,659.00	7,684.39	7,682.56	264.94	19.71	90.73	658.45	-124.36	9,546.67	9,464.61	82.06	116.340	
18,000.00	7,659.00	7,684.77	7,682.94	267.61	19.71	90.74	658.44	-124.36	9,644.44	9,562.35	82.09	117.485	
18,100.00	7,659.00	7,685.16	7,683.33	270.28	19.71	90.75	658.44	-124.36	9,742.25	9,660.13	82.12	118.629	
18,200.00	7,659.00	7,685.57	7,683.74	272.95	19.71	90.76	658.44	-124.36	9,840.11	9,757.95	82.16	119.771	
18,300.00	7,659.00	7,685.98	7,684.15	275.62	19.72	90.77	658.44	-124.36	9,938.01	9,855.81	82.19	120.913	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ WATKINS 30-5-8H - STK 1 - STK 1													Offset Site Error:	0.00 usft
Survey Program: 2112-MWD OWSG, 7241-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	2,036.00	2,035.74	0.00	0.00	-11.40	721.56	-145.51	2,166.61					
100.00	100.00	2,036.00	2,035.74	0.13	0.00	-11.40	721.56	-145.51	2,072.84	2,070.69	2.15	964.086		
200.00	199.98	2,036.00	2,035.74	0.50	0.00	5.65	721.56	-145.51	1,979.05	1,976.88	2.16	914.410		
300.00	299.84	2,036.00	2,035.74	0.86	0.00	6.25	721.56	-145.51	1,884.66	1,882.45	2.21	854.692		
400.00	399.45	2,036.00	2,035.74	1.23	0.00	6.94	721.56	-145.51	1,789.71	1,787.45	2.26	792.989		
500.00	498.70	2,036.00	2,035.74	1.63	0.00	7.76	721.56	-145.51	1,694.21	1,691.89	2.32	730.520		
600.00	597.47	2,036.00	2,035.74	2.05	0.00	8.75	721.56	-145.51	1,598.22	1,595.82	2.39	668.354		
700.00	695.62	2,036.00	2,035.74	2.49	0.00	9.94	721.56	-145.51	1,501.74	1,499.27	2.47	607.376		
800.00	793.06	2,036.00	2,035.74	2.98	0.00	11.39	721.56	-145.51	1,404.82	1,402.26	2.56	548.273		
900.00	889.64	2,036.00	2,035.74	3.50	0.00	13.19	721.56	-145.51	1,307.50	1,304.84	2.66	491.544		
1,000.00	985.27	2,036.00	2,035.74	4.06	0.00	15.46	721.56	-145.51	1,209.79	1,207.02	2.77	437.518		
1,100.00	1,079.82	2,036.00	2,035.74	4.66	0.00	18.36	721.56	-145.51	1,111.74	1,108.86	2.88	386.381		
1,200.00	1,173.23	2,036.00	2,035.74	5.31	0.00	20.85	721.56	-145.51	1,013.42	1,010.42	3.00	337.894		
1,300.00	1,266.35	2,036.00	2,035.74	5.98	0.00	20.85	721.56	-145.51	915.29	912.16	3.13	292.822		
1,400.00	1,359.46	2,036.00	2,035.74	6.66	0.00	20.85	721.56	-145.51	817.61	814.34	3.28	249.288		
1,500.00	1,452.58	2,036.00	2,035.74	7.34	0.00	20.85	721.56	-145.51	720.58	717.11	3.47	207.484		
1,600.00	1,545.69	2,036.00	2,035.74	8.03	0.00	20.85	721.56	-145.51	624.48	620.75	3.72	167.669		
1,700.00	1,638.81	2,036.00	2,035.74	8.72	0.00	20.85	721.56	-145.51	529.82	525.76	4.07	130.249		
1,800.00	1,731.92	2,036.00	2,035.74	9.41	0.00	20.85	721.56	-145.51	437.56	432.99	4.56	95.905		
1,900.00	1,825.04	2,036.00	2,035.74	10.11	0.00	20.85	721.56	-145.51	349.56	344.25	5.31	65.785		
2,000.00	1,918.15	2,036.00	2,035.74	10.81	0.00	20.85	721.56	-145.51	270.06	263.58	6.48	41.668		
2,100.00	2,011.27	2,036.00	2,035.74	11.51	0.00	20.85	721.56	-145.51	208.99	200.90	8.08	25.854		
2,200.00	2,104.39	2,099.42	2,099.15	12.21	0.13	23.51	722.75	-146.02	174.29	165.16	9.13	19.095		
2,300.00	2,197.50	2,194.92	2,194.63	12.91	0.44	29.02	724.14	-146.83	142.39	132.17	10.22	13.930		
2,400.00	2,290.62	2,290.75	2,290.46	13.61	0.77	38.10	723.74	-147.25	110.78	99.13	11.65	9.507		
2,500.00	2,383.73	2,384.45	2,384.12	14.31	1.09	54.26	721.10	-147.10	81.94	68.16	13.79	5.943		
2,600.00	2,476.85	2,475.92	2,475.51	15.01	1.41	81.56	717.35	-146.49	64.72	48.40	16.32	3.965		
2,627.21	2,502.19	2,500.82	2,500.39	15.20	1.50	90.48	716.34	-146.28	63.79	47.09	16.70	3.819	CC, ES, SF	
2,700.00	2,569.96	2,567.51	2,567.02	15.72	1.74	113.36	713.60	-145.75	70.17	53.59	16.58	4.233		
2,800.00	2,663.08	2,659.04	2,658.47	16.42	2.07	135.58	709.80	-145.10	94.34	78.80	15.53	6.073		
2,900.00	2,756.20	2,750.81	2,750.16	17.12	2.40	148.25	706.12	-144.45	126.89	111.77	15.12	8.392		
3,000.00	2,849.31	2,842.48	2,841.76	17.83	2.73	155.74	702.56	-143.88	162.76	147.53	15.24	10.683		
3,100.00	2,942.43	2,933.62	2,932.83	18.53	3.07	160.51	698.99	-143.23	200.31	184.69	15.62	12.828		
3,200.00	3,035.54	3,024.31	3,023.43	19.24	3.40	163.82	695.08	-142.57	239.00	222.88	16.12	14.825		
3,300.00	3,128.66	3,115.08	3,114.10	19.94	3.73	166.29	690.77	-142.04	278.49	261.78	16.71	16.671		
3,400.00	3,221.77	3,207.02	3,205.93	20.65	4.07	168.24	686.21	-141.79	318.35	301.00	17.35	18.348		
3,500.00	3,314.89	3,300.95	3,299.76	21.35	4.41	169.77	682.02	-141.64	358.01	339.95	18.06	19.828		
3,600.00	3,408.01	3,393.36	3,392.10	22.06	4.75	170.99	678.39	-141.89	397.22	378.47	18.75	21.182		
3,700.00	3,501.12	3,483.17	3,481.84	22.77	5.08	171.91	674.83	-141.68	436.76	417.33	19.43	22.481		
3,800.00	3,594.24	3,574.67	3,573.25	23.47	5.41	172.67	670.96	-141.17	476.74	456.60	20.14	23.676		
3,900.00	3,687.35	3,671.09	3,669.60	24.18	5.76	173.39	667.18	-141.15	516.32	495.41	20.91	24.690		
4,000.00	3,780.47	3,774.53	3,773.00	24.89	6.13	174.02	664.61	-141.53	554.62	532.85	21.77	25.475		
4,100.00	3,873.58	3,875.99	3,874.46	25.59	6.48	174.46	664.41	-141.88	590.95	568.36	22.59	26.159		
4,200.00	3,966.70	3,967.89	3,966.36	26.30	6.79	174.81	664.78	-142.30	626.77	603.47	23.30	26.901		
4,300.00	4,059.81	4,054.04	4,052.51	27.01	7.09	175.11	664.46	-142.67	663.30	639.34	23.95	27.692		
4,400.00	4,152.93	4,142.33	4,140.79	27.71	7.40	175.40	663.21	-142.76	700.84	676.20	24.64	28.446		
4,500.00	4,246.05	4,235.23	4,233.68	28.42	7.74	175.65	661.88	-142.49	738.55	713.17	25.38	29.102		
4,600.00	4,339.16	4,329.01	4,327.45	29.13	8.07	175.87	660.64	-142.22	776.17	750.04	26.13	29.706		
4,700.00	4,432.28	4,422.41	4,420.85	29.83	8.40	176.07	659.56	-141.96	813.64	786.77	26.87	30.275		
4,800.00	4,525.39	4,513.66	4,512.09	30.54	8.73	176.23	658.56	-141.51	851.15	823.55	27.60	30.840		
4,900.00	4,618.51	4,604.84	4,603.26	31.25	9.05	176.37	657.36	-140.91	888.91	860.58	28.32	31.384		
5,000.00	4,711.62	4,697.84	4,696.25	31.95	9.39	176.48	656.22	-140.08	926.65	897.59	29.07	31.880		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ WATKINS 30-5-8H - STK 1 - STK 1													Offset Site Error:	0.00 usft
Survey Program: 2112-MWD OWSG, 7241-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,100.00	4,804.74	4,791.79	4,790.19	32.66	9.72	176.60	655.08	-139.28	964.39	934.57	29.82	32.342		
5,200.00	4,897.86	4,886.88	4,885.27	33.37	10.05	176.68	654.34	-138.20	1,001.83	971.25	30.58	32.760		
5,300.00	4,990.97	4,984.43	4,982.81	34.08	10.39	176.74	653.78	-136.87	1,039.17	1,007.81	31.36	33.134		
5,400.00	5,084.09	5,086.12	5,084.48	34.78	10.74	176.76	654.31	-135.31	1,075.60	1,043.42	32.18	33.426		
5,500.00	5,177.20	5,180.32	5,178.67	35.49	11.06	176.77	655.13	-133.78	1,111.76	1,078.84	32.92	33.773		
5,600.00	5,270.32	5,276.33	5,274.67	36.20	11.38	176.83	655.81	-132.97	1,147.80	1,114.13	33.67	34.086		
5,700.00	5,363.43	5,372.85	5,371.18	36.91	11.70	176.90	656.66	-132.66	1,183.54	1,149.11	34.43	34.374		
5,800.00	5,456.55	5,468.39	5,466.72	37.61	12.02	176.96	657.66	-132.40	1,219.12	1,183.94	35.18	34.654		
5,900.00	5,549.67	5,561.52	5,559.84	38.32	12.33	177.03	658.75	-132.25	1,254.57	1,218.66	35.91	34.939		
6,000.00	5,642.78	5,653.53	5,651.85	39.03	12.63	177.09	659.67	-132.08	1,290.16	1,253.54	36.63	35.225		
6,100.00	5,735.90	5,751.16	5,749.48	39.74	12.96	177.15	660.65	-132.05	1,325.71	1,288.31	37.40	35.451		
6,200.00	5,829.01	5,849.03	5,847.34	40.44	13.29	177.24	661.91	-132.60	1,360.82	1,322.65	38.17	35.655		
6,300.00	5,922.13	5,940.64	5,938.94	41.15	13.60	177.32	663.11	-133.26	1,395.88	1,356.99	38.88	35.898		
6,400.00	6,015.24	6,023.80	6,022.08	41.86	13.88	177.40	663.82	-133.99	1,431.29	1,391.76	39.53	36.206		
6,500.00	6,108.36	6,102.34	6,100.63	42.57	14.16	177.49	663.61	-134.75	1,467.66	1,427.52	40.14	36.563		
6,600.00	6,201.47	6,187.60	6,185.87	43.28	14.46	177.58	662.75	-135.39	1,504.75	1,463.93	40.81	36.869		
6,700.00	6,294.59	6,284.52	6,282.79	43.98	14.80	177.68	661.78	-136.03	1,541.86	1,500.27	41.59	37.071		
6,800.00	6,387.71	6,376.58	6,374.85	44.69	15.12	177.73	661.15	-135.87	1,578.96	1,536.63	42.33	37.303		
6,900.00	6,480.82	6,477.66	6,475.92	45.40	15.48	177.75	661.04	-134.94	1,615.76	1,572.62	43.14	37.453		
7,000.00	6,573.94	6,569.43	6,567.69	46.11	15.79	177.77	661.25	-133.97	1,652.32	1,608.45	43.87	37.663		
7,100.00	6,667.05	6,647.40	6,645.65	46.82	16.07	177.78	661.00	-132.97	1,689.42	1,644.93	44.48	37.980		
7,200.00	6,760.17	6,736.26	6,734.50	47.52	16.38	177.79	660.25	-131.69	1,727.02	1,681.83	45.19	38.216		
7,300.00	6,853.28	6,841.18	6,839.41	48.23	16.75	177.80	659.58	-130.24	1,764.44	1,718.40	46.04	38.322		
7,400.00	6,946.40	6,950.12	6,948.34	48.94	17.13	177.80	659.83	-128.90	1,801.03	1,754.10	46.92	38.384		
7,500.00	7,039.52	7,052.45	7,050.66	49.65	17.48	177.81	660.57	-127.98	1,837.11	1,789.37	47.74	38.483		
7,600.00	7,132.94	7,118.00	7,116.20	50.33	17.71	155.72	661.42	-127.58	1,871.33	1,823.10	48.24	38.794		
7,700.00	7,225.98	7,173.06	7,171.17	50.90	17.82	128.71	661.89	-124.89	1,901.63	1,853.11	48.52	39.191		
7,800.00	7,315.86	7,241.00	7,238.35	51.34	17.96	110.16	661.31	-114.92	1,928.86	1,879.99	48.87	39.465		
7,900.00	7,399.85	7,241.00	7,238.35	51.68	17.96	98.01	661.31	-114.92	1,950.66	1,901.97	48.69	40.061		
8,000.00	7,475.41	7,273.00	7,269.44	51.91	17.97	90.59	660.44	-107.45	1,968.54	1,919.81	48.73	40.397		
8,100.00	7,540.24	7,420.87	7,408.86	52.05	18.03	87.91	658.12	-58.63	1,981.08	1,931.43	49.65	39.901		
8,200.00	7,592.37	7,462.00	7,446.38	52.11	18.06	85.73	659.33	-41.83	1,984.49	1,934.46	50.03	39.665		
8,300.00	7,630.20	7,493.00	7,474.39	52.09	18.08	84.84	659.75	-28.56	1,983.55	1,932.98	50.56	39.229		
8,400.00	7,652.61	7,525.00	7,502.86	52.01	18.12	85.13	659.37	-13.95	1,979.08	1,927.72	51.35	38.539		
8,500.00	7,659.00	7,536.32	7,512.76	51.89	18.13	85.79	659.03	-8.48	1,971.47	1,919.23	52.24	37.737		
8,600.00	7,659.00	7,556.00	7,529.67	51.77	18.16	86.28	658.27	1.55	1,965.55	1,912.18	53.37	36.828		
8,700.00	7,659.00	7,733.60	7,662.27	51.67	18.74	90.15	654.72	118.30	1,963.35	1,907.58	55.76	35.209		
8,800.00	7,659.00	7,803.11	7,701.50	51.61	19.17	91.30	656.14	175.61	1,959.83	1,902.23	57.60	34.025		
8,900.00	7,659.00	7,880.54	7,735.26	51.58	19.85	92.29	656.61	245.19	1,958.57	1,898.84	59.74	32.787		
9,000.00	7,659.00	8,024.99	7,774.31	51.59	21.60	93.44	658.20	383.99	1,956.87	1,893.77	63.10	31.014		
9,100.00	7,659.00	8,136.77	7,786.29	51.67	23.33	93.80	660.53	494.97	1,953.43	1,887.00	66.43	29.404		
9,200.00	7,659.00	8,225.86	7,785.33	51.83	24.87	93.77	661.16	584.03	1,950.65	1,881.03	69.62	28.019		
9,300.00	7,659.00	8,345.64	7,780.76	52.14	27.16	93.65	662.85	703.71	1,946.94	1,873.26	73.67	26.427		
9,400.00	7,659.00	8,436.26	7,779.41	52.67	29.00	93.61	664.18	794.31	1,943.40	1,866.07	77.33	25.131		
9,500.00	7,659.00	8,527.02	7,780.08	53.53	30.93	93.64	665.19	885.06	1,940.36	1,859.21	81.15	23.910		
9,600.00	7,659.00	8,614.78	7,781.20	54.75	32.86	93.68	665.77	972.80	1,937.81	1,852.78	85.03	22.789		
9,700.00	7,659.00	8,702.41	7,782.40	56.29	34.84	93.71	665.69	1,060.43	1,936.01	1,847.00	89.01	21.750		
9,800.00	7,659.00	8,797.50	7,782.69	58.05	37.04	93.73	665.15	1,155.51	1,934.62	1,841.33	93.28	20.739		
9,900.00	7,659.00	8,898.47	7,782.77	59.97	39.43	93.73	664.43	1,256.48	1,933.35	1,835.54	97.81	19.766		
10,000.00	7,659.00	9,001.33	7,782.56	62.00	41.90	93.73	663.88	1,359.34	1,931.89	1,829.42	102.47	18.853		
10,100.00	7,659.00	9,104.61	7,781.17	64.11	44.42	93.69	663.33	1,462.61	1,930.36	1,823.13	107.22	18.003		
10,200.00	7,659.00	9,217.21	7,781.09	66.28	47.20	93.69	663.28	1,575.21	1,928.43	1,816.11	112.31	17.170		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - EXIST HZ WATKINS 30-5-8H - STK 1 - STK 1													Offset Site Error:	0.00 usft
Survey Program: 2112-MWD OWSG, 7241-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,300.00	7,659.00	9,317.03	7,782.47	68.51	49.68	93.74	663.76	1,675.01	1,926.06	1,808.96	117.09	16.449		
10,400.00	7,659.00	9,415.93	7,781.68	70.77	52.17	93.72	664.00	1,773.91	1,923.78	1,801.90	121.89	15.783		
10,500.00	7,659.00	9,523.56	7,778.41	73.06	54.88	93.62	664.28	1,881.48	1,921.35	1,794.37	126.98	15.131		
10,600.00	7,659.00	9,615.70	7,775.22	75.39	57.22	93.53	664.48	1,973.56	1,918.93	1,787.29	131.64	14.577		
10,700.00	7,659.00	9,699.13	7,773.22	77.74	59.35	93.48	664.20	2,056.97	1,917.14	1,781.07	136.07	14.090		
10,800.00	7,659.00	9,808.77	7,771.15	80.12	62.17	93.42	663.63	2,166.59	1,915.58	1,774.24	141.34	13.553		
10,900.00	7,659.00	9,925.97	7,771.87	82.51	65.19	93.44	664.04	2,283.78	1,913.29	1,766.41	146.88	13.026		
11,000.00	7,659.00	10,031.21	7,774.49	84.93	67.91	93.53	665.42	2,388.98	1,910.14	1,758.06	152.08	12.560		
11,100.00	7,659.00	10,125.90	7,775.49	87.36	70.37	93.56	666.22	2,483.66	1,907.37	1,750.41	156.96	12.152		
11,200.00	7,659.00	10,220.65	7,775.58	89.81	72.83	93.57	667.03	2,578.40	1,904.56	1,742.69	161.87	11.766		
11,300.00	7,659.00	10,307.26	7,773.14	92.27	75.09	93.50	666.94	2,664.97	1,902.50	1,735.98	166.53	11.425		
11,400.00	7,659.00	10,402.76	7,770.35	94.75	77.58	93.42	666.49	2,760.44	1,900.82	1,729.34	171.48	11.085		
11,500.00	7,659.00	10,508.20	7,766.08	97.23	80.34	93.29	665.76	2,865.79	1,899.30	1,722.53	176.78	10.744		
11,600.00	7,659.00	10,623.24	7,763.95	99.73	83.36	93.23	666.02	2,980.80	1,896.98	1,714.58	182.40	10.400		
11,700.00	7,659.00	10,702.26	7,763.28	102.24	85.44	93.22	666.26	3,059.81	1,894.70	1,707.83	186.87	10.139		
11,800.00	7,659.00	10,784.46	7,762.48	104.75	87.60	93.19	665.24	3,142.01	1,893.86	1,702.43	191.44	9.893		
11,900.00	7,659.00	10,884.00	7,761.11	107.28	90.22	93.15	663.82	3,241.52	1,893.22	1,696.63	196.59	9.630		
12,000.00	7,659.00	10,980.74	7,758.33	109.81	92.78	93.07	662.18	3,338.21	1,892.78	1,691.12	201.67	9.386		
12,100.00	7,659.00	11,073.48	7,756.09	112.35	95.23	93.00	660.49	3,430.91	1,892.50	1,685.89	206.61	9.160		
12,100.20	7,659.00	11,073.65	7,756.09	112.36	95.23	93.00	660.49	3,431.08	1,892.50	1,685.88	206.62	9.159		
12,200.00	7,659.00	11,160.56	7,752.63	114.90	97.53	92.90	658.28	3,517.90	1,892.85	1,681.49	211.36	8.956		
12,300.00	7,659.00	11,291.17	7,748.21	117.46	100.98	92.76	654.91	3,648.38	1,893.46	1,675.82	217.64	8.700		
12,400.00	7,659.00	11,423.07	7,746.64	120.02	104.48	92.72	654.93	3,780.27	1,891.31	1,667.39	223.92	8.447		
12,500.00	7,659.00	11,511.29	7,746.05	122.58	106.82	92.70	655.13	3,868.48	1,889.06	1,660.30	228.76	8.258		
12,600.00	7,659.00	11,617.50	7,745.51	125.15	109.63	92.69	655.41	3,974.69	1,886.79	1,652.59	234.20	8.056		
12,700.00	7,659.00	11,707.57	7,745.18	127.73	112.03	92.68	655.44	4,064.76	1,884.75	1,645.64	239.12	7.882		
12,800.00	7,659.00	11,809.22	7,743.64	130.31	114.73	92.64	655.06	4,166.40	1,883.08	1,638.66	244.42	7.704		
12,900.00	7,659.00	11,918.04	7,741.46	132.90	117.62	92.57	655.48	4,275.20	1,880.60	1,630.63	249.97	7.523		
13,000.00	7,659.00	12,000.69	7,739.47	135.49	119.81	92.52	655.28	4,357.82	1,878.74	1,624.09	254.65	7.378		
13,100.00	7,659.00	12,093.34	7,736.60	138.08	122.28	92.43	654.38	4,450.42	1,877.59	1,617.93	259.66	7.231		
13,153.89	7,659.00	12,116.00	7,735.87	139.48	122.88	92.41	654.13	4,473.07	1,877.13	1,615.73	261.40	7.181		
13,200.00	7,659.00	12,116.00	7,735.87	140.68	122.88	92.41	654.13	4,473.07	1,877.72	1,615.65	262.06	7.165		
13,300.00	7,659.00	12,116.00	7,735.87	143.28	122.88	92.41	654.13	4,473.07	1,882.29	1,619.28	263.01	7.157		
13,400.00	7,659.00	12,116.00	7,735.87	145.88	122.88	92.41	654.13	4,473.07	1,892.15	1,628.88	263.27	7.187		
13,500.00	7,659.00	12,116.00	7,735.87	148.48	122.88	92.41	654.13	4,473.07	1,907.21	1,644.34	262.86	7.256		
13,600.00	7,659.00	12,116.00	7,735.87	151.09	122.88	92.41	654.13	4,473.07	1,927.34	1,665.53	261.82	7.361		
13,700.00	7,659.00	12,116.00	7,735.87	153.70	122.88	92.41	654.13	4,473.07	1,952.40	1,692.22	260.18	7.504		
13,800.00	7,659.00	12,116.00	7,735.87	156.32	122.88	92.41	654.13	4,473.07	1,982.19	1,724.17	258.02	7.682		
13,900.00	7,659.00	12,116.00	7,735.87	158.94	122.88	92.41	654.13	4,473.07	2,016.50	1,761.12	255.38	7.896		
14,000.00	7,659.00	12,116.00	7,735.87	161.56	122.88	92.41	654.13	4,473.07	2,055.11	1,802.76	252.35	8.144		
14,100.00	7,659.00	12,116.00	7,735.87	164.18	122.88	92.41	654.13	4,473.07	2,097.78	1,848.79	248.99	8.425		
14,200.00	7,659.00	12,116.00	7,735.87	166.80	122.88	92.41	654.13	4,473.07	2,144.27	1,898.91	245.36	8.739		
14,300.00	7,659.00	12,116.00	7,735.87	169.43	122.88	92.41	654.13	4,473.07	2,194.33	1,952.81	241.52	9.085		
14,400.00	7,659.00	12,116.00	7,735.87	172.06	122.88	92.41	654.13	4,473.07	2,247.73	2,010.19	237.54	9.463		
14,500.00	7,659.00	12,116.00	7,735.87	174.69	122.88	92.41	654.13	4,473.07	2,304.24	2,070.78	233.46	9.870		
14,600.00	7,659.00	12,116.00	7,735.87	177.33	122.88	92.41	654.13	4,473.07	2,363.62	2,134.30	229.33	10.307		
14,700.00	7,659.00	12,116.00	7,735.87	179.96	122.88	92.41	654.13	4,473.07	2,425.68	2,200.50	225.18	10.772		
14,800.00	7,659.00	12,116.00	7,735.87	182.60	122.88	92.41	654.13	4,473.07	2,490.21	2,269.16	221.04	11.266		
14,900.00	7,659.00	12,116.00	7,735.87	185.24	122.88	92.41	654.13	4,473.07	2,557.02	2,340.07	216.95	11.786		
15,000.00	7,659.00	12,116.00	7,735.87	187.88	122.88	92.41	654.13	4,473.07	2,625.94	2,413.02	212.92	12.333		
15,100.00	7,659.00	12,116.00	7,735.87	190.52	122.88	92.41	654.13	4,473.07	2,696.80	2,487.84	208.96	12.906		
15,200.00	7,659.00	12,116.00	7,735.87	193.16	122.88	92.41	654.13	4,473.07	2,769.47	2,564.36	205.10	13.503		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design												SEC 30-T4S-R64W - EXIST HZ WATKINS 30-5-8H - STK 1 - STK 1		Offset Site Error:		0.00 usft	
Survey Program:												2112-MWD OWSG, 7241-MWD OWSG		Offset Well Error:		0.00 usft	
Reference		Offset		Semi Major Axis		Distance							Warning				
Measured Depth Depth (usft)	Vertical Depth (usft)	Measured Depth 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)	Minimum Separation (usft)	Separation Factor					
15,300.00	7,659.00	12,116.00	7,735.87	195.81	122.88	92.41	654.13	4,473.07	2,843.79	2,642.45	201.35	14.124					
15,400.00	7,659.00	12,116.00	7,735.87	198.45	122.88	92.41	654.13	4,473.07	2,919.65	2,721.96	197.70	14.768					
15,500.00	7,659.00	12,116.00	7,735.87	201.10	122.88	92.41	654.13	4,473.07	2,996.93	2,802.77	194.16	15.435					
15,600.00	7,659.00	12,116.00	7,735.87	203.75	122.88	92.41	654.13	4,473.07	3,075.51	2,884.78	190.74	16.124					
