

CRESTONE PEAK RESOURCES

ARAPAHOE COUNTY

SEC 15-T4S-R65W

LONE TREE 4-65 15-16 3CH

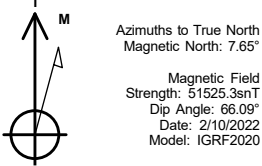
OWB

Plan: PROPOSAL 1

Standard Planning Report

11 February, 2022

Project: ARAPAHOE COUNTY
Site: SEC 15-T4S-R65W
Well: LONE TREE 4-65 15-16 3CH
Wellbore: OWB
Design: PROPOSAL 1



WELL DETAILS: LONE TREE 4-65 15-16 3CH

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1683330.27	3241109.90	39.706421°N	104.643033°W	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	1085.22	16.70	155.11	1073.44	-109.66	50.88	2.00	155.11	-27.58	
4	7617.92	16.70	155.11	7330.46	-1812.95	841.23	0.00	0.00	-455.90	
5	8587.24	90.00	269.93	7950.00	-1982.34	272.66	10.00	113.90	135.22	LP-LT 4-65
6	18481.45	90.00	269.93	7950.00	-1993.64	-9621.54	0.00	0.00	9825.92	PBHL-LT 4

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	Start Build 2.00
1085.22	16.70	155.11	1073.44	-109.66	50.88	-27.58	120.89	Start 6532.71 hold at 1085.22 MD
7617.92	16.70	155.11	7330.46	-1812.95	841.23	-455.90	1998.61	Start DLS 10.00 TFO 113.90
8587.24	90.00	269.93	7950.00	-1982.34	272.66	135.22	2635.64	Start 9894.21 hold at 8587.24 MD
18481.45	90.00	269.93	7950.00	-1993.64	-9621.54	9825.92	12529.85	TD at 18481.45

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
LP-LT 4-65 3CH	7950.00	-1982.34	272.66	1681350.61	3241401.24	39.700979°N	104.642064°W	Point
PBHL-LT 4-65 3CH	7950.00	-1993.64	-9621.54	1681245.97	3231507.67	39.700943°N	104.677227°W	Point

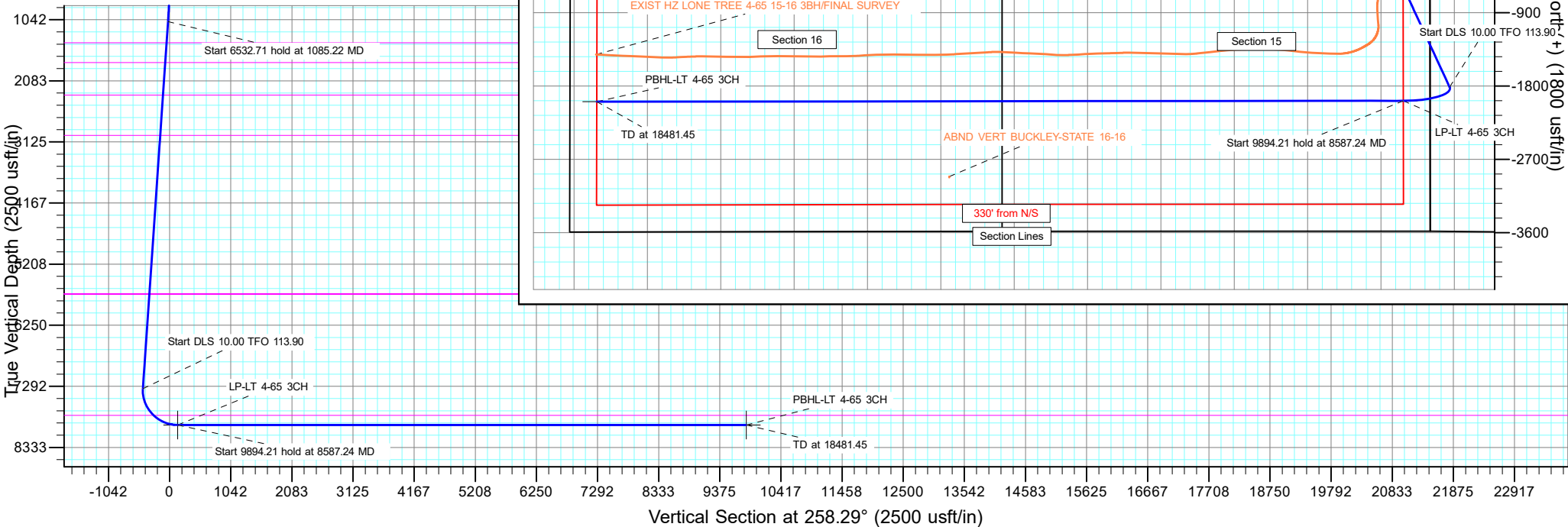
PROJECT DETAILS: ARAPAHOE COUNTY

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone
System Datum: Mean Sea Level

SHL:
1719' FNL, 600' FEL
Sec 15-T4S-R65W

LP:
1600' FSL, 330' FEL
Sec 15-T4S-R65W

BHL:
1600' FSL, 330' FWL
Sec 16-T4S-R65W



Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5718.40usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5718.40usft
Site:	SEC 15-T4S-R65W	North Reference:	True
Well:	LONE TREE 4-65 15-16 3CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Project	ARAPAHOE COUNTY		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site	SEC 15-T4S-R65W			
Site Position:		Northing:	1,685,061.36 usft	Latitude: 39.711158°N
From:	Lat/Long	Easting:	3,241,690.88 usft	Longitude: 104.640910°W
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence: 0.54 °

Well	LONE TREE 4-65 15-16 3CH			
Well Position	+N/-S	-1,725.53 usft	Northing:	1,683,330.27 usft
	+E/-W	-597.32 usft	Easting:	3,241,109.90 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:		Ground Level: 5,693.40 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	2/10/2022	7.65	66.09	51,525.31533338

Design	PROPOSAL 1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	258.29

Plan Survey Tool Program	Date	2/11/2022		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,481.45 PROPOSAL 1 (OWB)	MWD OWSG	
			OWSG MWD - Standard	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,085.22	16.70	155.11	1,073.44	-109.66	50.88	2.00	2.00	0.00	155.11	
7,617.92	16.70	155.11	7,330.46	-1,812.95	841.23	0.00	0.00	0.00	0.00	
8,587.24	90.00	269.93	7,950.00	-1,982.34	272.66	10.00	7.56	11.85	113.90	LP-LT 4-65 3CH
18,481.45	90.00	269.93	7,950.00	-1,993.64	-9,621.54	0.00	0.00	0.00	0.00	PBHL-LT 4-65 3CH

Planning Report

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Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5718.40usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5718.40usft
Site:	SEC 15-T4S-R65W	North Reference:	True
Well:	LONE TREE 4-65 15-16 3CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
300.00	1.00	155.11	300.00	-0.40	0.18	-0.10	2.00	2.00	0.00
400.00	3.00	155.11	399.93	-3.56	1.65	-0.90	2.00	2.00	0.00
500.00	5.00	155.11	499.68	-9.89	4.59	-2.49	2.00	2.00	0.00
600.00	7.00	155.11	599.13	-19.37	8.99	-4.87	2.00	2.00	0.00
700.00	9.00	155.11	698.15	-31.99	14.85	-8.05	2.00	2.00	0.00
800.00	11.00	155.11	796.63	-47.74	22.15	-12.01	2.00	2.00	0.00
900.00	13.00	155.11	894.44	-66.60	30.91	-16.75	2.00	2.00	0.00
1,000.00	15.00	155.11	991.46	-88.55	41.09	-22.27	2.00	2.00	0.00
1,085.22	16.70	155.11	1,073.44	-109.66	50.88	-27.58	2.00	2.00	0.00
Start 6532.71 hold at 1085.22 MD									
1,100.00	16.70	155.11	1,087.59	-113.52	52.67	-28.55	0.00	0.00	0.00
1,200.00	16.70	155.11	1,183.37	-139.59	64.77	-35.10	0.00	0.00	0.00
1,300.00	16.70	155.11	1,279.15	-165.66	76.87	-41.66	0.00	0.00	0.00
1,400.00	16.70	155.11	1,374.93	-191.74	88.97	-48.22	0.00	0.00	0.00
1,461.67	16.70	155.11	1,434.00	-207.81	96.43	-52.26	0.00	0.00	0.00
Laramie									
1,500.00	16.70	155.11	1,470.71	-217.81	101.07	-54.77	0.00	0.00	0.00
1,600.00	16.70	155.11	1,566.49	-243.88	113.16	-61.33	0.00	0.00	0.00
1,700.00	16.70	155.11	1,662.27	-269.96	125.26	-67.88	0.00	0.00	0.00
1,800.00	16.70	155.11	1,758.05	-296.03	137.36	-74.44	0.00	0.00	0.00
1,814.56	16.70	155.11	1,772.00	-299.82	139.12	-75.40	0.00	0.00	0.00
Fox Hills									
1,900.00	16.70	155.11	1,853.83	-322.10	149.46	-81.00	0.00	0.00	0.00
2,000.00	16.70	155.11	1,949.61	-348.18	161.56	-87.55	0.00	0.00	0.00
2,100.00	16.70	155.11	2,045.39	-374.25	173.66	-94.11	0.00	0.00	0.00
2,200.00	16.70	155.11	2,141.17	-400.32	185.75	-100.67	0.00	0.00	0.00
2,300.00	16.70	155.11	2,236.95	-426.39	197.85	-107.22	0.00	0.00	0.00
2,391.92	16.70	155.11	2,325.00	-450.36	208.97	-113.25	0.00	0.00	0.00
Upper Pierre aquifer									
2,400.00	16.70	155.11	2,332.73	-452.47	209.95	-113.78	0.00	0.00	0.00
2,500.00	16.70	155.11	2,428.51	-478.54	222.05	-120.34	0.00	0.00	0.00
2,600.00	16.70	155.11	2,524.30	-504.61	234.15	-126.89	0.00	0.00	0.00
2,700.00	16.70	155.11	2,620.08	-530.69	246.25	-133.45	0.00	0.00	0.00
2,800.00	16.70	155.11	2,715.86	-556.76	258.34	-140.01	0.00	0.00	0.00
2,900.00	16.70	155.11	2,811.64	-582.83	270.44	-146.56	0.00	0.00	0.00
3,000.00	16.70	155.11	2,907.42	-608.91	282.54	-153.12	0.00	0.00	0.00
3,100.00	16.70	155.11	3,003.20	-634.98	294.64	-159.68	0.00	0.00	0.00
3,110.24	16.70	155.11	3,013.00	-637.65	295.88	-160.35	0.00	0.00	0.00
Base of Upper Pierre aquifer									
3,200.00	16.70	155.11	3,098.98	-661.05	306.74	-166.23	0.00	0.00	0.00
3,300.00	16.70	155.11	3,194.76	-687.13	318.84	-172.79	0.00	0.00	0.00
3,400.00	16.70	155.11	3,290.54	-713.20	330.94	-179.35	0.00	0.00	0.00
3,500.00	16.70	155.11	3,386.32	-739.27	343.03	-185.90	0.00	0.00	0.00
3,600.00	16.70	155.11	3,482.10	-765.35	355.13	-192.46	0.00	0.00	0.00
3,700.00	16.70	155.11	3,577.88	-791.42	367.23	-199.02	0.00	0.00	0.00
3,800.00	16.70	155.11	3,673.66	-817.49	379.33	-205.57	0.00	0.00	0.00
3,900.00	16.70	155.11	3,769.44	-843.57	391.43	-212.13	0.00	0.00	0.00
4,000.00	16.70	155.11	3,865.22	-869.64	403.53	-218.69	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5718.40usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5718.40usft
Site:	SEC 15-T4S-R65W	North Reference:	True
Well:	LONE TREE 4-65 15-16 3CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,100.00	16.70	155.11	3,961.00	-895.71	415.62	-225.24	0.00	0.00	0.00	
4,200.00	16.70	155.11	4,056.78	-921.79	427.72	-231.80	0.00	0.00	0.00	
4,300.00	16.70	155.11	4,152.56	-947.86	439.82	-238.36	0.00	0.00	0.00	
4,400.00	16.70	155.11	4,248.34	-973.93	451.92	-244.91	0.00	0.00	0.00	
4,500.00	16.70	155.11	4,344.12	-1,000.01	464.02	-251.47	0.00	0.00	0.00	
4,600.00	16.70	155.11	4,439.90	-1,026.08	476.12	-258.02	0.00	0.00	0.00	
4,700.00	16.70	155.11	4,535.68	-1,052.15	488.21	-264.58	0.00	0.00	0.00	
4,800.00	16.70	155.11	4,631.46	-1,078.22	500.31	-271.14	0.00	0.00	0.00	
4,900.00	16.70	155.11	4,727.24	-1,104.30	512.41	-277.69	0.00	0.00	0.00	
5,000.00	16.70	155.11	4,823.02	-1,130.37	524.51	-284.25	0.00	0.00	0.00	
5,100.00	16.70	155.11	4,918.80	-1,156.44	536.61	-290.81	0.00	0.00	0.00	
5,200.00	16.70	155.11	5,014.58	-1,182.52	548.71	-297.36	0.00	0.00	0.00	
5,300.00	16.70	155.11	5,110.36	-1,208.59	560.80	-303.92	0.00	0.00	0.00	
5,400.00	16.70	155.11	5,206.14	-1,234.66	572.90	-310.48	0.00	0.00	0.00	
5,500.00	16.70	155.11	5,301.92	-1,260.74	585.00	-317.03	0.00	0.00	0.00	
5,600.00	16.70	155.11	5,397.70	-1,286.81	597.10	-323.59	0.00	0.00	0.00	
5,700.00	16.70	155.11	5,493.48	-1,312.88	609.20	-330.15	0.00	0.00	0.00	
5,800.00	16.70	155.11	5,589.26	-1,338.96	621.30	-336.70	0.00	0.00	0.00	
5,900.00	16.70	155.11	5,685.04	-1,365.03	633.39	-343.26	0.00	0.00	0.00	
5,932.33	16.70	155.11	5,716.00	-1,373.46	637.30	-345.38	0.00	0.00	0.00	
Terry ("Sussex") - Hygiene ("Shannon") - Mitten - Mitten Marker 1 - Teepee Buttes - Mitten Marker 2 - Sharon Springs										
6,000.00	16.70	155.11	5,780.82	-1,391.10	645.49	-349.82	0.00	0.00	0.00	
6,100.00	16.70	155.11	5,876.60	-1,417.18	657.59	-356.37	0.00	0.00	0.00	
6,200.00	16.70	155.11	5,972.38	-1,443.25	669.69	-362.93	0.00	0.00	0.00	
6,300.00	16.70	155.11	6,068.16	-1,469.32	681.79	-369.49	0.00	0.00	0.00	
6,400.00	16.70	155.11	6,163.94	-1,495.40	693.89	-376.04	0.00	0.00	0.00	
6,500.00	16.70	155.11	6,259.72	-1,521.47	705.98	-382.60	0.00	0.00	0.00	
6,600.00	16.70	155.11	6,355.50	-1,547.54	718.08	-389.16	0.00	0.00	0.00	
6,700.00	16.70	155.11	6,451.28	-1,573.62	730.18	-395.71	0.00	0.00	0.00	
6,800.00	16.70	155.11	6,547.06	-1,599.69	742.28	-402.27	0.00	0.00	0.00	
6,900.00	16.70	155.11	6,642.84	-1,625.76	754.38	-408.83	0.00	0.00	0.00	
7,000.00	16.70	155.11	6,738.62	-1,651.84	766.48	-415.38	0.00	0.00	0.00	
7,100.00	16.70	155.11	6,834.40	-1,677.91	778.57	-421.94	0.00	0.00	0.00	
7,200.00	16.70	155.11	6,930.18	-1,703.98	790.67	-428.49	0.00	0.00	0.00	
7,300.00	16.70	155.11	7,025.96	-1,730.06	802.77	-435.05	0.00	0.00	0.00	
7,400.00	16.70	155.11	7,121.74	-1,756.13	814.87	-441.61	0.00	0.00	0.00	
7,500.00	16.70	155.11	7,217.52	-1,782.20	826.97	-448.16	0.00	0.00	0.00	
7,600.00	16.70	155.11	7,313.30	-1,808.27	839.07	-454.72	0.00	0.00	0.00	
7,617.92	16.70	155.11	7,330.46	-1,812.95	841.23	-455.90	0.00	0.00	0.00	
Start DLS 10.00 TFO 113.90										
7,650.00	15.67	166.02	7,361.28	-1,821.34	844.22	-457.12	10.00	-3.21	34.03	
7,700.00	15.29	184.78	7,409.49	-1,834.47	845.30	-455.52	10.00	-0.77	37.51	
7,750.00	16.45	202.64	7,457.61	-1,847.58	842.03	-449.65	10.00	2.32	35.73	
7,800.00	18.87	217.12	7,505.28	-1,860.57	834.42	-439.56	10.00	4.85	28.96	
7,850.00	22.15	227.95	7,552.12	-1,873.34	822.53	-425.33	10.00	6.56	21.64	
7,900.00	25.96	235.92	7,597.78	-1,885.79	806.45	-407.06	10.00	7.62	15.95	
7,950.00	30.10	241.91	7,641.91	-1,897.84	786.32	-384.90	10.00	8.28	11.98	
8,000.00	34.45	246.54	7,684.18	-1,909.38	762.27	-359.01	10.00	8.70	9.26	
8,050.00	38.94	250.23	7,724.27	-1,920.33	734.49	-329.59	10.00	8.98	7.39	
8,100.00	43.52	253.27	7,761.87	-1,930.60	703.20	-296.86	10.00	9.17	6.07	
8,132.74	46.56	254.99	7,785.00	-1,936.93	680.92	-273.76	10.00	9.28	5.25	
Niobrara										
8,150.00	48.17	255.83	7,796.69	-1,940.13	668.63	-261.08	10.00	9.34	4.86	