15,700.00	7,659.00	12,116.00	7,735.87	206.40	122.88	92.41	654.13	4,473.07	3,155.31	2,967.88	187.43	16.835					
15,800.00	7,659.00	12,116.00	7,735.87	209.05	122.88	92.41	654.13	4,473.07	3,236.23	3,051.99	184.24	17.565					
15,900.00	7,659.00	12,116.00	7,735.87	211.70	122.88	92.41	654.13	4,473.07	3,318.19	3,137.02	181.17	18.316					
16,000.00	7,659.00	12,116.00	7,735.87	214.36	122.88	92.41	654.13	4,473.07	3,401.12	3,222.91	178.21	19.085					
16,100.00	7,659.00	12,116.00	7,735.87	217.01	122.88	92.41	654.13	4,473.07	3,484.94	3,309.58	175.36	19.873					
16,200.00	7,659.00	12,116.00	7,735.87	219.67	122.88	92.41	654.13	4,473.07	3,569.60	3,396.98	172.62	20.679					
16,300.00	7,659.00	12,116.00	7,735.87	222.32	122.88	92.41	654.13	4,473.07	3,655.03	3,485.05	169.98	21.503					
16,400.00	7,659.00	12,116.00	7,735.87	224.98	122.88	92.41	654.13	4,473.07	3,741.18	3,573.74	167.44	22.343					
16,500.00	7,659.00	12,116.00	7,735.87	227.64	122.88	92.41	654.13	4,473.07	3,828.01	3,663.00	165.01	23.199					
16,600.00	7,659.00	12,116.00	7,735.87	230.30	122.88	92.41	654.13	4,473.07	3,915.46	3,752.80	162.66	24.071					
16,700.00	7,659.00	12,116.00	7,735.87	232.96	122.88	92.41	654.13	4,473.07	4,003.50	3,843.09	160.41	24.958					
16,800.00	7,659.00	12,116.00	7,735.87	235.62	122.88	92.41	654.13	4,473.07	4,092.10	3,933.85	158.25	25.859					
16,900.00	7,659.00	12,116.00	7,735.87	238.28	122.88	92.41	654.13	4,473.07	4,181.20	4,025.04	156.16	26.774					
17,000.00	7,659.00	12,116.00	7,735.87	240.95	122.88	92.41	654.13	4,473.07	4,270.79	4,116.63	154.16	27.703					
17,100.00	7,659.00	12,116.00	7,735.87	243.61	122.88	92.41	654.13	4,473.07	4,360.83	4,208.59	152.24	28.645					
17,200.00	7,659.00	12,116.00	7,735.87	246.27	122.88	92.41	654.13	4,473.07	4,451.30	4,300.91	150.39	29.599					
17,300.00	7,659.00	12,116.00	7,735.87	248.94	122.88	92.41	654.13	4,473.07	4,542.17	4,393.56	148.61	30.565					
17,400.00	7,659.00	12,116.00	7,735.87	251.60	122.88	92.41	654.13	4,473.07	4,633.41	4,486.52	146.89	31.543					
17,500.00	7,659.00	12,116.00	7,735.87	254.27	122.88	92.41	654.13	4,473.07	4,725.01	4,579.76	145.24	32.531					
17,600.00	7,659.00	12,116.00	7,735.87	256.94	122.88	92.41	654.13	4,473.07	4,816.94	4,673.28	143.66	33.531					
17,700.00	7,659.00	12,116.00	7,735.87	259.61	122.88	92.41	654.13	4,473.07	4,909.19	4,767.06	142.13	34.541					
17,800.00	7,659.00	12,116.00	7,735.87	262.27	122.88	92.41	654.13	4,473.07	5,001.73	4,861.08	140.66	35.560					
17,900.00	7,659.00	12,116.00	7,735.87	264.94	122.88	92.41	654.13	4,473.07	5,094.56	4,955.32	139.24	36.589					
18,000.00	7,659.00	12,116.00	7,735.87	267.61	122.88	92.41	654.13	4,473.07	5,187.65	5,049.78	137.87	37.627					
18,100.00	7,659.00	12,116.00	7,735.87	270.28	122.88	92.41	654.13	4,473.07	5,281.00	5,144.45	136.55	38.674					
18,200.00	7,659.00	12,116.00	7,735.87	272.95	122.88	92.41	654.13	4,473.07	5,374.58	5,239.30	135.28	39.729					
18,300.00	7,659.00	12,116.00	7,735.87	275.62	122.88	92.41	654.13	4,473.07	5,468.40	5,334.34	134.05	40.793					
18,400.00	7,659.00	12,116.00	7,735.87	278.29	122.88	92.41	654.13	4,473.07	5,562.42	5,429.55	132.87	41.864					
18,500.00	7,659.00	12,116.00	7,735.87	280.97	122.88	92.41	654.13	4,473.07	5,656.66	5,524.93	131.73	42.942					
18,558.76	7,659.00	12,116.00	7,735.87	282.54	122.88	92.41	654.13	4,473.07	5,712.12	5,581.04	131.08	43.579					

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - SI HZ WATKINS 30-5-5GH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 185-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-9.39	811.58	-134.27	822.62					
100.00	100.00	98.87	98.87	0.13	0.15	-9.39	811.54	-134.24	822.56	822.28	0.29	2,849.457		
200.00	199.98	199.73	199.73	0.50	0.31	7.18	811.39	-134.16	820.67	819.86	0.81	1,015.878		
300.00	299.84	298.32	298.32	0.86	0.69	7.25	811.31	-133.98	815.38	813.82	1.56	523.960		
400.00	399.45	398.11	398.11	1.23	1.05	7.37	811.29	-133.72	806.67	804.39	2.28	353.618		
500.00	498.70	497.20	497.19	1.63	1.40	7.54	811.27	-133.27	794.49	791.48	3.01	264.248		
600.00	597.47	595.80	595.79	2.05	1.75	7.77	811.33	-132.78	778.96	775.23	3.73	208.648		
700.00	695.62	693.86	693.86	2.49	2.10	8.05	811.32	-132.35	759.99	755.53	4.46	170.305		
800.00	793.06	790.04	790.04	2.98	2.45	8.39	811.43	-131.94	737.76	732.57	5.19	142.198		
900.00	889.64	885.78	885.78	3.50	2.79	8.81	811.69	-131.55	712.36	706.44	5.92	120.403		
1,000.00	985.27	980.94	980.93	4.06	3.12	9.32	812.04	-131.13	683.75	677.10	6.65	102.843		
1,100.00	1,079.82	1,075.76	1,075.75	4.66	3.46	9.95	812.43	-130.66	651.93	644.54	7.39	88.250		
1,200.00	1,173.23	1,168.71	1,168.70	5.31	3.79	10.67	812.82	-130.06	617.07	608.94	8.13	75.887		
1,300.00	1,266.35	1,261.55	1,261.53	5.98	4.12	11.40	813.31	-129.49	581.63	572.76	8.87	65.594		
1,400.00	1,359.46	1,353.84	1,353.83	6.66	4.45	12.20	813.88	-129.00	546.36	536.75	9.61	56.852		
1,500.00	1,452.58	1,447.17	1,447.15	7.34	4.78	13.13	814.57	-128.52	511.32	500.95	10.37	49.329		
1,600.00	1,545.69	1,541.27	1,541.24	8.03	5.12	14.20	815.17	-128.03	476.32	465.19	11.13	42.779		
1,700.00	1,638.81	1,633.91	1,633.89	8.72	5.45	15.42	815.71	-127.48	441.44	429.52	11.92	37.048		
1,800.00	1,731.92	1,726.97	1,726.94	9.41	5.78	16.86	816.38	-126.95	406.90	394.19	12.71	32.005		
1,900.00	1,825.04	1,819.99	1,819.95	10.11	6.11	18.53	817.11	-126.54	372.68	359.14	13.53	27.538		
2,000.00	1,918.15	1,912.65	1,912.60	10.81	6.44	20.52	817.96	-126.19	338.93	324.55	14.38	23.564		
2,100.00	2,011.27	2,006.00	2,005.95	11.51	6.77	22.96	818.94	-125.80	305.77	290.50	15.28	20.016		
2,200.00	2,104.39	2,098.68	2,098.63	12.21	7.10	25.92	820.03	-125.49	273.33	257.10	16.23	16.841		
2,300.00	2,197.50	2,188.43	2,188.35	12.91	7.41	29.35	822.01	-125.67	242.61	225.34	17.27	14.050		
2,400.00	2,290.62	2,278.29	2,278.14	13.61	7.73	33.52	825.69	-125.97	214.70	196.28	18.41	11.659		
2,500.00	2,383.73	2,368.86	2,368.52	14.31	8.05	38.71	831.32	-125.93	190.35	170.64	19.70	9.660		
2,600.00	2,476.85	2,459.14	2,458.43	15.01	8.37	44.77	839.51	-125.94	170.55	149.42	21.13	8.071		
2,700.00	2,569.96	2,551.24	2,549.77	15.72	8.70	51.50	851.26	-126.24	156.21	133.56	22.65	6.898		
2,800.00	2,663.08	2,645.02	2,642.32	16.42	9.05	58.60	866.39	-126.74	147.07	122.88	24.19	6.080		
2,900.00	2,756.20	2,739.70	2,735.15	17.12	9.41	65.43	884.94	-127.45	142.80	117.12	25.68	5.561		
2,951.28	2,803.95	2,788.84	2,783.04	17.49	9.60	68.64	895.95	-127.91	142.33	115.92	26.40	5.391 CC		
3,000.00	2,849.31	2,835.89	2,828.75	17.83	9.79	71.52	907.09	-128.31	142.71	115.64	27.07	5.271 ES		
3,100.00	2,942.43	2,933.82	2,923.53	18.53	10.19	76.94	931.70	-129.12	145.42	117.02	28.40	5.120		
3,200.00	3,035.54	3,032.05	3,018.27	19.24	10.61	81.67	957.63	-130.01	149.89	120.23	29.66	5.053		
3,300.00	3,128.66	3,131.27	3,113.88	19.94	11.04	86.06	984.15	-130.72	155.63	124.74	30.89	5.039		
3,400.00	3,221.77	3,231.26	3,210.58	20.65	11.49	90.60	1,009.59	-131.36	161.96	129.89	32.07	5.051		
3,500.00	3,314.89	3,330.61	3,306.83	21.35	11.93	94.97	1,034.19	-132.25	168.84	135.67	33.17	5.090		
3,600.00	3,408.01	3,429.74	3,402.77	22.06	12.39	98.84	1,059.11	-133.34	176.46	142.24	34.22	5.157		
3,700.00	3,501.12	3,526.02	3,495.99	22.77	12.84	102.34	1,083.18	-133.67	185.57	150.40	35.18	5.275		
3,800.00	3,594.24	3,623.99	3,590.91	23.47	13.30	105.64	1,107.44	-133.07	196.29	160.17	36.12	5.434		
3,900.00	3,687.35	3,723.48	3,687.30	24.18	13.77	108.63	1,132.08	-132.36	207.70	170.64	37.06	5.604		
4,000.00	3,780.47	3,824.76	3,785.74	24.89	14.24	111.73	1,155.87	-132.71	218.70	180.74	37.96	5.762		
4,100.00	3,873.58	3,923.70	3,882.14	25.59	14.71	114.73	1,178.11	-133.69	229.79	191.02	38.77	5.927		
4,200.00	3,966.70	4,022.41	3,978.17	26.30	15.18	117.29	1,200.96	-134.61	241.36	201.78	39.58	6.098		
4,300.00	4,059.81	4,120.94	4,073.99	27.01	15.65	119.58	1,223.89	-135.38	253.49	213.10	40.39	6.276		
4,400.00	4,152.93	4,220.23	4,170.21	27.71	16.14	121.35	1,248.39	-135.86	265.87	224.61	41.26	6.444		
4,500.00	4,246.05	4,318.92	4,265.83	28.42	16.63	122.95	1,272.79	-136.42	278.39	236.27	42.12	6.610		
4,600.00	4,339.16	4,418.17	4,362.14	29.13	17.12	124.53	1,296.75	-137.00	291.27	248.31	42.96	6.779		
4,700.00	4,432.28	4,516.81	4,457.86	29.83	17.60	125.99	1,320.58	-137.91	304.05	260.25	43.80	6.942		
4,800.00	4,525.39	4,614.27	4,552.63	30.54	18.09	127.45	1,343.28	-138.63	317.50	272.90	44.60	7.119		
4,900.00	4,618.51	4,710.41	4,645.94	31.25	18.56	128.60	1,366.45	-138.56	331.55	286.13	45.42	7.299		
5,000.00	4,711.62	4,809.66	4,742.27	31.95	19.06	129.64	1,390.33	-137.74	346.43	300.12	46.30	7.482		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - SI HZ WATKINS 30-5-5GH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 185-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,100.00	4,804.74	4,906.87	4,836.39	32.66	19.55	130.44	1,414.61	-136.91	361.04	313.85	47.19	7.650		
5,200.00	4,897.86	5,004.74	4,931.31	33.37	20.05	131.24	1,438.45	-135.58	376.43	328.34	48.09	7.828		
5,300.00	4,990.97	5,100.99	5,024.31	34.08	20.55	131.74	1,463.12	-133.49	392.05	343.02	49.03	7.997		
5,400.00	5,084.09	5,195.41	5,115.80	34.78	21.03	132.30	1,486.32	-130.96	408.61	358.70	49.91	8.187		
5,500.00	5,177.20	5,299.94	5,217.25	35.49	21.56	132.96	1,511.39	-128.33	425.36	374.44	50.91	8.354		
5,600.00	5,270.32	5,399.42	5,313.29	36.20	22.08	133.33	1,537.19	-126.20	440.88	388.96	51.92	8.492		
5,700.00	5,363.43	5,497.15	5,407.78	36.91	22.59	133.72	1,562.07	-124.20	456.58	403.70	52.88	8.634		
5,800.00	5,456.55	5,591.31	5,499.13	37.61	23.07	134.21	1,584.86	-122.31	472.86	419.10	53.76	8.796		
5,900.00	5,549.67	5,683.48	5,589.08	38.32	23.52	134.92	1,604.84	-120.60	490.31	435.78	54.52	8.992		
6,000.00	5,642.78	5,788.51	5,692.16	39.03	24.01	136.02	1,624.95	-120.11	507.93	452.60	55.33	9.180		
6,100.00	5,735.90	5,875.58	5,778.08	39.74	24.39	137.21	1,638.97	-121.07	525.99	470.18	55.81	9.424		
6,200.00	5,829.01	5,963.33	5,865.16	40.44	24.75	138.64	1,649.76	-122.21	546.19	490.01	56.18	9.723		
6,300.00	5,922.13	6,049.76	5,951.20	41.15	25.07	140.18	1,657.78	-123.29	568.48	512.04	56.44	10.073		
6,400.00	6,015.24	6,130.26	6,031.53	41.86	25.36	141.69	1,662.95	-123.94	593.23	536.68	56.56	10.489		
6,500.00	6,108.36	6,210.28	6,111.52	42.57	25.61	143.25	1,665.35	-123.95	621.06	564.46	56.60	10.972		
6,600.00	6,201.47	6,295.24	6,196.47	43.28	25.87	144.86	1,666.30	-123.15	651.27	594.56	56.71	11.484		
6,700.00	6,294.59	6,386.05	6,287.27	43.98	26.14	146.45	1,666.74	-121.99	682.66	625.72	56.93	11.991		
6,800.00	6,387.71	6,477.16	6,378.37	44.69	26.40	148.02	1,666.08	-121.49	714.80	657.65	57.15	12.507		
6,900.00	6,480.82	6,568.72	6,469.92	45.40	26.65	149.51	1,664.84	-121.25	747.65	690.26	57.39	13.027		
7,000.00	6,573.94	6,663.90	6,565.09	46.11	26.92	150.93	1,663.69	-120.89	780.91	723.17	57.73	13.526		
7,100.00	6,667.05	6,759.57	6,660.76	46.82	27.18	152.29	1,662.43	-121.53	813.96	755.87	58.10	14.011		
7,200.00	6,760.17	6,847.49	6,748.66	47.52	27.43	153.47	1,660.82	-122.10	847.76	789.38	58.38	14.522		
7,300.00	6,853.28	6,941.62	6,842.78	48.23	27.70	154.57	1,659.76	-121.88	881.92	823.12	58.80	14.998		
7,400.00	6,946.40	7,032.64	6,933.79	48.94	27.97	155.46	1,659.58	-120.58	916.38	857.12	59.25	15.465		
7,500.00	7,039.52	7,122.93	7,024.06	49.65	28.24	156.25	1,659.60	-118.74	951.24	891.51	59.73	15.925		
7,600.00	7,132.94	7,212.76	7,113.87	50.33	28.51	156.68	1,659.48	-116.56	983.59	923.43	60.16	16.348		
7,700.00	7,225.98	7,274.82	7,175.87	50.90	28.70	157.55	1,659.41	-114.04	1,006.88	946.86	60.01	16.777		
7,800.00	7,315.86	7,313.46	7,214.18	51.34	28.82	93.36	1,659.42	-109.19	1,024.00	964.70	59.30	17.268		
7,900.00	7,399.85	7,361.00	7,260.51	51.68	28.96	83.38	1,659.37	-98.59	1,035.54	976.89	58.65	17.657		
8,000.00	7,475.41	7,406.32	7,303.87	51.91	29.09	77.87	1,659.16	-85.39	1,040.76	982.83	57.93	17.966		
8,100.00	7,540.24	7,465.45	7,359.27	52.05	29.26	75.68	1,658.92	-64.79	1,039.41	981.70	57.71	18.011		
8,200.00	7,592.37	7,524.27	7,412.98	52.11	29.43	75.63	1,659.18	-40.83	1,031.57	973.78	57.79	17.851		
8,300.00	7,630.20	7,567.90	7,451.80	52.09	29.55	76.70	1,659.15	-20.92	1,018.86	960.96	57.90	17.598		
8,400.00	7,652.61	7,609.31	7,487.52	52.01	29.66	78.92	1,658.62	0.02	1,002.98	944.46	58.52	17.140		
8,500.00	7,659.00	7,654.20	7,524.75	51.89	29.77	82.16	1,657.83	25.05	985.04	925.22	59.83	16.465		
8,600.00	7,659.00	7,715.02	7,572.33	51.77	29.93	84.96	1,657.22	62.90	970.47	908.63	61.83	15.695		
8,700.00	7,659.00	7,780.96	7,620.13	51.67	30.11	87.80	1,657.36	108.30	961.59	897.56	64.03	15.018		
8,800.00	7,659.00	7,848.81	7,664.95	51.61	30.30	90.48	1,657.35	159.19	958.19	891.93	66.26	14.460		
8,823.23	7,659.00	7,866.97	7,675.93	51.60	30.35	91.13	1,657.28	173.66	958.08	891.26	66.82	14.339		
8,900.00	7,659.00	7,932.87	7,712.35	51.58	30.57	93.31	1,656.80	228.55	959.12	890.44	68.68	13.965		
9,000.00	7,659.00	8,054.40	7,760.26	51.59	31.14	96.17	1,656.59	339.88	960.91	889.32	71.59	13.423		
9,100.00	7,659.00	8,168.43	7,781.19	51.67	32.02	97.43	1,656.81	451.79	960.91	886.40	74.51	12.896		
9,200.00	7,659.00	8,324.19	7,781.28	51.83	33.78	97.47	1,658.57	607.42	957.84	879.31	78.53	12.197		
9,300.00	7,659.00	8,412.89	7,778.31	52.14	35.02	97.33	1,661.57	696.01	952.12	870.63	81.49	11.684		
9,400.00	7,659.00	8,489.71	7,775.78	52.67	36.18	97.20	1,662.49	772.78	948.55	864.24	84.30	11.252		
9,500.00	7,659.00	8,568.85	7,774.21	53.53	37.46	97.11	1,661.69	851.90	947.32	860.03	87.28	10.853		
9,559.21	7,659.00	8,626.39	7,773.92	54.21	38.45	97.09	1,660.57	909.43	947.26	857.83	89.44	10.591		
9,600.00	7,659.00	8,666.02	7,774.11	54.75	39.14	97.10	1,659.78	949.05	947.29	856.37	90.92	10.419		
9,700.00	7,659.00	8,759.89	7,774.29	56.29	40.86	97.11	1,657.49	1,042.89	947.77	853.15	94.61	10.018		
9,800.00	7,659.00	8,859.81	7,774.20	58.05	42.78	97.10	1,654.67	1,142.77	948.59	849.96	98.62	9.618		
9,900.00	7,659.00	8,967.46	7,773.42	59.97	44.95	97.05	1,652.06	1,250.38	948.93	845.89	103.04	9.210		
10,000.00	7,659.00	9,074.93	7,772.10	62.00	47.19	96.97	1,650.15	1,357.83	948.59	841.01	107.57	8.818		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - SI HZ WATKINS 30-5-5GH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 185-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,100.00	7,659.00	9,192.41	7,770.81	64.11	49.73	96.90	1,649.57	1,475.30	947.00	834.41	112.59	8.411		
10,200.00	7,659.00	9,297.73	7,770.55	66.28	52.06	96.91	1,650.83	1,580.62	943.80	826.54	117.26	8.049		
10,300.00	7,659.00	9,401.26	7,771.78	68.51	54.41	97.01	1,652.43	1,684.12	940.44	818.50	121.94	7.712		
10,400.00	7,659.00	9,507.70	7,773.43	70.77	56.86	97.15	1,654.75	1,790.53	936.50	809.70	126.80	7.386		
10,500.00	7,659.00	9,606.03	7,773.38	73.06	59.16	97.18	1,656.98	1,888.83	932.28	800.88	131.40	7.095		
10,600.00	7,659.00	9,696.69	7,772.90	75.39	61.30	97.17	1,658.44	1,979.47	928.66	792.91	135.74	6.841		
10,700.00	7,659.00	9,793.99	7,772.69	77.74	63.63	97.18	1,659.40	2,076.77	925.68	785.29	140.39	6.594		
10,800.00	7,659.00	9,898.47	7,772.11	80.12	66.15	97.17	1,660.57	2,181.23	922.53	777.15	145.37	6.346		
10,900.00	7,659.00	9,994.07	7,772.23	82.51	68.47	97.20	1,661.69	2,276.84	919.42	769.39	150.02	6.128		
11,000.00	7,659.00	10,088.82	7,772.43	84.93	70.79	97.23	1,662.27	2,371.58	916.87	762.20	154.66	5.928		
11,100.00	7,659.00	10,185.43	7,772.04	87.36	73.17	97.23	1,662.47	2,468.19	914.65	755.23	159.41	5.738		
11,200.00	7,659.00	10,270.86	7,770.41	89.81	75.29	97.13	1,661.51	2,553.59	913.55	749.87	163.68	5.581		
11,247.22	7,659.00	10,315.05	7,769.42	90.97	76.39	97.07	1,660.59	2,597.77	913.47	747.59	165.88	5.507		
11,300.00	7,659.00	10,364.64	7,768.79	92.27	77.63	97.03	1,659.44	2,647.34	913.56	745.22	168.34	5.427		
11,400.00	7,659.00	10,463.55	7,768.18	94.75	80.10	96.99	1,656.92	2,746.21	914.05	740.78	173.27	5.275		
11,500.00	7,659.00	10,578.90	7,767.68	97.23	83.00	96.96	1,655.02	2,861.55	913.66	734.65	179.01	5.104		
11,600.00	7,659.00	10,690.73	7,765.85	99.73	85.83	96.86	1,654.74	2,973.36	911.74	727.15	184.59	4.939		
11,700.00	7,659.00	10,793.42	7,763.78	102.24	88.44	96.75	1,655.35	3,076.02	908.93	719.17	189.76	4.790		
11,800.00	7,659.00	10,892.35	7,761.77	104.75	90.96	96.64	1,655.87	3,174.94	906.21	711.42	194.79	4.652		
11,900.00	7,659.00	10,989.00	7,759.42	107.28	93.43	96.51	1,656.17	3,271.56	903.65	703.92	199.73	4.524		
12,000.00	7,659.00	11,084.98	7,757.02	109.81	95.89	96.37	1,656.01	3,367.50	901.56	696.91	204.65	4.405		
12,100.00	7,659.00	11,183.57	7,755.42	112.35	98.43	96.28	1,655.62	3,466.08	899.81	690.10	209.71	4.291		
12,200.00	7,659.00	11,285.31	7,754.39	114.90	101.05	96.23	1,655.32	3,567.82	898.02	683.10	214.92	4.178		
12,300.00	7,659.00	11,394.93	7,754.10	117.46	103.88	96.23	1,655.75	3,677.43	895.64	675.15	220.49	4.062		
12,400.00	7,659.00	11,495.18	7,754.05	120.02	106.48	96.24	1,656.79	3,777.67	892.62	666.98	225.64	3.956		
12,500.00	7,659.00	11,599.37	7,753.93	122.58	109.18	96.26	1,658.17	3,881.86	889.33	658.35	230.98	3.850		
12,600.00	7,659.00	11,697.65	7,752.91	125.15	111.73	96.22	1,659.51	3,980.12	885.88	649.81	236.07	3.753		
12,700.00	7,659.00	11,792.14	7,751.99	127.73	114.19	96.18	1,660.37	4,074.60	882.91	641.91	240.99	3.664		
12,800.00	7,659.00	11,889.04	7,751.27	130.31	116.72	96.15	1,660.84	4,171.50	880.38	634.35	246.03	3.578		
12,900.00	7,659.00	11,984.83	7,751.00	132.90	119.22	96.14	1,660.94	4,267.28	878.27	627.26	251.01	3.499		
13,000.00	7,659.00	12,081.23	7,751.79	135.49	121.74	96.21	1,660.69	4,363.68	876.64	620.63	256.01	3.424		
13,100.00	7,659.00	12,180.74	7,753.99	138.08	124.34	96.36	1,660.38	4,463.17	875.22	614.07	261.15	3.351		
13,135.08	7,659.00	12,200.00	7,754.47	138.99	124.85	96.40	1,660.32	4,482.42	874.80	612.68	262.12	3.337 SF		
13,200.00	7,659.00	12,200.00	7,754.47	140.68	124.85	96.39	1,660.32	4,482.42	877.12	615.88	261.24	3.358		
13,300.00	7,659.00	12,200.00	7,754.47	143.28	124.85	96.39	1,660.32	4,482.42	889.38	631.96	257.42	3.455		
13,400.00	7,659.00	12,200.00	7,754.47	145.88	124.85	96.39	1,660.32	4,482.42	912.51	661.52	250.99	3.636		
13,500.00	7,659.00	12,200.00	7,754.47	148.48	124.85	96.39	1,660.32	4,482.42	945.70	703.13	242.57	3.899		
13,600.00	7,659.00	12,200.00	7,754.47	151.09	124.85	96.39	1,660.32	4,482.42	987.93	755.09	232.85	4.243		
13,700.00	7,659.00	12,200.00	7,754.47	153.70	124.85	96.39	1,660.32	4,482.42	1,038.12	815.65	222.47	4.666		
13,800.00	7,659.00	12,200.00	7,754.47	156.32	124.85	96.39	1,660.32	4,482.42	1,095.15	883.20	211.95	5.167		
13,900.00	7,659.00	12,200.00	7,754.47	158.94	124.85	96.39	1,660.32	4,482.42	1,158.03	956.34	201.69	5.742		
14,000.00	7,659.00	12,200.00	7,754.47	161.56	124.85	96.39	1,660.32	4,482.42	1,225.85	1,033.93	191.92	6.387		
14,100.00	7,659.00	12,200.00	7,754.47	164.18	124.85	96.39	1,660.32	4,482.42	1,297.83	1,115.06	182.78	7.101		
14,200.00	7,659.00	12,200.00	7,754.47	166.80	124.85	96.39	1,660.32	4,482.42	1,373.33	1,199.00	174.33	7.878		
14,300.00	7,659.00	12,200.00	7,754.47	169.43	124.85	96.39	1,660.32	4,482.42	1,451.80	1,285.21	166.59	8.715		
14,400.00	7,659.00	12,200.00	7,754.47	172.06	124.85	96.39	1,660.32	4,482.42	1,532.77	1,373.24	159.53	9.608		
14,500.00	7,659.00	12,200.00	7,754.47	174.69	124.85	96.39	1,660.32	4,482.42	1,615.88	1,462.75	153.12	10.553		
14,600.00	7,659.00	12,200.00	7,754.47	177.33	124.85	96.39	1,660.32	4,482.42	1,700.80	1,553.49	147.31	11.546		
14,700.00	7,659.00	12,200.00	7,754.47	179.96	124.85	96.39	1,660.32	4,482.42	1,787.29	1,645.24	142.05	12.582		
14,800.00	7,659.00	12,200.00	7,754.47	182.60	124.85	96.39	1,660.32	4,482.42	1,875.12	1,737.83	137.29	13.658		
14,900.00	7,659.00	12,200.00	7,754.47	185.24	124.85	96.39	1,660.32	4,482.42	1,964.11	1,831.14	132.97	14.771		
15,000.00	7,659.00	12,200.00	7,754.47	187.88	124.85	96.39	1,660.32	4,482.42	2,054.12	1,925.06	129.06	15.916		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - SI HZ WATKINS 30-5-5GH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 185-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
15,100.00	7,659.00	12,200.00	7,754.47	190.52	124.85	96.39	1,660.32	4,482.42	2,145.01	2,019.50	125.52	17.090		
15,200.00	7,659.00	12,200.00	7,754.47	193.16	124.85	96.39	1,660.32	4,482.42	2,236.68	2,114.39	122.30	18.289		
15,300.00	7,659.00	12,200.00	7,754.47	195.81	124.85	96.39	1,660.32	4,482.42	2,329.04	2,209.67	119.37	19.511		
15,400.00	7,659.00	12,200.00	7,754.47	198.45	124.85	96.39	1,660.32	4,482.42	2,422.00	2,305.30	116.70	20.753		
15,500.00	7,659.00	12,200.00	7,754.47	201.10	124.85	96.39	1,660.32	4,482.42	2,515.50	2,401.23	114.28	22.013		
15,600.00	7,659.00	12,200.00	7,754.47	203.75	124.85	96.39	1,660.32	4,482.42	2,609.49	2,497.43	112.06	23.287		
15,700.00	7,659.00	12,200.00	7,754.47	206.40	124.85	96.39	1,660.32	4,482.42	2,703.91	2,593.87	110.03	24.573		
15,800.00	7,659.00	12,200.00	7,754.47	209.05	124.85	96.39	1,660.32	4,482.42	2,798.71	2,690.53	108.18	25.871		
15,900.00	7,659.00	12,200.00	7,754.47	211.70	124.85	96.39	1,660.32	4,482.42	2,893.86	2,787.38	106.48	27.177		
16,000.00	7,659.00	12,200.00	7,754.47	214.36	124.85	96.39	1,660.32	4,482.42	2,989.33	2,884.41	104.92	28.490		
16,100.00	7,659.00	12,200.00	7,754.47	217.01	124.85	96.39	1,660.32	4,482.42	3,085.09	2,981.60	103.49	29.809		
16,200.00	7,659.00	12,200.00	7,754.47	219.67	124.85	96.39	1,660.32	4,482.42	3,181.11	3,078.93	102.18	31.133		
16,300.00	7,659.00	12,200.00	7,754.47	222.32	124.85	96.39	1,660.32	4,482.42	3,277.37	3,176.40	100.97	32.459		
16,400.00	7,659.00	12,200.00	7,754.47	224.98	124.85	96.39	1,660.32	4,482.42	3,373.84	3,273.99	99.85	33.788		
16,500.00	7,659.00	12,200.00	7,754.47	227.64	124.85	96.39	1,660.32	4,482.42	3,470.51	3,371.69	98.82	35.119		
16,600.00	7,659.00	12,200.00	7,754.47	230.30	124.85	96.39	1,660.32	4,482.42	3,567.37	3,469.50	97.87	36.449		
16,700.00	7,659.00	12,200.00	7,754.47	232.96	124.85	96.39	1,660.32	4,482.42	3,664.40	3,567.41	96.99	37.780		
16,800.00	7,659.00	12,200.00	7,754.47	235.62	124.85	96.39	1,660.32	4,482.42	3,761.58	3,665.40	96.18	39.110		
16,900.00	7,659.00	12,200.00	7,754.47	238.28	124.85	96.39	1,660.32	4,482.42	3,858.91	3,763.48	95.43	40.438		
17,000.00	7,659.00	12,200.00	7,754.47	240.95	124.85	96.39	1,660.32	4,482.42	3,956.37	3,861.64	94.73	41.765		
17,100.00	7,659.00	12,200.00	7,754.47	243.61	124.85	96.39	1,660.32	4,482.42	4,053.95	3,959.87	94.08	43.089		
17,200.00	7,659.00	12,200.00	7,754.47	246.27	124.85	96.39	1,660.32	4,482.42	4,151.65	4,058.16	93.48	44.411		
17,300.00	7,659.00	12,200.00	7,754.47	248.94	124.85	96.39	1,660.32	4,482.42	4,249.45	4,156.53	92.93	45.730		
17,400.00	7,659.00	12,200.00	7,754.47	251.60	124.85	96.39	1,660.32	4,482.42	4,347.36	4,254.95	92.41	47.045		
17,500.00	7,659.00	12,200.00	7,754.47	254.27	124.85	96.39	1,660.32	4,482.42	4,445.36	4,353.43	91.93	48.358		
17,600.00	7,659.00	12,200.00	7,754.47	256.94	124.85	96.39	1,660.32	4,482.42	4,543.44	4,451.96	91.48	49.667		
17,700.00	7,659.00	12,200.00	7,754.47	259.61	124.85	96.39	1,660.32	4,482.42	4,641.61	4,550.55	91.06	50.972		
17,800.00	7,659.00	12,200.00	7,754.47	262.27	124.85	96.39	1,660.32	4,482.42	4,739.85	4,649.18	90.67	52.274		
17,900.00	7,659.00	12,200.00	7,754.47	264.94	124.85	96.39	1,660.32	4,482.42	4,838.17	4,747.86	90.31	53.571		
18,000.00	7,659.00	12,200.00	7,754.47	267.61	124.85	96.39	1,660.32	4,482.42	4,936.55	4,846.58	89.98	54.865		
18,100.00	7,659.00	12,200.00	7,754.47	270.28	124.85	96.39	1,660.32	4,482.42	5,035.00	4,945.34	89.66	56.155		
18,200.00	7,659.00	12,200.00	7,754.47	272.95	124.85	96.39	1,660.32	4,482.42	5,133.51	5,044.14	89.37	57.441		
18,300.00	7,659.00	12,200.00	7,754.47	275.62	124.85	96.39	1,660.32	4,482.42	5,232.07	5,142.97	89.10	58.722		
18,400.00	7,659.00	12,200.00	7,754.47	278.29	124.85	96.39	1,660.32	4,482.42	5,330.69	5,241.84	88.84	60.000		
18,500.00	7,659.00	12,200.00	7,754.47	280.97	124.85	96.39	1,660.32	4,482.42	5,429.35	5,340.75	88.61	61.273		
18,558.76	7,659.00	12,200.00	7,754.47	282.54	124.85	96.39	1,660.32	4,482.42	5,487.35	5,398.88	88.48	62.020		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 1BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	1.00	1.00	0.00	0.00	-180.00	-20.03	0.00	20.03					
100.00	100.00	101.00	101.00	0.13	0.14	-180.00	-20.03	0.00	20.03	19.76	0.27	73.538	CC, ES	
200.00	199.98	200.98	200.98	0.50	0.50	-164.76	-20.03	0.00	21.71	20.72	0.99	21.884		
300.00	299.84	300.85	300.85	0.86	0.85	-167.68	-20.03	0.00	26.80	25.08	1.72	15.591		
400.00	399.45	401.63	401.61	1.23	1.22	-170.01	-18.34	-0.62	33.63	31.19	2.44	13.773		
500.00	498.70	502.67	502.50	1.63	1.58	-171.25	-13.31	-2.46	40.50	37.33	3.17	12.784		
600.00	597.47	603.95	603.38	2.05	1.96	-171.85	-4.91	-5.54	47.38	43.48	3.90	12.152		
700.00	695.62	705.48	704.13	2.49	2.34	-172.06	6.87	-9.84	54.26	49.62	4.64	11.703		
800.00	793.06	807.25	804.60	2.98	2.75	-172.01	22.03	-15.39	61.11	55.73	5.38	11.354		
900.00	889.64	909.27	904.69	3.50	3.20	-171.77	40.58	-22.18	67.94	61.80	6.14	11.065		
1,000.00	985.27	1,011.53	1,004.24	4.06	3.67	-171.40	62.52	-30.21	74.73	67.82	6.91	10.817		
1,100.00	1,079.82	1,114.03	1,103.12	4.66	4.19	-170.93	87.85	-39.47	81.48	73.79	7.70	10.589		
1,200.00	1,173.23	1,216.78	1,201.21	5.31	4.75	-170.36	116.55	-49.98	88.03	79.53	8.50	10.355		
1,300.00	1,266.35	1,316.73	1,296.05	5.98	5.33	-169.72	146.19	-60.82	93.54	84.19	9.35	10.007		
1,400.00	1,359.46	1,416.57	1,390.78	6.66	5.92	-169.15	175.79	-71.65	99.06	88.86	10.21	9.704		
1,500.00	1,452.58	1,516.41	1,485.52	7.34	6.51	-168.64	205.40	-82.48	104.60	93.52	11.08	9.440		
1,600.00	1,545.69	1,616.26	1,580.25	8.03	7.12	-168.18	235.00	-93.32	110.13	98.18	11.96	9.209		
1,700.00	1,638.81	1,716.10	1,674.99	8.72	7.73	-167.77	264.61	-104.15	115.68	102.83	12.85	9.005		
1,800.00	1,731.92	1,815.94	1,769.72	9.41	8.34	-167.39	294.21	-114.98	121.23	107.49	13.74	8.824		
1,900.00	1,825.04	1,915.78	1,864.46	10.11	8.96	-167.04	323.82	-125.81	126.79	112.15	14.64	8.662		
2,000.00	1,918.15	2,015.63	1,959.20	10.81	9.58	-166.73	353.42	-136.65	132.35	116.81	15.54	8.517		
2,100.00	2,011.27	2,115.47	2,053.93	11.51	10.20	-166.44	383.03	-147.48	137.91	121.46	16.45	8.386		
2,200.00	2,104.39	2,215.31	2,148.67	12.21	10.83	-166.17	412.63	-158.31	143.48	126.12	17.36	8.267		
2,300.00	2,197.50	2,315.16	2,243.40	12.91	11.45	-165.92	442.24	-169.14	149.05	130.78	18.27	8.159		
2,400.00	2,290.62	2,415.00	2,338.14	13.61	12.08	-165.70	471.84	-179.97	154.62	135.43	19.18	8.060		
2,500.00	2,383.73	2,514.84	2,432.87	14.31	12.70	-165.48	501.45	-190.81	160.19	140.09	20.10	7.969		
2,600.00	2,476.85	2,614.68	2,527.61	15.01	13.33	-165.28	531.05	-201.64	165.77	144.75	21.02	7.885		
2,700.00	2,569.96	2,714.53	2,622.34	15.72	13.96	-165.10	560.66	-212.47	171.35	149.40	21.94	7.808		
2,800.00	2,663.08	2,814.37	2,717.08	16.42	14.59	-164.92	590.26	-223.30	176.93	154.06	22.87	7.737		
2,900.00	2,756.20	2,914.21	2,811.81	17.12	15.22	-164.76	619.87	-234.14	182.51	158.71	23.79	7.670		
3,000.00	2,849.31	3,014.06	2,906.55	17.83	15.85	-164.60	649.47	-244.97	188.09	163.37	24.72	7.608		
3,100.00	2,942.43	3,113.90	3,001.28	18.53	16.49	-164.46	679.08	-255.80	193.67	168.02	25.65	7.551		
3,200.00	3,035.54	3,213.74	3,096.02	19.24	17.12	-164.32	708.68	-266.63	199.26	172.68	26.58	7.497		
3,300.00	3,128.66	3,313.58	3,190.76	19.94	17.75	-164.19	738.29	-277.46	204.85	177.34	27.51	7.446		
3,400.00	3,221.77	3,413.43	3,285.49	20.65	18.38	-164.07	767.89	-288.30	210.43	181.99	28.44	7.399		
3,500.00	3,314.89	3,513.27	3,380.23	21.35	19.02	-163.95	797.50	-299.13	216.02	186.65	29.37	7.354		
3,600.00	3,408.01	3,613.11	3,474.96	22.06	19.65	-163.84	827.10	-309.96	221.61	191.30	30.31	7.312		
3,700.00	3,501.12	3,712.96	3,569.70	22.77	20.28	-163.74	856.71	-320.79	227.20	195.96	31.24	7.272		
3,800.00	3,594.24	3,812.80	3,664.43	23.47	20.92	-163.64	886.31	-331.62	232.79	200.61	32.18	7.235		
3,900.00	3,687.35	3,912.64	3,759.17	24.18	21.55	-163.54	915.92	-342.46	238.38	205.27	33.11	7.199		
4,000.00	3,780.47	4,012.48	3,853.90	24.89	22.18	-163.45	945.52	-353.29	243.97	209.93	34.05	7.165		
4,100.00	3,873.58	4,112.33	3,948.64	25.59	22.82	-163.36	975.13	-364.12	249.57	214.58	34.99	7.133		
4,200.00	3,966.70	4,212.17	4,043.37	26.30	23.45	-163.28	1,004.73	-374.95	255.16	219.24	35.92	7.103		
4,300.00	4,059.81	4,312.01	4,138.11	27.01	24.09	-163.20	1,034.34	-385.79	260.75	223.89	36.86	7.074		
4,400.00	4,152.93	4,411.85	4,232.84	27.71	24.72	-163.13	1,063.94	-396.62	266.35	228.55	37.80	7.046		
4,500.00	4,246.05	4,511.70	4,327.58	28.42	25.36	-163.05	1,093.55	-407.45	271.94	233.20	38.74	7.020		
4,600.00	4,339.16	4,611.54	4,422.32	29.13	25.99	-162.98	1,123.15	-418.28	277.54	237.86	39.68	6.995		
4,700.00	4,432.28	4,711.38	4,517.05	29.83	26.63	-162.92	1,152.76	-429.11	283.13	242.51	40.62	6.971		
4,800.00	4,525.39	4,811.23	4,611.79	30.54	27.26	-162.85	1,182.36	-439.95	288.73	247.17	41.56	6.947		
4,900.00	4,618.51	4,911.07	4,706.52	31.25	27.90	-162.79	1,211.97	-450.78	294.32	251.82	42.50	6.925		
5,000.00	4,711.62	5,010.91	4,801.26	31.95	28.53	-162.73	1,241.57	-461.61	299.92	256.48	43.44	6.904		
5,100.00	4,804.74	5,110.75	4,895.99	32.66	29.17	-162.67	1,271.18	-472.44	305.52	261.14	44.38	6.884		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 1BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,200.00	4,897.86	5,210.60	4,990.73	33.37	29.80	-162.62	1,300.78	-483.28	311.11	265.79	45.32	6.864		
5,300.00	4,990.97	5,310.44	5,085.46	34.08	30.44	-162.56	1,330.39	-494.11	316.71	270.45	46.27	6.846		
5,400.00	5,084.09	5,410.28	5,180.20	34.78	31.08	-162.51	1,359.99	-504.94	322.31	275.10	47.21	6.828		
5,500.00	5,177.20	5,510.13	5,274.93	35.49	31.71	-162.46	1,389.60	-515.77	327.91	279.76	48.15	6.810		
5,600.00	5,270.32	5,609.97	5,369.67	36.20	32.35	-162.41	1,419.20	-526.60	333.51	284.41	49.09	6.793		
5,700.00	5,363.43	5,709.81	5,464.40	36.91	32.98	-162.36	1,448.81	-537.44	339.10	289.07	50.03	6.777		
5,800.00	5,456.55	5,809.65	5,559.14	37.61	33.62	-162.32	1,478.41	-548.27	344.70	293.72	50.98	6.762		
5,900.00	5,549.67	5,909.50	5,653.88	38.32	34.25	-162.28	1,508.02	-559.10	350.30	298.38	51.92	6.747		
6,000.00	5,642.78	6,009.34	5,748.61	39.03	34.89	-162.23	1,537.62	-569.93	355.90	303.03	52.86	6.732		
6,100.00	5,735.90	6,109.18	5,843.35	39.74	35.53	-162.19	1,567.23	-580.77	361.50	307.69	53.81	6.718		
6,200.00	5,829.01	6,209.03	5,938.08	40.44	36.16	-162.15	1,596.83	-591.60	367.10	312.35	54.75	6.705		
6,300.00	5,922.13	6,308.87	6,032.82	41.15	36.80	-162.11	1,626.44	-602.43	372.70	317.00	55.70	6.692		
6,400.00	6,015.24	6,408.71	6,127.55	41.86	37.43	-162.08	1,656.04	-613.26	378.30	321.66	56.64	6.679		
6,500.00	6,108.36	6,508.55	6,222.29	42.57	38.07	-162.04	1,685.65	-624.09	383.90	326.31	57.58	6.667		
6,600.00	6,201.47	6,608.40	6,317.02	43.28	38.71	-162.00	1,715.25	-634.93	389.50	330.97	58.53	6.655		
6,700.00	6,294.59	6,708.24	6,411.76	43.98	39.34	-161.97	1,744.86	-645.76	395.10	335.62	59.47	6.643		
6,800.00	6,387.71	6,808.08	6,506.49	44.69	39.98	-161.94	1,774.46	-656.59	400.70	340.28	60.42	6.632		
6,900.00	6,480.82	6,907.92	6,601.23	45.40	40.62	-161.90	1,804.07	-667.42	406.30	344.93	61.36	6.621		
7,000.00	6,573.94	7,007.77	6,695.96	46.11	41.25	-161.87	1,833.67	-678.26	411.90	349.59	62.31	6.611		
7,100.00	6,667.05	7,107.61	6,790.70	46.82	41.89	-161.84	1,863.28	-689.09	417.50	354.24	63.25	6.600		
7,200.00	6,760.17	7,207.45	6,885.44	47.52	42.53	-161.81	1,892.88	-699.92	423.10	358.90	64.20	6.590		
7,300.00	6,853.28	7,307.30	6,980.17	48.23	43.16	-161.78	1,922.49	-710.75	428.70	363.55	65.14	6.581		
7,400.00	6,946.40	7,407.61	7,075.42	48.94	43.80	-161.74	1,952.09	-721.58	434.29	368.24	66.05	6.575		
7,500.00	7,039.52	7,507.24	7,170.43	49.65	44.43	-163.56	1,981.66	-732.41	439.79	373.59	66.96	6.569		
7,600.00	7,132.64	7,601.33	7,258.59	50.33	44.75	173.31	2,008.65	-743.24	446.30	380.48	67.81	6.564		
7,700.00	7,225.76	7,691.81	7,339.67	50.99	45.05	145.50	2,033.18	-754.07	454.03	388.46	68.67	6.559		
7,800.00	7,318.88	7,779.41	7,412.78	51.34	45.25	125.67	2,055.01	-764.90	462.46	396.99	69.54	6.554		
7,900.00	7,399.85	7,864.67	7,477.21	51.68	45.38	112.71	2,073.95	-775.73	471.03	405.58	70.42	6.549		
8,000.00	7,475.41	7,948.03	7,532.40	51.91	45.45	104.07	2,089.88	-786.56	479.19	413.69	71.30	6.544		
8,100.00	7,540.24	8,029.92	7,577.97	52.05	45.46	98.17	2,102.69	-797.39	486.45	420.77	72.18	6.539		
8,200.00	7,592.37	8,110.70	7,613.62	52.11	45.43	94.16	2,112.32	-808.22	492.40	426.33	73.06	6.534		
8,300.00	7,630.20	8,190.71	7,639.10	52.09	45.36	91.58	2,118.73	-819.05	496.73	429.92	73.94	6.529		
8,400.00	7,652.61	8,270.25	7,654.26	52.01	45.26	90.20	2,121.88	-829.88	499.20	431.27	74.81	6.524		
8,500.00	7,659.00	8,350.63	7,659.00	51.89	45.14	89.89	2,121.76	-840.71	499.74	430.31	75.68	6.519		
8,600.00	7,659.00	8,450.63	7,659.00	51.77	45.00	89.89	2,119.77	-851.54	499.75	428.76	76.55	6.514		
8,700.00	7,659.00	8,550.63	7,659.00	51.67	44.88	89.89	2,117.79	-862.37	499.75	426.87	77.42	6.509		
8,800.00	7,659.00	8,650.63	7,659.00	51.61	44.80	89.89	2,115.80	-873.20	499.75	424.64	78.29	6.504		
8,900.00	7,659.00	8,750.63	7,659.00	51.58	44.76	89.89	2,113.82	-884.03	499.76	422.10	79.16	6.499		
9,000.00	7,659.00	8,850.63	7,659.00	51.59	44.79	89.89	2,111.83	-894.86	499.76	419.28	80.03	6.494		
9,100.00	7,659.00	8,950.63	7,659.00	51.67	44.96	89.89	2,109.84	-905.69	499.76	416.20	80.90	6.489		
9,200.00	7,659.00	9,050.63	7,659.00	51.83	45.44	89.89	2,107.86	-916.52	499.77	412.90	81.77	6.484		
9,300.00	7,659.00	9,150.63	7,659.00	52.14	46.45	89.89	2,105.87	-927.35	499.77	409.40	82.64	6.479		
9,400.00	7,659.00	9,250.63	7,659.00	52.67	47.95	89.89	2,103.89	-938.18	499.77	405.72	83.51	6.474		
9,500.00	7,659.00	9,350.63	7,659.00	53.53	49.72	89.89	2,101.90	-949.01	499.78	401.88	84.38	6.469		
9,600.00	7,659.00	9,450.63	7,659.00	54.75	51.64	89.89	2,099.91	-959.84	499.78	397.89	85.25	6.464		
9,700.00	7,659.00	9,550.63	7,659.00	56.29	53.66	89.89	2,097.93	-970.67	499.78	393.79	86.12	6.459		
9,800.00	7,659.00	9,650.63	7,659.00	58.05	55.75	89.89	2,095.94	-981.50	499.79	389.57	87.00	6.454		
9,900.00	7,659.00	9,750.63	7,659.00	59.97	57.90	89.89	2,093.96	-992.33	499.79	385.26	87.87	6.449		
10,000.00	7,659.00	9,850.63	7,659.00	62.00	60.09	89.89	2,091.97	-1,003.16	499.79	380.86	88.74	6.444		
10,100.00	7,659.00	9,950.63	7,659.00	64.11	62.33	89.89	2,089.98	-1,014.00	499.80	376.38	89.61	6.439		
10,200.00	7,659.00	10,050.63	7,659.00	66.28	64.60	89.89	2,088.00	-1,024.83	499.80	371.82	90.48	6.434		
10,300.00	7,659.00	10,150.63	7,659.00	68.51	66.91	89.89	2,086.01	-1,035.66	499.80	367.21	91.35	6.429		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 1BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,400.00	7,659.00	10,250.63	7,659.00	70.77	69.24	89.89	2,084.03	1,758.76	499.81	362.54	137.27	3.641		
10,500.00	7,659.00	10,350.63	7,659.00	73.06	71.60	89.89	2,082.04	1,858.74	499.81	357.82	141.99	3.520		
10,600.00	7,659.00	10,450.63	7,659.00	75.39	73.98	89.89	2,080.05	1,958.72	499.81	353.05	146.76	3.406		
10,700.00	7,659.00	10,550.63	7,659.00	77.74	76.38	89.89	2,078.07	2,058.70	499.82	348.24	151.57	3.297		
10,800.00	7,659.00	10,650.63	7,659.00	80.12	78.80	89.89	2,076.08	2,158.68	499.82	343.39	156.43	3.195		
10,900.00	7,659.00	10,750.63	7,659.00	82.51	81.23	89.89	2,074.10	2,258.66	499.82	338.51	161.31	3.099		
11,000.00	7,659.00	10,850.63	7,659.00	84.93	83.68	89.89	2,072.11	2,358.64	499.83	333.60	166.23	3.007		
11,100.00	7,659.00	10,950.63	7,659.00	87.36	86.15	89.89	2,070.12	2,458.62	499.83	328.66	171.17	2.920		
11,200.00	7,659.00	11,050.63	7,659.00	89.81	88.63	89.89	2,068.14	2,558.60	499.83	323.69	176.14	2.838		
11,300.00	7,659.00	11,150.63	7,659.00	92.27	91.12	89.89	2,066.15	2,658.58	499.84	318.70	181.14	2.759		
11,400.00	7,659.00	11,250.63	7,659.00	94.75	93.62	89.89	2,064.17	2,758.56	499.84	313.68	186.16	2.685		
11,500.00	7,659.00	11,350.63	7,659.00	97.23	96.13	89.89	2,062.18	2,858.54	499.84	308.65	191.19	2.614		
11,600.00	7,659.00	11,450.63	7,659.00	99.73	98.65	89.89	2,060.19	2,958.52	499.85	303.60	196.25	2.547		
11,700.00	7,659.00	11,550.63	7,659.00	102.24	101.18	89.89	2,058.21	3,058.50	499.85	298.52	201.32	2.483		
11,800.00	7,659.00	11,650.63	7,659.00	104.75	103.72	89.89	2,056.22	3,158.48	499.85	293.44	206.42	2.422		
11,900.00	7,659.00	11,750.63	7,659.00	107.28	106.27	89.89	2,054.24	3,258.46	499.86	288.34	211.52	2.363		