Planning Report

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Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5718.40usft
Site:	SEC 15-T4S-R65W	North Reference:	True
Well:	LONE TREE 4-65 15-16 3CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,200.00	52.87	258.04	7,828.47	-1,948.83	631.04	-222.51	10.00	9.40	4.42
8,250.00	57.61	259.99	7,856.97	-1,956.64	590.73	-181.45	10.00	9.47	3.90
8,300.00	62.37	261.74	7,881.97	-1,963.49	547.99	-138.21	10.00	9.53	3.51
8,350.00	67.16	263.35	7,903.28	-1,969.35	503.16	-93.12	10.00	9.57	3.21
8,400.00	71.96	264.84	7,920.74	-1,974.16	456.57	-46.53	10.00	9.60	3.00
8,450.00	76.77	266.26	7,934.22	-1,977.88	408.58	1.22	10.00	9.62	2.84
8,500.00	81.59	267.63	7,943.60	-1,980.50	359.56	49.76	10.00	9.64	2.73
8,550.00	86.41	268.95	7,948.83	-1,981.98	309.87	98.71	10.00	9.64	2.66
8,587.24	90.00	269.93	7,950.00	-1,982.34	272.66	135.22	10.00	9.65	2.63
Start 9894.21 hold at 8587.24 MD									
8,600.00	90.00	269.93	7,950.00	-1,982.35	259.90	147.72	0.00	0.00	0.00
8,700.00	90.00	269.93	7,950.00	-1,982.47	159.90	245.66	0.00	0.00	0.00
8,800.00	90.00	269.93	7,950.00	-1,982.58	59.90	343.61	0.00	0.00	0.00
8,900.00	90.00	269.93	7,950.00	-1,982.69	-40.10	441.55	0.00	0.00	0.00
9,000.00	90.00	269.93	7,950.00	-1,982.81	-140.10	539.49	0.00	0.00	0.00
9,100.00	90.00	269.93	7,950.00	-1,982.92	-240.10	637.44	0.00	0.00	0.00
9,200.00	90.00	269.93	7,950.00	-1,983.04	-340.10	735.38	0.00	0.00	0.00
9,300.00	90.00	269.93	7,950.00	-1,983.15	-440.10	833.32	0.00	0.00	0.00
9,400.00	90.00	269.93	7,950.00	-1,983.27	-540.10	931.27	0.00	0.00	0.00
9,500.00	90.00	269.93	7,950.00	-1,983.38	-640.10	1,029.21	0.00	0.00	0.00
9,600.00	90.00	269.93	7,950.00	-1,983.49	-740.10	1,127.15	0.00	0.00	0.00
9,700.00	90.00	269.93	7,950.00	-1,983.61	-840.10	1,225.10	0.00	0.00	0.00
9,800.00	90.00	269.93	7,950.00	-1,983.72	-940.10	1,323.04	0.00	0.00	0.00
9,900.00	90.00	269.93	7,950.00	-1,983.84	-1,040.10	1,420.98	0.00	0.00	0.00
10,000.00	90.00	269.93	7,950.00	-1,983.95	-1,140.10	1,518.93	0.00	0.00	0.00
10,100.00	90.00	269.93	7,950.00	-1,984.07	-1,240.10	1,616.87	0.00	0.00	0.00
10,200.00	90.00	269.93	7,950.00	-1,984.18	-1,340.10	1,714.81	0.00	0.00	0.00
10,300.00	90.00	269.93	7,950.00	-1,984.29	-1,440.10	1,812.75	0.00	0.00	0.00
10,400.00	90.00	269.93	7,950.00	-1,984.41	-1,540.10	1,910.70	0.00	0.00	0.00
10,500.00	90.00	269.93	7,950.00	-1,984.52	-1,640.10	2,008.64	0.00	0.00	0.00
10,600.00	90.00	269.93	7,950.00	-1,984.64	-1,740.10	2,106.58	0.00	0.00	0.00
10,700.00	90.00	269.93	7,950.00	-1,984.75	-1,840.10	2,204.53	0.00	0.00	0.00
10,800.00	90.00	269.93	7,950.00	-1,984.86	-1,940.10	2,302.47	0.00	0.00	0.00
10,900.00	90.00	269.93	7,950.00	-1,984.98	-2,040.10	2,400.41	0.00	0.00	0.00
11,000.00	90.00	269.93	7,950.00	-1,985.09	-2,140.10	2,498.36	0.00	0.00	0.00
11,100.00	90.00	269.93	7,950.00	-1,985.21	-2,240.10	2,596.30	0.00	0.00	0.00
11,200.00	90.00	269.93	7,950.00	-1,985.32	-2,340.10	2,694.24	0.00	0.00	0.00
11,300.00	90.00	269.93	7,950.00	-1,985.44	-2,440.10	2,792.19	0.00	0.00	0.00
11,400.00	90.00	269.93	7,950.00	-1,985.55	-2,540.10	2,890.13	0.00	0.00	0.00
11,500.00	90.00	269.93	7,950.00	-1,985.66	-2,640.10	2,988.07	0.00	0.00	0.00
11,600.00	90.00	269.93	7,950.00	-1,985.78	-2,740.10	3,086.02	0.00	0.00	0.00
11,700.00	90.00	269.93	7,950.00	-1,985.89	-2,840.10	3,183.96	0.00	0.00	0.00
11,800.00	90.00	269.93	7,950.00	-1,986.01	-2,940.10	3,281.90	0.00	0.00	0.00
11,900.00	90.00	269.93	7,950.00	-1,986.12	-3,040.10	3,379.85	0.00	0.00	0.00
12,000.00	90.00	269.93	7,950.00	-1,986.24	-3,140.10	3,477.79	0.00	0.00	0.00
12,100.00	90.00	269.93	7,950.00	-1,986.35	-3,240.10	3,575.73	0.00	0.00	0.00
12,200.00	90.00	269.93	7,950.00	-1,986.46	-3,340.10	3,673.67	0.00	0.00	0.00
12,300.00	90.00	269.93	7,950.00	-1,986.58	-3,440.10	3,771.62	0.00	0.00	0.00
12,400.00	90.00	269.93	7,950.00	-1,986.69	-3,540.10	3,869.56	0.00	0.00	0.00
12,500.00	90.00	269.93	7,950.00	-1,986.81	-3,640.10	3,967.50	0.00	0.00	0.00
12,600.00	90.00	269.93	7,950.00	-1,986.92	-3,740.10	4,065.45	0.00	0.00	0.00
12,700.00	90.00	269.93	7,950.00	-1,987.04	-3,840.10	4,163.39	0.00	0.00	0.00
12,800.00	90.00	269.93	7,950.00	-1,987.15	-3,940.10	4,261.33	0.00	0.00	0.00
12,900.00	90.00	269.93	7,950.00	-1,987.26	-4,040.10	4,359.28	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5718.40usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5718.40usft
Site:	SEC 15-T4S-R65W	North Reference:	True
Well:	LONE TREE 4-65 15-16 3CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
13,000.00	90.00	269.93	7,950.00	-1,987.38	-4,140.10	4,457.22	0.00	0.00	0.00
13,100.00	90.00	269.93	7,950.00	-1,987.49	-4,240.10	4,555.16	0.00	0.00	0.00
13,200.00	90.00	269.93	7,950.00	-1,987.61	-4,340.10	4,653.11	0.00	0.00	0.00
13,300.00	90.00	269.93	7,950.00	-1,987.72	-4,440.10	4,751.05	0.00	0.00	0.00
13,400.00	90.00	269.93	7,950.00	-1,987.84	-4,540.10	4,848.99	0.00	0.00	0.00
13,500.00	90.00	269.93	7,950.00	-1,987.95	-4,640.10	4,946.94	0.00	0.00	0.00
13,600.00	90.00	269.93	7,950.00	-1,988.06	-4,740.10	5,044.88	0.00	0.00	0.00
13,700.00	90.00	269.93	7,950.00	-1,988.18	-4,840.10	5,142.82	0.00	0.00	0.00
13,800.00	90.00	269.93	7,950.00	-1,988.29	-4,940.10	5,240.76	0.00	0.00	0.00
13,900.00	90.00	269.93	7,950.00	-1,988.41	-5,040.10	5,338.71	0.00	0.00	0.00
14,000.00	90.00	269.93	7,950.00	-1,988.52	-5,140.10	5,436.65	0.00	0.00	0.00
14,100.00	90.00	269.93	7,950.00	-1,988.64	-5,240.10	5,534.59	0.00	0.00	0.00
14,200.00	90.00	269.93	7,950.00	-1,988.75	-5,340.10	5,632.54	0.00	0.00	0.00
14,300.00	90.00	269.93	7,950.00	-1,988.86	-5,440.10	5,730.48	0.00	0.00	0.00
14,400.00	90.00	269.93	7,950.00	-1,988.98	-5,540.10	5,828.42	0.00	0.00	0.00
14,500.00	90.00	269.93	7,950.00	-1,989.09	-5,640.10	5,926.37	0.00	0.00	0.00
14,600.00	90.00	269.93	7,950.00	-1,989.21	-5,740.10	6,024.31	0.00	0.00	0.00
14,700.00	90.00	269.93	7,950.00	-1,989.32	-5,840.10	6,122.25	0.00	0.00	0.00
14,800.00	90.00	269.93	7,950.00	-1,989.43	-5,940.10	6,220.20	0.00	0.00	0.00
14,900.00	90.00	269.93	7,950.00	-1,989.55	-6,040.10	6,318.14	0.00	0.00	0.00
15,000.00	90.00	269.93	7,950.00	-1,989.66	-6,140.10	6,416.08	0.00	0.00	0.00
15,100.00	90.00	269.93	7,950.00	-1,989.78	-6,240.10	6,514.03	0.00	0.00	0.00
15,200.00	90.00	269.93	7,950.00	-1,989.89	-6,340.10	6,611.97	0.00	0.00	0.00
15,300.00	90.00	269.93	7,950.00	-1,990.01	-6,440.10	6,709.91	0.00	0.00	0.00
15,400.00	90.00	269.93	7,950.00	-1,990.12	-6,540.10	6,807.86	0.00	0.00	0.00
15,500.00	90.00	269.93	7,950.00	-1,990.23	-6,640.10	6,905.80	0.00	0.00	0.00
15,600.00	90.00	269.93	7,950.00	-1,990.35	-6,740.10	7,003.74	0.00	0.00	0.00
15,700.00	90.00	269.93	7,950.00	-1,990.46	-6,840.10	7,101.68	0.00	0.00	0.00
15,800.00	90.00	269.93	7,950.00	-1,990.58	-6,940.10	7,199.63	0.00	0.00	0.00
15,900.00	90.00	269.93	7,950.00	-1,990.69	-7,040.10	7,297.57	0.00	0.00	0.00
16,000.00	90.00	269.93	7,950.00	-1,990.81	-7,140.10	7,395.51	0.00	0.00	0.00
16,100.00	90.00	269.93	7,950.00	-1,990.92	-7,240.10	7,493.46	0.00	0.00	0.00
16,200.00	90.00	269.93	7,950.00	-1,991.03	-7,340.10	7,591.40	0.00	0.00	0.00
16,300.00	90.00	269.93	7,950.00	-1,991.15	-7,440.10	7,689.34	0.00	0.00	0.00
16,400.00	90.00	269.93	7,950.00	-1,991.26	-7,540.10	7,787.29	0.00	0.00	0.00
16,500.00	90.00	269.93	7,950.00	-1,991.38	-7,640.10	7,885.23	0.00	0.00	0.00
16,600.00	90.00	269.93	7,950.00	-1,991.49	-7,740.10	7,983.17	0.00	0.00	0.00
16,700.00	90.00	269.93	7,950.00	-1,991.61	-7,840.10	8,081.12	0.00	0.00	0.00
16,800.00	90.00	269.93	7,950.00	-1,991.72	-7,940.10	8,179.06	0.00	0.00	0.00
16,900.00	90.00	269.93	7,950.00	-1,991.83	-8,040.10	8,277.00	0.00	0.00	0.00
17,000.00	90.00	269.93	7,950.00	-1,991.95	-8,140.10	8,374.95	0.00	0.00	0.00
17,100.00	90.00	269.93	7,950.00	-1,992.06	-8,240.10	8,472.89	0.00	0.00	0.00
17,200.00	90.00	269.93	7,950.00	-1,992.18	-8,340.10	8,570.83	0.00	0.00	0.00
17,300.00	90.00	269.93	7,950.00	-1,992.29	-8,440.10	8,668.78	0.00	0.00	0.00
17,400.00	90.00	269.93	7,950.00	-1,992.41	-8,540.10	8,766.72	0.00	0.00	0.00
17,500.00	90.00	269.93	7,950.00	-1,992.52	-8,640.10	8,864.66	0.00	0.00	0.00
17,600.00	90.00	269.93	7,950.00	-1,992.63	-8,740.10	8,962.60	0.00	0.00	0.00
17,700.00	90.00	269.93	7,950.00	-1,992.75	-8,840.10	9,060.55	0.00	0.00	0.00
17,800.00	90.00	269.93	7,950.00	-1,992.86	-8,940.10	9,158.49	0.00	0.00	0.00
17,900.00	90.00	269.93	7,950.00	-1,992.98	-9,040.10	9,256.43	0.00	0.00	0.00
18,000.00	90.00	269.93	7,950.00	-1,993.09	-9,140.10	9,354.38	0.00	0.00	0.00
18,100.00	90.00	269.93	7,950.00	-1,993.21	-9,240.10	9,452.32	0.00	0.00	0.00
18,200.00	90.00	269.93	7,950.00	-1,993.32	-9,340.10	9,550.26	0.00	0.00	0.00
18,300.00	90.00	269.93	7,950.00	-1,993.43	-9,440.10	9,648.21	0.00	0.00	0.00

Planning Report

Database:	EDT_32Bit_ODBC	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Company:	CRESTONE PEAK RESOURCES	TVD Reference:	KB 25' @ 5718.40usft
Project:	ARAPAHOE COUNTY	MD Reference:	KB 25' @ 5718.40usft
Site:	SEC 15-T4S-R65W	North Reference:	True
Well:	LONE TREE 4-65 15-16 3CH	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
18,400.00	90.00	269.93	7,950.00	-1,993.55	-9,540.10	9,746.15	0.00	0.00	0.00
18,481.45	90.00	269.93	7,950.00	-1,993.64	-9,621.54	9,825.92	0.00	0.00	0.00
TD at 18481.45									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL-LT 4-65 3CH - plan hits target center - Point	0.00	0.00	7,950.00	-1,993.64	-9,621.54	1,681,245.97	3,231,507.67	39.700943°N	104.677227°W
LP-LT 4-65 3CH - plan hits target center - Point	0.00	0.00	7,950.00	-1,982.34	272.66	1,681,350.61	3,241,401.25	39.700979°N	104.642064°W