12,000.00	7,659.00	11,850.63	7,659.00	109.81	108.82	89.89	2,052.25	3,358.44	499.86	283.22	216.64	2.307		
12,100.00	7,659.00	11,950.63	7,659.00	112.35	111.38	89.89	2,050.26	3,458.42	499.86	278.09	221.77	2.254		
12,200.00	7,659.00	12,050.63	7,659.00	114.90	113.95	89.89	2,048.28	3,558.40	499.87	272.95	226.92	2.203		
12,300.00	7,659.00	12,150.63	7,659.00	117.46	116.52	89.89	2,046.29	3,658.38	499.87	267.80	232.07	2.154		
12,400.00	7,659.00	12,250.63	7,659.00	120.02	119.09	89.89	2,044.31	3,758.37	499.87	262.63	237.24	2.107		
12,500.00	7,659.00	12,350.63	7,659.00	122.58	121.67	89.89	2,042.32	3,858.35	499.88	257.46	242.41	2.062		
12,600.00	7,659.00	12,450.63	7,659.00	125.15	124.26	89.89	2,040.33	3,958.33	499.88	252.28	247.60	2.019		
12,700.00	7,659.00	12,550.63	7,659.00	127.73	126.85	89.89	2,038.35	4,058.31	499.88	247.09	252.79	1.977		
12,800.00	7,659.00	12,650.63	7,659.00	130.31	129.45	89.89	2,036.36	4,158.29	499.89	241.89	258.00	1.938		
12,900.00	7,659.00	12,750.63	7,659.00	132.90	132.04	89.89	2,034.38	4,258.27	499.89	236.68	263.21	1.899		
13,000.00	7,659.00	12,850.63	7,659.00	135.49	134.65	89.89	2,032.39	4,358.25	499.89	231.47	268.42	1.862		
13,100.00	7,659.00	12,950.63	7,659.00	138.08	137.25	89.89	2,030.40	4,458.23	499.90	226.25	273.65	1.827		
13,192.01	7,659.00	13,037.30	7,659.00	140.47	139.51	89.89	2,028.52	4,544.87	499.60	221.60	278.00	1.797		
13,200.00	7,659.00	13,044.10	7,659.00	140.68	139.69	89.89	2,028.30	4,551.67	499.75	221.44	278.32	1.796		
13,300.00	7,659.00	13,129.22	7,659.00	143.28	141.91	89.89	2,024.24	4,636.69	501.38	219.27	282.11	1.777		
13,400.00	7,659.00	13,214.18	7,659.00	145.88	144.12	89.89	2,017.66	4,721.39	505.98	220.30	285.68	1.771 SF		
13,500.00	7,659.00	13,298.83	7,659.00	148.48	146.32	89.89	2,008.62	4,805.56	513.53	224.52	289.01	1.777		
13,600.00	7,659.00	13,385.75	7,659.00	151.09	148.56	89.89	1,996.80	4,891.67	523.97	231.48	292.49	1.791		
13,700.00	7,659.00	13,485.09	7,659.00	153.70	151.12	89.89	1,982.34	4,989.96	535.41	237.70	297.71	1.798		
13,800.00	7,659.00	13,584.44	7,659.00	156.32	153.69	89.89	1,967.88	5,088.24	546.84	243.91	302.93	1.805		
13,900.00	7,659.00	13,683.78	7,659.00	158.94	156.26	89.90	1,953.42	5,186.53	558.27	250.12	308.15	1.812		
14,000.00	7,659.00	13,783.13	7,659.00	161.56	158.83	89.90	1,938.96	5,284.82	569.70	256.32	313.38	1.818		
14,100.00	7,659.00	13,882.47	7,659.00	164.18	161.41	89.90	1,924.51	5,383.10	581.14	262.52	318.62	1.824		
14,200.00	7,659.00	13,981.82	7,659.00	166.80	163.99	89.90	1,910.05	5,481.39	592.57	268.71	323.86	1.830		
14,300.00	7,659.00	14,081.16	7,659.00	169.43	166.58	89.90	1,895.59	5,579.67	604.00	274.90	329.10	1.835		
14,400.00	7,659.00	14,180.50	7,659.00	172.06	169.17	89.91	1,881.13	5,677.96	615.43	281.08	334.35	1.841		
14,500.00	7,659.00	14,279.85	7,659.00	174.69	171.76	89.91	1,866.67	5,776.25	626.86	287.27	339.60	1.846		
14,600.00	7,659.00	14,379.19	7,659.00	177.33	174.35	89.91	1,852.21	5,874.53	638.30	293.44	344.85	1.851		
14,700.00	7,659.00	14,478.54	7,659.00	179.96	176.95	89.91	1,837.76	5,972.82	649.73	299.62	350.11	1.856		
14,800.00	7,659.00	14,577.88	7,659.00	182.60	179.55	89.91	1,823.30	6,071.11	661.16	305.79	355.37	1.860		
14,900.00	7,659.00	14,677.23	7,659.00	185.24	182.15	89.91	1,808.84	6,169.39	672.59	311.96	360.64	1.865		
15,000.00	7,659.00	14,776.57	7,659.00	187.88	184.75	89.92	1,794.38	6,267.68	684.03	318.12	365.90	1.869		
15,100.00	7,659.00	14,875.91	7,659.00	190.52	187.36	89.92	1,779.92	6,365.97	695.46	324.28	371.17	1.874		
15,200.00	7,659.00	14,975.26	7,659.00	193.16	189.97	89.92	1,765.46	6,464.25	706.89	330.44	376.45	1.878		
15,300.00	7,659.00	15,074.60	7,659.00	195.81	192.58	89.92	1,751.00	6,562.54	718.32	336.60	381.72	1.882		
15,400.00	7,659.00	15,173.95	7,659.00	198.45	195.19	89.92	1,736.55	6,660.83	729.76	342.75	387.00	1.886		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 1BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
15,500.00	7,659.00	15,273.29	7,659.00	201.10	197.81	89.92	1,722.09	6,759.11	741.19	348.91	392.28	1.889		
15,600.00	7,659.00	15,372.64	7,659.00	203.75	200.42	89.92	1,707.63	6,857.40	752.62	355.05	397.57	1.893		
15,700.00	7,659.00	15,471.98	7,659.00	206.40	203.04	89.92	1,693.17	6,955.69	764.05	361.20	402.85	1.897		
15,800.00	7,659.00	15,571.33	7,659.00	209.05	205.66	89.93	1,678.71	7,053.97	775.48	367.35	408.14	1.900		
15,900.00	7,659.00	15,670.67	7,659.00	211.70	208.28	89.93	1,664.25	7,152.26	786.92	373.49	413.43	1.903		
16,000.00	7,659.00	15,770.01	7,659.00	214.36	210.91	89.93	1,649.80	7,250.55	798.35	379.63	418.72	1.907		
16,100.00	7,659.00	15,869.36	7,659.00	217.01	213.53	89.93	1,635.34	7,348.83	809.78	385.77	424.01	1.910		
16,200.00	7,659.00	15,968.70	7,659.00	219.67	216.16	89.93	1,620.88	7,447.12	821.21	391.90	429.31	1.913		
16,300.00	7,659.00	16,068.05	7,659.00	222.32	218.79	89.93	1,606.42	7,545.41	832.65	398.05	434.60	1.916		
16,400.00	7,659.00	16,167.39	7,659.00	224.98	221.42	89.93	1,591.96	7,643.69	844.08	404.18	439.90	1.919		
16,500.00	7,659.00	16,266.74	7,659.00	227.64	224.05	89.93	1,577.50	7,741.98	855.51	410.31	445.20	1.922		
16,600.00	7,659.00	16,366.08	7,659.00	230.30	226.68	89.93	1,563.05	7,840.27	866.94	416.44	450.51	1.924		
16,700.00	7,659.00	16,465.42	7,659.00	232.96	229.31	89.93	1,548.59	7,938.55	878.38	422.57	455.81	1.927		
16,800.00	7,659.00	16,564.77	7,659.00	235.62	231.95	89.94	1,534.13	8,036.84	889.81	428.69	461.11	1.930		
16,900.00	7,659.00	16,664.11	7,659.00	238.28	234.58	89.94	1,519.67	8,135.13	901.24	434.82	466.42	1.932		
17,000.00	7,659.00	16,763.46	7,659.00	240.95	237.22	89.94	1,505.21	8,233.41	912.67	440.94	471.73	1.935		
17,100.00	7,659.00	16,862.80	7,659.00	243.61	239.86	89.94	1,490.75	8,331.70	924.10	447.07	477.04	1.937		
17,200.00	7,659.00	16,962.15	7,659.00	246.27	242.50	89.94	1,476.30	8,429.99	935.54	453.19	482.35	1.940		
17,300.00	7,659.00	17,061.49	7,659.00	248.94	245.14	89.94	1,461.84	8,528.27	946.97	459.31	487.66	1.942		
17,400.00	7,659.00	17,160.84	7,659.00	251.60	247.78	89.94	1,447.38	8,626.56	958.40	465.43	492.98	1.944		
17,500.00	7,659.00	17,260.18	7,659.00	254.27	250.42	89.94	1,432.92	8,724.85	969.83	471.54	498.29	1.946		
17,600.00	7,659.00	17,359.52	7,659.00	256.94	253.06	89.94	1,418.46	8,823.13	981.27	477.66	503.61	1.948		
17,700.00	7,659.00	17,458.87	7,659.00	259.61	255.71	89.94	1,404.00	8,921.42	992.70	483.78	508.92	1.951		
17,800.00	7,659.00	17,558.21	7,659.00	262.27	258.35	89.94	1,389.55	9,019.71	1,004.13	489.89	514.24	1.953		
17,900.00	7,659.00	17,657.56	7,659.00	264.94	261.00	89.94	1,375.09	9,117.99	1,015.56	496.00	519.56	1.955		
18,000.00	7,659.00	17,756.90	7,659.00	267.61	263.65	89.94	1,360.63	9,216.28	1,027.00	502.12	524.88	1.957		
18,100.00	7,659.00	17,856.25	7,659.00	270.28	266.29	89.94	1,346.17	9,314.57	1,038.43	508.23	530.20	1.959		
18,200.00	7,659.00	17,955.59	7,659.00	272.95	268.94	89.95	1,331.71	9,412.85	1,049.86	514.34	535.52	1.960		
18,300.00	7,659.00	18,054.93	7,659.00	275.62	271.59	89.95	1,317.25	9,511.14	1,061.29	520.45	540.84	1.962		
18,400.00	7,659.00	18,154.28	7,659.00	278.29	274.24	89.95	1,302.79	9,609.43	1,072.72	526.56	546.17	1.964		
18,500.00	7,659.00	18,253.62	7,659.00	280.97	276.89	89.95	1,288.34	9,707.71	1,084.16	532.67	551.49	1.966		
18,558.76	7,659.00	18,312.00	7,659.00	282.54	278.45	89.95	1,279.84	9,765.47	1,090.87	536.25	554.62	1.967		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 3AH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	1.00	1.00	0.00	0.00	-179.60	-40.07	-0.28	40.07					
100.00	100.00	101.00	101.00	0.13	0.14	-179.60	-40.07	-0.28	40.07	39.80	0.27	147.080	CC, ES	
200.00	199.98	200.98	200.98	0.50	0.50	-163.74	-40.07	-0.28	41.74	40.75	0.99	42.072		
300.00	299.84	300.84	300.84	0.86	0.85	-165.51	-40.07	-0.28	46.79	45.07	1.72	27.222		
400.00	399.45	400.45	400.45	1.23	1.21	-167.73	-40.07	-0.28	55.27	52.83	2.45	22.596		
500.00	498.70	500.30	499.70	1.63	1.57	-169.90	-40.07	-0.28	67.23	64.06	3.18	21.168		
600.00	597.47	601.53	598.47	2.05	1.93	-171.75	-40.07	-0.28	82.68	78.77	3.91	21.126		
700.00	695.62	703.38	696.62	2.49	2.30	-173.25	-40.07	-0.28	101.61	96.95	4.66	21.822		
800.00	793.06	805.94	794.06	2.98	2.67	-174.43	-40.07	-0.28	123.98	118.57	5.40	22.939		
900.00	889.64	890.64	890.64	3.50	2.97	-175.35	-40.07	-0.28	149.76	143.67	6.09	24.581		
1,000.00	985.27	988.26	988.25	4.06	3.31	-175.65	-39.86	-1.63	178.44	171.62	6.83	26.141		
1,100.00	1,079.82	1,085.71	1,085.58	4.66	3.65	-175.05	-39.16	-6.23	209.29	201.73	7.56	27.667		
1,200.00	1,173.23	1,182.67	1,182.22	5.31	4.00	-173.90	-37.97	-14.06	242.19	233.87	8.32	29.111		
1,300.00	1,266.35	1,279.00	1,277.91	5.98	4.35	-172.44	-36.31	-24.92	274.96	265.89	9.08	30.295		
1,400.00	1,359.46	1,373.32	1,371.51	6.66	4.70	-171.15	-34.56	-36.39	307.61	297.77	9.84	31.256		
1,500.00	1,452.58	1,467.64	1,465.12	7.34	5.06	-170.11	-32.81	-47.86	340.36	329.74	10.62	32.055		
1,600.00	1,545.69	1,561.96	1,558.72	8.03	5.42	-169.25	-31.06	-59.33	373.20	361.80	11.40	32.725		
1,700.00	1,638.81	1,656.28	1,652.32	8.72	5.79	-168.54	-29.30	-70.80	406.10	393.90	12.20	33.293		
1,800.00	1,731.92	1,750.60	1,745.93	9.41	6.16	-167.93	-27.55	-82.27	439.05	426.05	13.00	33.778		
1,900.00	1,825.04	1,844.92	1,839.53	10.11	6.53	-167.40	-25.80	-93.74	472.04	458.23	13.80	34.197		
2,000.00	1,918.15	1,939.24	1,933.14	10.81	6.90	-166.94	-24.05	-105.21	505.05	490.44	14.61	34.560		
2,100.00	2,011.27	2,033.56	2,026.74	11.51	7.28	-166.54	-22.30	-116.68	538.10	522.67	15.43	34.878		
2,200.00	2,104.39	2,127.88	2,120.34	12.21	7.66	-166.19	-20.55	-128.15	571.16	554.92	16.25	35.159		
2,300.00	2,197.50	2,222.20	2,213.95	12.91	8.04	-165.87	-18.80	-139.62	604.24	587.18	17.07	35.408		
2,400.00	2,290.62	2,316.52	2,307.55	13.61	8.42	-165.59	-17.05	-151.09	637.34	619.45	17.89	35.630		
2,500.00	2,383.73	2,410.84	2,401.15	14.31	8.80	-165.33	-15.30	-162.56	670.45	651.73	18.71	35.829		
2,600.00	2,476.85	2,505.16	2,494.76	15.01	9.18	-165.10	-13.55	-174.03	703.57	684.03	19.54	36.008		
2,700.00	2,569.96	2,600.52	2,588.36	15.72	9.56	-164.89	-11.79	-185.50	736.69	716.32	20.37	36.163		
2,800.00	2,663.08	2,706.20	2,681.96	16.42	9.99	-164.70	-10.04	-196.97	769.83	748.58	21.25	36.231		
2,900.00	2,756.20	2,788.12	2,775.57	17.12	10.33	-164.52	-8.29	-208.44	802.97	780.95	22.03	36.452		
3,000.00	2,849.31	2,882.44	2,869.17	17.83	10.71	-164.36	-6.54	-219.91	836.12	813.26	22.86	36.575		
3,100.00	2,942.43	2,976.76	2,962.78	18.53	11.10	-164.21	-4.79	-231.38	869.28	845.59	23.69	36.687		
3,200.00	3,035.54	3,071.08	3,056.38	19.24	11.48	-164.07	-3.04	-242.85	902.44	877.91	24.53	36.791		
3,300.00	3,128.66	3,165.40	3,149.98	19.94	11.87	-163.94	-1.29	-254.32	935.61	910.24	25.36	36.887		
3,400.00	3,221.77	3,259.72	3,243.59	20.65	12.25	-163.82	0.46	-265.79	968.77	942.57	26.20	36.976		
3,500.00	3,314.89	3,354.04	3,337.19	21.35	12.64	-163.71	2.21	-277.26	1,001.95	974.91	27.04	37.059		
3,600.00	3,408.01	3,448.36	3,430.79	22.06	13.02	-163.60	3.96	-288.73	1,035.12	1,007.25	27.87	37.136		
3,700.00	3,501.12	3,542.68	3,524.40	22.77	13.41	-163.50	5.72	-300.20	1,068.30	1,039.59	28.71	37.207		
3,800.00	3,594.24	3,637.00	3,618.00	23.47	13.80	-163.41	7.47	-311.67	1,101.48	1,071.93	29.55	37.274		
3,900.00	3,687.35	3,731.32	3,711.60	24.18	14.19	-163.32	9.22	-323.14	1,134.67	1,104.28	30.39	37.337		
4,000.00	3,780.47	3,825.64	3,805.21	24.89	14.57	-163.24	10.97	-334.61	1,167.85	1,136.62	31.23	37.395		
4,100.00	3,873.58	3,919.96	3,898.81	25.59	14.96	-163.16	12.72	-346.08	1,201.04	1,168.97	32.07	37.451		
4,200.00	3,966.70	4,014.28	3,992.42	26.30	15.35	-163.09	14.47	-357.56	1,234.23	1,201.32	32.91	37.503		
4,300.00	4,059.81	4,108.60	4,086.02	27.01	15.74	-163.02	16.22	-369.03	1,267.42	1,233.67	33.75	37.552		
4,400.00	4,152.93	4,202.92	4,179.62	27.71	16.12	-162.96	17.97	-380.50	1,300.61	1,266.02	34.59	37.598		
4,500.00	4,246.05	4,302.76	4,273.23	28.42	16.54	-162.89	19.72	-391.97	1,333.81	1,298.35	35.46	37.617		
4,600.00	4,339.16	4,408.44	4,366.83	29.13	16.97	-162.83	21.47	-403.44	1,367.00	1,330.66	36.35	37.611		
4,700.00	4,432.28	4,485.88	4,460.43	29.83	17.29	-162.78	23.23	-414.91	1,400.20	1,363.08	37.12	37.722		
4,800.00	4,525.39	4,580.20	4,554.04	30.54	17.68	-162.72	24.98	-426.38	1,433.40	1,395.44	37.96	37.759		
4,900.00	4,618.51	4,674.52	4,647.64	31.25	18.07	-162.67	26.73	-437.85	1,466.60	1,427.79	38.80	37.794		
5,000.00	4,711.62	4,768.84	4,741.24	31.95	18.46	-162.62	28.48	-449.32	1,499.80	1,460.15	39.65	37.828		
5,100.00	4,804.74	4,863.16	4,834.85	32.66	18.84	-162.57	30.23	-460.79	1,533.00	1,492.51	40.49	37.859		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 3AH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,200.00	4,897.86	4,957.48	4,928.45	33.37	19.23	-162.53	31.98	-472.26	1,566.20	1,524.87	41.34	37.890		
5,300.00	4,990.97	5,051.80	5,022.05	34.08	19.62	-162.48	33.73	-483.73	1,599.40	1,557.22	42.18	37.919		
5,400.00	5,084.09	5,146.12	5,115.66	34.78	20.01	-162.44	35.48	-495.20	1,632.61	1,589.58	43.02	37.946		
5,500.00	5,177.20	5,240.44	5,209.26	35.49	20.40	-162.40	37.23	-506.67	1,665.81	1,621.94	43.87	37.973		
5,600.00	5,270.32	5,334.76	5,302.87	36.20	20.79	-162.36	38.98	-518.14	1,699.02	1,654.30	44.71	37.998		
5,700.00	5,363.43	5,429.08	5,396.47	36.91	21.18	-162.33	40.74	-529.61	1,732.22	1,686.66	45.56	38.022		
5,800.00	5,456.55	5,523.40	5,490.07	37.61	21.57	-162.29	42.49	-541.08	1,765.43	1,719.03	46.40	38.045		
5,900.00	5,549.67	5,617.72	5,583.68	38.32	21.96	-162.26	44.24	-552.55	1,798.64	1,751.39	47.25	38.067		
6,000.00	5,642.78	5,712.04	5,677.28	39.03	22.35	-162.22	45.99	-564.02	1,831.84	1,783.75	48.10	38.088		
6,100.00	5,735.90	5,806.36	5,770.88	39.74	22.74	-162.19	47.74	-575.49	1,865.05	1,816.11	48.94	38.108		
6,200.00	5,829.01	5,900.68	5,864.49	40.44	23.13	-162.16	49.49	-586.96	1,898.26	1,848.47	49.79	38.128		
6,300.00	5,922.13	6,005.00	5,958.09	41.15	23.56	-162.13	51.24	-598.43	1,931.47	1,880.80	50.67	38.115		
6,400.00	6,015.24	6,089.32	6,051.69	41.86	23.91	-162.10	52.99	-609.90	1,964.68	1,913.20	51.48	38.164		
6,500.00	6,108.36	6,183.64	6,145.30	42.57	24.30	-162.07	54.74	-621.37	1,997.89	1,945.56	52.33	38.181		
6,600.00	6,201.47	6,277.96	6,238.90	43.28	24.69	-162.05	56.49	-632.84	2,031.10	1,977.93	53.17	38.198		
6,700.00	6,294.59	6,372.28	6,332.51	43.98	25.07	-162.02	58.25	-644.31	2,064.31	2,010.29	54.02	38.214		
6,800.00	6,387.71	6,466.60	6,426.11	44.69	25.46	-162.00	60.00	-655.78	2,097.52	2,042.66	54.87	38.229		
6,900.00	6,480.82	6,560.92	6,519.71	45.40	25.85	-161.97	61.75	-667.25	2,130.73	2,075.02	55.71	38.243		
7,000.00	6,573.94	6,655.24	6,613.32	46.11	26.24	-161.95	63.50	-678.72	2,163.95	2,107.38	56.56	38.258		
7,100.00	6,667.05	6,749.56	6,706.92	46.82	26.63	-161.92	65.25	-690.19	2,197.16	2,139.75	57.41	38.271		
7,200.00	6,760.17	6,843.88	6,800.52	47.52	27.02	-161.90	67.00	-701.67	2,230.37	2,172.11	58.26	38.284		
7,300.00	6,853.28	6,938.20	6,894.13	48.23	27.41	-161.88	68.75	-713.14	2,263.58	2,204.48	59.11	38.297		
7,400.00	6,946.40	7,032.52	6,987.73	48.94	27.80	-161.86	70.50	-724.61	2,296.80	2,236.84	59.95	38.309		
7,500.00	7,039.52	7,124.14	7,078.95	49.65	28.15	-161.93	72.14	-732.31	2,330.05	2,269.32	60.73	38.368		
7,600.00	7,132.94	7,212.69	7,167.21	50.33	28.39	-175.50	73.48	-726.56	2,363.54	2,302.24	61.30	38.556		
7,700.00	7,225.98	7,299.93	7,252.29	50.90	28.56	-147.43	74.51	-707.67	2,396.88	2,335.17	61.71	38.839		
7,800.00	7,315.86	7,386.62	7,333.03	51.34	28.67	-127.28	75.23	-676.34	2,429.06	2,367.05	62.01	39.175		
7,900.00	7,399.85	7,473.35	7,408.15	51.68	28.76	-113.95	75.63	-633.18	2,459.07	2,396.84	62.23	39.515		
8,000.00	7,475.41	7,560.59	7,476.30	51.91	28.85	-104.96	75.71	-578.83	2,486.00	2,423.56	62.44	39.813		
8,100.00	7,540.24	7,648.72	7,535.95	52.05	28.97	-98.76	75.45	-514.09	2,509.04	2,446.33	62.71	40.007		
8,200.00	7,592.37	7,737.93	7,585.53	52.11	29.16	-94.51	74.84	-440.02	2,527.51	2,464.37	63.14	40.031		
8,300.00	7,630.20	7,828.33	7,623.42	52.09	29.47	-91.76	73.90	-358.06	2,540.86	2,477.07	63.79	39.829		
8,400.00	7,652.61	7,919.85	7,648.19	52.01	29.92	-90.29	72.62	-270.07	2,548.69	2,483.96	64.73	39.375		
8,500.00	7,659.00	8,012.34	7,658.69	51.89	30.52	-89.97	71.03	-178.29	2,550.81	2,484.86	65.95	38.679		
8,600.00	7,659.00	8,110.92	7,659.00	51.77	31.32	-89.98	69.15	-79.73	2,550.73	2,483.22	67.51	37.782		
8,700.00	7,659.00	8,210.92	7,659.00	51.67	32.33	-89.98	67.24	20.25	2,550.66	2,481.20	69.46	36.722		
8,800.00	7,659.00	8,310.92	7,659.00	51.61	33.53	-89.98	65.33	120.23	2,550.59	2,478.83	71.76	35.543		
8,900.00	7,659.00	8,410.92	7,659.00	51.58	34.89	-89.98	63.42	220.22	2,550.52	2,476.14	74.38	34.289		
9,000.00	7,659.00	8,510.92	7,659.00	51.59	36.41	-89.98	61.51	320.20	2,550.45	2,473.16	77.29	32.997		
9,100.00	7,659.00	8,610.92	7,659.00	51.67	38.05	-89.98	59.59	420.18	2,550.38	2,469.92	80.46	31.697		
9,200.00	7,659.00	8,710.92	7,659.00	51.83	39.81	-89.98	57.68	520.16	2,550.31	2,466.45	83.86	30.413		
9,300.00	7,659.00	8,810.92	7,659.00	52.14	41.67	-89.98	55.77	620.14	2,550.24	2,462.79	87.45	29.162		
9,400.00	7,659.00	8,910.92	7,659.00	52.67	43.62	-89.98	53.86	720.12	2,550.17	2,458.94	91.22	27.955		
9,500.00	7,659.00	9,010.92	7,659.00	53.53	45.65	-89.98	51.95	820.11	2,550.10	2,454.94	95.15	26.800		
9,600.00	7,659.00	9,110.92	7,659.00	54.75	47.74	-89.98	50.04	920.09	2,550.03	2,450.81	99.22	25.701		
9,700.00	7,659.00	9,210.92	7,659.00	56.29	49.88	-89.98	48.12	1,020.07	2,549.95	2,446.55	103.40	24.660		
9,800.00	7,659.00	9,310.92	7,659.00	58.05	52.08	-89.98	46.21	1,120.05	2,549.88	2,442.18	107.70	23.676		
9,900.00	7,659.00	9,410.92	7,659.00	59.97	54.33	-89.98	44.30	1,220.03	2,549.81	2,437.73	112.09	22.748		
10,000.00	7,659.00	9,510.92	7,659.00	62.00	56.61	-89.98	42.39	1,320.01	2,549.74	2,433.18	116.56	21.875		
10,100.00	7,659.00	9,610.92	7,659.00	64.11	58.93	-89.98	40.48	1,420.00	2,549.67	2,428.56	121.11	21.053		
10,200.00	7,659.00	9,710.92	7,659.00	66.28	61.28	-89.98	38.56	1,519.98	2,549.60	2,423.88	125.72	20.280		
10,300.00	7,659.00	9,810.92	7,659.00	68.51	63.66	-89.98	36.65	1,619.96	2,549.53	2,419.13	130.40	19.552		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 3AH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,400.00	7,659.00	9,910.92	7,659.00	70.77	66.06	89.98	34.74	1,719.94	2,549.46	2,414.34	135.12	18.868		