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,461.67	1,434.00	Laramie				
1,814.56	1,772.00	Fox Hills				
2,391.92	2,325.00	Upper Pierre aquifer				
3,110.24	3,013.00	Base of Upper Pierre aquifer				
5,932.33	5,716.00	Terry ("Sussex")				
5,932.33	5,716.00	Hygiene ("Shannon")				
5,932.33	5,716.00	Mitten				
5,932.33	5,716.00	Mitten Marker 1				
5,932.33	5,716.00	Tepee Buttes				
5,932.33	5,716.00	Mitten Marker 2				
5,932.33	5,716.00	Sharon Springs				
8,132.74	7,785.00	Niobrara				

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
250.00	250.00	0.00	0.00	Start Build 2.00
1,085.22	1,073.44	-109.66	50.88	Start 6532.71 hold at 1085.22 MD
7,617.92	7,330.46	-1,812.95	841.23	Start DLS 10.00 TFO 113.90
8,587.24	7,950.00	-1,982.34	272.66	Start 9894.21 hold at 8587.24 MD
18,481.45	7,950.00	-1,993.64	-9,621.54	TD at 18481.45

CRESTONE PEAK RESOURCES

**ARAPAHOE COUNTY
SEC 15-T4S-R65W
LONE TREE 4-65 15-16 3CH**

**OWB
PROPOSAL 1**

Anticollision Report

11 February, 2022

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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:	Stations	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	2/11/2022		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	18,481.45	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 15-T4S-R65W						
ABND VERT BUCKLEY-STATE 16-16 - OWB - Design #	14,159.27	7,921.60	923.80	625.38	3.096	CC
ABND VERT BUCKLEY-STATE 16-16 - OWB - Design #	14,200.00	7,921.60	924.69	624.83	3.084	ES, SF
ABND VERT STATE-SMITH 1-16 - OWB - Design #1	18,146.65	7,868.60	2,960.98	2,557.55	7.340	CC
ABND VERT STATE-SMITH 1-16 - OWB - Design #1	18,200.00	7,868.60	2,961.46	2,556.88	7.320	ES
ABND VERT STATE-SMITH 1-16 - OWB - Design #1	18,400.00	7,868.60	2,971.80	2,563.67	7.281	SF
EXIST HZ LONE TREE 4-65 15-16 3BH - OWB - FINAL	1,122.32	1,108.34	65.85	57.73	8.116	CC
EXIST HZ LONE TREE 4-65 15-16 3BH - OWB - FINAL	18,481.45	17,512.12	578.41	46.92	1.088	Level 2, ES, SF
EXIST HZ PROSPER FARMS 4-65 13-14 1H - OWB - FI	3,246.31	3,132.64	688.20	667.90	33.911	CC
EXIST HZ PROSPER FARMS 4-65 13-14 1H - OWB - FI	3,300.00	3,180.87	688.49	667.69	33.099	ES
EXIST HZ PROSPER FARMS 4-65 13-14 1H - OWB - FI	4,700.00	4,510.21	837.44	805.40	26.130	SF
LONE TREE 4-65 15-16 1AH - OWB - PROPOSAL 1	206.23	211.83	199.98	198.93	190.357	CC
LONE TREE 4-65 15-16 1AH - OWB - PROPOSAL 1	250.00	255.31	199.98	198.62	146.694	ES
LONE TREE 4-65 15-16 1AH - OWB - PROPOSAL 1	18,481.45	18,221.72	3,259.74	2,708.57	5.914	SF
LONE TREE 4-65 15-16 1BH - OWB - PROPOSAL 1	250.00	254.80	150.08	148.72	110.232	CC, ES
LONE TREE 4-65 15-16 1BH - OWB - PROPOSAL 1	18,481.45	18,230.53	2,588.86	2,037.52	4.696	SF
LONE TREE 4-65 15-16 2AH - OWB - PROPOSAL 1	250.71	255.13	99.81	98.44	73.139	CC
LONE TREE 4-65 15-16 2AH - OWB - PROPOSAL 1	300.00	304.64	100.14	98.43	58.671	ES
LONE TREE 4-65 15-16 2AH - OWB - PROPOSAL 1	18,481.45	18,142.12	1,920.60	1,369.88	3.487	SF
LONE TREE 4-65 15-16 2BH - OWB - PROPOSAL 1	250.00	250.00	49.90	48.56	37.124	CC
LONE TREE 4-65 15-16 2BH - OWB - PROPOSAL 1	300.00	300.55	50.03	48.33	29.594	ES
LONE TREE 4-65 15-16 2BH - OWB - PROPOSAL 1	18,476.23	18,257.68	1,249.06	697.56	2.265	SF
LONE TREE 4-65 15-16 4AH - OWB - PROPOSAL 1	250.00	249.90	49.90	48.56	37.134	CC
LONE TREE 4-65 15-16 4AH - OWB - PROPOSAL 1	1,000.00	987.87	52.25	45.44	7.680	ES
LONE TREE 4-65 15-16 4AH - OWB - PROPOSAL 1	18,481.45	18,574.16	604.60	54.93	1.100	Level 2, SF
LONE TREE 4-65 15-16 4BH - OWB - PROPOSAL 1	250.00	249.90	100.17	98.83	74.539	CC
LONE TREE 4-65 15-16 4BH - OWB - PROPOSAL 1	900.00	878.82	102.13	96.20	17.220	ES
LONE TREE 4-65 15-16 4BH - OWB - PROPOSAL 1	18,481.45	18,844.18	1,199.89	647.44	2.172	SF
PROSPER FARMS 4-65 14-13 1AH - OWB - PROPOSA	206.40	211.60	174.85	173.80	166.473	CC
PROSPER FARMS 4-65 14-13 1AH - OWB - PROPOSA	250.00	254.92	174.85	173.49	128.386	ES
PROSPER FARMS 4-65 14-13 1AH - OWB - PROPOSA	10,600.00	7,427.77	3,898.92	3,812.72	45.234	SF
PROSPER FARMS 4-65 14-13 1BH - OWB - PROPOSA	250.00	254.30	124.94	123.58	91.892	CC, ES
PROSPER FARMS 4-65 14-13 1BH - OWB - PROPOSA	900.00	888.00	221.48	215.45	36.694	SF
PROSPER FARMS 4-65 14-13 2BH - OWB - PROPOSA	628.82	637.49	74.23	70.21	18.479	CC, ES
PROSPER FARMS 4-65 14-13 2BH - OWB - PROPOSA	1,000.00	1,007.58	96.83	90.06	14.303	SF
PROSPER FARMS 4-65 14-13 3AH - OWB - PROPOSA	810.94	815.54	23.21	17.92	4.388	CC, ES
PROSPER FARMS 4-65 14-13 3AH - OWB - PROPOSA	900.00	904.68	24.30	18.33	4.072	SF
PROSPER FARMS 4-65 14-13 3BH - OWB - PROPOSA	250.00	250.00	25.13	23.79	18.698	CC

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

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W						
PROSPER FARMS 4-65 14-13 3BH - OWB - PROPOSA	8,244.55	8,187.31	38.11	-29.47	0.564	Level 1, ES, SF
PROSPER FARMS 4-65 14-13 4AH - OWB - PROPOSA	250.00	249.90	75.04	73.70	55.840	CC
PROSPER FARMS 4-65 14-13 4AH - OWB - PROPOSA	500.00	493.56	75.69	72.65	24.892	ES
PROSPER FARMS 4-65 14-13 4AH - OWB - PROPOSA	8,200.00	8,186.65	614.74	542.39	8.497	SF
PROSPER FARMS 4-65 14-13 4BH - OWB - PROPOSA	250.00	249.90	124.94	123.60	92.971	CC
PROSPER FARMS 4-65 14-13 4BH - OWB - PROPOSA	600.00	585.31	126.01	122.28	33.868	ES
PROSPER FARMS 4-65 14-13 4BH - OWB - PROPOSA	7,650.00	7,518.98	1,134.16	1,056.14	14.537	SF