10,500.00	7,659.00	10,010.92	7,659.00	73.06	68.48	89.98	32.83	1,819.92	2,549.39	2,409.49	139.90	18.223		
10,600.00	7,659.00	10,110.92	7,659.00	75.39	70.93	89.98	30.92	1,919.90	2,549.32	2,404.60	144.72	17.616		
10,700.00	7,659.00	10,210.92	7,659.00	77.74	73.39	89.98	29.00	2,019.89	2,549.25	2,399.67	149.57	17.043		
10,800.00	7,659.00	10,310.92	7,659.00	80.12	75.86	89.98	27.09	2,119.87	2,549.18	2,394.71	154.47	16.503		
10,900.00	7,659.00	10,410.92	7,659.00	82.51	78.35	89.98	25.18	2,219.85	2,549.11	2,389.71	159.39	15.993		
11,000.00	7,659.00	10,510.92	7,659.00	84.93	80.86	89.98	23.27	2,319.83	2,549.03	2,384.69	164.35	15.510		
11,100.00	7,659.00	10,610.92	7,659.00	87.36	83.38	89.98	21.36	2,419.81	2,548.96	2,379.63	169.33	15.053		
11,200.00	7,659.00	10,710.92	7,659.00	89.81	85.90	89.98	19.44	2,519.80	2,548.89	2,374.56	174.33	14.621		
11,300.00	7,659.00	10,810.92	7,659.00	92.27	88.44	89.98	17.53	2,619.78	2,548.82	2,369.46	179.36	14.210		
11,400.00	7,659.00	10,910.92	7,659.00	94.75	90.99	89.98	15.62	2,719.76	2,548.75	2,364.34	184.41	13.821		
11,500.00	7,659.00	11,010.92	7,659.00	97.23	93.54	89.98	13.71	2,819.74	2,548.68	2,359.20	189.48	13.451		
11,600.00	7,659.00	11,110.92	7,659.00	99.73	96.10	89.98	11.80	2,919.72	2,548.61	2,354.05	194.56	13.099		
11,700.00	7,659.00	11,210.92	7,659.00	102.24	98.67	89.98	9.88	3,019.70	2,548.54	2,348.87	199.66	12.764		
11,800.00	7,659.00	11,310.92	7,659.00	104.75	101.25	89.98	7.97	3,119.69	2,548.47	2,343.69	204.78	12.445		
11,900.00	7,659.00	11,410.92	7,659.00	107.28	103.83	89.98	6.06	3,219.67	2,548.40	2,338.49	209.91	12.140		
12,000.00	7,659.00	11,510.92	7,659.00	109.81	106.42	89.98	4.15	3,319.65	2,548.33	2,333.27	215.05	11.850		
12,100.00	7,659.00	11,610.92	7,659.00	112.35	109.01	89.98	2.24	3,419.63	2,548.26	2,328.05	220.21	11.572		
12,200.00	7,659.00	11,710.92	7,659.00	114.90	111.61	89.98	0.32	3,519.61	2,548.19	2,322.81	225.37	11.306		
12,300.00	7,659.00	11,810.92	7,659.00	117.46	114.21	89.98	-1.59	3,619.59	2,548.11	2,317.56	230.55	11.052		
12,400.00	7,659.00	11,910.92	7,659.00	120.02	116.82	89.98	-3.50	3,719.58	2,548.04	2,312.31	235.74	10.809		
12,500.00	7,659.00	12,010.92	7,659.00	122.58	119.43	89.98	-5.41	3,819.56	2,547.97	2,307.04	240.93	10.576		
12,600.00	7,659.00	12,110.92	7,659.00	125.15	122.05	89.98	-7.32	3,919.54	2,547.90	2,301.77	246.13	10.352		
12,700.00	7,659.00	12,210.92	7,659.00	127.73	124.67	89.98	-9.24	4,019.52	2,547.83	2,296.49	251.34	10.137		
12,800.00	7,659.00	12,310.92	7,659.00	130.31	127.29	89.98	-11.15	4,119.50	2,547.76	2,291.20	256.56	9.930		
12,900.00	7,659.00	12,410.92	7,659.00	132.90	129.91	89.98	-13.06	4,219.48	2,547.69	2,285.90	261.79	9.732		
13,000.00	7,659.00	12,510.92	7,659.00	135.49	132.54	89.98	-14.97	4,319.47	2,547.62	2,280.60	267.02	9.541		
13,100.00	7,659.00	12,610.92	7,659.00	138.08	135.17	89.98	-16.88	4,419.45	2,547.55	2,275.29	272.26	9.357		
13,200.00	7,659.00	12,710.92	7,659.00	140.68	137.80	89.98	-18.80	4,519.43	2,547.04	2,269.54	277.50	9.178		
13,300.00	7,659.00	12,810.91	7,659.00	143.28	140.44	89.98	-20.71	4,619.40	2,545.81	2,263.05	282.76	9.004		
13,400.00	7,659.00	12,910.90	7,659.00	145.88	143.07	89.98	-22.62	4,719.37	2,544.57	2,256.56	288.01	8.835		
13,500.00	7,659.00	13,010.90	7,659.00	148.48	145.71	89.98	-24.53	4,819.35	2,543.34	2,250.06	293.28	8.672		
13,600.00	7,659.00	13,110.89	7,659.00	151.09	148.35	89.98	-26.44	4,919.32	2,542.10	2,243.56	298.54	8.515		
13,700.00	7,659.00	13,210.88	7,659.00	153.70	151.00	89.98	-28.35	5,019.30	2,540.86	2,237.05	303.81	8.363		
13,800.00	7,659.00	13,310.87	7,659.00	156.32	153.64	89.98	-30.27	5,119.27	2,539.63	2,230.54	309.09	8.217		
13,900.00	7,659.00	13,410.87	7,659.00	158.94	156.29	89.98	-32.18	5,219.25	2,538.39	2,224.02	314.37	8.075		
14,000.00	7,659.00	13,510.86	7,659.00	161.56	158.94	89.98	-34.09	5,319.22	2,537.15	2,217.50	319.65	7.937		
14,100.00	7,659.00	13,610.85	7,659.00	164.18	161.59	89.98	-36.00	5,419.19	2,535.92	2,210.98	324.94	7.804		
14,200.00	7,659.00	13,710.84	7,659.00	166.80	164.24	89.98	-37.91	5,519.17	2,534.68	2,204.45	330.23	7.676		
14,300.00	7,659.00	13,810.84	7,659.00	169.43	166.89	89.98	-39.83	5,619.14	2,533.45	2,197.92	335.52	7.551		
14,400.00	7,659.00	13,910.83	7,659.00	172.06	169.55	89.98	-41.74	5,719.12	2,532.21	2,191.39	340.82	7.430		
14,500.00	7,659.00	14,010.82	7,659.00	174.69	172.20	89.98	-43.65	5,819.09	2,530.97	2,184.85	346.12	7.312		
14,600.00	7,659.00	14,110.81	7,659.00	177.33	174.86	89.98	-45.56	5,919.06	2,529.74	2,178.32	351.42	7.199		
14,700.00	7,659.00	14,210.80	7,659.00	179.96	177.52	89.98	-47.47	6,019.04	2,528.50	2,171.77	356.73	7.088		
14,800.00	7,659.00	14,310.80	7,659.00	182.60	180.18	89.98	-49.38	6,119.01	2,527.26	2,165.23	362.03	6.981		
14,900.00	7,659.00	14,410.79	7,659.00	185.24	182.84	89.98	-51.30	6,218.99	2,526.03	2,158.68	367.34	6.876		
15,000.00	7,659.00	14,510.78	7,659.00	187.88	185.50	89.98	-53.21	6,318.96	2,524.79	2,152.13	372.66	6.775		
15,100.00	7,659.00	14,610.77	7,659.00	190.52	188.16	89.98	-55.12	6,418.93	2,523.56	2,145.58	377.97	6.677		
15,200.00	7,659.00	14,710.77	7,659.00	193.16	190.82	89.98	-57.03	6,518.91	2,522.32	2,139.03	383.29	6.581		
15,300.00	7,659.00	14,810.76	7,659.00	195.81	193.49	89.98	-58.94	6,618.88	2,521.08	2,132.47	388.61	6.487		
15,400.00	7,659.00	14,910.75	7,659.00	198.45	196.15	89.98	-60.86	6,718.86	2,519.85	2,125.92	393.93	6.397		
15,500.00	7,659.00	15,010.74	7,659.00	201.10	198.82	89.98	-62.77	6,818.83	2,518.61	2,119.36	399.25	6.308		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 3AH - OWB - PROPOSAL 1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)					
15,600.00	7,659.00	15,110.74	7,659.00	203.75	201.48	89.98	-64.68	6,918.80	2,517.37	2,112.80	404.58	6.222	
15,700.00	7,659.00	15,210.73	7,659.00	206.40	204.15	89.98	-66.59	7,018.78	2,516.14	2,106.23	409.91	6.138	
15,800.00	7,659.00	15,310.72	7,659.00	209.05	206.82	89.98	-68.50	7,118.75	2,514.90	2,099.67	415.24	6.057	
15,900.00	7,659.00	15,410.71	7,659.00	211.70	209.49	89.98	-70.41	7,218.73	2,513.67	2,093.10	420.57	5.977	
16,000.00	7,659.00	15,510.71	7,659.00	214.36	212.16	89.98	-72.33	7,318.70	2,512.43	2,086.53	425.90	5.899	
16,100.00	7,659.00	15,610.70	7,659.00	217.01	214.83	89.98	-74.24	7,418.67	2,511.19	2,079.96	431.23	5.823	
16,200.00	7,659.00	15,710.69	7,659.00	219.67	217.50	89.98	-76.15	7,518.65	2,509.96	2,073.39	436.57	5.749	
16,300.00	7,659.00	15,810.68	7,659.00	222.32	220.17	89.98	-78.06	7,618.62	2,508.72	2,066.82	441.90	5.677	
16,400.00	7,659.00	15,910.67	7,659.00	224.98	222.84	89.98	-79.97	7,718.60	2,507.48	2,060.24	447.24	5.607	
16,500.00	7,659.00	16,010.67	7,659.00	227.64	225.51	89.98	-81.88	7,818.57	2,506.25	2,053.67	452.58	5.538	
16,600.00	7,659.00	16,110.66	7,659.00	230.30	228.19	89.98	-83.80	7,918.55	2,505.01	2,047.09	457.92	5.470	
16,700.00	7,659.00	16,210.65	7,659.00	232.96	230.86	89.98	-85.71	8,018.52	2,503.78	2,040.51	463.26	5.405	
16,800.00	7,659.00	16,310.64	7,659.00	235.62	233.54	89.98	-87.62	8,118.49	2,502.54	2,033.93	468.61	5.340	
16,900.00	7,659.00	16,410.64	7,659.00	238.28	236.21	89.98	-89.53	8,218.47	2,501.30	2,027.35	473.95	5.278	
17,000.00	7,659.00	16,510.63	7,659.00	240.95	238.89	89.98	-91.44	8,318.44	2,500.07	2,020.77	479.30	5.216	
17,100.00	7,659.00	16,610.62	7,659.00	243.61	241.56	89.98	-93.36	8,418.42	2,498.83	2,014.19	484.64	5.156	
17,200.00	7,659.00	16,710.61	7,659.00	246.27	244.24	89.98	-95.27	8,518.39	2,497.60	2,007.61	489.99	5.097	
17,300.00	7,659.00	16,810.61	7,659.00	248.94	246.91	89.98	-97.18	8,618.36	2,496.36	2,001.02	495.34	5.040	
17,400.00	7,659.00	16,910.60	7,659.00	251.60	249.59	89.98	-99.09	8,718.34	2,495.12	1,994.44	500.69	4.983	
17,500.00	7,659.00	17,010.59	7,659.00	254.27	252.27	89.98	-101.00	8,818.31	2,493.89	1,987.85	506.04	4.928	
17,600.00	7,659.00	17,110.58	7,659.00	256.94	254.95	89.98	-102.91	8,918.29	2,492.65	1,981.26	511.39	4.874	
17,700.00	7,659.00	17,210.58	7,659.00	259.61	257.62	89.98	-104.83	9,018.26	2,491.41	1,974.67	516.74	4.821	
17,800.00	7,659.00	17,310.57	7,659.00	262.27	260.30	89.98	-106.74	9,118.23	2,490.18	1,968.08	522.09	4.770	
17,900.00	7,659.00	17,410.56	7,659.00	264.94	262.98	89.98	-108.65	9,218.21	2,488.94	1,961.49	527.45	4.719	
18,000.00	7,659.00	17,510.55	7,659.00	267.61	265.66	89.98	-110.56	9,318.18	2,487.71	1,954.90	532.80	4.669	
18,100.00	7,659.00	17,610.54	7,659.00	270.28	268.34	89.98	-112.47	9,418.16	2,486.47	1,948.31	538.16	4.620	
18,200.00	7,659.00	17,710.54	7,659.00	272.95	271.02	89.98	-114.39	9,518.13	2,485.23	1,941.72	543.51	4.573	
18,300.00	7,659.00	17,810.53	7,659.00	275.62	273.70	89.98	-116.30	9,618.10	2,484.00	1,935.13	548.87	4.526	
18,400.00	7,659.00	17,910.52	7,659.00	278.29	276.38	89.98	-118.21	9,718.08	2,482.76	1,928.53	554.23	4.480	
18,500.00	7,659.00	18,010.51	7,659.00	280.97	279.06	89.98	-120.12	9,818.05	2,481.52	1,921.94	559.59	4.435	
18,558.76	7,659.00	18,069.27	7,659.00	282.54	280.64	89.98	-121.24	9,876.79	2,480.80	1,918.06	562.73	4.408 SF	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 3BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	1.00	1.00	0.00	0.00	-179.73	-59.74	-0.28	59.74					
100.00	100.00	101.00	101.00	0.13	0.14	-179.73	-59.74	-0.28	59.74	59.47	0.27	219.279	CC, ES	
200.00	199.98	200.98	200.98	0.50	0.50	-163.65	-59.74	-0.28	61.41	60.42	0.99	61.897		
300.00	299.84	300.84	300.84	0.86	0.85	-164.89	-59.74	-0.28	66.45	64.73	1.72	38.662		
400.00	399.45	400.45	400.45	1.23	1.21	-166.59	-59.74	-0.28	74.90	72.45	2.45	30.621		
500.00	498.70	500.30	499.70	1.63	1.57	-168.41	-59.74	-0.28	86.80	83.63	3.18	27.327		
600.00	597.47	601.53	598.47	2.05	1.93	-170.11	-59.74	-0.28	102.18	98.27	3.91	26.103		
700.00	695.62	696.62	696.62	2.49	2.27	-171.61	-59.74	-0.28	121.03	116.40	4.63	26.121		
800.00	793.06	792.22	792.20	2.98	2.60	-172.28	-60.54	-1.53	143.93	138.58	5.35	26.913		
900.00	889.64	886.27	886.14	3.50	2.92	-171.89	-63.00	-5.38	171.46	165.41	6.05	28.323		
1,000.00	985.27	978.44	978.00	4.06	3.24	-170.89	-67.03	-11.67	203.57	196.81	6.76	30.099		
1,100.00	1,079.82	1,068.39	1,067.38	4.66	3.57	-169.58	-72.49	-20.21	240.24	232.76	7.48	32.123		
1,200.00	1,173.23	1,158.19	1,156.32	5.31	3.91	-168.27	-79.17	-30.65	281.04	272.82	8.21	34.216		
1,300.00	1,266.35	1,248.97	1,246.19	5.98	4.26	-167.36	-86.05	-41.40	322.76	313.81	8.95	36.059		
1,400.00	1,359.46	1,339.74	1,336.06	6.66	4.61	-166.65	-92.92	-52.14	364.54	354.84	9.70	37.584		
1,500.00	1,452.58	1,430.51	1,425.94	7.34	4.98	-166.09	-99.80	-62.88	406.36	395.90	10.46	38.854		
1,600.00	1,545.69	1,521.29	1,515.81	8.03	5.34	-165.64	-106.68	-73.63	448.20	436.97	11.22	39.929		
1,700.00	1,638.81	1,612.06	1,605.68	8.72	5.71	-165.26	-113.55	-84.37	490.06	478.06	12.00	40.847		
1,800.00	1,731.92	1,702.83	1,695.55	9.41	6.09	-164.94	-120.43	-95.12	531.94	519.16	12.77	41.639		
1,900.00	1,825.04	1,793.61	1,785.43	10.11	6.46	-164.67	-127.30	-105.86	573.82	560.27	13.56	42.327		
2,000.00	1,918.15	1,884.38	1,875.30	10.81	6.84	-164.44	-134.18	-116.61	615.72	601.38	14.34	42.931		
2,100.00	2,011.27	1,975.15	1,965.17	11.51	7.22	-164.23	-141.05	-127.35	657.62	642.49	15.13	43.463		
2,200.00	2,104.39	2,065.93	2,055.04	12.21	7.60	-164.05	-147.93	-138.10	699.53	683.61	15.92	43.937		
2,300.00	2,197.50	2,156.70	2,144.92	12.91	7.98	-163.89	-154.81	-148.84	741.45	724.73	16.71	44.360		
2,400.00	2,290.62	2,247.47	2,234.79	13.61	8.36	-163.75	-161.68	-159.58	783.37	765.86	17.51	44.740		
2,500.00	2,383.73	2,338.25	2,324.66	14.31	8.75	-163.62	-168.56	-170.33	825.29	806.99	18.31	45.083		
2,600.00	2,476.85	2,429.02	2,414.53	15.01	9.13	-163.51	-175.43	-181.07	867.22	848.11	19.10	45.395		
2,700.00	2,569.96	2,519.79	2,504.41	15.72	9.52	-163.40	-182.31	-191.82	909.15	889.24	19.90	45.678		
2,800.00	2,663.08	2,610.57	2,594.28	16.42	9.90	-163.30	-189.18	-202.56	951.08	930.37	20.70	45.938		
2,900.00	2,756.20	2,701.34	2,684.15	17.12	10.29	-163.22	-196.06	-213.31	993.01	971.50	21.51	46.176		
3,000.00	2,849.31	2,807.89	2,774.02	17.83	10.74	-163.14	-202.94	-224.05	1,034.94	1,012.57	22.37	46.260		
3,100.00	2,942.43	2,882.89	2,863.90	18.53	11.06	-163.06	-209.81	-234.80	1,076.88	1,053.77	23.11	46.596		
3,200.00	3,035.54	2,973.66	2,953.77	19.24	11.45	-162.99	-216.69	-245.54	1,118.82	1,094.90	23.91	46.783		
3,300.00	3,128.66	3,064.43	3,043.64	19.94	11.84	-162.93	-223.56	-256.28	1,160.76	1,136.04	24.72	46.957		
3,400.00	3,221.77	3,155.21	3,133.51	20.65	12.23	-162.87	-230.44	-267.03	1,202.70	1,177.17	25.53	47.118		
3,500.00	3,314.89	3,245.98	3,223.39	21.35	12.62	-162.81	-237.31	-277.77	1,244.64	1,218.31	26.33	47.269		
3,600.00	3,408.01	3,336.75	3,313.26	22.06	13.01	-162.76	-244.19	-288.52	1,286.58	1,259.44	27.14	47.409		
3,700.00	3,501.12	3,427.53	3,403.13	22.77	13.40	-162.71	-251.06	-299.26	1,328.52	1,300.58	27.94	47.541		
3,800.00	3,594.24	3,518.30	3,493.01	23.47	13.79	-162.67	-257.94	-310.01	1,370.47	1,341.71	28.75	47.664		
3,900.00	3,687.35	3,609.07	3,582.88	24.18	14.18	-162.62	-264.82	-320.75	1,412.41	1,382.85	29.56	47.780		
4,000.00	3,780.47	3,700.15	3,672.75	24.89	14.57	-162.58	-271.69	-331.50	1,454.36	1,423.99	30.37	47.888		
4,100.00	3,873.58	3,809.38	3,762.62	25.59	15.04	-162.55	-278.57	-342.24	1,496.30	1,465.05	31.26	47.874		
4,200.00	3,966.70	3,881.39	3,852.50	26.30	15.35	-162.51	-285.44	-352.99	1,538.25	1,506.26	31.99	48.090		
4,300.00	4,059.81	3,972.17	3,942.37	27.01	15.74	-162.48	-292.32	-363.73	1,580.19	1,547.40	32.80	48.182		
4,400.00	4,152.93	4,062.94	4,032.24	27.71	16.13	-162.44	-299.19	-374.47	1,622.14	1,588.53	33.61	48.268		
4,500.00	4,246.05	4,153.71	4,122.11	28.42	16.52	-162.41	-306.07	-385.22	1,664.09	1,629.67	34.42	48.351		
4,600.00	4,339.16	4,244.49	4,211.99	29.13	16.91	-162.38	-312.95	-395.96	1,706.03	1,670.81	35.23	48.429		
4,700.00	4,432.28	4,335.26	4,301.86	29.83	17.30	-162.36	-319.82	-406.71	1,747.98	1,711.94	36.04	48.503		
4,800.00	4,525.39	4,426.03	4,391.73	30.54	17.69	-162.33	-326.70	-417.45	1,789.93	1,753.08	36.85	48.574		
4,900.00	4,618.51	4,516.81	4,481.60	31.25	18.08	-162.30	-333.57	-428.20	1,831.88	1,794.22	37.66	48.641		
5,000.00	4,711.62	4,607.58	4,571.48	31.95	18.47	-162.28	-340.45	-438.94	1,873.83	1,835.35	38.47	48.705		
5,100.00	4,804.74	4,701.65	4,661.35	32.66	18.88	-162.26	-347.32	-449.69	1,915.78	1,876.48	39.30	48.749		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 3BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,200.00	4,897.86	4,789.13	4,751.22	33.37	19.25	-162.23	-354.20	-460.43	1,957.73	1,917.63	40.10	48.824		
5,300.00	4,990.97	4,879.90	4,841.09	34.08	19.65	-162.21	-361.07	-471.17	1,999.68	1,958.77	40.91	48.880		
5,400.00	5,084.09	4,970.67	4,930.97	34.78	20.04	-162.19	-367.95	-481.92	2,041.63	1,999.90	41.72	48.933		
5,500.00	5,177.20	5,061.45	5,020.84	35.49	20.43	-162.17	-374.83	-492.66	2,083.58	2,041.04	42.54	48.984		
5,600.00	5,270.32	5,152.22	5,110.71	36.20	20.82	-162.16	-381.70	-503.41	2,125.53	2,082.18	43.35	49.032		
5,700.00	5,363.43	5,242.99	5,200.58	36.91	21.21	-162.14	-388.58	-514.15	2,167.48	2,123.31	44.16	49.079		
5,800.00	5,456.55	5,333.77	5,290.46	37.61	21.60	-162.12	-395.45	-524.90	2,209.43	2,164.45	44.98	49.123		
5,900.00	5,549.67	5,424.54	5,380.33	38.32	22.00	-162.10	-402.33	-535.64	2,251.38	2,205.59	45.79	49.166		
6,000.00	5,642.78	5,515.31	5,470.20	39.03	22.39	-162.09	-409.20	-546.39	2,293.33	2,246.72	46.61	49.207		
6,100.00	5,735.90	5,606.09	5,560.07	39.74	22.78	-162.07	-416.08	-557.13	2,335.28	2,287.86	47.42	49.247		
6,200.00	5,829.01	5,703.14	5,649.95	40.44	23.20	-162.06	-422.96	-567.88	2,377.23	2,328.97	48.26	49.258		
6,300.00	5,922.13	5,787.63	5,739.82	41.15	23.56	-162.04	-429.83	-578.62	2,419.18	2,370.13	49.05	49.321		
6,400.00	6,015.24	5,878.41	5,829.69	41.86	23.96	-162.03	-436.71	-589.36	2,461.13	2,411.27	49.87	49.356		
6,500.00	6,108.36	5,969.18	5,919.56	42.57	24.35	-162.01	-443.58	-600.11	2,503.08	2,452.40	50.68	49.389		
6,600.00	6,201.47	6,059.95	6,009.44	43.28	24.74	-162.00	-450.46	-610.85	2,545.04	2,493.54	51.50	49.422		
6,700.00	6,294.59	6,150.73	6,099.31	43.98	25.13	-161.99	-457.33	-621.60	2,586.99	2,534.67	52.31	49.453		
6,800.00	6,387.71	6,241.50	6,189.18	44.69	25.52	-161.98	-464.21	-632.34	2,628.94	2,575.81	53.13	49.483		
6,900.00	6,480.82	6,332.27	6,279.05	45.40	25.92	-161.97	-471.09	-643.09	2,670.89	2,616.95	53.94	49.512		
7,000.00	6,573.94	6,423.05	6,368.93	46.11	26.31	-161.95	-477.96	-653.83	2,712.84	2,658.08	54.76	49.539		
7,100.00	6,667.05	6,513.82	6,458.80	46.82	26.70	-161.94	-484.84	-664.58	2,754.79	2,699.22	55.58	49.566		
7,200.00	6,760.17	6,604.59	6,548.67	47.52	27.09	-161.93	-491.71	-675.32	2,796.75	2,740.35	56.40	49.592		
7,300.00	6,853.28	6,704.63	6,638.54	48.23	27.52	-161.92	-498.59	-686.06	2,838.70	2,781.45	57.25	49.583		
7,400.00	6,946.40	6,786.14	6,728.42	48.94	27.88	-161.91	-505.46	-696.81	2,880.65	2,822.62	58.03	49.641		
7,500.00	7,039.52	6,876.91	6,818.29	49.65	28.27	-161.90	-512.34	-707.55	2,922.60	2,863.76	58.85	49.664		
7,600.00	7,132.94	6,967.41	6,907.89	50.33	28.66	-161.89	-519.19	-718.27	2,964.59	2,904.94	59.65	49.701		
7,700.00	7,225.98	7,055.56	6,995.17	50.90	29.04	-161.88	-525.87	-728.70	3,006.15	2,945.77	60.39	49.783		
7,800.00	7,315.86	7,138.61	7,077.63	51.34	29.37	-161.87	-532.23	-735.71	3,046.40	2,985.38	61.02	49.928		
7,900.00	7,399.85	7,225.08	7,163.61	51.68	29.62	-161.86	-539.10	-743.87	3,084.44	3,022.90	61.54	50.125		
8,000.00	7,475.41	7,318.78	7,254.77	51.91	29.81	-161.85	-546.66	-751.06	3,119.23	3,057.24	61.99	50.320		
8,100.00	7,540.24	7,422.55	7,350.43	52.05	29.94	-161.84	-554.95	-758.08	3,149.76	3,087.35	62.41	50.469		
8,200.00	7,592.37	7,539.83	7,448.05	52.11	30.01	-161.83	-563.87	-768.07	3,175.08	3,112.23	62.85	50.521		
8,300.00	7,630.20	7,674.16	7,541.17	52.09	30.04	-161.82	-573.05	-775.12	3,194.21	3,130.81	63.40	50.583		
8,400.00	7,652.61	7,827.61	7,616.95	52.01	30.14	-161.81	-581.56	-782.50	3,206.22	3,141.96	64.26	49.891		
8,500.00	7,659.00	7,997.95	7,656.75	51.89	30.60	-161.80	-587.86	-789.63	3,210.35	3,144.66	65.69	48.870		
8,600.00	7,659.00	8,120.18	7,659.00	51.77	31.34	-161.79	-590.38	-796.50	3,210.39	3,143.01	67.38	47.649		
8,700.00	7,659.00	8,220.18	7,659.00	51.67	32.24	-161.78	-592.29	-803.43	3,210.32	3,141.02	69.30	46.322		
8,800.00	7,659.00	8,320.18	7,659.00	51.61	33.37	-161.77	-594.21	-810.57	3,210.26	3,138.67	71.59	44.843		
8,900.00	7,659.00	8,420.18	7,659.00	51.58	34.71	-161.76	-596.13	-817.71	3,210.19	3,135.99	74.20	43.266		
9,000.00	7,659.00	8,520.18	7,659.00	51.59	36.21	-161.75	-598.04	-824.85	3,210.12	3,133.03	77.09	41.639		
9,100.00	7,659.00	8,620.18	7,659.00	51.67	37.84	-161.74	-599.96	-831.99	3,210.06	3,129.81	80.25	40.000		
9,200.00	7,659.00	8,720.18	7,659.00	51.83	39.60	-161.73	-601.88	-839.13	3,209.99	3,126.35	83.64	38.380		
9,300.00	7,659.00	8,820.18	7,659.00	52.14	41.46	-161.72	-603.79	-846.27	3,209.93	3,122.70	87.22	36.801		
9,400.00	7,659.00	8,920.18	7,659.00	52.67	43.41	-161.71	-605.71	-853.41	3,209.86	3,118.87	90.99	35.277		
9,500.00	7,659.00	9,020.18	7,659.00	53.53	45.43	-161.70	-607.63	-860.55	3,209.79	3,114.88	94.91	33.818		
9,600.00	7,659.00	9,120.18	7,659.00	54.75	47.52	-161.69	-609.54	-867.69	3,209.73	3,110.75	98.97	32.430		
9,700.00	7,659.00	9,220.18	7,659.00	56.29	49.67	-161.68	-611.46	-874.83	3,209.66	3,106.50	103.16	31.114		
9,800.00	7,659.00	9,320.18	7,659.00	58.05	51.87	-161.67	-613.38	-881.97	3,209.60	3,102.15	107.45	29.871		
9,900.00	7,659.00	9,420.18	7,659.00	59.97	54.11	-161.66	-615.29	-889.11	3,209.53	3,097.70	111.83	28.699		
10,000.00	7,659.00	9,520.18	7,659.00	62.00	56.40	-161.65	-617.21	-896.25	3,209.46	3,093.16	116.30	27.595		
10,100.00	7,659.00	9,620.18	7,659.00	64.11	58.71	-161.64	-619.13	-903.39	3,209.40	3,088.55	120.85	26.557		
10,200.00	7,659.00	9,720.18	7,659.00	66.28	61.06	-161.63	-621.04	-910.53	3,209.33	3,083.87	125.46	25.580		
10,300.00	7,659.00	9,820.18	7,659.00	68.51	63.44	-161.62	-622.96	-917.67	3,209.27	3,079.13	130.13	24.661		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 3BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,400.00	7,659.00	9,920.18	7,659.00	70.77	65.84	89.98	-624.88	1,707.17	3,209.20	3,074.34	134.86	23.797		
10,500.00	7,659.00	10,020.18	7,659.00	73.06	68.26	89.98	-626.80	1,807.15	3,209.13	3,069.50	139.63	22.983		
10,600.00	7,659.00	10,120.18	7,659.00	75.39	70.71	89.98	-628.71	1,907.13	3,209.07	3,064.62	144.45	22.216		
10,700.00	7,659.00	10,220.18	7,659.00	77.74	73.17	89.98	-630.63	2,007.12	3,209.00	3,059.69	149.31	21.493		
10,800.00	7,659.00	10,320.18	7,659.00	80.12	75.64	89.98	-632.55	2,107.10	3,208.94	3,054.74	154.20	20.810		
10,900.00	7,659.00	10,420.18	7,659.00	82.51	78.13	89.98	-634.46	2,207.08	3,208.87	3,049.75	159.12	20.166		
11,000.00	7,659.00	10,520.18	7,659.00	84.93	80.64	89.98	-636.38	2,307.06	3,208.80	3,044.73	164.08	19.557		
11,100.00	7,659.00	10,620.18	7,659.00	87.36	83.15	89.98	-638.30	2,407.04	3,208.74	3,039.68	169.06	18.980		
11,200.00	7,659.00	10,720.18	7,659.00	89.81	85.68	89.98	-640.21	2,507.02	3,208.67	3,034.61	174.06	18.434		
11,300.00	7,659.00	10,820.18	7,659.00	92.27	88.22	89.98	-642.13	2,607.01	3,208.61	3,029.52	179.09	17.916		
11,400.00	7,659.00	10,920.18	7,659.00	94.75	90.76	89.98	-644.05	2,706.99	3,208.54	3,024.40	184.14	17.424		
11,500.00	7,659.00	11,020.18	7,659.00	97.23	93.32	89.98	-645.96	2,806.97	3,208.48	3,019.27	189.21	16.957		
11,600.00	7,659.00	11,120.18	7,659.00	99.73	95.88	89.98	-647.88	2,906.95	3,208.41	3,014.12	194.29	16.513		
11,700.00	7,659.00	11,220.18	7,659.00	102.24	98.45	89.98	-649.80	3,006.93	3,208.34	3,008.95	199.39	16.091		
11,800.00	7,659.00	11,320.18	7,659.00	104.75	101.02	89.98	-651.71	3,106.91	3,208.28	3,003.77	204.51	15.688		
11,900.00	7,659.00	11,420.17	7,659.00	107.28	103.61	89.98	-653.63	3,206.90	3,208.21	2,998.57	209.64	15.304		
12,000.00	7,659.00	11,520.17	7,659.00	109.81	106.19	89.98	-655.55	3,306.88	3,208.15	2,993.36	214.78	14.937		
12,100.00	7,659.00	11,620.17	7,659.00	112.35	108.79	89.98	-657.46	3,406.86	3,208.08	2,988.14	219.94	14.586		
12,200.00	7,659.00	11,720.17	7,659.00	114.90	111.38	89.98	-659.38	3,506.84	3,208.01	2,982.91	225.10	14.251		
12,300.00	7,659.00	11,820.17	7,659.00	117.46	113.99	89.98	-661.30	3,606.82	3,207.95	2,977.67	230.28	13.931		
12,400.00	7,659.00	11,920.17	7,659.00	120.02	116.59	89.98	-663.21	3,706.80	3,207.88	2,972.42	235.46	13.624		
12,500.00	7,659.00	12,020.17	7,659.00	122.58	119.20	89.98	-665.13	3,806.79	3,207.82	2,967.16	240.66	13.329		
12,600.00	7,659.00	12,120.17	7,659.00	125.15	121.82	89.98	-667.05	3,906.77	3,207.75	2,961.89	245.86	13.047		
12,700.00	7,659.00	12,220.17	7,659.00	127.73	124.43	89.98	-668.96	4,006.75	3,207.68	2,956.61	251.07	12.776		
12,800.00	7,659.00	12,320.17	7,659.00	130.31	127.06	89.98	-670.88	4,106.73	3,207.62	2,951.33	256.29	12.516		
12,900.00	7,659.00	12,420.17	7,659.00	132.90	129.68	89.98	-672.80	4,206.71	3,207.55	2,946.04	261.52	12.265		
13,000.00	7,659.00	12,520.17	7,659.00	135.49	132.31	89.98	-674.72	4,306.69	3,207.49	2,940.74	266.75	12.024		
13,100.00	7,659.00	12,620.17	7,659.00	138.08	134.94	89.98	-676.63	4,406.68	3,207.42	2,935.43	271.99	11.793		
13,200.00	7,659.00	12,720.17	7,659.00	140.68	137.57	89.98	-678.55	4,506.65	3,206.92	2,929.69	277.23	11.568		
13,300.00	7,659.00	12,820.16	7,659.00	143.28	140.20	89.98	-680.47	4,606.63	3,205.69	2,923.21	282.48	11.348		
13,400.00	7,659.00	12,920.16	7,659.00	145.88	142.84	89.98	-682.38	4,706.60	3,204.46	2,916.72	287.74	11.137		
13,500.00	7,659.00	13,020.15	7,659.00	148.48	145.48	89.98	-684.30	4,806.58	3,203.23	2,910.22	293.00	10.932		
13,600.00	7,659.00	13,120.14	7,659.00	151.09	148.12	89.98	-686.22	4,906.55	3,202.00	2,903.73	298.27	10.735		
13,700.00	7,659.00	13,220.13	7,659.00	153.70	150.76	89.98	-688.13	5,006.52	3,200.76	2,897.22	303.54	10.545		
13,800.00	7,659.00	13,320.13	7,659.00	156.32	153.41	89.98	-690.05	5,106.50	3,199.53	2,890.72	308.82	10.361		
13,900.00	7,659.00	13,420.12	7,659.00	158.94	156.05	89.98	-691.97	5,206.47	3,198.30	2,884.21	314.09	10.183		
14,000.00	7,659.00	13,520.11	7,659.00	161.56	158.70	89.98	-693.88	5,306.45	3,197.07	2,877.69	319.38	10.010		
14,100.00	7,659.00	13,620.10	7,659.00	164.18	161.35	89.98	-695.80	5,406.42	3,195.84	2,871.17	324.66	9.844		
14,200.00	7,659.00	13,720.10	7,659.00	166.80	164.00	89.98	-697.72	5,506.39	3,194.61	2,864.65	329.96	9.682		
14,300.00	7,659.00	13,820.09	7,659.00	169.43	166.65	89.98	-699.63	5,606.37	3,193.38	2,858.13	335.25	9.525		
14,400.00	7,659.00	13,920.08	7,659.00	172.06	169.31	89.98	-701.55	5,706.34	3,192.14	2,851.60	340.55	9.374		
14,500.00	7,659.00	14,020.07	7,659.00	174.69	171.96	89.98	-703.47	5,806.32	3,190.91	2,845.07	345.85	9.226		
14,600.00	7,659.00	14,120.07	7,659.00	177.33	174.62	89.98	-705.38	5,906.29	3,189.68	2,838.53	351.15	9.084		
14,700.00	7,659.00	14,220.06	7,659.00	179.96	177.28	89.98	-707.30	6,006.26	3,188.45	2,832.00	356.45	8.945		
14,800.00	7,659.00	14,320.05	7,659.00	182.60	179.94	89.98	-709.22	6,106.24	3,187.22	2,825.46	361.76	8.810		
14,900.00	7,659.00	14,420.04	7,659.00	185.24	182.60	89.98	-711.13	6,206.21	3,185.99	2,818.92	367.07	8.679		
15,000.00	7,659.00	14,520.04	7,659.00	187.88	185.26	89.98	-713.05	6,306.19	3,184.76	2,812.37	372.38	8.552		
15,100.00	7,659.00	14,620.03	7,659.00	190.52	187.92	89.98	-714.97	6,406.16	3,183.53	2,805.83	377.70	8.429		
15,200.00	7,659.00	14,720.02	7,659.00	193.16	190.58	89.98	-716.88	6,506.14	3,182.29	2,799.28	383.02	8.308		
15,300.00	7,659.00	14,820.01	7,659.00	195.81	193.25	89.98	-718.80	6,606.11	3,181.06	2,792.73	388.34	8.192		
15,400.00	7,659.00	14,920.01	7,659.00	198.45	195.91	89.98	-720.72	6,706.08	3,179.83	2,786.17	393.66	8.078		
15,500.00	7,659.00	15,020.00	7,659.00	201.10	198.58	89.98	-722.63	6,806.06	3,178.60	2,779.62	398.98	7.967		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 3BH - OWB - PROPOSAL 1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)					
15,600.00	7,659.00	15,119.99	7,659.00	203.75	201.24	89.98	-724.55	6,906.03	3,177.37	2,773.06	404.31	7.859	
15,700.00	7,659.00	15,219.98	7,659.00	206.40	203.91	89.98	-726.47	7,006.01	3,176.14	2,766.50	409.63	7.754	
15,800.00	7,659.00	15,319.98	7,659.00	209.05	206.58	89.98	-728.38	7,105.98	3,174.91	2,759.94	414.96	7.651	
15,900.00	7,659.00	15,419.97	7,659.00	211.70	209.25	89.98	-730.30	7,205.95	3,173.67	2,753.38	420.29	7.551	
16,000.00	7,659.00	15,519.96	7,659.00	214.36	211.92	89.98	-732.22	7,305.93	3,172.44	2,746.82	425.63	7.454	
16,100.00	7,659.00	15,619.95	7,659.00	217.01	214.59	89.98	-734.13	7,405.90	3,171.21	2,740.25	430.96	7.358	
16,200.00	7,659.00	15,719.94	7,659.00	219.67	217.26	89.98	-736.05	7,505.88	3,169.98	2,733.69	436.29	7.266	
16,300.00	7,659.00	15,819.94	7,659.00	222.32	219.93	89.98	-737.97	7,605.85	3,168.75	2,727.12	441.63	7.175	
16,400.00	7,659.00	15,919.93	7,659.00	224.98	222.60	89.98	-739.88	7,705.82	3,167.52	2,720.55	446.97	7.087	
16,500.00	7,659.00	16,019.92	7,659.00	227.64	225.27	89.98	-741.80	7,805.80	3,166.29	2,713.98	452.31	7.000	
16,600.00	7,659.00	16,119.91	7,659.00	230.30	227.94	89.98	-743.72	7,905.77	3,165.05	2,707.41	457.65	6.916	
16,700.00	7,659.00	16,219.91	7,659.00	232.96	230.62	89.98	-745.63	8,005.75	3,163.82	2,700.83	462.99	6.833	
16,800.00	7,659.00	16,319.90	7,659.00	235.62	233.29	89.98	-747.55	8,105.72	3,162.59	2,694.26	468.33	6.753	
16,900.00	7,659.00	16,419.89	7,659.00	238.28	235.97	89.98	-749.47	8,205.69	3,161.36	2,687.68	473.68	6.674	
17,000.00	7,659.00	16,519.88	7,659.00	240.95	238.64	89.98	-751.38	8,305.67	3,160.13	2,681.11	479.02	6.597	
17,100.00	7,659.00	16,619.88	7,659.00	243.61	241.32	89.98	-753.30	8,405.64	3,158.90	2,674.53	484.37	6.522	
17,200.00	7,659.00	16,719.87	7,659.00	246.27	243.99	89.98	-755.22	8,505.62	3,157.67	2,667.95	489.72	6.448	
17,300.00	7,659.00	16,819.86	7,659.00	248.94	246.67	89.98	-757.13	8,605.59	3,156.44	2,661.37	495.07	6.376	
17,400.00	7,659.00	16,919.85	7,659.00	251.60	249.35	89.98	-759.05	8,705.56	3,155.20	2,654.79	500.42	6.305	
17,500.00	7,659.00	17,019.85	7,659.00	254.27	252.02	89.98	-760.97	8,805.54	3,153.97	2,648.21	505.77	6.236	
17,600.00	7,659.00	17,119.84	7,659.00	256.94	254.70	89.98	-762.88	8,905.51	3,152.74	2,641.62	511.12	6.168	
17,700.00	7,659.00	17,219.83	7,659.00	259.61	257.38	89.98	-764.80	9,005.49	3,151.51	2,635.04	516.47	6.102	
17,800.00	7,659.00	17,319.82	7,659.00	262.27	260.06	89.98	-766.72	9,105.46	3,150.28	2,628.46	521.82	6.037	
17,900.00	7,659.00	17,419.82	7,659.00	264.94	262.74	89.98	-768.63	9,205.43	3,149.05	2,621.87	527.18	5.973	
18,000.00	7,659.00	17,519.81	7,659.00	267.61	265.41	89.98	-770.55	9,305.41	3,147.82	2,615.29	532.53	5.911	
18,100.00	7,659.00	17,619.80	7,659.00	270.28	268.09	89.98	-772.47	9,405.38	3,146.58	2,608.70	537.89	5.850	
18,200.00	7,659.00	17,719.79	7,659.00	272.95	270.77	89.98	-774.38	9,505.36	3,145.35	2,602.11	543.24	5.790	
18,300.00	7,659.00	17,819.79	7,659.00	275.62	273.45	89.98	-776.30	9,605.33	3,144.12	2,595.52	548.60	5.731	
18,400.00	7,659.00	17,919.78	7,659.00	278.29	276.13	89.98	-778.22	9,705.30	3,142.89	2,588.93	553.96	5.674	
18,500.00	7,659.00	18,019.77	7,659.00	280.97	278.81	89.98	-780.13	9,805.27	3,141.66	2,582.34	559.32	5.617	
18,558.76	7,659.00	18,078.52	7,659.00	282.54	280.39	89.98	-781.26	9,864.02	3,140.94	2,578.47	562.46	5.584 SF	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 4AH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	1.00	1.00	0.00	0.00	-179.80	-79.77	-0.28	79.77					
100.00	100.00	101.00	101.00	0.13	0.14	-179.80	-79.77	-0.28	79.77	79.50	0.27	292.817	CC, ES	
200.00	199.98	200.98	200.98	0.50	0.50	-163.60	-79.77	-0.28	81.45	80.46	0.99	82.090		
300.00	299.84	300.84	300.84	0.86	0.85	-164.55	-79.77	-0.28	86.48	84.76	1.72	50.316		
400.00	399.45	400.45	400.45	1.23	1.21	-165.91	-79.77	-0.28	94.91	92.46	2.45	38.801		
500.00	498.70	499.70	499.70	1.63	1.57	-167.45	-79.77	-0.28	106.77	103.60	3.17	33.634		
600.00	597.47	595.35	595.33	2.05	1.90	-168.45	-81.07	-1.19	123.34	119.46	3.89	31.743		
700.00	695.62	689.43	689.29	2.49	2.22	-168.59	-84.90	-3.87	145.77	141.19	4.59	31.791		
800.00	793.06	781.47	781.01	2.98	2.54	-168.21	-91.10	-8.20	173.90	168.62	5.28	32.910		
900.00	889.64	871.02	869.99	3.50	2.86	-167.52	-99.44	-14.03	207.60	201.62	5.98	34.713		
1,000.00	985.27	957.71	955.76	4.06	3.20	-166.71	-109.68	-21.19	246.70	240.02	6.67	36.976		
1,100.00	1,079.82	1,041.19	1,037.98	4.66	3.53	-165.84	-121.54	-29.49	291.00	283.65	7.35	39.566		
1,200.00	1,173.23	1,125.07	1,120.19	5.31	3.89	-165.07	-135.17	-39.01	339.92	331.86	8.06	42.162		
1,300.00	1,266.35	1,211.71	1,205.06	5.98	4.27	-164.63	-149.46	-49.01	389.80	381.03	8.77	44.422		
1,400.00	1,359.46	1,301.65	1,289.92	6.66	4.68	-164.29	-163.76	-59.00	439.69	430.18	9.52	46.204		
1,500.00	1,452.58	1,384.99	1,374.78	7.34	5.07	-164.01	-178.06	-69.00	489.59	479.35	10.24	47.815		
1,600.00	1,545.69	1,471.62	1,459.65	8.03	5.47	-163.79	-192.35	-79.00	539.50	528.52	10.98	49.124		
1,700.00	1,638.81	1,558.26	1,544.51	8.72	5.88	-163.60	-206.65	-88.99	589.41	577.68	11.73	50.243		
1,800.00	1,731.92	1,644.90	1,629.38	9.41	6.29	-163.45	-220.95	-98.99	639.33	626.84	12.48	51.210		
1,900.00	1,825.04	1,731.54	1,714.24	10.11	6.70	-163.32	-235.25	-108.98	689.25	676.01	13.24	52.052		
2,000.00	1,918.15	1,818.18	1,799.10	10.81	7.12	-163.20	-249.54	-118.98	739.17	725.17	14.00	52.791		
2,100.00	2,011.27	1,904.82	1,883.97	11.51	7.54	-163.10	-263.84	-128.98	789.09	774.33	14.76	53.445		
2,200.00	2,104.39	2,008.54	1,968.83	12.21	8.04	-163.01	-278.14	-138.97	839.02	823.42	15.60	53.778		
2,300.00	2,197.50	2,078.09	2,053.70	12.91	8.38	-162.93	-292.44	-148.97	888.95	872.65	16.30	54.544		
2,400.00	2,290.62	2,164.73	2,138.56	13.61	8.80	-162.86	-306.73	-158.97	938.87	921.81	17.07	55.011		
2,500.00	2,383.73	2,251.37	2,223.43	14.31	9.23	-162.80	-321.03	-168.96	988.80	970.96	17.84	55.433		
2,600.00	2,476.85	2,338.01	2,308.29	15.01	9.65	-162.74	-335.33	-178.96	1,038.73	1,020.12	18.61	55.816		
2,700.00	2,569.96	2,424.65	2,393.15	15.72	10.07	-162.69	-349.63	-188.96	1,088.66	1,069.28	19.38	56.165		
2,800.00	2,663.08	2,511.29	2,478.02	16.42	10.50	-162.64	-363.92	-198.95	1,138.59	1,118.43	20.16	56.484		
2,900.00	2,756.20	2,602.07	2,562.88	17.12	10.95	-162.60	-378.22	-208.95	1,188.52	1,167.57	20.95	56.729		
3,000.00	2,849.31	2,684.57	2,647.75	17.83	11.35	-162.56	-392.52	-218.94	1,238.46	1,216.75	21.71	57.046		
3,100.00	2,942.43	2,771.20	2,732.61	18.53	11.78	-162.52	-406.81	-228.94	1,288.39	1,265.90	22.49	57.295		
3,200.00	3,035.54	2,857.84	2,817.47	19.24	12.21	-162.48	-421.11	-238.94	1,338.32	1,315.06	23.26	57.525		
3,300.00	3,128.66	2,944.48	2,902.34	19.94	12.63	-162.45	-435.41	-248.93	1,388.25	1,364.21	24.04	57.739		
3,400.00	3,221.77	3,031.12	2,987.20	20.65	13.06	-162.42	-449.71	-258.93	1,438.19	1,413.36	24.82	57.938		
3,500.00	3,314.89	3,117.76	3,072.07	21.35	13.49	-162.40	-464.00	-268.93	1,488.12	1,462.52	25.60	58.123		
3,600.00	3,408.01	3,204.40	3,156.93	22.06	13.92	-162.37	-478.30	-278.92	1,538.06	1,511.67	26.38	58.296		
3,700.00	3,501.12	3,308.96	3,241.79	22.77	14.44	-162.35	-492.60	-288.92	1,587.99	1,560.75	27.24	58.296		
3,800.00	3,594.24	3,377.67	3,326.66	23.47	14.78	-162.32	-506.90	-298.92	1,637.92	1,609.98	27.95	58.610		
3,900.00	3,687.35	3,464.31	3,411.52	24.18	15.21	-162.30	-521.19	-308.91	1,687.86	1,659.13	28.73	58.753		
4,000.00	3,780.47	3,550.95	3,496.39	24.89	15.64	-162.28	-535.49	-318.91	1,737.79	1,708.28	29.51	58.887		
4,100.00	3,873.58	3,637.59	3,581.25	25.59	16.07	-162.26	-549.79	-328.90	1,787.73	1,757.43	30.29	59.014		
4,200.00	3,966.70	3,724.23	3,666.12	26.30	16.50	-162.25	-564.09	-338.90	1,837.66	1,806.59	31.08	59.133		
4,300.00	4,059.81	3,810.87	3,750.98	27.01	16.93	-162.23	-578.38	-348.90	1,887.60	1,855.74	31.86	59.246		
4,400.00	4,152.93	3,897.51	3,835.84	27.71	17.36	-162.21	-592.68	-358.89	1,937.53	1,904.89	32.64	59.352		
4,500.00	4,246.05	3,984.15	3,920.71	28.42	17.79	-162.20	-606.98	-368.89	1,987.47	1,954.04	33.43	59.453		
4,600.00	4,339.16	4,070.78	4,005.57	29.13	18.22	-162.18	-621.27	-378.89	2,037.40	2,003.19	34.21	59.549		
4,700.00	4,432.28	4,157.42	4,090.44	29.83	18.65	-162.17	-635.57	-388.88	2,087.34	2,052.34	35.00	59.640		
4,800.00	4,525.39	4,244.06	4,175.30	30.54	19.08	-162.16	-649.87	-398.88	2,137.27	2,101.49	35.78	59.726		
4,900.00	4,618.51	4,330.70	4,260.16	31.25	19.51	-162.14	-664.17	-408.88	2,187.21	2,150.64	36.57	59.808		
5,000.00	4,711.62	4,417.34	4,345.03	31.95	19.94	-162.13	-678.46	-418.87	2,237.15	2,199.79	37.36	59.886		
5,100.00	4,804.74	4,503.98	4,429.89	32.66	20.37	-162.12	-692.76	-428.87	2,287.08	2,248.94	38.14	59.960		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 4AH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,200.00	4,897.86	4,609.38	4,514.76	33.37	20.89	-162.11	-707.06	-438.86	2,337.02	2,298.01	39.01	59.909		
5,300.00	4,990.97	4,677.25	4,599.62	34.08	21.23	-162.10	-721.36	-448.86	2,386.95	2,347.24	39.72	60.099		
5,400.00	5,084.09	4,763.89	4,684.48	34.78	21.66	-162.09	-735.65	-458.86	2,436.89	2,396.38	40.50	60.163		
5,500.00	5,177.20	4,850.53	4,769.35	35.49	22.09	-162.08	-749.95	-468.85	2,486.83	2,445.53	41.29	60.225		
5,600.00	5,270.32	4,937.17	4,854.21	36.20	22.52	-162.07	-764.25	-478.85	2,536.76	2,494.68	42.08	60.283		
5,700.00	5,363.43	5,023.81	4,939.08	36.91	22.96	-162.06	-778.55	-488.85	2,586.70	2,543.83	42.87	60.340		
5,800.00	5,456.55	5,110.45	5,023.94	37.61	23.39	-162.05	-792.84	-498.84	2,636.63	2,592.98	43.66	60.393		
5,900.00	5,549.67	5,202.91	5,108.81	38.32	23.85	-162.04	-807.14	-508.84	2,686.57	2,642.10	44.47	60.411		
6,000.00	5,642.78	5,283.73	5,193.67	39.03	24.25	-162.03	-821.44	-518.84	2,736.51	2,691.27	45.24	60.494		
6,100.00	5,735.90	5,370.36	5,278.53	39.74	24.68	-162.03	-835.73	-528.83	2,786.44	2,740.42	46.03	60.541		
6,200.00	5,829.01	5,457.00	5,363.40	40.44	25.11	-162.02	-850.03	-538.83	2,836.38	2,789.56	46.82	60.586		
6,300.00	5,922.13	5,543.64	5,448.26	41.15	25.54	-162.01	-864.33	-548.82	2,886.32	2,838.71	47.61	60.630		
6,400.00	6,015.24	5,630.28	5,533.13	41.86	25.98	-162.01	-878.63	-558.82	2,936.25	2,887.86	48.40	60.671		
6,500.00	6,108.36	5,716.92	5,617.99	42.57	26.41	-162.00	-892.92	-568.82	2,986.19	2,937.00	49.19	60.711		