Offset Design SEC 15-T4S-R65W - ABND VERT BUCKLEY-STATE 16-16 - OWB - Design #1													Offset Site Error:	0.00 usft
Survey Program: 0-INC-ONLY													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 +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	-118.80	-2,912.50	-5,298.31	6,046.12					
100.00	100.00	71.60	71.60	0.13	0.56	-118.80	-2,912.50	-5,298.31	6,046.06	6,045.36	0.70	8,677.228		
200.00	200.00	171.60	171.60	0.49	2.04	-118.80	-2,912.50	-5,298.31	6,046.06	6,043.53	2.53	2,391.680		
250.00	250.00	221.60	221.60	0.67	2.91	-118.80	-2,912.50	-5,298.31	6,046.06	6,042.48	3.58	1,688.911		
300.00	300.00	271.60	271.60	0.84	3.78	86.10	-2,912.50	-5,298.31	6,046.03	6,041.40	4.62	1,307.612		
400.00	399.93	371.53	371.53	1.19	5.52	86.14	-2,912.50	-5,298.31	6,045.79	6,039.08	6.71	901.282		
500.00	499.68	471.28	471.28	1.54	7.27	86.21	-2,912.50	-5,298.31	6,045.32	6,036.52	8.81	686.473		
600.00	599.13	570.73	570.73	1.92	9.00	86.32	-2,912.50	-5,298.31	6,044.64	6,033.72	10.92	553.627		
700.00	698.15	669.75	669.75	2.32	10.73	86.47	-2,912.50	-5,298.31	6,043.76	6,030.71	13.05	463.261		
800.00	796.63	768.23	768.23	2.75	12.45	86.65	-2,912.50	-5,298.31	6,042.70	6,027.51	15.19	397.731		
900.00	894.44	866.04	866.04	3.21	14.16	86.87	-2,912.50	-5,298.31	6,041.50	6,024.14	17.36	347.980		
1,000.00	991.46	963.06	963.06	3.71	15.85	87.12	-2,912.50	-5,298.31	6,040.19	6,020.64	19.55	308.888		
1,085.22	1,073.44	1,045.04	1,045.04	4.17	17.28	87.35	-2,912.50	-5,298.31	6,039.03	6,017.58	21.44	281.622		
1,100.00	1,087.59	1,059.19	1,059.19	4.25	17.53	87.39	-2,912.50	-5,298.31	6,038.82	6,017.05	21.77	277.355		
1,200.00	1,183.37	1,154.97	1,154.97	4.81	19.20	87.65	-2,912.50	-5,298.31	6,037.53	6,013.52	24.01	251.448		
1,300.00	1,279.15	1,250.75	1,250.75	5.39	20.87	87.92	-2,912.50	-5,298.31	6,036.37	6,010.11	26.26	229.870		
1,400.00	1,374.93	1,346.53	1,346.53	5.98	22.54	88.18	-2,912.50	-5,298.31	6,035.34	6,006.83	28.52	211.643		
1,500.00	1,470.71	1,442.31	1,442.31	6.57	24.21	88.44	-2,912.50	-5,298.31	6,034.46	6,003.68	30.78	196.059		
1,600.00	1,566.49	1,538.09	1,538.09	7.16	25.88	88.70	-2,912.50	-5,298.31	6,033.71	6,000.66	33.05	182.588		
1,700.00	1,662.27	1,633.87	1,633.87	7.76	27.56	88.96	-2,912.50	-5,298.31	6,033.10	5,997.78	35.32	170.836		
1,800.00	1,758.05	1,729.65	1,729.65	8.36	29.23	89.22	-2,912.50	-5,298.31	6,032.62	5,995.03	37.59	160.495		
1,900.00	1,853.83	1,825.43	1,825.43	8.96	30.90	89.48	-2,912.50	-5,298.31	6,032.28	5,992.42	39.86	151.329		
2,000.00	1,949.61	1,921.21	1,921.21	9.57	32.57	89.75	-2,912.50	-5,298.31	6,032.08	5,989.94	42.14	143.151		
2,097.41	2,042.91	2,014.51	2,014.51	10.16	34.20	90.00	-2,912.50	-5,298.31	6,032.01	5,987.66	44.36	135.990		
2,100.00	2,045.39	2,016.99	2,016.99	10.17	34.24	90.01	-2,912.50	-5,298.31	6,032.01	5,987.60	44.42	135.809		
2,200.00	2,141.17	2,112.77	2,112.77	10.78	35.91	90.27	-2,912.50	-5,298.31	6,032.09	5,985.39	46.69	129.184		
2,300.00	2,236.95	2,208.55	2,208.55	11.39	37.59	90.53	-2,912.50	-5,298.31	6,032.29	5,983.32	48.97	123.176		
2,400.00	2,332.73	2,304.33	2,304.33	11.99	39.26	90.79	-2,912.50	-5,298.31	6,032.64	5,981.39	51.25	117.704		
2,500.00	2,428.51	2,400.11	2,400.11	12.60	40.93	91.05	-2,912.50	-5,298.31	6,033.12	5,979.59	53.53	112.699		
2,600.00	2,524.30	2,504.11	2,495.90	13.21	42.74	91.31	-2,912.50	-5,298.31	6,033.74	5,977.79	55.96	107.827		
2,700.00	2,620.08	2,608.33	2,591.68	13.82	44.56	91.58	-2,912.50	-5,298.31	6,034.50	5,976.11	58.39	103.355		
2,800.00	2,715.86	2,687.46	2,687.46	14.43	45.95	91.84	-2,912.50	-5,298.31	6,035.39	5,975.02	60.38	99.962		
2,900.00	2,811.64	2,783.24	2,783.24	15.04	47.62	92.10	-2,912.50	-5,298.31	6,036.42	5,973.76	62.66	96.338		
3,000.00	2,907.42	2,879.02	2,879.02	15.66	49.29	92.36	-2,912.50	-5,298.31	6,037.59	5,972.65	64.94	92.972		
3,100.00	3,003.20	2,974.80	2,974.80	16.27	50.96	92.62	-2,912.50	-5,298.31	6,038.89	5,971.67	67.22	89.835		
3,200.00	3,098.98	3,070.58	3,070.58	16.88	52.63	92.88	-2,912.50	-5,298.31	6,040.33	5,970.83	69.50	86.907		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - ABND VERT BUCKLEY-STATE 16-16 - 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		
3,300.00	3,194.76	3,166.36	3,166.36	17.49	54.30	93.14	-2,912.50	-5,298.31	6,041.91	5,970.12	71.79	84.166		
3,400.00	3,290.54	3,262.14	3,262.14	18.10	55.98	93.40	-2,912.50	-5,298.31	6,043.62	5,969.56	74.07	81.597		
3,500.00	3,386.32	3,357.92	3,357.92	18.72	57.65	93.66	-2,912.50	-5,298.31	6,045.47	5,969.12	76.35	79.183		
3,600.00	3,482.10	3,453.70	3,453.70	19.33	59.32	93.92	-2,912.50	-5,298.31	6,047.46	5,968.83	78.63	76.911		
3,700.00	3,577.88	3,549.48	3,549.48	19.94	60.99	94.18	-2,912.50	-5,298.31	6,049.58	5,968.67	80.91	74.769		
3,800.00	3,673.66	3,645.26	3,645.26	20.55	62.66	94.44	-2,912.50	-5,298.31	6,051.83	5,968.64	83.19	72.747		
3,900.00	3,769.44	3,741.04	3,741.04	21.17	64.33	94.70	-2,912.50	-5,298.31	6,054.23	5,968.75	85.47	70.834		
4,000.00	3,865.22	3,836.82	3,836.82	21.78	66.01	94.96	-2,912.50	-5,298.31	6,056.75	5,969.00	87.75	69.022		
4,100.00	3,961.00	3,932.60	3,932.60	22.39	67.68	95.22	-2,912.50	-5,298.31	6,059.42	5,969.39	90.03	67.304		
4,200.00	4,056.78	4,028.38	4,028.38	23.01	69.35	95.48	-2,912.50	-5,298.31	6,062.21	5,969.90	92.31	65.673		
4,300.00	4,152.56	4,124.16	4,124.16	23.62	71.02	95.74	-2,912.50	-5,298.31	6,065.15	5,970.56	94.59	64.122		
4,400.00	4,248.34	4,219.94	4,219.94	24.23	72.69	96.00	-2,912.50	-5,298.31	6,068.21	5,971.35	96.87	62.646		
4,500.00	4,344.12	4,315.72	4,315.72	24.85	74.36	96.26	-2,912.50	-5,298.31	6,071.42	5,972.27	99.14	61.239		
4,600.00	4,439.90	4,411.50	4,411.50	25.46	76.04	96.52	-2,912.50	-5,298.31	6,074.75	5,973.33	101.42	59.897		
4,700.00	4,535.68	4,507.28	4,507.28	26.08	77.71	96.77	-2,912.50	-5,298.31	6,078.22	5,974.53	103.70	58.616		
4,800.00	4,631.46	4,603.06	4,603.06	26.69	79.38	97.03	-2,912.50	-5,298.31	6,081.83	5,975.86	105.97	57.391		
4,900.00	4,727.24	4,701.16	4,698.84	27.30	81.09	97.29	-2,912.50	-5,298.31	6,085.57	5,977.28	108.29	56.198		
5,000.00	4,823.02	4,805.38	4,794.62	27.92	82.91	97.55	-2,912.50	-5,298.31	6,089.44	5,978.73	110.71	55.004		
5,100.00	4,918.80	4,909.60	4,890.40	28.53	84.73	97.80	-2,912.50	-5,298.31	6,093.44	5,980.31	113.13	53.862		
5,200.00	5,014.58	4,986.18	4,986.18	29.15	86.07	98.06	-2,912.50	-5,298.31	6,097.58	5,982.51	115.07	52.991		
5,300.00	5,110.36	5,081.96	5,081.96	29.76	87.74	98.32	-2,912.50	-5,298.31	6,101.85	5,984.51	117.34	52.001		
5,400.00	5,206.14	5,177.74	5,177.74	30.37	89.41	98.57	-2,912.50	-5,298.31	6,106.25	5,986.64	119.61	51.050		
5,500.00	5,301.92	5,273.52	5,273.52	30.99	91.08	98.83	-2,912.50	-5,298.31	6,110.79	5,988.90	121.88	50.136		
5,600.00	5,397.70	5,369.30	5,369.30	31.60	92.75	99.08	-2,912.50	-5,298.31	6,115.45	5,991.30	124.15	49.257		
5,700.00	5,493.48	5,465.08	5,465.08	32.22	94.42	99.34	-2,912.50	-5,298.31	6,120.25	5,993.83	126.42	48.411		
5,800.00	5,589.26	5,560.86	5,560.86	32.83	96.10	99.59	-2,912.50	-5,298.31	6,125.18	5,996.49	128.69	47.596		
5,900.00	5,685.04	5,656.64	5,656.64	33.45	97.77	99.85	-2,912.50	-5,298.31	6,130.24	5,999.28	130.96	46.810		
6,000.00	5,780.82	5,752.42	5,752.42	34.06	99.44	100.10	-2,912.50	-5,298.31	6,135.43	6,002.20	133.23	46.053		
6,100.00	5,876.60	5,848.20	5,848.20	34.67	101.11	100.35	-2,912.50	-5,298.31	6,140.75	6,005.26	135.49	45.322		
6,200.00	5,972.38	5,943.98	5,943.98	35.29	102.78	100.61	-2,912.50	-5,298.31	6,146.20	6,008.44	137.76	44.616		
6,300.00	6,068.16	6,039.76	6,039.76	35.90	104.45	100.86	-2,912.50	-5,298.31	6,151.78	6,011.76	140.02	43.934		
6,400.00	6,163.94	6,135.54	6,135.54	36.52	106.13	101.11	-2,912.50	-5,298.31	6,157.49	6,015.20	142.29	43.276		
6,500.00	6,259.72	6,231.32	6,231.32	37.13	107.80	101.36	-2,912.50	-5,298.31	6,163.32	6,018.78	144.55	42.639		
6,600.00	6,355.50	6,327.10	6,327.10	37.75	109.47	101.61	-2,912.50	-5,298.31	6,169.29	6,022.48	146.81	42.023		
6,700.00	6,451.28	6,422.88	6,422.88	38.36	111.14	101.86	-2,912.50	-5,298.31	6,175.38	6,026.31	149.07	41.426		
6,800.00	6,547.06	6,518.66	6,518.66	38.98	112.81	102.11	-2,912.50	-5,298.31	6,181.60	6,030.28	151.33	40.849		
6,900.00	6,642.84	6,614.44	6,614.44	39.59	114.48	102.36	-2,912.50	-5,298.31	6,187.95	6,034.37	153.59	40.290		
7,000.00	6,738.62	6,710.22	6,710.22	40.21	116.16	102.61	-2,912.50	-5,298.31	6,194.43	6,038.59	155.84	39.748		
7,100.00	6,834.40	6,806.00	6,806.00	40.82	117.83	102.86	-2,912.50	-5,298.31	6,201.03	6,042.93	158.10	39.222		
7,200.00	6,930.18	6,901.78	6,901.78	41.43	119.50	103.11	-2,912.50	-5,298.31	6,207.76	6,047.40	160.36	38.713		
7,300.00	7,025.96	7,002.44	6,997.56	42.05	121.26	103.36	-2,912.50	-5,298.31	6,214.61	6,051.92	162.69	38.198		
7,400.00	7,121.74	7,106.66	7,093.34	42.66	123.07	103.60	-2,912.50	-5,298.31	6,221.59	6,056.50	165.09	37.685		
7,500.00	7,217.52	7,189.12	7,189.12	43.28	124.51	103.85	-2,912.50	-5,298.31	6,228.70	6,061.58	167.11	37.272		
7,600.00	7,313.30	7,284.90	7,284.90	43.89	126.19	104.10	-2,912.50	-5,298.31	6,235.92	6,066.56	169.36	36.819		
7,617.92	7,330.46	7,302.06	7,302.06	44.00	126.49	104.14	-2,912.50	-5,298.31	6,237.23	6,067.46	169.77	36.740		
7,650.00	7,361.28	7,332.88	7,332.88	44.20	127.02	93.76	-2,912.50	-5,298.31	6,238.70	6,068.21	170.49	36.593		
7,700.00	7,409.49	7,381.09	7,381.09	44.47	127.86	75.77	-2,912.50	-5,298.31	6,237.48	6,065.89	171.60	36.350		
7,750.00	7,457.61	7,429.21	7,429.21	44.71	128.70	58.59	-2,912.50	-5,298.31	6,232.00	6,059.32	172.68	36.089		
7,800.00	7,505.28	7,476.88	7,476.88	44.91	129.54	44.73	-2,912.50	-5,298.31	6,222.29	6,048.56	173.73	35.815		
7,850.00	7,552.12	7,523.72	7,523.72	45.08	130.35	34.44	-2,912.50	-5,298.31	6,208.43	6,033.68	174.75	35.528		
7,900.00	7,597.78	7,569.38	7,569.38	45.23	131.15	26.91	-2,912.50	-5,298.31	6,190.50	6,014.79	175.71	35.231		
7,950.00	7,641.91	7,613.51	7,613.51	45.34	131.92	21.28	-2,912.50	-5,298.31	6,168.65	5,992.02	176.63	34.924		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - ABND VERT BUCKLEY-STATE 16-16 - 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		
8,000.00	7,684.18	7,655.78	7,655.78	45.43	132.66	16.90	-2,912.50	-5,298.31	6,143.04	5,965.54	177.50	34.609		
8,050.00	7,724.27	7,704.13	7,695.87	45.50	133.50	13.31	-2,912.50	-5,298.31	6,113.85	5,935.40	178.45	34.261		
8,100.00	7,761.87	7,733.47	7,733.47	45.54	134.01	10.21	-2,912.50	-5,298.31	6,081.31	5,902.26	179.05	33.964		
8,150.00	7,796.69	7,768.29	7,768.29	45.57	134.62	7.35	-2,912.50	-5,298.31	6,045.65	5,865.93	179.73	33.638		
8,200.00	7,828.47	7,800.07	7,800.07	45.58	135.18	4.52	-2,912.50	-5,298.31	6,007.16	5,826.82	180.33	33.311		
8,250.00	7,856.97	7,828.57	7,828.57	45.57	135.67	1.48	-2,912.50	-5,298.31	5,966.11	5,785.25	180.87	32.986		
8,300.00	7,881.97	7,853.57	7,853.57	45.54	136.11	-2.07	-2,912.50	-5,298.31	5,922.83	5,741.51	181.32	32.664		
8,350.00	7,903.28	7,874.88	7,874.88	45.50	136.48	-6.62	-2,912.50	-5,298.31	5,877.64	5,695.94	181.70	32.348		
8,400.00	7,920.74	7,907.66	7,892.34	45.44	137.05	-13.05	-2,912.50	-5,298.31	5,830.88	5,648.62	182.26	31.992		
8,450.00	7,934.22	7,905.82	7,905.82	45.38	137.02	-23.05	-2,912.50	-5,298.31	5,782.92	5,600.72	182.20	31.739		
8,500.00	7,943.60	7,915.20	7,915.20	45.30	137.19	-39.91	-2,912.50	-5,298.31	5,734.12	5,551.79	182.33	31.449		
8,550.00	7,948.83	7,920.43	7,920.43	45.22	137.28	-66.94	-2,912.50	-5,298.31	5,684.86	5,502.48	182.38	31.171		
8,587.24	7,950.00	7,921.60	7,921.60	45.15	137.30	-90.00	-2,912.50	-5,298.31	5,648.09	5,465.74	182.35	30.973		
8,600.00	7,950.00	7,921.60	7,921.60	45.13	137.30	-90.00	-2,912.50	-5,298.31	5,635.50	5,453.16	182.34	30.907		
8,700.00	7,950.00	7,921.60	7,921.60	44.96	137.30	-90.00	-2,912.50	-5,298.31	5,536.88	5,354.66	182.22	30.386		
8,800.00	7,950.00	7,921.60	7,921.60	44.81	137.30	-90.00	-2,912.50	-5,298.31	5,438.31	5,256.21	182.10	29.864		
8,900.00	7,950.00	7,921.60	7,921.60	44.69	137.30	-90.00	-2,912.50	-5,298.31	5,339.79	5,157.80	181.98	29.342		
9,000.00	7,950.00	7,921.60	7,921.60	44.58	137.30	-90.00	-2,912.50	-5,298.31	5,241.32	5,059.45	181.87	28.819		