6,600.00	6,201.47	5,803.56	5,702.85	43.28	26.84	-161.99	-907.22	-578.81	3,036.12	2,986.15	49.98	60.749		
6,700.00	6,294.59	5,909.80	5,787.72	43.98	27.37	-161.99	-921.52	-588.81	3,086.06	3,035.21	50.85	60.687		
6,800.00	6,387.71	5,976.83	5,872.58	44.69	27.70	-161.98	-935.82	-598.81	3,136.00	3,084.44	51.56	60.821		
6,900.00	6,480.82	6,063.47	5,957.45	45.40	28.13	-161.97	-950.11	-608.80	3,185.93	3,133.58	52.35	60.855		
7,000.00	6,573.94	6,150.11	6,042.31	46.11	28.57	-161.97	-964.41	-618.80	3,235.87	3,182.73	53.15	60.887		
7,100.00	6,667.05	6,236.75	6,127.17	46.82	29.00	-161.96	-978.71	-628.80	3,285.81	3,231.87	53.94	60.918		
7,200.00	6,760.17	6,323.39	6,212.04	47.52	29.43	-161.96	-993.01	-638.79	3,335.74	3,281.01	54.73	60.948		
7,300.00	6,853.28	6,410.03	6,296.90	48.23	29.86	-161.95	-1,007.30	-648.79	3,385.68	3,330.16	55.52	60.977		
7,400.00	6,946.40	6,503.33	6,381.77	48.94	30.33	-161.95	-1,021.60	-658.78	3,435.62	3,379.27	56.35	60.974		
7,500.00	7,039.52	6,583.31	6,466.63	49.65	30.72	-161.94	-1,035.90	-668.78	3,485.55	3,428.44	57.11	61.031		
7,600.00	7,132.94	6,669.68	6,551.24	50.33	31.16	174.22	-1,050.15	-678.75	3,535.50	3,477.62	57.88	61.081		
7,700.00	7,225.98	6,753.80	6,633.64	50.90	31.57	144.65	-1,064.03	-688.45	3,584.79	3,526.22	58.57	61.208		
7,800.00	7,315.86	6,833.12	6,711.33	51.34	31.97	123.31	-1,077.12	-697.60	3,632.23	3,573.07	59.16	61.395		
7,900.00	7,399.85	6,905.22	6,781.95	51.68	32.33	109.07	-1,089.02	-705.92	3,676.88	3,617.21	59.67	61.621		
8,000.00	7,475.41	6,967.92	6,843.36	51.91	32.64	99.32	-1,099.37	-713.16	3,717.97	3,657.86	60.10	61.861		
8,100.00	7,540.24	7,019.30	6,893.69	52.05	32.90	92.37	-1,107.85	-719.09	3,754.90	3,694.42	60.49	62.079		
8,200.00	7,592.37	7,057.80	6,931.41	52.11	33.09	87.31	-1,114.20	-723.53	3,787.17	3,726.33	60.85	62.235		
8,300.00	7,630.20	7,082.27	6,955.37	52.09	33.21	83.60	-1,118.24	-726.35	3,814.37	3,753.13	61.24	62.289		
8,400.00	7,652.61	7,091.94	6,964.85	52.01	33.26	80.97	-1,119.83	-727.47	3,836.02	3,774.37	61.65	62.220		
8,500.00	7,659.00	7,086.64	6,959.66	51.89	33.23	79.43	-1,118.96	-726.86	3,851.74	3,789.64	62.10	62.025		
8,600.00	7,659.00	7,075.43	6,948.68	51.77	33.18	79.26	-1,117.11	-725.56	3,866.54	3,803.89	62.64	61.723		
8,700.00	7,659.00	8,286.75	7,659.00	51.67	33.97	89.99	-1,252.18	-5.08	3,870.33	3,800.55	69.77	55.469		
8,800.00	7,659.00	8,386.75	7,659.00	51.61	34.04	89.99	-1,254.09	94.90	3,870.26	3,798.24	72.02	53.740		
8,900.00	7,659.00	8,486.75	7,659.00	51.58	35.09	89.99	-1,256.01	194.89	3,870.19	3,795.60	74.59	51.889		
9,000.00	7,659.00	8,586.75	7,659.00	51.59	36.59	89.99	-1,257.92	294.87	3,870.12	3,792.68	77.44	49.973		
9,100.00	7,659.00	8,686.75	7,659.00	51.67	38.25	89.99	-1,259.84	394.85	3,870.05	3,789.49	80.56	48.037		
9,200.00	7,659.00	8,786.75	7,659.00	51.83	40.02	89.99	-1,261.75	494.83	3,869.98	3,786.07	83.92	46.118		
9,300.00	7,659.00	8,886.75	7,659.00	52.14	41.88	89.99	-1,263.66	594.81	3,869.92	3,782.45	87.47	44.243		
9,400.00	7,659.00	8,986.75	7,659.00	52.67	43.82	89.99	-1,265.58	694.79	3,869.85	3,778.64	91.21	42.430		
9,500.00	7,659.00	9,086.75	7,659.00	53.53	45.84	89.99	-1,267.49	794.78	3,869.78	3,774.68	95.10	40.691		
9,600.00	7,659.00	9,186.75	7,659.00	54.75	47.92	89.99	-1,269.41	894.76	3,869.71	3,770.58	99.14	39.034		
9,700.00	7,659.00	9,286.75	7,659.00	56.29	50.05	89.99	-1,271.32	994.74	3,869.64	3,766.35	103.29	37.462		
9,800.00	7,659.00	9,386.75	7,659.00	58.05	52.24	89.99	-1,273.24	1,094.72	3,869.58	3,762.01	107.56	35.975		
9,900.00	7,659.00	9,486.75	7,659.00	59.97	54.47	89.99	-1,275.15	1,194.70	3,869.51	3,757.58	111.93	34.571		
10,000.00	7,659.00	9,586.75	7,659.00	62.00	56.74	89.99	-1,277.07	1,294.68	3,869.44	3,753.06	116.38	33.248		
10,100.00	7,659.00	9,686.75	7,659.00	64.11	59.04	89.99	-1,278.98	1,394.67	3,869.37	3,748.46	120.91	32.003		
10,200.00	7,659.00	9,786.75	7,659.00	66.28	61.38	89.99	-1,280.90	1,494.65	3,869.30	3,743.80	125.50	30.830		
10,300.00	7,659.00	9,886.75	7,659.00	68.51	63.74	89.99	-1,282.81	1,594.63	3,869.23	3,739.07	130.16	29.726		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 4AH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,400.00	7,659.00	9,986.75	7,659.00	70.77	66.12	89.99	-1,284.72	1,694.61	3,869.17	3,734.29	134.87	28.687		
10,500.00	7,659.00	10,086.75	7,659.00	73.06	68.53	89.99	-1,286.64	1,794.59	3,869.10	3,729.46	139.63	27.709		
10,600.00	7,659.00	10,186.75	7,659.00	75.39	70.96	89.99	-1,288.55	1,894.57	3,869.03	3,724.59	144.44	26.786		
10,700.00	7,659.00	10,286.75	7,659.00	77.74	73.41	89.99	-1,290.47	1,994.56	3,868.96	3,719.68	149.29	25.917		
10,800.00	7,659.00	10,386.75	7,659.00	80.12	75.87	89.99	-1,292.38	2,094.54	3,868.89	3,714.73	154.17	25.095		
10,900.00	7,659.00	10,486.75	7,659.00	82.51	78.35	89.99	-1,294.30	2,194.52	3,868.82	3,709.74	159.08	24.320		
11,000.00	7,659.00	10,586.75	7,659.00	84.93	80.84	89.99	-1,296.21	2,294.50	3,868.76	3,704.73	164.03	23.586		
11,100.00	7,659.00	10,686.75	7,659.00	87.36	83.35	89.99	-1,298.13	2,394.48	3,868.69	3,699.69	169.00	22.892		
11,200.00	7,659.00	10,786.75	7,659.00	89.81	85.86	89.99	-1,300.04	2,494.46	3,868.62	3,694.63	174.00	22.234		
11,300.00	7,659.00	10,886.75	7,659.00	92.27	88.39	89.99	-1,301.95	2,594.45	3,868.55	3,689.54	179.02	21.610		
11,400.00	7,659.00	10,986.75	7,659.00	94.75	90.92	89.99	-1,303.87	2,694.43	3,868.48	3,684.43	184.06	21.018		
11,500.00	7,659.00	11,086.75	7,659.00	97.23	93.47	89.99	-1,305.78	2,794.41	3,868.42	3,679.30	189.12	20.455		
11,600.00	7,659.00	11,186.75	7,659.00	99.73	96.02	89.99	-1,307.70	2,894.39	3,868.35	3,674.15	194.19	19.920		
11,700.00	7,659.00	11,286.75	7,659.00	102.24	98.58	89.99	-1,309.61	2,994.37	3,868.28	3,668.99	199.29	19.410		
11,800.00	7,659.00	11,386.75	7,659.00	104.75	101.14	89.99	-1,311.53	3,094.35	3,868.21	3,663.81	204.40	18.925		
11,900.00	7,659.00	11,486.75	7,659.00	107.28	103.72	89.99	-1,313.44	3,194.33	3,868.14	3,658.62	209.52	18.462		
12,000.00	7,659.00	11,586.75	7,659.00	109.81	106.30	89.99	-1,315.36	3,294.32	3,868.07	3,653.41	214.66	18.019		
12,100.00	7,659.00	11,686.75	7,659.00	112.35	108.88	89.99	-1,317.27	3,394.30	3,868.01	3,648.20	219.81	17.597		
12,200.00	7,659.00	11,786.75	7,659.00	114.90	111.47	89.99	-1,319.19	3,494.28	3,867.94	3,642.97	224.97	17.193		
12,300.00	7,659.00	11,886.75	7,659.00	117.46	114.06	89.99	-1,321.10	3,594.26	3,867.87	3,637.73	230.14	16.806		
12,400.00	7,659.00	11,986.75	7,659.00	120.02	116.66	89.99	-1,323.01	3,694.24	3,867.80	3,632.48	235.32	16.436		
12,500.00	7,659.00	12,086.75	7,659.00	122.58	119.27	89.99	-1,324.93	3,794.22	3,867.73	3,627.22	240.51	16.081		
12,600.00	7,659.00	12,186.75	7,659.00	125.15	121.87	89.99	-1,326.84	3,894.21	3,867.67	3,621.95	245.71	15.741		
12,700.00	7,659.00	12,286.75	7,659.00	127.73	124.49	89.99	-1,328.76	3,994.19	3,867.60	3,616.68	250.92	15.414		
12,800.00	7,659.00	12,386.75	7,659.00	130.31	127.10	89.99	-1,330.67	4,094.17	3,867.53	3,611.39	256.14	15.099		
12,900.00	7,659.00	12,486.75	7,659.00	132.90	129.72	89.99	-1,332.59	4,194.15	3,867.46	3,606.10	261.36	14.797		
13,000.00	7,659.00	12,586.75	7,659.00	135.49	132.34	89.99	-1,334.50	4,294.13	3,867.39	3,600.80	266.59	14.507		
13,100.00	7,659.00	12,686.75	7,659.00	138.08	134.96	89.99	-1,336.42	4,394.11	3,867.32	3,595.50	271.82	14.227		
13,200.00	7,659.00	12,786.74	7,659.00	140.68	137.59	89.99	-1,338.33	4,494.09	3,866.25	3,589.76	277.06	13.956		
13,300.00	7,659.00	12,886.74	7,659.00	143.28	140.22	89.99	-1,340.25	4,594.07	3,865.18	3,583.28	282.31	13.693		
13,400.00	7,659.00	12,986.73	7,659.00	145.88	142.85	89.99	-1,342.16	4,694.04	3,864.11	3,576.79	287.57	13.438		
13,500.00	7,659.00	13,086.72	7,659.00	148.48	145.48	89.99	-1,344.07	4,794.02	3,863.04	3,570.29	292.83	13.193		
13,600.00	7,659.00	13,186.71	7,659.00	151.09	148.12	89.99	-1,345.99	4,893.99	3,861.97	3,563.80	298.09	12.955		
13,700.00	7,659.00	13,286.71	7,659.00	153.70	150.76	89.99	-1,347.90	4,993.96	3,860.90	3,557.29	303.36	12.726		
13,800.00	7,659.00	13,386.70	7,659.00	156.32	153.40	89.99	-1,349.82	5,093.94	3,859.82	3,550.79	308.63	12.505		
13,900.00	7,659.00	13,486.69	7,659.00	158.94	156.04	89.99	-1,351.73	5,193.91	3,858.75	3,544.28	313.91	12.291		
14,000.00	7,659.00	13,586.68	7,659.00	161.56	158.68	89.99	-1,353.65	5,293.89	3,857.68	3,537.76	319.19	12.084		
14,100.00	7,659.00	13,686.67	7,659.00	164.18	161.33	89.99	-1,355.56	5,393.86	3,856.61	3,531.24	324.48	11.883		
14,200.00	7,659.00	13,786.67	7,659.00	166.80	163.97	89.99	-1,357.47	5,493.83	3,854.49	3,524.72	329.76	11.689		
14,300.00	7,659.00	13,886.66	7,659.00	169.43	166.62	89.99	-1,359.39	5,593.81	3,853.25	3,518.20	335.05	11.500		
14,400.00	7,659.00	13,986.65	7,659.00	172.06	169.27	89.99	-1,361.30	5,693.78	3,852.02	3,511.67	340.35	11.318		
14,500.00	7,659.00	14,086.64	7,659.00	174.69	171.92	89.99	-1,363.22	5,793.76	3,850.78	3,505.14	345.65	11.141		
14,600.00	7,659.00	14,186.64	7,659.00	177.33	174.58	89.99	-1,365.13	5,893.73	3,849.55	3,498.60	350.95	10.969		
14,700.00	7,659.00	14,286.63	7,659.00	179.96	177.23	89.99	-1,367.05	5,993.70	3,848.32	3,492.07	356.25	10.802		
14,800.00	7,659.00	14,386.62	7,659.00	182.60	179.89	89.99	-1,368.96	6,093.68	3,847.08	3,485.53	361.56	10.640		
14,900.00	7,659.00	14,486.61	7,659.00	185.24	182.54	89.99	-1,370.87	6,193.65	3,845.85	3,478.98	366.87	10.483		
15,000.00	7,659.00	14,586.61	7,659.00	187.88	185.20	89.99	-1,372.79	6,293.63	3,844.62	3,472.44	372.18	10.330		
15,100.00	7,659.00	14,686.60	7,659.00	190.52	187.86	89.99	-1,374.70	6,393.60	3,843.38	3,465.89	377.49	10.181		
15,200.00	7,659.00	14,786.59	7,659.00	193.16	190.52	89.99	-1,376.62	6,493.58	3,842.15	3,459.34	382.81	10.037		
15,300.00	7,659.00	14,886.58	7,659.00	195.81	193.18	89.99	-1,378.53	6,593.55	3,840.92	3,452.79	388.13	9.896		
15,400.00	7,659.00	14,986.58	7,659.00	198.45	195.84	89.99	-1,380.45	6,693.52	3,839.68	3,446.24	393.45	9.759		
15,500.00	7,659.00	15,086.57	7,659.00	201.10	198.50	89.99	-1,382.36	6,793.50	3,838.45	3,439.68	398.77	9.626		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 4AH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
15,600.00	7,659.00	15,186.56	7,659.00	203.75	201.17	89.99	-1,384.28	6,893.47	3,837.21	3,433.12	404.09	9.496		
15,700.00	7,659.00	15,286.55	7,659.00	206.40	203.83	89.99	-1,386.19	6,993.45	3,835.98	3,426.56	409.42	9.369		
15,800.00	7,659.00	15,386.55	7,659.00	209.05	206.50	89.99	-1,388.10	7,093.42	3,834.75	3,420.00	414.74	9.246		
15,900.00	7,659.00	15,486.54	7,659.00	211.70	209.16	89.99	-1,390.02	7,193.39	3,833.51	3,413.44	420.07	9.126		
16,000.00	7,659.00	15,586.53	7,659.00	214.36	211.83	89.99	-1,391.93	7,293.37	3,832.28	3,406.88	425.40	9.009		
16,100.00	7,659.00	15,686.52	7,659.00	217.01	214.50	89.99	-1,393.85	7,393.34	3,831.05	3,400.31	430.74	8.894		
16,200.00	7,659.00	15,786.51	7,659.00	219.67	217.16	89.99	-1,395.76	7,493.32	3,829.81	3,393.74	436.07	8.783		
16,300.00	7,659.00	15,886.51	7,659.00	222.32	219.83	89.99	-1,397.68	7,593.29	3,828.58	3,387.17	441.41	8.674		
16,400.00	7,659.00	15,986.50	7,659.00	224.98	222.50	89.99	-1,399.59	7,693.26	3,827.35	3,380.60	446.74	8.567		
16,500.00	7,659.00	16,086.49	7,659.00	227.64	225.17	89.99	-1,401.50	7,793.24	3,826.11	3,374.03	452.08	8.463		
16,600.00	7,659.00	16,186.48	7,659.00	230.30	227.84	89.99	-1,403.42	7,893.21	3,824.88	3,367.46	457.42	8.362		
16,700.00	7,659.00	16,286.48	7,659.00	232.96	230.51	89.99	-1,405.33	7,993.19	3,823.64	3,360.88	462.76	8.263		
16,800.00	7,659.00	16,386.47	7,659.00	235.62	233.18	89.99	-1,407.25	8,093.16	3,822.41	3,354.31	468.10	8.166		
16,900.00	7,659.00	16,486.46	7,659.00	238.28	235.86	89.99	-1,409.16	8,193.13	3,821.18	3,347.73	473.45	8.071		
17,000.00	7,659.00	16,586.45	7,659.00	240.95	238.53	89.99	-1,411.08	8,293.11	3,819.94	3,341.15	478.79	7.978		
17,100.00	7,659.00	16,686.45	7,659.00	243.61	241.20	89.98	-1,412.99	8,393.08	3,818.71	3,334.57	484.14	7.888		
17,200.00	7,659.00	16,786.44	7,659.00	246.27	243.88	89.98	-1,414.91	8,493.06	3,817.48	3,327.99	489.48	7.799		
17,300.00	7,659.00	16,886.43	7,659.00	248.94	246.55	89.98	-1,416.82	8,593.03	3,816.24	3,321.41	494.83	7.712		
17,400.00	7,659.00	16,986.42	7,659.00	251.60	249.23	89.98	-1,418.73	8,693.00	3,815.01	3,314.83	500.18	7.627		
17,500.00	7,659.00	17,086.42	7,659.00	254.27	251.90	89.98	-1,420.65	8,792.98	3,813.78	3,308.25	505.53	7.544		
17,600.00	7,659.00	17,186.41	7,659.00	256.94	254.58	89.98	-1,422.56	8,892.95	3,812.54	3,301.66	510.88	7.463		
17,700.00	7,659.00	17,286.40	7,659.00	259.61	257.25	89.98	-1,424.48	8,992.93	3,811.31	3,295.08	516.23	7.383		
17,800.00	7,659.00	17,386.39	7,659.00	262.27	259.93	89.98	-1,426.39	9,092.90	3,810.07	3,288.49	521.58	7.305		
17,900.00	7,659.00	17,486.39	7,659.00	264.94	262.61	89.98	-1,428.31	9,192.88	3,808.84	3,281.90	526.94	7.228		
18,000.00	7,659.00	17,586.38	7,659.00	267.61	265.28	89.98	-1,430.22	9,292.85	3,807.61	3,275.32	532.29	7.153		
18,100.00	7,659.00	17,686.37	7,659.00	270.28	267.96	89.98	-1,432.13	9,392.82	3,806.37	3,268.73	537.64	7.080		
18,200.00	7,659.00	17,786.36	7,659.00	272.95	270.64	89.98	-1,434.05	9,492.80	3,805.14	3,262.14	543.00	7.008		
18,300.00	7,659.00	17,886.36	7,659.00	275.62	273.32	89.98	-1,435.96	9,592.77	3,803.91	3,255.55	548.36	6.937		
18,400.00	7,659.00	17,986.35	7,659.00	278.29	276.00	89.98	-1,437.88	9,692.75	3,802.67	3,248.96	553.71	6.868		
18,500.00	7,659.00	18,086.34	7,659.00	280.97	278.68	89.98	-1,439.79	9,792.72	3,801.44	3,242.37	559.07	6.800		
18,558.76	7,659.00	18,145.08	7,659.00	282.54	280.25	89.98	-1,440.92	9,851.45	3,800.71	3,238.50	562.22	6.760 SF		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 4BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	2.00	2.00	0.00	0.00	-179.73	-119.84	-0.56	119.84					
100.00	100.00	102.00	102.00	0.13	0.14	-179.73	-119.84	-0.56	119.84	119.56	0.28	434.167	CC, ES	
200.00	199.98	201.98	201.98	0.50	0.50	-163.41	-119.84	-0.56	121.51	120.52	1.00	122.030		
300.00	299.84	301.84	301.84	0.86	0.86	-164.06	-119.84	-0.56	126.54	124.81	1.72	73.469		
400.00	399.45	397.30	397.28	1.23	1.19	-164.68	-121.34	-1.25	136.49	134.06	2.43	56.127		
500.00	498.70	491.68	491.54	1.63	1.51	-164.96	-125.67	-3.22	152.75	149.61	3.14	48.709		
600.00	597.47	584.38	583.91	2.05	1.84	-164.97	-132.67	-6.41	175.19	171.35	3.84	45.614		
700.00	695.62	674.87	673.81	2.49	2.18	-164.78	-142.12	-10.72	203.66	199.12	4.54	44.842		
800.00	793.06	762.73	760.72	2.98	2.53	-164.47	-153.77	-16.03	237.97	232.74	5.24	45.453		
900.00	889.64	847.54	844.21	3.50	2.89	-164.08	-167.31	-22.20	277.93	272.01	5.92	46.948		
1,000.00	985.27	928.98	923.94	4.06	3.26	-163.65	-182.41	-29.09	323.27	316.68	6.59	49.040		
1,100.00	1,079.82	1,006.79	999.64	4.66	3.63	-163.20	-198.77	-36.55	373.75	366.50	7.25	51.559		
1,200.00	1,173.23	1,080.82	1,071.19	5.31	4.01	-162.84	-216.06	-44.43	428.96	421.06	7.89	54.337		
1,300.00	1,266.35	1,162.76	1,150.09	5.98	4.44	-162.73	-236.19	-53.61	485.85	477.27	8.58	56.623		
1,400.00	1,359.46	1,245.00	1,229.27	6.66	4.89	-162.63	-256.39	-62.81	542.74	533.45	9.29	58.410		
1,500.00	1,452.58	1,327.24	1,308.46	7.34	5.34	-162.56	-276.59	-72.02	599.63	589.62	10.01	59.928		
1,600.00	1,545.69	1,409.47	1,387.64	8.03	5.80	-162.50	-296.79	-81.23	656.52	645.80	10.73	61.208		
1,700.00	1,638.81	1,508.29	1,466.82	8.72	6.35	-162.44	-316.98	-90.44	713.42	701.89	11.52	61.914		
1,800.00	1,731.92	1,573.95	1,546.01	9.41	6.72	-162.40	-337.18	-99.65	770.31	758.13	12.18	63.234		
1,900.00	1,825.04	1,656.18	1,625.19	10.11	7.19	-162.36	-357.38	-108.86	827.20	814.29	12.92	64.047		
2,000.00	1,918.15	1,738.42	1,704.38	10.81	7.66	-162.33	-377.58	-118.07	884.10	870.44	13.65	64.757		
2,100.00	2,011.27	1,820.66	1,783.56	11.51	8.13	-162.30	-397.78	-127.27	940.99	926.60	14.39	65.383		
2,200.00	2,104.39	1,902.89	1,862.75	12.21	8.60	-162.27	-417.98	-136.48	997.88	982.75	15.13	65.937		
2,300.00	2,197.50	1,985.13	1,941.93	12.91	9.07	-162.25	-438.18	-145.69	1,054.78	1,038.90	15.88	66.431		
2,400.00	2,290.62	2,067.37	2,021.11	13.61	9.54	-162.23	-458.37	-154.90	1,111.67	1,095.05	16.62	66.874		
2,500.00	2,383.73	2,149.61	2,100.30	14.31	10.02	-162.21	-478.57	-164.11	1,168.57	1,151.20	17.37	67.273		
2,600.00	2,476.85	2,231.84	2,179.48	15.01	10.49	-162.19	-498.77	-173.32	1,225.46	1,207.34	18.12	67.634		
2,700.00	2,569.96	2,314.08	2,258.67	15.72	10.97	-162.18	-518.97	-182.52	1,282.36	1,263.49	18.87	67.961		
2,800.00	2,663.08	2,403.68	2,337.85	16.42	11.49	-162.16	-539.17	-191.73	1,339.25	1,319.60	19.65	68.148		
2,900.00	2,756.20	2,478.55	2,417.04	17.12	11.92	-162.15	-559.37	-200.94	1,396.15	1,375.77	20.37	68.533		
3,000.00	2,849.31	2,560.79	2,496.22	17.83	12.40	-162.14	-579.57	-210.15	1,453.04	1,431.92	21.12	68.784		
3,100.00	2,942.43	2,643.03	2,575.40	18.53	12.88	-162.13	-599.77	-219.36	1,509.94	1,488.06	21.88	69.015		
3,200.00	3,035.54	2,725.26	2,654.59	19.24	13.35	-162.12	-619.96	-228.57	1,566.83	1,544.20	22.63	69.228		
3,300.00	3,128.66	2,807.50	2,733.77	19.94	13.83	-162.11	-640.16	-237.77	1,623.73	1,600.34	23.39	69.425		
3,400.00	3,221.77	2,889.74	2,812.96	20.65	14.31	-162.10	-660.36	-246.98	1,680.62	1,656.48	24.14	69.608		
3,500.00	3,314.89	2,971.98	2,892.14	21.35	14.79	-162.09	-680.56	-256.19	1,737.52	1,712.62	24.90	69.778		
3,600.00	3,408.01	3,054.21	2,971.33	22.06	15.27	-162.08	-700.76	-265.40	1,794.41	1,768.75	25.66	69.937		
3,700.00	3,501.12	3,136.45	3,050.51	22.77	15.75	-162.08	-720.96	-274.61	1,851.31	1,824.89	26.42	70.084		
3,800.00	3,594.24	3,218.69	3,129.69	23.47	16.23	-162.07	-741.16	-283.82	1,908.20	1,881.03	27.17	70.222		
3,900.00	3,687.35	3,300.92	3,208.88	24.18	16.70	-162.06	-761.36	-293.03	1,965.10	1,937.16	27.93	70.352		
4,000.00	3,780.47	3,383.16	3,288.06	24.89	17.18	-162.06	-781.55	-302.23	2,021.99	1,993.30	28.69	70.473		
4,100.00	3,873.58	3,465.40	3,367.25	25.59	17.66	-162.05	-801.75	-311.44	2,078.89	2,049.43	29.45	70.587		
4,200.00	3,966.70	3,547.63	3,446.43	26.30	18.14	-162.04	-821.95	-320.65	2,135.78	2,105.57	30.21	70.694		
4,300.00	4,059.81	3,629.87	3,525.61	27.01	18.62	-162.04	-842.15	-329.86	2,192.68	2,161.70	30.97	70.795		
4,400.00	4,152.93	3,712.11	3,604.80	27.71	19.10	-162.03	-862.35	-339.07	2,249.57	2,217.84	31.73	70.889		
4,500.00	4,246.05	3,805.65	3,683.98	28.42	19.65	-162.03	-882.55	-348.28	2,306.47	2,273.92	32.54	70.870		
4,600.00	4,339.16	3,876.58	3,763.17	29.13	20.06	-162.03	-902.75	-357.48	2,363.36	2,330.10	33.26	71.064		
4,700.00	4,432.28	3,958.82	3,842.35	29.83	20.54	-162.02	-922.95	-366.69	2,420.26	2,386.24	34.02	71.143		
4,800.00	4,525.39	4,041.06	3,921.54	30.54	21.02	-162.02	-943.14	-375.90	2,477.15	2,442.37	34.78	71.219		
4,900.00	4,618.51	4,123.29	4,000.72	31.25	21.51	-162.01	-963.34	-385.11	2,534.05	2,498.50	35.55	71.290		
5,000.00	4,711.62	4,205.53	4,079.90	31.95	21.99	-162.01	-983.54	-394.32	2,590.94	2,554.63	36.31	71.358		
5,100.00	4,804.74	4,287.77	4,159.09	32.66	22.47	-162.01	-1,003.74	-403.53	2,647.84	2,610.76	37.07	71.422		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 4BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
5,200.00	4,897.86	4,370.00	4,238.27	33.37	22.95	-162.00	-1,023.94	-412.74	2,704.73	2,666.89	37.84	71.483		
5,300.00	4,990.97	4,452.24	4,317.46	34.08	23.43	-162.00	-1,044.14	-421.94	2,761.63	2,723.03	38.60	71.541		
5,400.00	5,084.09	4,534.48	4,396.64	34.78	23.91	-162.00	-1,064.34	-431.15	2,818.52	2,779.16	39.37	71.596		
5,500.00	5,177.20	4,616.72	4,475.83	35.49	24.39	-161.99	-1,084.54	-440.36	2,875.42	2,835.28	40.13	71.648		
5,600.00	5,270.32	4,701.05	4,555.01	36.20	24.88	-161.99	-1,104.73	-449.57	2,932.31	2,891.41	40.91	71.681		
5,700.00	5,363.43	4,781.19	4,634.19	36.91	25.35	-161.99	-1,124.93	-458.78	2,989.21	2,947.54	41.66	71.744		
5,800.00	5,456.55	4,863.43	4,713.38	37.61	25.83	-161.98	-1,145.13	-467.99	3,046.10	3,003.67	42.43	71.789		
5,900.00	5,549.67	4,945.66	4,792.56	38.32	26.31	-161.98	-1,165.33	-477.19	3,103.00	3,059.80	43.20	71.832		
6,000.00	5,642.78	5,027.90	4,871.75	39.03	26.80	-161.98	-1,185.53	-486.40	3,159.89	3,115.93	43.97	71.872		
6,100.00	5,735.90	5,110.14	4,950.93	39.74	27.28	-161.98	-1,205.73	-495.61	3,216.79	3,172.06	44.73	71.910		
6,200.00	5,829.01	5,207.63	5,030.11	40.44	27.85	-161.97	-1,225.93	-504.82	3,273.68	3,228.12	45.57	71.840		
6,300.00	5,922.13	5,274.61	5,109.30	41.15	28.24	-161.97	-1,246.13	-514.03	3,330.58	3,284.31	46.27	71.981		
6,400.00	6,015.24	5,356.85	5,188.48	41.86	28.72	-161.97	-1,266.32	-523.24	3,387.47	3,340.44	47.04	72.014		
6,500.00	6,108.36	5,439.09	5,267.67	42.57	29.20	-161.97	-1,286.52	-532.44	3,444.37	3,396.56	47.81	72.046		
6,600.00	6,201.47	5,521.32	5,346.85	43.28	29.68	-161.97	-1,306.72	-541.65	3,501.26	3,452.69	48.58	72.076		
6,700.00	6,294.59	5,603.56	5,426.04	43.98	30.16	-161.96	-1,326.92	-550.86	3,558.16	3,508.81	49.35	72.104		
6,800.00	6,387.71	5,685.80	5,505.22	44.69	30.65	-161.96	-1,347.12	-560.07	3,615.06	3,564.94	50.12	72.131		
6,900.00	6,480.82	5,768.03	5,584.40	45.40	31.13	-161.96	-1,367.32	-569.28	3,671.95	3,621.06	50.89	72.156		
7,000.00	6,573.94	5,850.27	5,663.59	46.11	31.61	-161.96	-1,387.52	-578.49	3,728.85	3,677.19	51.66	72.180		
7,100.00	6,667.05	5,932.51	5,742.77	46.82	32.09	-161.96	-1,407.71	-587.70	3,785.74	3,733.31	52.43	72.203		
7,200.00	6,760.17	6,014.74	5,821.96	47.52	32.57	-161.96	-1,427.91	-596.90	3,842.64	3,789.43	53.20	72.225		
7,300.00	6,853.28	6,103.02	5,901.14	48.23	33.09	-161.95	-1,448.11	-606.11	3,899.53	3,845.53	54.00	72.210		
7,400.00	6,946.40	6,179.22	5,980.33	48.94	33.53	-161.95	-1,468.31	-615.32	3,956.43	3,901.68	54.75	72.265		
7,500.00	7,039.52	6,261.46	6,059.51	49.65	34.02	-161.95	-1,488.51	-624.53	4,013.32	3,957.80	55.52	72.283		
7,600.00	7,132.94	6,343.44	6,138.45	50.33	34.50	-173.34	-1,508.65	-633.71	4,070.20	4,013.94	56.27	72.334		
7,700.00	7,225.98	6,423.27	6,215.32	50.90	34.96	-142.65	-1,528.25	-642.65	4,126.23	4,069.31	56.92	72.492		
7,800.00	7,315.86	6,498.53	6,287.79	51.34	35.40	-120.34	-1,546.74	-651.08	4,179.98	4,122.51	57.47	72.735		
7,900.00	7,399.85	6,566.93	6,353.65	51.68	35.81	-105.31	-1,563.54	-658.74	4,230.23	4,172.31	57.92	73.037		
8,000.00	7,475.41	6,626.40	6,410.90	51.91	36.15	-94.98	-1,578.14	-665.39	4,275.98	4,217.69	58.29	73.361		
8,100.00	7,540.24	6,675.11	6,457.81	52.05	36.44	-87.66	-1,590.11	-670.85	4,316.40	4,257.80	58.60	73.657		
8,200.00	7,592.37	6,711.60	6,492.94	52.11	36.65	-82.40	-1,599.07	-674.93	4,350.82	4,291.92	58.90	73.867		
8,300.00	7,630.20	6,734.75	6,515.24	52.09	36.79	-78.69	-1,604.76	-677.53	4,378.66	4,319.43	59.22	73.936		
8,400.00	7,652.61	6,743.87	6,524.02	52.01	36.84	-76.21	-1,607.00	-678.55	4,399.41	4,339.82	59.59	73.829		
8,500.00	7,659.00	6,738.77	6,519.10	51.89	36.81	-74.92	-1,605.74	-677.98	4,412.71	4,352.70	60.00	73.540		
8,600.00	7,659.00	6,728.06	6,508.79	51.77	36.75	-74.78	-1,603.11	-676.78	4,424.31	4,363.77	60.53	73.092		
8,700.00	7,659.00	6,717.35	6,498.48	51.67	36.69	-74.64	-1,600.48	-675.58	4,438.10	4,376.90	61.20	72.519		
8,800.00	7,659.00	6,706.64	6,488.17	51.61	36.62	-74.50	-1,597.85	-674.38	4,454.08	4,392.08	61.99	71.847		
8,900.00	7,659.00	6,704.07	6,477.86	51.58	36.61	-74.36	-1,595.22	-673.18	4,472.21	4,409.27	62.93	71.061		
9,000.00	7,659.00	6,685.22	6,467.55	51.59	36.50	-74.22	-1,592.59	-671.98	4,492.46	4,428.56	63.90	70.299		
9,100.00	7,659.00	6,674.52	6,457.24	51.67	36.44	-74.08	-1,589.96	-670.78	4,514.82	4,449.83	64.99	69.467		
9,200.00	7,659.00	8,900.92	7,659.00	51.83	42.43	89.97	-1,921.29	482.14	4,529.64	4,445.00	84.65	53.513		
9,300.00	7,659.00	9,000.92	7,659.00	52.14	43.83	89.97	-1,923.20	582.12	4,529.58	4,441.43	88.15	51.386		
9,400.00	7,659.00	9,100.92	7,659.00	52.67	45.52	89.97	-1,925.12	682.11	4,529.51	4,437.67	91.83	49.322		
9,500.00	7,659.00	9,200.92	7,659.00	53.53	47.37	89.97	-1,927.03	782.09	4,529.44	4,433.76	95.68	47.338		
9,600.00	7,659.00	9,300.92	7,659.00	54.75	49.33	89.97	-1,928.95	882.07	4,529.38	4,429.70	99.68	45.441		
9,700.00	7,659.00	9,400.92	7,659.00	56.29	51.38	89.97	-1,930.86	982.05	4,529.31	4,425.51	103.79	43.637		
9,800.00	7,659.00	9,500.92	7,659.00	58.05	53.49	89.97	-1,932.78	1,082.03	4,529.24	4,421.22	108.03	41.928		
9,900.00	7,659.00	9,600.92	7,659.00	59.97	55.65	89.97	-1,934.70	1,182.01	4,529.17	4,416.82	112.36	40.311		
10,000.00	7,659.00	9,700.92	7,659.00	62.00	57.86	89.97	-1,936.61	1,282.00	4,529.11	4,412.33	116.77	38.785		
10,100.00	7,659.00	9,800.92	7,659.00	64.11	60.11	89.97	-1,938.53	1,381.98	4,529.04	4,407.77	121.27	37.346		
10,200.00	7,659.00	9,900.92	7,659.00	66.28	62.39	89.97	-1,940.44	1,481.96	4,528.97	4,403.13	125.84	35.990		
10,300.00	7,659.00	10,000.92	7,659.00	68.51	64.71	89.97	-1,942.36	1,581.94	4,528.91	4,398.44	130.47	34.712		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 4BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													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)	Minimum Separation (usft)	Separation Factor		
10,400.00	7,659.00	10,100.92	7,659.00	70.77	67.05	89.97	-1,944.28	1,681.92	4,528.84	4,393.68	135.16	33.508		
10,500.00	7,659.00	10,200.92	7,659.00	73.06	69.42	89.97	-1,946.19	1,781.90	4,528.77	4,388.88	139.90	32.372		
10,600.00	7,659.00	10,300.92	7,659.00	75.39	71.81	89.97	-1,948.11	1,881.89	4,528.71	4,384.03	144.68	31.302		
10,700.00	7,659.00	10,400.92	7,659.00	77.74	74.22	89.97	-1,950.02	1,981.87	4,528.64	4,379.13	149.51	30.291		
10,800.00	7,659.00	10,500.92	7,659.00	80.12	76.65	89.97	-1,951.94	2,081.85	4,528.57	4,374.20	154.37	29.336		
10,900.00	7,659.00	10,600.92	7,659.00	82.51	79.10	89.97	-1,953.85	2,181.83	4,528.50	4,369.24	159.27	28.434		
11,000.00	7,659.00	10,700.92	7,659.00	84.93	81.56	89.97	-1,955.77	2,281.81	4,528.44	4,364.24	164.19	27.580		
11,100.00	7,659.00	10,800.92	7,659.00	87.36	84.04	89.97	-1,957.69	2,381.79	4,528.37	4,359.22	169.15	26.771		
11,200.00	7,659.00	10,900.92	7,659.00	89.81	86.52	89.97	-1,959.60	2,481.78	4,528.30	4,354.17	174.13	26.005		
11,300.00	7,659.00	11,000.92	7,659.00	92.27	89.03	89.97	-1,961.52	2,581.76	4,528.24	4,349.10	179.14	25.278		
11,400.00	7,659.00	11,100.92	7,659.00	94.75	91.54	89.97	-1,963.43	2,681.74	4,528.17	4,344.01	184.17	24.588		
11,500.00	7,659.00	11,200.92	7,659.00	97.23	94.06	89.97	-1,965.35	2,781.72	4,528.10	4,338.89	189.21	23.931		
11,600.00	7,659.00	11,300.92	7,659.00	99.73	96.59	89.97	-1,967.27	2,881.70	4,528.04	4,333.76	194.28	23.307		
11,700.00	7,659.00	11,400.92	7,659.00	102.24	99.13	89.97	-1,969.18	2,981.68	4,527.97	4,328.61	199.36	22.712		
11,800.00	7,659.00	11,500.92	7,659.00	104.75	101.67	89.97	-1,971.10	3,081.67	4,527.90	4,323.44	204.46	22.145		
11,900.00	7,659.00	11,600.92	7,659.00	107.28	104.23	89.97	-1,973.01	3,181.65	4,527.84	4,318.26	209.58	21.605		
12,000.00	7,659.00	11,700.92	7,659.00	109.81	106.79	89.97	-1,974.93	3,281.63	4,527.77	4,313.07	214.70	21.088		
12,100.00	7,659.00	11,800.92	7,659.00	112.35	109.35	89.97	-1,976.84	3,381.61	4,527.70	4,307.86	219.84	20.595		
12,200.00	7,659.00	11,900.92	7,659.00	114.90	111.93	89.97	-1,978.76	3,481.59	4,527.63	4,302.64	225.00	20.123		
12,300.00	7,659.00	12,000.92	7,659.00	117.46	114.51	89.97	-1,980.68	3,581.57	4,527.57	4,297.41	230.16	19.671		
12,400.00	7,659.00	12,100.92	7,659.00	120.02	117.09	89.97	-1,982.59	3,681.55	4,527.50	4,292.17	235.33	19.239		
12,500.00	7,659.00	12,200.92	7,659.00	122.58	119.68	89.97	-1,984.51	3,781.54	4,527.43	4,286.92	240.52	18.824		
12,600.00	7,659.00	12,300.92	7,659.00	125.15	122.27	89.97	-1,986.42	3,881.52	4,527.37	4,281.66	245.71	18.426		
12,700.00	7,659.00	12,400.92	7,659.00	127.73	124.87	89.97	-1,988.34	3,981.50	4,527.30	4,276.39	250.91	18.044		
12,800.00	7,659.00	12,500.92	7,659.00	130.31	127.47	89.97	-1,990.25	4,081.48	4,527.23	4,271.12	256.12	17.676		
12,900.00	7,659.00	12,600.92	7,659.00	132.90	130.07	89.97	-1,992.17	4,181.46	4,527.17	4,265.83	261.33	17.323		
13,000.00	7,659.00	12,700.92	7,659.00	135.49	132.68	89.97	-1,994.09	4,281.44	4,527.10	4,260.54	266.55	16.984		
13,100.00	7,659.00	12,800.92	7,659.00	138.08	135.29	89.97	-1,996.00	4,381.43	4,527.03	4,255.25	271.78	16.657		
13,200.00	7,659.00	12,900.92	7,659.00	140.68	137.91	89.97	-1,997.92	4,481.41	4,526.96	4,249.96	277.02	16.340		
13,300.00	7,659.00	13,000.91	7,659.00	143.28	140.53	89.97	-1,999.83	4,581.38	4,526.89	4,244.67	282.26	16.032		
13,400.00	7,659.00	13,100.90	7,659.00	145.88	143.15	89.97	-2,001.75	4,681.35	4,526.82	4,239.38	287.51	15.735		
13,500.00	7,659.00	13,200.90	7,659.00	148.48	145.77	89.97	-2,003.66	4,781.33	4,526.75	4,234.09	292.77	15.449		
13,600.00	7,659.00	13,300.89	7,659.00	151.09	148.40	89.97	-2,005.58	4,881.30	4,526.68	4,228.80	298.02	15.172		
13,700.00	7,659.00	13,400.88	7,659.00	153.70	151.02	89.97	-2,007.50	4,981.28	4,526.61	4,223.51	303.29	14.905		
13,800.00	7,659.00	13,500.87	7,659.00	156.32	153.65	89.97	-2,009.41	5,081.25	4,526.54	4,218.22	308.56	14.646		
13,900.00	7,659.00	13,600.87	7,659.00	158.94	156.29	89.97	-2,011.33	5,181.22	4,526.47	4,212.93	313.83	14.396		
14,000.00	7,659.00	13,700.86	7,659.00	161.56	158.92	89.97	-2,013.24	5,281.20	4,526.40	4,207.64	319.11	14.154		
14,100.00	7,659.00	13,800.85	7,659.00	164.18	161.56	89.97	-2,015.16	5,381.17	4,526.33	4,202.35	324.39	13.920		
14,200.00	7,659.00	13,900.84	7,659.00	166.80	164.20	89.97	-2,017.07	5,481.15	4,526.26	4,197.06	329.67	13.693		
14,300.00	7,659.00	14,000.83	7,659.00	169.43	166.84	89.97	-2,018.99	5,581.12	4,526.19	4,191.77	334.96	13.473		
14,400.00	7,659.00	14,100.83	7,659.00	172.06	169.48	89.97	-2,020.91	5,681.09	4,526.12	4,186.48	340.25	13.260		
14,500.00	7,659.00	14,200.82	7,659.00	174.69	172.12	89.97	-2,022.82	5,781.07	4,526.05	4,181.19	345.54	13.053		
14,600.00	7,659.00	14,300.81	7,659.00	177.33	174.77	89.97	-2,024.74	5,881.04	4,525.98	4,175.90	350.84	12.853		
14,700.00	7,659.00	14,400.80	7,659.00	179.96	177.42	89.97	-2,026.65	5,981.02	4,525.91	4,170.61	356.14	12.658		
14,800.00	7,659.00	14,500.80	7,659.00	182.60	180.06	89.97	-2,028.57	6,080.99	4,525.84	4,165.32	361.44	12.469		
14,900.00	7,659.00	14,600.79	7,659.00	185.24	182.71	89.97	-2,030.48	6,180.96	4,525.77	4,160.03	366.75	12.285		
15,000.00	7,659.00	14,700.78	7,659.00	187.88	185.36	89.97	-2,032.40	6,280.94	4,525.70	4,154.74	372.06	12.107		
15,100.00	7,659.00	14,800.77	7,659.00	190.52	188.02	89.97	-2,034.32	6,380.91	4,525.63	4,149.45	377.37	11.933		
15,200.00	7,659.00	14,900.77	7,659.00	193.16	190.67	89.97	-2,036.23	6,480.89	4,525.56	4,144.16	382.68	11.764		
15,300.00	7,659.00	15,000.76	7,659.00	195.81	193.32	89.97	-2,038.15	6,580.86	4,525.49	4,138.87	388.00	11.600		
15,400.00	7,659.00	15,100.75	7,659.00	198.45	195.98	89.97	-2,040.06	6,680.83	4,525.42	4,133.58	393.31	11.440		
15,500.00	7,659.00	15,200.74	7,659.00	201.10	198.64	89.97	-2,041.98	6,780.81	4,525.35	4,128.29	398.63	11.284		

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

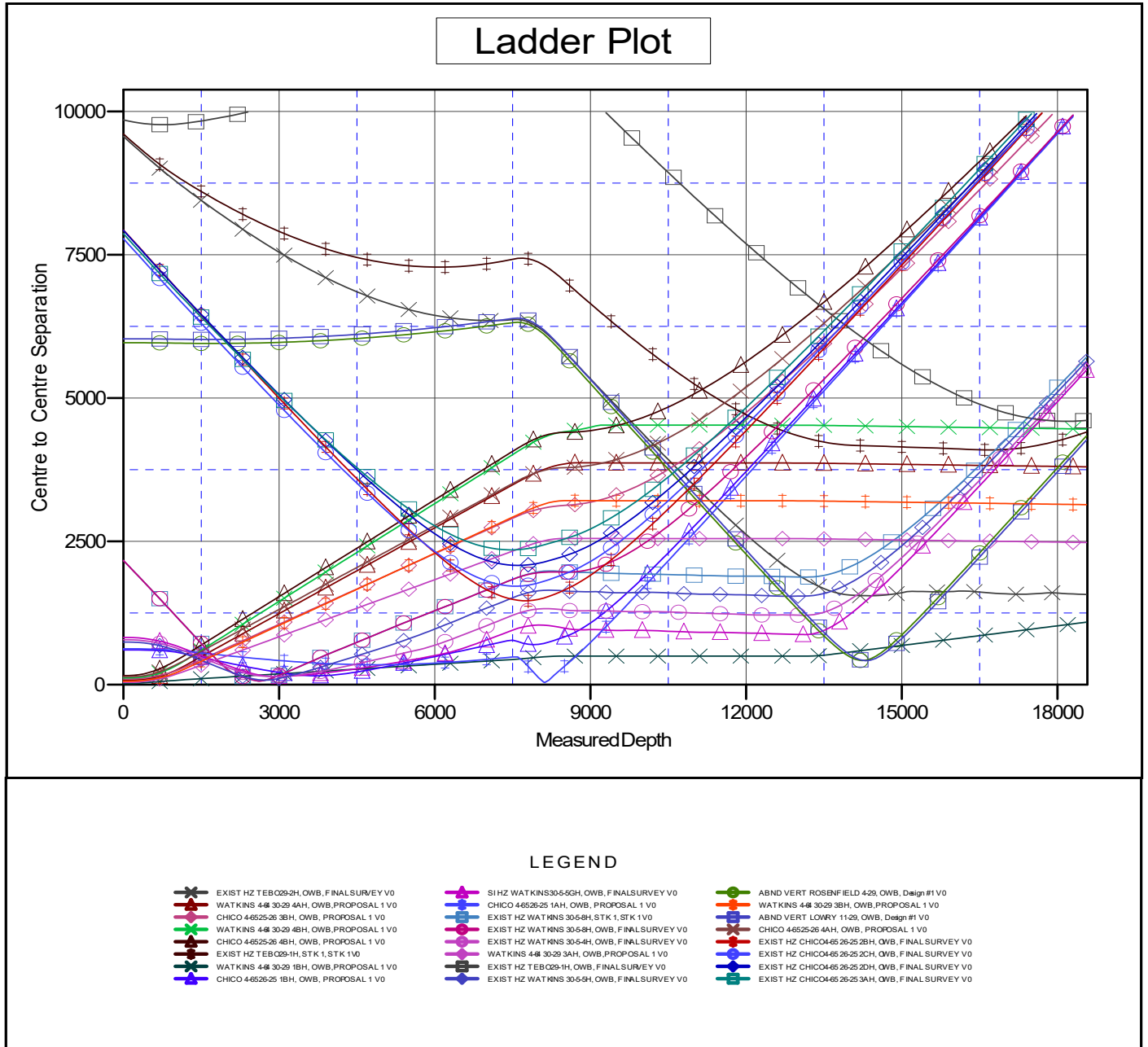
Offset Design SEC 30-T4S-R64W - WATKINS 4-64 30-29 4BH - OWB - PROPOSAL 1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)					
15,600.00	7,659.00	15,300.74	7,659.00	203.75	201.29	89.97	-2,043.89	6,880.78	4,496.96	4,093.00	403.95	11.132	
15,700.00	7,659.00	15,400.73	7,659.00	206.40	203.95	89.97	-2,045.81	6,980.76	4,495.72	4,086.45	409.28	10.985	
15,800.00	7,659.00	15,500.72	7,659.00	209.05	206.61	89.97	-2,047.72	7,080.73	4,494.49	4,079.89	414.60	10.840	
15,900.00	7,659.00	15,600.71	7,659.00	211.70	209.27	89.97	-2,049.64	7,180.71	4,493.26	4,073.33	419.93	10.700	
16,000.00	7,659.00	15,700.71	7,659.00	214.36	211.93	89.97	-2,051.56	7,280.68	4,492.03	4,066.77	425.26	10.563	
16,100.00	7,659.00	15,800.70	7,659.00	217.01	214.60	89.97	-2,053.47	7,380.65	4,490.79	4,060.21	430.59	10.429	
16,200.00	7,659.00	15,900.69	7,659.00	219.67	217.26	89.97	-2,055.39	7,480.63	4,489.56	4,053.64	435.92	10.299	
16,300.00	7,659.00	16,000.68	7,659.00	222.32	219.92	89.97	-2,057.30	7,580.60	4,488.33	4,047.08	441.25	10.172	
16,400.00	7,659.00	16,100.68	7,659.00	224.98	222.59	89.97	-2,059.22	7,680.58	4,487.10	4,040.51	446.59	10.048	
16,500.00	7,659.00	16,200.67	7,659.00	227.64	225.25	89.97	-2,061.13	7,780.55	4,485.86	4,033.94	451.92	9.926	
16,600.00	7,659.00	16,300.66	7,659.00	230.30	227.92	89.97	-2,063.05	7,880.52	4,484.63	4,027.37	457.26	9.808	
16,700.00	7,659.00	16,400.65	7,659.00	232.96	230.59	89.97	-2,064.97	7,980.50	4,483.40	4,020.80	462.60	9.692	
16,800.00	7,659.00	16,500.65	7,659.00	235.62	233.25	89.97	-2,066.88	8,080.47	4,482.17	4,014.23	467.94	9.579	
16,900.00	7,659.00	16,600.64	7,659.00	238.28	235.92	89.97	-2,068.80	8,180.45	4,480.93	4,007.65	473.28	9.468	
17,000.00	7,659.00	16,700.63	7,659.00	240.95	238.59	89.97	-2,070.71	8,280.42	4,479.70	4,001.08	478.62	9.360	
17,100.00	7,659.00	16,800.62	7,659.00	243.61	241.26	89.97	-2,072.63	8,380.39	4,478.47	3,994.50	483.97	9.254	
17,200.00	7,659.00	16,900.61	7,659.00	246.27	243.93	89.97	-2,074.54	8,480.37	4,477.24	3,987.93	489.31	9.150	
17,300.00	7,659.00	17,000.61	7,659.00	248.94	246.60	89.97	-2,076.46	8,580.34	4,476.00	3,981.35	494.66	9.049	
17,400.00	7,659.00	17,100.60	7,659.00	251.60	249.27	89.97	-2,078.38	8,680.32	4,474.77	3,974.77	500.00	8.949	
17,500.00	7,659.00	17,200.59	7,659.00	254.27	251.94	89.97	-2,080.29	8,780.29	4,473.54	3,968.19	505.35	8.852	
17,600.00	7,659.00	17,300.58	7,659.00	256.94	254.61	89.97	-2,082.21	8,880.26	4,472.31	3,961.61	510.70	8.757	
17,700.00	7,659.00	17,400.58	7,659.00	259.61	257.29	89.97	-2,084.12	8,980.24	4,471.08	3,955.03	516.05	8.664	
17,800.00	7,659.00	17,500.57	7,659.00	262.27	259.96	89.97	-2,086.04	9,080.21	4,469.84	3,948.44	521.40	8.573	
17,900.00	7,659.00	17,600.56	7,659.00	264.94	262.63	89.97	-2,087.95	9,180.19	4,468.61	3,941.86	526.75	8.483	
18,000.00	7,659.00	17,700.55	7,659.00	267.61	265.31	89.97	-2,089.87	9,280.16	4,467.38	3,935.27	532.10	8.396	
18,100.00	7,659.00	17,800.55	7,659.00	270.28	267.98	89.97	-2,091.79	9,380.13	4,466.15	3,928.69	537.46	8.310	
18,200.00	7,659.00	17,900.54	7,659.00	272.95	270.66	89.97	-2,093.70	9,480.11	4,464.91	3,922.10	542.81	8.226	
18,300.00	7,659.00	18,000.53	7,659.00	275.62	273.33	89.97	-2,095.62	9,580.08	4,463.68	3,915.51	548.17	8.143	
18,400.00	7,659.00	18,100.52	7,659.00	278.29	276.01	89.97	-2,097.53	9,680.06	4,462.45	3,908.93	553.52	8.062	
18,500.00	7,659.00	18,200.52	7,659.00	280.97	278.68	89.97	-2,099.45	9,780.03	4,461.22	3,902.34	558.88	7.982	
18,558.76	7,659.00	18,259.27	7,659.00	282.54	280.25	89.97	-2,100.57	9,838.77	4,460.49	3,898.47	562.03	7.936 SF	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well WATKINS 4-64 30-29 1AH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5791.00usft
Reference Site:	SEC 30-T4S-R64W	MD Reference:	KB 25' @ 5791.00usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	WATKINS 4-64 30-29 1AH	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT_32Bit_ODBC
Reference Design:	PROPOSAL 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB 25' @ 5791.00usft
Offset Depths are relative to Offset Datum
Central Meridian is 105.500000°W

Coordinates are relative to: WATKINS 4-64 30-29 1AH
Coordinate System is US State Plane 1983, Colorado Central Zone
Grid Convergence at Surface is: 0.57°



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

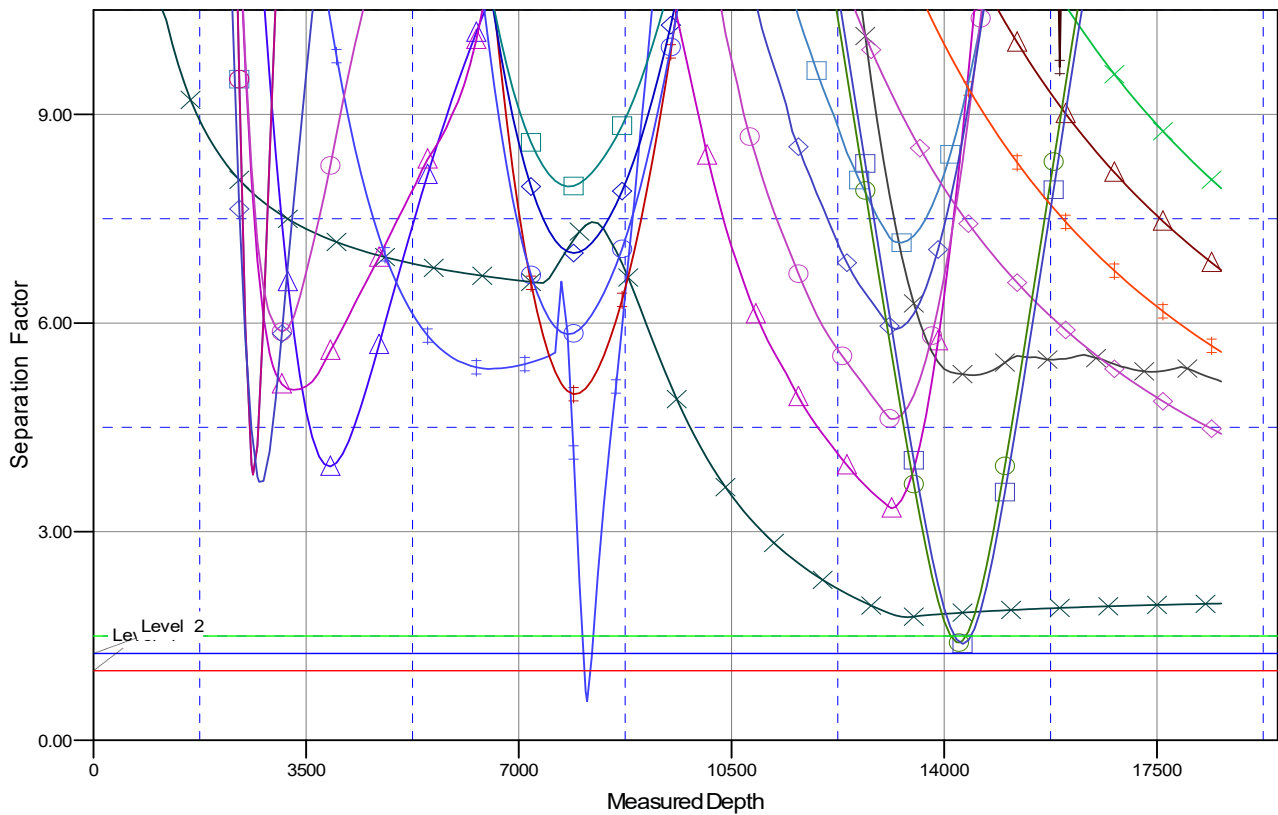
Anticollision Report

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Separation Factor Plot



LEGEND

EXIST HZ TEB029-2H, OWB, FINAL SURVEY V0	SI HZ WATKINS305-50H, OWB, FINAL SURVEY V0	ABND VERT ROSENFELD 4-28, OWB, Design#1 V0
WATKINS 4# 30-29 4AH, OWB, PROPOSAL 1 V0	CHICO 44625-25 1AH, OWB, PROPOSAL 1 V0	WATKINS 4# 30-29 3BH, OWB, PROPOSAL 1 V0
CHICO 44625-26 3BH, OWB, PROPOSAL 1 V0	EXIST HZ WATKINS 305-6H, STK 1, STK 1 V0	ABND VERT LOWRY 11-29, OWB, Design#1 V0
WATKINS 4# 30-29 4BH, OWB, PROPOSAL 1 V0	EXIST HZ WATKINS 305-6H, OWB, FINAL SURVEY V0	CHICO 44625-26 4AH, OWB, PROPOSAL 1 V0
CHICO 44625-26 4BH, OWB, PROPOSAL 1 V0	EXIST HZ WATKINS 305-4H, OWB, FINAL SURVEY V0	EXIST HZ CHICO44625-26-25 2BH, OWB, FINAL SURVEY V0
EXIST HZ TEB029-1H, STK 1, STK 1 V0	WATKINS 4# 30-29 3AH, OWB, PROPOSAL 1 V0	EXIST HZ CHICO44625-26-25 2CH, OWB, FINAL SURVEY V0
WATKINS 4# 30-29 1BH, OWB, PROPOSAL 1 V0	EXIST HZ TEB029-1H, OWB, FINAL SURVEY V0	EXIST HZ CHICO44625-26-25 2DH, OWB, FINAL SURVEY V0
CHICO 44625-26 1BH, OWB, PROPOSAL 1 V0	EXIST HZ WATKINS 305-5H, OWB, FINAL SURVEY V0	EXIST HZ CHICO44625-26-25 3AH, OWB, FINAL SURVEY V0