9,100.00	7,950.00	7,921.60	7,921.60	44.50	137.30	-90.00	-2,912.50	-5,298.31	5,142.92	4,961.16	181.76	28.296		
9,200.00	7,950.00	7,921.60	7,921.60	44.48	137.30	-90.00	-2,912.50	-5,298.31	5,044.58	4,862.93	181.65	27.771		
9,300.00	7,950.00	7,921.60	7,921.60	44.63	137.30	-90.00	-2,912.50	-5,298.31	4,946.30	4,764.76	181.54	27.246		
9,400.00	7,950.00	7,921.60	7,921.60	45.49	137.30	-90.00	-2,912.50	-5,298.31	4,848.10	4,666.66	181.44	26.720		
9,500.00	7,950.00	7,921.60	7,921.60	47.12	137.30	-90.00	-2,912.50	-5,298.31	4,749.97	4,568.63	181.34	26.193		
9,600.00	7,950.00	7,921.60	7,921.60	48.99	137.30	-90.00	-2,912.50	-5,298.31	4,651.92	4,470.67	181.25	25.665		
9,700.00	7,950.00	7,921.60	7,921.60	50.96	137.30	-90.00	-2,912.50	-5,298.31	4,553.95	4,372.78	181.17	25.137		
9,800.00	7,950.00	7,921.60	7,921.60	53.01	137.30	-90.00	-2,912.50	-5,298.31	4,456.08	4,274.99	181.09	24.607		
9,900.00	7,950.00	7,921.60	7,921.60	55.12	137.30	-90.00	-2,912.50	-5,298.31	4,358.30	4,177.27	181.03	24.075		
10,000.00	7,950.00	7,921.60	7,921.60	57.28	137.30	-90.00	-2,912.50	-5,298.31	4,260.62	4,079.65	180.97	23.543		
10,100.00	7,950.00	7,921.60	7,921.60	59.48	137.30	-90.00	-2,912.50	-5,298.31	4,163.06	3,982.13	180.93	23.009		
10,200.00	7,950.00	7,921.60	7,921.60	61.71	137.30	-90.00	-2,912.50	-5,298.31	4,065.61	3,884.71	180.91	22.474		
10,300.00	7,950.00	7,921.60	7,921.60	63.99	137.30	-90.00	-2,912.50	-5,298.31	3,968.29	3,787.40	180.90	21.937		
10,400.00	7,950.00	7,921.60	7,921.60	66.29	137.30	-90.00	-2,912.50	-5,298.31	3,871.11	3,690.20	180.91	21.398		
10,500.00	7,950.00	7,921.60	7,921.60	68.62	137.30	-90.00	-2,912.50	-5,298.31	3,774.08	3,593.13	180.94	20.858		
10,600.00	7,950.00	7,921.60	7,921.60	70.97	137.30	-90.00	-2,912.50	-5,298.31	3,677.20	3,496.20	181.00	20.316		
10,700.00	7,950.00	7,921.60	7,921.60	73.34	137.30	-90.00	-2,912.50	-5,298.31	3,580.50	3,399.40	181.10	19.771		
10,800.00	7,950.00	7,921.60	7,921.60	75.74	137.30	-90.00	-2,912.50	-5,298.31	3,483.98	3,302.75	181.23	19.224		
10,900.00	7,950.00	7,921.60	7,921.60	78.15	137.30	-90.00	-2,912.50	-5,298.31	3,387.66	3,206.26	181.40	18.676		
11,000.00	7,950.00	7,921.60	7,921.60	80.58	137.30	-90.00	-2,912.50	-5,298.31	3,291.56	3,109.95	181.61	18.124		
11,100.00	7,950.00	7,921.60	7,921.60	83.03	137.30	-90.00	-2,912.50	-5,298.31	3,195.71	3,013.82	181.88	17.570		
11,200.00	7,950.00	7,921.60	7,921.60	85.49	137.30	-90.00	-2,912.50	-5,298.31	3,100.11	2,917.89	182.22	17.013		
11,300.00	7,950.00	7,921.60	7,921.60	87.96	137.30	-90.00	-2,912.50	-5,298.31	3,004.80	2,822.18	182.62	16.454		
11,400.00	7,950.00	7,921.60	7,921.60	90.45	137.30	-90.00	-2,912.50	-5,298.31	2,909.81	2,726.70	183.11	15.891		
11,500.00	7,950.00	7,921.60	7,921.60	92.95	137.30	-90.00	-2,912.50	-5,298.31	2,815.16	2,631.47	183.69	15.326		
11,600.00	7,950.00	7,921.60	7,921.60	95.45	137.30	-90.00	-2,912.50	-5,298.31	2,720.89	2,536.52	184.37	14.758		
11,700.00	7,950.00	7,921.60	7,921.60	97.97	137.30	-90.00	-2,912.50	-5,298.31	2,627.05	2,441.87	185.18	14.187		
11,800.00	7,950.00	7,921.60	7,921.60	100.49	137.30	-90.00	-2,912.50	-5,298.31	2,533.68	2,347.56	186.12	13.613		
11,900.00	7,950.00	7,921.60	7,921.60	103.03	137.30	-90.00	-2,912.50	-5,298.31	2,440.84	2,253.62	187.22	13.037		
12,000.00	7,950.00	7,921.60	7,921.60	105.57	137.30	-90.00	-2,912.50	-5,298.31	2,348.58	2,160.08	188.50	12.459		
12,100.00	7,950.00	7,921.60	7,921.60	108.11	137.30	-90.00	-2,912.50	-5,298.31	2,256.99	2,067.00	189.98	11.880		
12,200.00	7,950.00	7,921.60	7,921.60	110.67	137.30	-90.00	-2,912.50	-5,298.31	2,166.13	1,974.44	191.69	11.300		
12,300.00	7,950.00	7,921.60	7,921.60	113.23	137.30	-90.00	-2,912.50	-5,298.31	2,076.12	1,882.46	193.66	10.720		
12,400.00	7,950.00	7,921.60	7,921.60	115.79	137.30	-90.00	-2,912.50	-5,298.31	1,987.07	1,791.15	195.91	10.143		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - ABND VERT BUCKLEY-STATE 16-16 - 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		
12,500.00	7,950.00	7,921.60	7,921.60	118.36	137.30	-90.00	-2,912.50	-5,298.31	1,899.10	1,700.61	198.49	9.568		
12,600.00	7,950.00	7,921.60	7,921.60	120.94	137.30	-90.00	-2,912.50	-5,298.31	1,812.38	1,610.95	201.43	8.997		
12,700.00	7,950.00	7,921.60	7,921.60	123.52	137.30	-90.00	-2,912.50	-5,298.31	1,727.10	1,522.32	204.78	8.434		
12,800.00	7,950.00	7,921.60	7,921.60	126.11	137.30	-90.00	-2,912.50	-5,298.31	1,643.48	1,434.91	208.57	7.880		
12,900.00	7,950.00	7,921.60	7,921.60	128.70	137.30	-90.00	-2,912.50	-5,298.31	1,561.78	1,348.94	212.85	7.338		
13,000.00	7,950.00	7,921.60	7,921.60	131.29	137.30	-90.00	-2,912.50	-5,298.31	1,482.33	1,264.67	217.66	6.810		
13,100.00	7,950.00	7,921.60	7,921.60	133.89	137.30	-90.00	-2,912.50	-5,298.31	1,405.51	1,182.46	223.04	6.301		
13,200.00	7,950.00	7,921.60	7,921.60	136.49	137.30	-90.00	-2,912.50	-5,298.31	1,331.77	1,102.73	229.03	5.815		
13,300.00	7,950.00	7,921.60	7,921.60	139.09	137.30	-90.00	-2,912.50	-5,298.31	1,261.64	1,026.01	235.63	5.354		
13,400.00	7,950.00	7,921.60	7,921.60	141.70	137.30	-90.00	-2,912.50	-5,298.31	1,195.78	952.95	242.83	4.924		
13,500.00	7,950.00	7,921.60	7,921.60	144.31	137.30	-90.00	-2,912.50	-5,298.31	1,134.92	884.35	250.57	4.529		
13,600.00	7,950.00	7,921.60	7,921.60	146.93	137.30	-90.00	-2,912.50	-5,298.31	1,079.90	821.19	258.71	4.174		
13,700.00	7,950.00	7,921.60	7,921.60	149.54	137.30	-90.00	-2,912.50	-5,298.31	1,031.66	764.59	267.07	3.863		
13,800.00	7,950.00	7,921.60	7,921.60	152.16	137.30	-90.00	-2,912.50	-5,298.31	991.20	715.85	275.35	3.600		
13,900.00	7,950.00	7,921.60	7,921.60	154.78	137.30	-90.00	-2,912.50	-5,298.31	959.49	676.31	283.18	3.388		
14,000.00	7,950.00	7,921.60	7,921.60	157.41	137.30	-90.00	-2,912.50	-5,298.31	937.43	647.29	290.13	3.231		
14,100.00	7,950.00	7,921.60	7,921.60	160.03	137.30	-90.00	-2,912.50	-5,298.31	925.70	629.89	295.80	3.129		
14,159.27	7,950.00	7,921.60	7,921.60	161.59	137.30	-90.00	-2,912.50	-5,298.31	923.80	625.38	298.42	3.096 CC		
14,200.00	7,950.00	7,921.60	7,921.60	162.66	137.30	-90.00	-2,912.50	-5,298.31	924.69	624.83	299.87	3.084 ES, SF		
14,300.00	7,950.00	7,921.60	7,921.60	165.29	137.30	-90.00	-2,912.50	-5,298.31	934.45	632.29	302.17	3.093		
14,400.00	7,950.00	7,921.60	7,921.60	167.92	137.30	-90.00	-2,912.50	-5,298.31	954.65	651.92	302.73	3.153		
14,500.00	7,950.00	7,921.60	7,921.60	170.55	137.30	-90.00	-2,912.50	-5,298.31	984.63	682.90	301.73	3.263		
14,600.00	7,950.00	7,921.60	7,921.60	173.19	137.30	-90.00	-2,912.50	-5,298.31	1,023.54	724.07	299.48	3.418		
14,700.00	7,950.00	7,921.60	7,921.60	175.83	137.30	-90.00	-2,912.50	-5,298.31	1,070.42	774.12	296.29	3.613		
14,800.00	7,950.00	7,921.60	7,921.60	178.46	137.30	-90.00	-2,912.50	-5,298.31	1,124.25	831.75	292.50	3.844		
14,900.00	7,950.00	7,921.60	7,921.60	181.10	137.30	-90.00	-2,912.50	-5,298.31	1,184.10	895.74	288.35	4.106		
15,000.00	7,950.00	7,921.60	7,921.60	183.75	137.30	-90.00	-2,912.50	-5,298.31	1,249.09	965.02	284.07	4.397		
15,100.00	7,950.00	7,921.60	7,921.60	186.39	137.30	-90.00	-2,912.50	-5,298.31	1,318.47	1,038.69	279.79	4.712		
15,200.00	7,950.00	7,921.60	7,921.60	189.03	137.30	-90.00	-2,912.50	-5,298.31	1,391.59	1,115.97	275.62	5.049		
15,300.00	7,950.00	7,921.60	7,921.60	191.68	137.30	-90.00	-2,912.50	-5,298.31	1,467.88	1,196.26	271.62	5.404		
15,400.00	7,950.00	7,921.60	7,921.60	194.33	137.30	-90.00	-2,912.50	-5,298.31	1,546.87	1,279.04	267.83	5.775		
15,500.00	7,950.00	7,921.60	7,921.60	196.97	137.30	-90.00	-2,912.50	-5,298.31	1,628.18	1,363.90	264.27	6.161		
15,600.00	7,950.00	7,921.60	7,921.60	199.62	137.30	-90.00	-2,912.50	-5,298.31	1,711.46	1,450.53	260.94	6.559		
15,700.00	7,950.00	7,921.60	7,921.60	202.27	137.30	-90.00	-2,912.50	-5,298.31	1,796.46	1,538.63	257.83	6.968		
15,800.00	7,950.00	7,921.60	7,921.60	204.93	137.30	-90.00	-2,912.50	-5,298.31	1,882.92	1,627.99	254.94	7.386		
15,900.00	7,950.00	7,921.60	7,921.60	207.58	137.30	-90.00	-2,912.50	-5,298.31	1,970.67	1,718.42	252.25	7.812		
16,000.00	7,950.00	7,921.60	7,921.60	210.23	137.30	-90.00	-2,912.50	-5,298.31	2,059.54	1,809.79	249.75	8.246		
16,100.00	7,950.00	7,921.60	7,921.60	212.89	137.30	-90.00	-2,912.50	-5,298.31	2,149.38	1,901.95	247.43	8.687		
16,200.00	7,950.00	7,921.60	7,921.60	215.54	137.30	-90.00	-2,912.50	-5,298.31	2,240.09	1,994.82	245.27	9.133		
16,300.00	7,950.00	7,921.60	7,921.60	218.20	137.30	-90.00	-2,912.50	-5,298.31	2,331.55	2,088.29	243.26	9.585		
16,400.00	7,950.00	7,921.60	7,921.60	220.85	137.30	-90.00	-2,912.50	-5,298.31	2,423.69	2,182.30	241.39	10.041		
16,500.00	7,950.00	7,921.60	7,921.60	223.51	137.30	-90.00	-2,912.50	-5,298.31	2,516.43	2,276.78	239.65	10.501		
16,600.00	7,950.00	7,921.60	7,921.60	226.17	137.30	-90.00	-2,912.50	-5,298.31	2,609.71	2,371.68	238.02	10.964		
16,700.00	7,950.00	7,921.60	7,921.60	228.83	137.30	-90.00	-2,912.50	-5,298.31	2,703.46	2,466.96	236.50	11.431		
16,800.00	7,950.00	7,921.60	7,921.60	231.49	137.30	-90.00	-2,912.50	-5,298.31	2,797.65	2,562.57	235.08	11.901		
16,900.00	7,950.00	7,921.60	7,921.60	234.15	137.30	-90.00	-2,912.50	-5,298.31	2,892.23	2,658.48	233.75	12.373		
17,000.00	7,950.00	7,921.60	7,921.60	236.81	137.30	-90.00	-2,912.50	-5,298.31	2,987.16	2,754.66	232.50	12.848		
17,100.00	7,950.00	7,921.60	7,921.60	239.47	137.30	-90.00	-2,912.50	-5,298.31	3,082.42	2,851.09	231.33	13.325		
17,200.00	7,950.00	7,921.60	7,921.60	242.14	137.30	-90.00	-2,912.50	-5,298.31	3,177.96	2,947.74	230.23	13.804		
17,300.00	7,950.00	7,921.60	7,921.60	244.80	137.30	-90.00	-2,912.50	-5,298.31	3,273.77	3,044.58	229.19	14.284		
17,400.00	7,950.00	7,921.60	7,921.60	247.46	137.30	-90.00	-2,912.50	-5,298.31	3,369.83	3,141.61	228.21	14.766		
17,500.00	7,950.00	7,921.60	7,921.60	250.13	137.30	-90.00	-2,912.50	-5,298.31	3,466.10	3,238.81	227.29	15.250		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - ABND VERT BUCKLEY-STATE 16-16 - 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	
17,600.00	7,950.00	7,921.60	7,921.60	252.79	137.30	-90.00	-2,912.50	-5,298.31	3,562.59	3,336.17	226.42	15.734	
17,700.00	7,950.00	7,921.60	7,921.60	255.46	137.30	-90.00	-2,912.50	-5,298.31	3,659.26	3,433.66	225.60	16.220	
17,800.00	7,950.00	7,921.60	7,921.60	258.13	137.30	-90.00	-2,912.50	-5,298.31	3,756.10	3,531.28	224.82	16.707	
17,900.00	7,950.00	7,921.60	7,921.60	260.79	137.30	-90.00	-2,912.50	-5,298.31	3,853.11	3,629.02	224.09	17.195	
18,000.00	7,950.00	7,921.60	7,921.60	263.46	137.30	-90.00	-2,912.50	-5,298.31	3,950.27	3,726.88	223.39	17.683	
18,100.00	7,950.00	7,921.60	7,921.60	266.13	137.30	-90.00	-2,912.50	-5,298.31	4,047.56	3,824.84	222.73	18.173	
18,200.00	7,950.00	7,921.60	7,921.60	268.80	137.30	-90.00	-2,912.50	-5,298.31	4,144.99	3,922.89	222.10	18.663	
18,300.00	7,950.00	7,921.60	7,921.60	271.47	137.30	-90.00	-2,912.50	-5,298.31	4,242.53	4,021.03	221.50	19.154	
18,400.00	7,950.00	7,921.60	7,921.60	274.14	137.30	-90.00	-2,912.50	-5,298.31	4,340.18	4,119.25	220.93	19.645	
18,481.45	7,950.00	7,921.60	7,921.60	276.31	137.30	-90.00	-2,912.50	-5,298.31	4,419.80	4,199.31	220.49	20.045	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - ABND VERT STATE-SMITH 1-16 - 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	0.00	0.00	0.00	0.00	-84.05	967.72	-9,290.13	9,340.75					
100.00	100.00	18.60	18.60	0.13	0.15	-84.05	967.72	-9,290.13	9,340.39	9,340.11	0.28	N/A		
200.00	200.00	118.60	118.60	0.49	1.11	-84.05	967.72	-9,290.13	9,340.39	9,338.79	1.60	5,827.079		
250.00	250.00	168.60	168.60	0.67	1.98	-84.05	967.72	-9,290.13	9,340.39	9,337.74	2.65	3,518.265		
300.00	300.00	218.60	218.60	0.84	2.86	120.84	967.72	-9,290.13	9,340.62	9,336.92	3.70	2,525.339		
400.00	399.93	318.53	318.53	1.19	4.60	120.82	967.72	-9,290.13	9,342.41	9,336.62	5.78	1,615.403		
500.00	499.68	418.28	418.28	1.54	6.34	120.80	967.72	-9,290.13	9,345.99	9,338.11	7.88	1,185.878		
600.00	599.13	517.73	517.73	1.92	8.08	120.76	967.72	-9,290.13	9,351.36	9,341.37	9.99	936.144		
700.00	698.15	616.75	616.75	2.32	9.80	120.71	967.72	-9,290.13	9,358.52	9,346.41	12.11	772.878		
800.00	796.63	715.23	715.23	2.75	11.52	120.65	967.72	-9,290.13	9,367.48	9,353.24	14.24	657.785		
900.00	894.44	813.04	813.04	3.21	13.23	120.57	967.72	-9,290.13	9,378.24	9,361.86	16.39	572.273		
1,000.00	991.46	910.06	910.06	3.71	14.92	120.47	967.72	-9,290.13	9,390.81	9,372.26	18.55	506.236		
1,085.22	1,073.44	1,007.96	992.04	4.17	16.63	120.38	967.72	-9,290.13	9,402.94	9,382.25	20.68	454.594		
1,100.00	1,087.59	1,006.19	1,006.19	4.25	16.60	120.40	967.72	-9,290.13	9,405.16	9,384.43	20.73	453.698		
1,200.00	1,183.37	1,101.97	1,101.97	4.81	18.27	120.55	967.72	-9,290.13	9,420.21	9,397.29	22.92	411.012		
1,300.00	1,279.15	1,202.25	1,197.75	5.39	20.02	120.70	967.72	-9,290.13	9,435.32	9,410.12	25.20	374.471		
1,400.00	1,374.93	1,306.47	1,293.53	5.98	21.84	120.84	967.72	-9,290.13	9,450.49	9,422.94	27.55	343.051		
1,500.00	1,470.71	1,389.31	1,389.31	6.57	23.29	120.99	967.72	-9,290.13	9,465.73	9,436.20	29.53	320.528		
1,600.00	1,566.49	1,485.09	1,485.09	7.16	24.96	121.13	967.72	-9,290.13	9,481.03	9,449.28	31.74	298.673		
1,700.00	1,662.27	1,580.87	1,580.87	7.76	26.63	121.27	967.72	-9,290.13	9,496.39	9,462.43	33.96	279.649		
1,800.00	1,758.05	1,676.65	1,676.65	8.36	28.30	121.42	967.72	-9,290.13	9,511.81	9,475.64	36.17	262.944		
1,900.00	1,853.83	1,772.43	1,772.43	8.96	29.97	121.56	967.72	-9,290.13	9,527.30	9,488.91	38.39	248.163		
2,000.00	1,949.61	1,868.21	1,868.21	9.57	31.65	121.70	967.72	-9,290.13	9,542.85	9,502.24	40.61	234.993		
2,100.00	2,045.39	1,963.99	1,963.99	10.17	33.32	121.85	967.72	-9,290.13	9,558.46	9,515.63	42.83	223.186		
2,200.00	2,141.17	2,059.77	2,059.77	10.78	34.99	121.99	967.72	-9,290.13	9,574.13	9,529.08	45.05	212.542		
2,300.00	2,236.95	2,155.55	2,155.55	11.39	36.66	122.13	967.72	-9,290.13	9,589.86	9,542.59	47.26	202.899		
2,400.00	2,332.73	2,251.33	2,251.33	11.99	38.33	122.27	967.72	-9,290.13	9,605.65	9,556.16	49.48	194.121		
2,500.00	2,428.51	2,347.11	2,347.11	12.60	40.00	122.41	967.72	-9,290.13	9,621.50	9,569.80	51.70	186.099		
2,600.00	2,524.30	2,442.90	2,442.90	13.21	41.68	122.55	967.72	-9,290.13	9,637.41	9,583.49	53.92	178.739		
2,700.00	2,620.08	2,538.68	2,538.68	13.82	43.35	122.69	967.72	-9,290.13	9,653.38	9,597.24	56.14	171.963		
2,800.00	2,715.86	2,634.46	2,634.46	14.43	45.02	122.83	967.72	-9,290.13	9,669.40	9,611.05	58.35	165.704		
2,900.00	2,811.64	2,730.24	2,730.24	15.04	46.69	122.97	967.72	-9,290.13	9,685.49	9,624.92	60.57	159.905		
3,000.00	2,907.42	2,826.02	2,826.02	15.66	48.36	123.10	967.72	-9,290.13	9,701.64	9,638.85	62.79	154.519		
3,100.00	3,003.20	2,921.80	2,921.80	16.27	50.04	123.24	967.72	-9,290.13	9,717.84	9,652.84	65.00	149.501		
3,200.00	3,098.98	3,017.58	3,017.58	16.88	51.71	123.38	967.72	-9,290.13	9,734.10	9,666.89	67.22	144.817		
3,300.00	3,194.76	3,113.36	3,113.36	17.49	53.38	123.52	967.72	-9,290.13	9,750.42	9,680.99	69.43	140.433		
3,400.00	3,290.54	3,209.14	3,209.14	18.10	55.05	123.65	967.72	-9,290.13	9,766.80	9,695.15	71.64	136.323		
3,500.00	3,386.32	3,304.92	3,304.92	18.72	56.72	123.79	967.72	-9,290.13	9,783.23	9,709.37	73.86	132.461		
3,600.00	3,482.10	3,400.70	3,400.70	19.33	58.39	123.93	967.72	-9,290.13	9,799.72	9,723.65	76.07	128.825		
3,700.00	3,577.88	3,503.52	3,496.48	19.94	60.19	124.06	967.72	-9,290.13	9,816.27	9,737.86	78.40	125.200		
3,800.00	3,673.66	3,607.74	3,592.26	20.55	62.01	124.20	967.72	-9,290.13	9,832.87	9,752.11	80.76	121.750		
3,900.00	3,769.44	3,688.04	3,688.04	21.17	63.41	124.33	967.72	-9,290.13	9,849.53	9,766.83	82.70	119.096		
4,000.00	3,865.22	3,783.82	3,783.82	21.78	65.08	124.46	967.72	-9,290.13	9,866.24	9,781.33	84.91	116.194		
4,100.00	3,961.00	3,879.60	3,879.60	22.39	66.75	124.60	967.72	-9,290.13	9,883.01	9,795.89	87.12	113.440		
4,200.00	4,056.78	3,975.38	3,975.38	23.01	68.42	124.73	967.72	-9,290.13	9,899.84	9,810.51	89.33	110.825		
4,300.00	4,152.56	4,071.16	4,071.16	23.62	70.10	124.86	967.72	-9,290.13	9,916.72	9,825.18	91.54	108.337		
4,400.00	4,248.34	4,166.94	4,166.94	24.23	71.77	124.99	967.72	-9,290.13	9,933.65	9,839.91	93.74	105.968		
4,500.00	4,344.12	4,262.72	4,262.72	24.85	73.44	125.13	967.72	-9,290.13	9,950.64	9,854.69	95.95	103.709		
4,600.00	4,439.90	4,358.50	4,358.50	25.46	75.11	125.26	967.72	-9,290.13	9,967.68	9,869.53	98.15	101.553		
4,700.00	4,535.68	4,454.28	4,454.28	26.08	76.78	125.39	967.72	-9,290.13	9,984.78	9,884.42	100.36	99.493		
8,600.00	7,950.00	7,868.60	7,868.60	45.13	136.37	90.00	967.72	-9,290.13	9,995.29	9,816.70	178.59	55.968		
8,700.00	7,950.00	7,868.60	7,868.60	44.96	136.37	90.00	967.72	-9,290.13	9,899.83	9,720.96	178.87	55.346		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - ABND VERT STATE-SMITH 1-16 - 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		
8,800.00	7,950.00	7,868.60	7,868.60	44.81	136.37	90.00	967.72	-9,290.13	9,804.45	9,625.28	179.17	54.721		
8,900.00	7,950.00	7,868.60	7,868.60	44.69	136.37	90.00	967.72	-9,290.13	9,709.17	9,529.67	179.49	54.092		
9,000.00	7,950.00	7,868.60	7,868.60	44.58	136.37	90.00	967.72	-9,290.13	9,613.98	9,434.14	179.84	53.459		
9,100.00	7,950.00	7,868.60	7,868.60	44.50	136.37	90.00	967.72	-9,290.13	9,518.89	9,338.69	180.20	52.823		
9,200.00	7,950.00	7,868.60	7,868.60	44.48	136.37	90.00	967.72	-9,290.13	9,423.90	9,243.31	180.59	52.184		
9,300.00	7,950.00	7,868.60	7,868.60	44.63	136.37	90.00	967.72	-9,290.13	9,329.02	9,148.02	181.00	51.541		
9,400.00	7,950.00	7,868.60	7,868.60	45.49	136.37	90.00	967.72	-9,290.13	9,234.24	9,052.81	181.44	50.895		
9,500.00	7,950.00	7,868.60	7,868.60	47.12	136.37	90.00	967.72	-9,290.13	9,139.58	8,957.68	181.90	50.246		
9,600.00	7,950.00	7,868.60	7,868.60	48.99	136.37	90.00	967.72	-9,290.13	9,045.03	8,862.65	182.38	49.593		
9,700.00	7,950.00	7,868.60	7,868.60	50.96	136.37	90.00	967.72	-9,290.13	8,950.60	8,767.71	182.90	48.938		
9,800.00	7,950.00	7,868.60	7,868.60	53.01	136.37	90.00	967.72	-9,290.13	8,856.29	8,672.86	183.43	48.280		
9,900.00	7,950.00	7,868.60	7,868.60	55.12	136.37	90.00	967.72	-9,290.13	8,762.11	8,578.11	184.00	47.620		
10,000.00	7,950.00	7,868.60	7,868.60	57.28	136.37	90.00	967.72	-9,290.13	8,668.06	8,483.46	184.60	46.957		
10,100.00	7,950.00	7,868.60	7,868.60	59.48	136.37	90.00	967.72	-9,290.13	8,574.14	8,388.92	185.22	46.291		
10,200.00	7,950.00	7,868.60	7,868.60	61.71	136.37	90.00	967.72	-9,290.13	8,480.37	8,294.49	185.88	45.624		
10,300.00	7,950.00	7,868.60	7,868.60	63.99	136.37	90.00	967.72	-9,290.13	8,386.73	8,200.17	186.56	44.954		
10,400.00	7,950.00	7,868.60	7,868.60	66.29	136.37	90.00	967.72	-9,290.13	8,293.25	8,105.97	187.28	44.283		
10,500.00	7,950.00	7,868.60	7,868.60	68.62	136.37	90.00	967.72	-9,290.13	8,199.92	8,011.89	188.03	43.610		
10,600.00	7,950.00	7,868.60	7,868.60	70.97	136.37	90.00	967.72	-9,290.13	8,106.74	7,917.93	188.81	42.936		
10,700.00	7,950.00	7,868.60	7,868.60	73.34	136.37	90.00	967.72	-9,290.13	8,013.74	7,824.11	189.63	42.260		
10,800.00	7,950.00	7,868.60	7,868.60	75.74	136.37	90.00	967.72	-9,290.13	7,920.90	7,730.42	190.48	41.584		
10,900.00	7,950.00	7,868.60	7,868.60	78.15	136.37	90.00	967.72	-9,290.13	7,828.24	7,636.87	191.37	40.907		
11,000.00	7,950.00	7,868.60	7,868.60	80.58	136.37	90.00	967.72	-9,290.13	7,735.76	7,543.47	192.29	40.229		
11,100.00	7,950.00	7,868.60	7,868.60	83.03	136.37	90.00	967.72	-9,290.13	7,643.47	7,450.21	193.26	39.551		
11,200.00	7,950.00	7,868.60	7,868.60	85.49	136.37	90.00	967.72	-9,290.13	7,551.38	7,357.12	194.26	38.873		
11,300.00	7,950.00	7,868.60	7,868.60	87.96	136.37	90.00	967.72	-9,290.13	7,459.49	7,264.19	195.30	38.195		
11,400.00	7,950.00	7,868.60	7,868.60	90.45	136.37	90.00	967.72	-9,290.13	7,367.81	7,171.43	196.38	37.517		
11,500.00	7,950.00	7,868.60	7,868.60	92.95	136.37	90.00	967.72	-9,290.13	7,276.35	7,078.85	197.51	36.841		
11,600.00	7,950.00	7,868.60	7,868.60	95.45	136.37	90.00	967.72	-9,290.13	7,185.12	6,986.45	198.68	36.165		
11,700.00	7,950.00	7,868.60	7,868.60	97.97	136.37	90.00	967.72	-9,290.13	7,094.13	6,894.24	199.89	35.491		
11,800.00	7,950.00	7,868.60	7,868.60	100.49	136.37	90.00	967.72	-9,290.13	7,003.38	6,802.24	201.14	34.818		
11,900.00	7,950.00	7,868.60	7,868.60	103.03	136.37	90.00	967.72	-9,290.13	6,912.89	6,710.44	202.45	34.146		
12,000.00	7,950.00	7,868.60	7,868.60	105.57	136.37	90.00	967.72	-9,290.13	6,822.66	6,618.86	203.80	33.477		
12,100.00	7,950.00	7,868.60	7,868.60	108.11	136.37	90.00	967.72	-9,290.13	6,732.71	6,527.51	205.20	32.810		
12,200.00	7,950.00	7,868.60	7,868.60	110.67	136.37	90.00	967.72	-9,290.13	6,643.04	6,436.39	206.65	32.146		
12,300.00	7,950.00	7,868.60	7,868.60	113.23	136.37	90.00	967.72	-9,290.13	6,553.68	6,345.52	208.16	31.484		
12,400.00	7,950.00	7,868.60	7,868.60	115.79	136.37	90.00	967.72	-9,290.13	6,464.62	6,254.91	209.71	30.826		
12,500.00	7,950.00	7,868.60	7,868.60	118.36	136.37	90.00	967.72	-9,290.13	6,375.89	6,164.57	211.32	30.171		
12,600.00	7,950.00	7,868.60	7,868.60	120.94	136.37	90.00	967.72	-9,290.13	6,287.50	6,074.51	212.99	29.520		
12,700.00	7,950.00	7,868.60	7,868.60	123.52	136.37	90.00	967.72	-9,290.13	6,199.47	5,984.75	214.72	28.872		
12,800.00	7,950.00	7,868.60	7,868.60	126.11	136.37	90.00	967.72	-9,290.13	6,111.80	5,895.29	216.50	28.229		
12,900.00	7,950.00	7,868.60	7,868.60	128.70	136.37	90.00	967.72	-9,290.13	6,024.51	5,806.16	218.35	27.591		
13,000.00	7,950.00	7,868.60	7,868.60	131.29	136.37	90.00	967.72	-9,290.13	5,937.62	5,717.36	220.26	26.957		
13,100.00	7,950.00	7,868.60	7,868.60	133.89	136.37	90.00	967.72	-9,290.13	5,851.16	5,628.92	222.23	26.329		
13,200.00	7,950.00	7,868.60	7,868.60	136.49	136.37	90.00	967.72	-9,290.13	5,765.13	5,540.85	224.28	25.706		
13,300.00	7,950.00	7,868.60	7,868.60	139.09	136.37	90.00	967.72	-9,290.13	5,679.56	5,453.17	226.39	25.088		
13,400.00	7,950.00	7,868.60	7,868.60	141.70	136.37	90.00	967.72	-9,290.13	5,594.47	5,365.90	228.57	24.476		
13,500.00	7,950.00	7,868.60	7,868.60	144.31	136.37	90.00	967.72	-9,290.13	5,509.88	5,279.06	230.82	23.871		
13,600.00	7,950.00	7,868.60	7,868.60	146.93	136.37	90.00	967.72	-9,290.13	5,425.81	5,192.67	233.14	23.272		
13,700.00	7,950.00	7,868.60	7,868.60	149.54	136.37	90.00	967.72	-9,290.13	5,342.29	5,106.74	235.55	22.680		
13,800.00	7,950.00	7,868.60	7,868.60	152.16	136.37	90.00	967.72	-9,290.13	5,259.35	5,021.32	238.03	22.096		
13,900.00	7,950.00	7,868.60	7,868.60	154.78	136.37	90.00	967.72	-9,290.13	5,177.01	4,936.42	240.59	21.518		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - ABND VERT STATE-SMITH 1-16 - 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		
14,000.00	7,950.00	7,868.60	7,868.60	157.41	136.37	90.00	967.72	-9,290.13	5,095.30	4,852.07	243.23	20.948		
14,100.00	7,950.00	7,868.60	7,868.60	160.03	136.37	90.00	967.72	-9,290.13	5,014.26	4,768.29	245.96	20.386		
14,200.00	7,950.00	7,868.60	7,868.60	162.66	136.37	90.00	967.72	-9,290.13	4,933.91	4,685.13	248.78	19.833		
14,300.00	7,950.00	7,868.60	7,868.60	165.29	136.37	90.00	967.72	-9,290.13	4,854.29	4,602.61	251.68	19.288		
14,400.00	7,950.00	7,868.60	7,868.60	167.92	136.37	90.00	967.72	-9,290.13	4,775.43	4,520.76	254.67	18.751		
14,500.00	7,950.00	7,868.60	7,868.60	170.55	136.37	90.00	967.72	-9,290.13	4,697.39	4,439.63	257.76	18.224		
14,600.00	7,950.00	7,868.60	7,868.60	173.19	136.37	90.00	967.72	-9,290.13	4,620.19	4,359.25	260.93	17.706		
14,700.00	7,950.00	7,868.60	7,868.60	175.83	136.37	90.00	967.72	-9,290.13	4,543.87	4,279.67	264.21	17.198		
14,800.00	7,950.00	7,868.60	7,868.60	178.46	136.37	90.00	967.72	-9,290.13	4,468.50	4,200.92	267.58	16.700		
14,900.00	7,950.00	7,868.60	7,868.60	181.10	136.37	90.00	967.72	-9,290.13	4,394.10	4,123.06	271.04	16.212		
15,000.00	7,950.00	7,868.60	7,868.60	183.75	136.37	90.00	967.72	-9,290.13	4,320.74	4,046.13	274.61	15.734		
15,100.00	7,950.00	7,868.60	7,868.60	186.39	136.37	90.00	967.72	-9,290.13	4,248.47	3,970.20	278.27	15.267		
15,200.00	7,950.00	7,868.60	7,868.60	189.03	136.37	90.00	967.72	-9,290.13	4,177.34	3,895.30	282.03	14.812		
15,300.00	7,950.00	7,868.60	7,868.60	191.68	136.37	90.00	967.72	-9,290.13	4,107.41	3,821.52	285.89	14.367		
15,400.00	7,950.00	7,868.60	7,868.60	194.33	136.37	90.00	967.72	-9,290.13	4,038.75	3,748.90	289.85	13.934		
15,500.00	7,950.00	7,868.60	7,868.60	196.97	136.37	90.00	967.72	-9,290.13	3,971.42	3,677.52	293.90	13.513		
15,600.00	7,950.00	7,868.60	7,868.60	199.62	136.37	90.00	967.72	-9,290.13	3,905.49	3,607.45	298.04	13.104		
15,700.00	7,950.00	7,868.60	7,868.60	202.27	136.37	90.00	967.72	-9,290.13	3,841.03	3,538.76	302.27	12.707		
15,800.00	7,950.00	7,868.60	7,868.60	204.93	136.37	90.00	967.72	-9,290.13	3,778.12	3,471.53	306.59	12.323		
15,900.00	7,950.00	7,868.60	7,868.60	207.58	136.37	90.00	967.72	-9,290.13	3,716.83	3,405.84	310.99	11.952		
16,000.00	7,950.00	7,868.60	7,868.60	210.23	136.37	90.00	967.72	-9,290.13	3,657.25	3,341.79	315.46	11.593		
16,100.00	7,950.00	7,868.60	7,868.60	212.89	136.37	90.00	967.72	-9,290.13	3,599.47	3,279.47	320.00	11.248		
16,200.00	7,950.00	7,868.60	7,868.60	215.54	136.37	90.00	967.72	-9,290.13	3,543.56	3,218.96	324.60	10.917		
16,300.00	7,950.00	7,868.60	7,868.60	218.20	136.37	90.00	967.72	-9,290.13	3,489.63	3,160.38	329.25	10.599		
16,400.00	7,950.00	7,868.60	7,868.60	220.85	136.37	90.00	967.72	-9,290.13	3,437.76	3,103.82	333.94	10.295		
16,500.00	7,950.00	7,868.60	7,868.60	223.51	136.37	90.00	967.72	-9,290.13	3,388.05	3,049.40	338.65	10.005		
16,600.00	7,950.00	7,868.60	7,868.60	226.17	136.37	90.00	967.72	-9,290.13	3,340.59	2,997.22	343.37	9.729		
16,700.00	7,950.00	7,868.60	7,868.60	228.83	136.37	90.00	967.72	-9,290.13	3,295.48	2,947.40	348.08	9.467		
16,800.00	7,950.00	7,868.60	7,868.60	231.49	136.37	90.00	967.72	-9,290.13	3,252.83	2,900.05	352.78	9.221		
16,900.00	7,950.00	7,868.60	7,868.60	234.15	136.37	90.00	967.72	-9,290.13	3,212.72	2,855.28	357.43	8.988		
17,000.00	7,950.00	7,868.60	7,868.60	236.81	136.37	90.00	967.72	-9,290.13	3,175.25	2,813.23	362.02	8.771		
17,100.00	7,950.00	7,868.60	7,868.60	239.47	136.37	90.00	967.72	-9,290.13	3,140.52	2,773.99	366.53	8.568		
17,200.00	7,950.00	7,868.60	7,868.60	242.14	136.37	90.00	967.72	-9,290.13	3,108.63	2,737.68	370.94	8.380		
17,300.00	7,950.00	7,868.60	7,868.60	244.80	136.37	90.00	967.72	-9,290.13	3,079.65	2,704.42	375.22	8.208		
17,400.00	7,950.00	7,868.60	7,868.60	247.46	136.37	90.00	967.72	-9,290.13	3,053.67	2,674.31	379.36	8.050		
17,500.00	7,950.00	7,868.60	7,868.60	250.13	136.37	90.00	967.72	-9,290.13	3,030.77	2,647.45	383.32	7.907		
17,600.00	7,950.00	7,868.60	7,868.60	252.79	136.37	90.00	967.72	-9,290.13	3,011.02	2,623.93	387.09	7.779		
17,700.00	7,950.00	7,868.60	7,868.60	255.46	136.37	90.00	967.72	-9,290.13	2,994.48	2,603.84	390.64	7.666		
17,800.00	7,950.00	7,868.60	7,868.60	258.13	136.37	90.00	967.72	-9,290.13	2,981.20	2,587.24	393.96	7.567		
17,900.00	7,950.00	7,868.60	7,868.60	260.79	136.37	90.00	967.72	-9,290.13	2,971.24	2,574.20	397.03	7.484		
18,000.00	7,950.00	7,868.60	7,868.60	263.46	136.37	90.00	967.72	-9,290.13	2,964.61	2,564.78	399.83	7.415		
18,100.00	7,950.00	7,868.60	7,868.60	266.13	136.37	90.00	967.72	-9,290.13	2,961.35	2,559.00	402.35	7.360		
18,146.65	7,950.00	7,868.60	7,868.60	267.37	136.37	90.00	967.72	-9,290.13	2,960.98	2,557.55	403.43	7.340 CC		
18,200.00	7,950.00	7,868.60	7,868.60	268.80	136.37	90.00	967.72	-9,290.13	2,961.46	2,556.88	404.58	7.320 ES		
18,300.00	7,950.00	7,868.60	7,868.60	271.47	136.37	90.00	967.72	-9,290.13	2,964.95	2,558.44	406.51	7.294		
18,400.00	7,950.00	7,868.60	7,868.60	274.14	136.37	90.00	967.72	-9,290.13	2,971.80	2,563.67	408.13	7.281 SF		
18,481.45	7,950.00	7,868.60	7,868.60	276.31	136.37	90.00	967.72	-9,290.13	2,979.85	2,570.62	409.23	7.282		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - EXIST HZ LONE TREE 4-65 15-16 3BH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 94-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	-180.00	-150.08	0.00	150.08					
100.00	100.00	100.09	100.09	0.13	0.13	-179.97	-149.92	-0.07	149.92	149.65	0.27	562.901		
200.00	200.00	199.92	199.92	0.49	0.50	-179.85	-149.67	-0.38	149.67	148.67	0.99	150.463		
250.00	250.00	249.92	249.91	0.67	0.68	-179.77	-149.56	-0.60	149.56	148.21	1.35	110.566		
300.00	300.00	299.90	299.90	0.84	0.86	25.28	-149.46	-0.81	149.06	147.36	1.70	87.515		
400.00	399.93	399.77	399.77	1.19	1.22	26.07	-149.27	-1.26	145.73	143.33	2.40	60.653		
500.00	499.68	499.40	499.39	1.54	1.57	27.59	-149.12	-1.74	139.38	136.26	3.11	44.750		
600.00	599.13	598.94	598.93	1.92	1.93	30.02	-149.04	-2.22	130.16	126.32	3.83	33.943		
700.00	698.15	698.18	698.17	2.32	2.28	33.70	-148.69	-2.51	117.98	113.41	4.56	25.847		
800.00	796.63	796.55	796.55	2.75	2.63	39.43	-148.30	-2.90	103.63	98.32	5.31	19.507		
900.00	894.44	894.24	894.23	3.21	2.98	48.49	-147.87	-3.32	88.18	82.08	6.10	14.457		
1,000.00	991.46	990.96	990.95	3.71	3.33	62.83	-147.62	-3.65	74.10	67.14	6.96	10.643		
1,085.22	1,073.44	1,072.81	1,072.80	4.17	3.62	80.47	-147.70	-3.91	66.70	58.94	7.77	8.589		
1,100.00	1,087.59	1,086.97	1,086.95	4.25	3.67	83.95	-147.73	-3.95	66.16	58.25	7.91	8.368		
1,122.32	1,108.97	1,108.34	1,108.33	4.37	3.74	89.27	-147.78	-4.01	65.85	57.73	8.11	8.116 CC		
1,200.00	1,183.37	1,182.77	1,182.76	4.81	4.00	107.19	-147.99	-4.23	69.51	60.75	8.76	7.937		
1,300.00	1,279.15	1,278.53	1,278.52	5.39	4.33	125.71	-148.31	-4.51	83.21	73.78	9.43	8.820		
1,400.00	1,374.93	1,374.28	1,374.26	5.98	4.67	138.32	-148.60	-4.90	103.31	93.25	10.06	10.271		
1,500.00	1,470.71	1,469.93	1,469.91	6.57	5.01	146.66	-148.89	-5.37	126.80	116.11	10.69	11.858		
1,600.00	1,566.49	1,565.79	1,565.78	7.16	5.35	152.39	-149.14	-5.88	152.14	140.79	11.35	13.401		
1,700.00	1,662.27	1,661.34	1,661.32	7.76	5.69	156.44	-149.44	-6.46	178.53	166.50	12.03	14.841		
1,800.00	1,758.05	1,756.77	1,756.75	8.36	6.03	159.43	-149.66	-7.17	205.70	192.98	12.72	16.171		
1,900.00	1,853.83	1,852.79	1,852.77	8.96	6.37	161.75	-149.85	-7.87	233.29	219.86	13.43	17.377		
2,000.00	1,949.61	1,948.52	1,948.50	9.57	6.72	163.58	-150.06	-8.51	261.10	246.97	14.13	18.472		
2,100.00	2,045.39	2,044.26	2,044.23	10.17	7.06	165.06	-150.25	-9.14	289.12	274.27	14.85	19.471		
2,200.00	2,141.17	2,140.16	2,140.13	10.78	7.40	166.29	-150.44	-9.73	317.27	301.70	15.57	20.379		
2,300.00	2,236.95	2,236.09	2,236.06	11.39	7.74	167.33	-150.63	-10.27	345.49	329.20	16.29	21.208		
2,400.00	2,332.73	2,332.38	2,332.34	11.99	8.07	168.25	-150.75	-10.54	373.70	356.70	17.00	21.979		
2,500.00	2,428.51	2,428.18	2,428.14	12.60	8.39	169.09	-150.73	-10.48	401.91	384.21	17.70	22.704		
2,600.00	2,524.30	2,525.31	2,525.28	13.21	8.72	169.84	-150.78	-10.33	430.08	411.67	18.41	23.355		
2,700.00	2,620.08	2,619.76	2,619.73	13.82	9.04	170.47	-150.94	-10.20	458.22	439.11	19.12	23.966		
2,800.00	2,715.86	2,714.68	2,714.64	14.43	9.38	171.02	-150.89	-10.29	486.72	466.88	19.84	24.534		
2,900.00	2,811.64	2,810.94	2,810.90	15.04	9.71	171.52	-150.78	-10.35	515.28	494.72	20.56	25.060		
3,000.00	2,907.42	2,907.04	2,907.01	15.66	10.05	171.97	-150.74	-10.34	543.78	522.49	21.29	25.547		
3,100.00	3,003.20	3,002.58	3,002.55	16.27	10.38	172.37	-150.75	-10.38	572.29	550.28	22.01	26.003		
3,200.00	3,098.98	3,098.02	3,097.98	16.88	10.72	172.73	-150.70	-10.43	600.88	578.15	22.73	26.432		
3,300.00	3,194.76	3,193.87	3,193.83	17.49	11.06	173.05	-150.67	-10.55	629.51	606.05	23.47	26.827		
3,400.00	3,290.54	3,288.46	3,288.42	18.10	11.40	173.34	-150.60	-10.74	658.23	634.04	24.19	27.212		
3,500.00	3,386.32	3,385.84	3,385.81	18.72	11.73	173.62	-150.48	-10.83	686.95	662.02	24.92	27.561		
3,600.00	3,482.10	3,479.17	3,479.14	19.33	12.06	173.87	-150.33	-10.90	715.70	690.08	25.63	27.926		
3,700.00	3,577.88	3,578.44	3,578.40	19.94	12.41	174.10	-150.30	-11.11	744.43	718.05	26.39	28.214		
3,800.00	3,673.66	3,675.39	3,675.35	20.55	12.74	174.31	-150.56	-11.18	772.85	745.73	27.12	28.497		
3,900.00	3,769.44	3,770.34	3,770.30	21.17	13.07	174.51	-150.71	-11.04	801.27	773.44	27.83	28.789		
4,000.00	3,865.22	3,864.68	3,864.64	21.78	13.39	174.70	-150.75	-10.99	829.84	801.29	28.55	29.070		
4,100.00	3,961.00	3,960.65	3,960.62	22.39	13.72	174.87	-150.78	-11.06	858.48	829.21	29.27	29.328		
4,200.00	4,056.78	4,056.79	4,056.76	23.01	14.05	175.04	-150.79	-11.03	887.10	857.11	29.99	29.579		
4,300.00	4,152.56	4,151.75	4,151.71	23.62	14.37	175.20	-150.75	-11.00	915.76	885.05	30.71	29.823		
4,400.00	4,248.34	4,247.88	4,247.84	24.23	14.70	175.35	-150.71	-10.97	944.44	913.01	31.43	30.047		
4,500.00	4,344.12	4,343.53	4,343.49	24.85	15.03	175.49	-150.65	-10.90	973.11	940.96	32.15	30.265		
4,600.00	4,439.90	4,439.05	4,439.02	25.46	15.36	175.62	-150.59	-10.86	1,001.81	968.93	32.88	30.472		
4,700.00	4,535.68	4,534.10	4,534.07	26.08	15.69	175.75	-150.46	-10.78	1,030.55	996.96	33.60	30.674		
4,800.00	4,631.46	4,631.51	4,631.48	26.69	16.03	175.88	-150.24	-10.72	1,059.39	1,025.05	34.34	30.853		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - EXIST HZ LONE TREE 4-65 15-16 3BH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 94-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		
4,900.00	4,727.24	4,755.39	4,755.34	27.30	16.45	176.00	-151.66	-10.28	1,086.98	1,051.72	35.26	30.827		
5,000.00	4,823.02	4,872.75	4,872.57	27.92	16.86	175.96	-157.09	-10.81	1,111.91	1,075.78	36.13	30.774		
5,100.00	4,918.80	4,978.96	4,978.58	28.53	17.23	175.88	-163.48	-11.63	1,135.86	1,098.93	36.93	30.756		
5,200.00	5,014.58	5,102.09	5,101.38	29.15	17.66	175.78	-172.43	-11.71	1,158.43	1,120.60	37.82	30.627		
5,300.00	5,110.36	5,227.38	5,226.14	29.76	18.10	175.75	-183.68	-9.29	1,178.53	1,139.82	38.71	30.446		
5,400.00	5,206.14	5,372.97	5,370.74	30.37	18.60	175.83	-199.01	-2.39	1,196.15	1,156.49	39.65	30.165		
5,500.00	5,301.92	5,576.51	5,570.71	30.99	19.33	175.75	-234.35	10.25	1,206.76	1,166.09	40.67	29.672		
5,600.00	5,397.70	5,721.21	5,710.84	31.60	19.88	175.41	-269.47	18.16	1,211.80	1,170.33	41.48	29.215		
5,700.00	5,493.48	5,833.27	5,818.35	32.22	20.31	175.03	-300.65	23.48	1,213.88	1,171.61	42.26	28.722		
5,800.00	5,589.26	5,952.77	5,932.70	32.83	20.80	174.63	-334.70	30.03	1,215.05	1,172.00	43.05	28.225		
5,900.00	5,685.04	6,048.92	6,024.49	33.45	21.20	174.27	-362.98	34.50	1,215.85	1,172.00	43.84	27.731		
6,000.00	5,780.82	6,163.40	6,132.83	34.06	21.69	173.59	-399.89	35.87	1,215.87	1,171.20	44.67	27.222		
6,100.00	5,876.60	6,273.22	6,235.31	34.67	22.19	172.64	-439.15	32.26	1,215.13	1,169.60	45.53	26.690		
6,200.00	5,972.38	6,378.73	6,332.37	35.29	22.69	171.51	-479.91	25.10	1,213.84	1,167.40	46.44	26.139		
6,300.00	6,068.16	6,486.68	6,430.57	35.90	23.22	170.20	-523.66	15.46	1,212.40	1,165.00	47.40	25.577		
6,400.00	6,163.94	6,621.25	6,550.71	36.52	23.93	168.35	-582.56	1.31	1,209.48	1,161.02	48.46	24.956		
6,500.00	6,259.72	6,733.54	6,648.70	37.13	24.56	166.61	-635.68	-12.33	1,205.08	1,155.48	49.60	24.295		
6,600.00	6,355.50	6,841.55	6,741.86	37.75	25.20	164.85	-688.58	-26.04	1,200.47	1,149.66	50.81	23.627		
6,700.00	6,451.28	6,967.39	6,850.24	38.36	25.98	162.84	-751.07	-39.53	1,195.21	1,143.10	52.11	22.936		
6,800.00	6,547.06	7,174.85	7,027.15	38.98	27.35	159.88	-859.01	-45.34	1,183.14	1,129.71	53.43	22.144		
6,900.00	6,642.84	7,266.20	7,104.78	39.59	27.98	158.67	-907.14	-43.60	1,169.17	1,114.44	54.73	21.364		
7,000.00	6,738.62	7,380.79	7,202.14	40.21	28.79	157.16	-967.46	-39.94	1,154.95	1,098.91	56.03	20.612		
7,100.00	6,834.40	7,479.28	7,285.89	40.82	29.50	155.90	-1,019.07	-35.25	1,140.43	1,083.04	57.38	19.874		
7,200.00	6,930.18	7,541.00	7,338.41	41.43	29.95	155.10	-1,051.35	-32.32	1,127.04	1,068.27	58.78	19.175		
7,300.00	7,025.96	7,595.30	7,384.99	42.05	30.34	154.34	-1,079.23	-31.64	1,117.59	1,057.45	60.14	18.582		
7,400.00	7,121.74	7,635.00	7,419.39	42.66	30.63	153.73	-1,098.95	-33.46	1,113.73	1,052.35	61.38	18.146		
7,440.74	7,160.76	7,665.98	7,446.05	42.91	30.86	153.20	-1,114.49	-36.23	1,113.48	1,051.51	61.97	17.968		
7,500.00	7,217.52	7,706.59	7,480.03	43.28	31.17	152.41	-1,136.03	-41.61	1,114.04	1,051.21	62.83	17.731		
7,600.00	7,313.30	7,755.03	7,519.06	43.89	31.54	151.30	-1,163.19	-50.82	1,118.28	1,054.19	64.08	17.450		
7,617.92	7,330.46	7,761.91	7,524.48	44.00	31.60	151.13	-1,167.11	-52.45	1,119.63	1,055.35	64.28	17.419		
7,650.00	7,361.28	7,774.15	7,534.03	44.20	31.69	140.21	-1,174.11	-55.54	1,121.80	1,057.20	64.60	17.365		
7,700.00	7,409.49	7,793.20	7,548.68	44.47	31.84	121.57	-1,185.07	-60.86	1,123.54	1,058.49	65.05	17.272		
7,750.00	7,457.61	7,823.00	7,571.01	44.71	32.08	103.73	-1,202.31	-70.43	1,123.35	1,057.72	65.63	17.117		
7,800.00	7,505.28	7,823.00	7,571.01	44.91	32.08	90.07	-1,202.31	-70.43	1,120.91	1,055.37	65.53	17.104		
7,850.00	7,552.12	7,823.00	7,571.01	45.08	32.08	80.14	-1,202.31	-70.43	1,117.16	1,051.86	65.29	17.111		
7,900.00	7,597.78	7,856.66	7,595.64	45.23	32.33	72.61	-1,221.35	-83.21	1,110.41	1,044.68	65.73	16.894		
7,950.00	7,641.91	7,870.77	7,605.83	45.34	32.44	67.57	-1,229.03	-89.23	1,102.34	1,036.72	65.62	16.798		
8,000.00	7,684.18	7,885.01	7,616.02	45.43	32.55	64.05	-1,236.59	-95.69	1,092.40	1,026.96	65.44	16.694		
8,050.00	7,724.27	7,918.00	7,639.23	45.50	32.80	61.44	-1,253.31	-112.11	1,081.11	1,015.41	65.70	16.454		
8,100.00	7,761.87	7,918.00	7,639.23	45.54	32.80	60.05	-1,253.31	-112.11	1,066.95	1,001.98	64.97	16.422		
8,150.00	7,796.69	7,918.00	7,639.23	45.57	32.80	59.26	-1,253.31	-112.11	1,051.63	987.50	64.13	16.398		
8,200.00	7,828.47	7,918.00	7,639.23	45.58	32.80	58.95	-1,253.31	-112.11	1,035.22	972.00	63.21	16.376		
8,250.00	7,856.97	7,961.85	7,669.17	45.57	33.09	59.09	-1,273.86	-136.68	1,015.10	951.37	63.73	15.927		
8,300.00	7,881.97	7,977.98	7,679.91	45.54	33.20	59.76	-1,280.92	-146.40	994.36	931.03	63.34	15.700		
8,350.00	7,903.28	8,013.00	7,702.68	45.50	33.44	61.06	-1,295.34	-168.77	972.56	908.91	63.64	15.281		
8,400.00	7,920.74	8,013.00	7,702.68	45.44	33.44	62.51	-1,295.34	-168.77	948.28	885.56	62.72	15.119		
8,450.00	7,934.22	8,031.48	7,714.26	45.38	33.56	64.59	-1,302.62	-181.19	923.05	860.51	62.54	14.760		
8,500.00	7,943.60	8,054.30	7,727.99	45.30	33.71	67.23	-1,311.67	-197.02	896.34	833.73	62.61	14.317		
8,550.00	7,948.83	8,076.79	7,740.85	45.22	33.86	70.37	-1,320.64	-213.12	868.32	805.54	62.77	13.833		
8,587.24	7,950.00	8,093.30	7,749.88	45.15	33.97	73.06	-1,327.26	-225.26	846.72	783.76	62.96	13.448		
8,600.00	7,950.00	8,107.00	7,757.09	45.13	34.06	73.51	-1,332.77	-235.53	839.32	775.96	63.36	13.247		
8,700.00	7,950.00	8,134.37	7,770.80	44.96	34.24	74.38	-1,343.46	-256.67	783.47	720.08	63.40	12.359		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - EXIST HZ LONE TREE 4-65 15-16 3BH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 94-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		
8,800.00	7,950.00	8,170.96	7,787.68	44.81	34.48	75.50	-1,356.72	-286.29	733.33	669.38	63.95	11.467		
8,900.00	7,950.00	8,201.00	7,800.25	44.69	34.69	76.38	-1,366.68	-311.69	689.60	625.15	64.45	10.700		
9,000.00	7,950.00	8,251.51	7,818.41	44.58	35.01	77.70	-1,381.22	-356.49	652.64	586.72	65.92	9.900		
9,100.00	7,950.00	8,296.00	7,831.03	44.50	35.31	78.67	-1,391.50	-397.88	623.48	556.19	67.29	9.265		
9,200.00	7,950.00	8,341.91	7,841.28	44.48	35.58	79.49	-1,399.21	-441.94	602.46	533.59	68.86	8.749		
9,300.00	7,950.00	8,391.00	7,849.77	44.63	35.90	80.22	-1,403.82	-490.05	589.98	519.40	70.58	8.359		
9,400.00	7,950.00	8,447.96	7,855.66	45.49	36.23	80.77	-1,405.44	-546.66	585.45	512.92	72.53	8.072		
9,414.40	7,950.00	8,456.47	7,856.12	45.69	36.28	80.81	-1,405.42	-555.16	585.37	512.57	72.81	8.040		
9,500.00	7,950.00	8,517.35	7,856.95	47.12	36.67	80.92	-1,403.63	-615.99	587.60	512.93	74.67	7.869		
9,600.00	7,950.00	8,612.89	7,857.48	48.99	37.38	81.05	-1,398.66	-711.41	592.74	515.08	77.66	7.633		
9,700.00	7,950.00	8,715.17	7,858.34	50.96	38.31	81.19	-1,394.44	-813.59	596.78	515.68	81.11	7.358		
9,800.00	7,950.00	8,799.02	7,859.06	53.01	39.21	81.34	-1,389.47	-897.29	602.63	518.57	84.06	7.169		
9,900.00	7,950.00	8,882.15	7,859.74	55.12	40.20	81.50	-1,382.20	-980.10	611.26	524.18	87.09	7.019		
10,000.00	7,950.00	8,969.95	7,860.44	57.28	41.35	81.70	-1,372.41	-1,067.34	622.27	531.87	90.41	6.883		
10,100.00	7,950.00	9,078.90	7,860.73	59.48	42.95	81.89	-1,359.96	-1,175.58	633.69	538.84	94.86	6.681		
10,200.00	7,950.00	9,211.43	7,861.97	61.71	45.17	82.14	-1,349.57	-1,307.68	641.45	540.77	100.67	6.372		
10,300.00	7,950.00	9,359.89	7,863.59	63.99	47.99	82.30	-1,348.27	-1,456.07	642.01	534.67	107.35	5.981		
10,400.00	7,950.00	9,449.57	7,864.41	66.29	49.80	82.36	-1,349.65	-1,545.73	640.47	529.14	111.33	5.753		
10,500.00	7,950.00	9,548.77	7,865.40	68.62	51.87	82.44	-1,349.83	-1,644.93	640.28	524.43	115.85	5.527		
10,600.00	7,950.00	9,679.41	7,866.56	70.97	54.69	82.50	-1,353.98	-1,775.48	637.09	515.17	121.92	5.225		
10,700.00	7,950.00	9,802.16	7,868.03	73.34	57.44	82.53	-1,362.98	-1,897.89	629.76	502.17	127.59	4.936		
10,800.00	7,950.00	9,917.46	7,869.22	75.74	60.08	82.49	-1,374.97	-2,012.55	619.42	486.50	132.91	4.660		
10,900.00	7,950.00	10,011.39	7,870.29	78.15	62.27	82.47	-1,385.25	-2,105.91	608.51	471.07	137.44	4.427		
11,000.00	7,950.00	10,111.34	7,871.63	80.58	64.62	82.46	-1,395.95	-2,205.28	597.85	455.60	142.24	4.203		
11,100.00	7,950.00	10,195.69	7,872.67	83.03	66.63	82.46	-1,404.32	-2,289.20	588.01	441.60	146.42	4.016		
11,200.00	7,950.00	10,272.56	7,873.60	85.49	68.46	82.48	-1,409.26	-2,365.91	581.62	431.45	150.17	3.873		
11,295.20	7,950.00	10,342.64	7,874.52	87.85	70.13	82.56	-1,410.83	-2,435.96	579.49	426.07	153.42	3.777		
11,300.00	7,950.00	10,346.02	7,874.56	87.96	70.21	82.56	-1,410.82	-2,439.34	579.49	425.92	153.57	3.773		
11,400.00	7,950.00	10,417.00	7,875.34	90.45	71.91	82.66	-1,408.78	-2,510.27	582.30	425.73	156.57	3.719		
11,500.00	7,950.00	10,514.34	7,876.44	92.95	74.23	82.84	-1,403.28	-2,607.45	587.87	426.46	161.41	3.642		
11,600.00	7,950.00	10,635.06	7,877.89	95.45	77.16	83.04	-1,398.42	-2,728.05	591.85	423.89	167.95	3.524		
11,700.00	7,950.00	10,744.17	7,879.18	97.97	79.83	83.17	-1,397.55	-2,837.16	592.55	418.93	173.62	3.413		
11,800.00	7,950.00	10,835.85	7,880.01	100.49	82.10	83.27	-1,396.38	-2,928.82	593.83	415.68	178.15	3.333		
11,900.00	7,950.00	10,933.24	7,880.88	103.03	84.51	83.38	-1,393.87	-3,026.17	596.39	413.32	183.07	3.258		
12,000.00	7,950.00	11,058.21	7,882.25	105.57	87.64	83.53	-1,392.68	-3,151.12	597.47	407.66	189.81	3.148		
12,100.00	7,950.00	11,173.13	7,883.42	108.11	90.54	83.60	-1,396.44	-3,265.97	594.17	398.42	195.75	3.035		
12,200.00	7,950.00	11,257.85	7,884.33	110.67	92.68	83.66	-1,398.95	-3,350.65	591.22	391.19	200.03	2.956		
12,300.00	7,950.00	11,375.02	7,885.73	113.23	95.66	83.76	-1,402.32	-3,467.76	588.39	382.25	206.14	2.854		
12,400.00	7,950.00	11,469.00	7,887.04	115.79	98.05	83.86	-1,405.61	-3,561.67	584.84	373.85	210.99	2.772		
12,500.00	7,950.00	11,584.59	7,888.48	118.36	101.01	83.93	-1,411.75	-3,677.08	579.47	362.52	216.95	2.671		
12,600.00	7,950.00	11,678.19	7,889.86	120.94	103.41	84.01	-1,417.46	-3,770.49	573.40	351.57	221.83	2.585		
12,700.00	7,950.00	11,760.82	7,891.14	123.52	105.53	84.11	-1,420.55	-3,853.06	569.64	343.57	226.07	2.520		
12,759.76	7,950.00	11,808.28	7,891.87	125.07	106.75	84.18	-1,421.04	-3,900.51	569.00	340.60	228.40	2.491		
12,800.00	7,950.00	11,839.89	7,892.34	126.11	107.56	84.23	-1,420.80	-3,932.11	569.29	339.41	229.89	2.476		
12,900.00	7,950.00	11,915.37	7,893.46	128.70	109.49	84.37	-1,418.00	-4,007.52	572.95	339.82	233.13	2.458		
13,000.00	7,950.00	12,002.32	7,894.70	131.29	111.72	84.55	-1,411.77	-4,094.24	580.03	342.84	237.20	2.445		
13,100.00	7,950.00	12,126.22	7,896.37	133.89	114.89	84.79	-1,403.68	-4,217.86	586.65	341.99	244.66	2.398		
13,200.00	7,950.00	12,229.28	7,897.77	136.49	117.56	84.96	-1,399.98	-4,320.84	590.23	340.03	250.20	2.359		
13,300.00	7,950.00	12,321.89	7,899.03	139.09	119.95	85.11	-1,396.17	-4,413.36	594.31	339.43	254.88	2.332		
13,400.00	7,950.00	12,419.69	7,900.38	141.70	122.48	85.28	-1,391.55	-4,511.04	599.02	339.02	260.00	2.304		
13,500.00	7,950.00	12,518.13	7,901.76	144.31	125.04	85.45	-1,386.17	-4,609.33	604.46	339.28	265.18	2.279		
13,600.00	7,950.00	12,671.41	7,903.91	146.93	129.03	85.68	-1,383.29	-4,762.51	606.91	332.72	274.19	2.213		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - EXIST HZ LONE TREE 4-65 15-16 3BH - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 94-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		
13,700.00	7,950.00	12,791.37	7,905.46	149.54	132.16	85.78	-1,390.00	-4,882.26	601.28	320.95	280.33	2.145		
13,800.00	7,950.00	12,880.00	7,906.69	152.16	134.48	85.86	-1,394.95	-4,970.75	595.68	310.54	285.14	2.089		
13,900.00	7,950.00	12,987.37	7,908.07	154.78	137.29	85.96	-1,401.10	-5,077.93	589.99	299.26	290.73	2.029		
14,000.00	7,950.00	13,088.12	7,909.39	157.41	139.93	86.04	-1,407.84	-5,178.45	583.33	287.29	296.04	1.970		
14,100.00	7,950.00	13,178.35	7,910.70	160.03	142.29	86.13	-1,412.93	-5,268.52	577.72	276.79	300.92	1.920		
14,200.00	7,950.00	13,269.52	7,912.07	162.66	144.68	86.25	-1,416.65	-5,359.60	573.66	267.88	305.79	1.876		
14,300.00	7,950.00	13,360.59	7,913.37	165.29	147.08	86.36	-1,418.95	-5,450.63	571.16	260.58	310.59	1.839		
14,400.00	7,950.00	13,452.86	7,914.72	167.92	149.51	86.49	-1,419.90	-5,542.89	570.15	254.74	315.41	1.808		
14,449.82	7,950.00	13,500.55	7,915.43	169.23	150.76	86.56	-1,420.00	-5,590.58	570.06	252.14	317.92	1.793		
14,500.00	7,950.00	13,547.59	7,916.11	170.55	152.00	86.63	-1,419.91	-5,637.62	570.17	249.80	320.37	1.780		
14,600.00	7,950.00	13,637.93	7,917.42	173.19	154.38	86.77	-1,418.62	-5,727.93	571.62	246.66	324.96	1.759		
14,700.00	7,950.00	13,734.91	7,918.76	175.83	156.93	86.92	-1,416.16	-5,824.87	574.19	244.14	330.05	1.740		
14,800.00	7,950.00	13,840.66	7,920.16	178.46	159.72	87.07	-1,413.63	-5,930.58	576.63	240.75	335.88	1.717		
14,900.00	7,950.00	13,959.30	7,921.14	181.10	162.85	87.17	-1,413.40	-6,049.21	576.93	234.39	342.54	1.684		
15,000.00	7,950.00	14,074.57	7,922.29	183.75	165.89	87.27	-1,416.95	-6,164.42	573.88	225.18	348.70	1.646		
15,100.00	7,950.00	14,183.83	7,922.96	186.39	168.78	87.31	-1,422.47	-6,273.54	568.91	214.52	354.39	1.605		
15,200.00	7,950.00	14,279.03	7,923.64	189.03	171.29	87.36	-1,427.77	-6,368.59	563.44	203.93	359.51	1.567		
15,300.00	7,950.00	14,369.85	7,924.43	191.68	173.69	87.42	-1,431.62	-6,459.32	559.28	194.89	364.39	1.535		
15,400.00	7,950.00	14,463.39	7,925.22	194.33	176.17	87.49	-1,434.23	-6,552.82	556.57	187.22	369.36	1.507		
15,500.00	7,950.00	14,554.54	7,926.04	196.97	178.58	87.57	-1,435.59	-6,643.95	555.16	181.04	374.12	1.484 Level 3		
15,600.00	7,950.00	14,655.00	7,926.88	199.62	181.25	87.65	-1,436.13	-6,744.41	554.71	175.22	379.49	1.462 Level 3		
15,700.00	7,950.00	14,767.74	7,927.45	202.27	184.23	87.70	-1,438.18	-6,857.12	552.99	167.39	385.60	1.434 Level 3		
15,800.00	7,950.00	14,857.12	7,927.74	204.93	186.60	87.73	-1,439.91	-6,946.49	551.13	160.86	390.28	1.412 Level 3		
15,826.68	7,950.00	14,878.04	7,927.80	205.63	187.16	87.73	-1,440.03	-6,967.41	551.01	159.72	391.29	1.408 Level 3		
15,900.00	7,950.00	14,936.57	7,927.99	207.58	188.71	87.76	-1,439.31	-7,025.93	551.99	158.03	393.96	1.401 Level 3		
16,000.00	7,950.00	15,039.75	7,928.29	210.23	191.45	87.80	-1,436.64	-7,129.07	554.68	155.10	399.58	1.388 Level 3		
16,100.00	7,950.00	15,141.08	7,928.55	212.89	194.14	87.83	-1,434.72	-7,230.38	556.69	151.65	405.04	1.374 Level 3		
16,200.00	7,950.00	15,251.09	7,928.92	215.54	197.06	87.87	-1,433.88	-7,340.39	557.54	146.36	411.18	1.356 Level 3		
16,300.00	7,950.00	15,357.17	7,929.32	218.20	199.88	87.91	-1,434.34	-7,446.46	557.21	140.27	416.94	1.336 Level 3		
16,400.00	7,950.00	15,468.47	7,929.67	220.85	202.83	87.94	-1,436.79	-7,557.74	555.11	132.17	422.94	1.313 Level 3		
16,500.00	7,950.00	15,572.71	7,930.09	223.51	205.60	87.97	-1,440.71	-7,661.91	551.44	122.97	428.47	1.287 Level 3		
16,600.00	7,950.00	15,663.31	7,930.26	226.17	208.01	87.98	-1,443.84	-7,752.45	548.13	114.83	433.31	1.265 Level 3		
16,675.96	7,950.00	15,727.55	7,930.37	228.19	209.72	87.99	-1,444.61	-7,816.68	547.30	110.74	436.57	1.254 Level 3		
16,700.00	7,950.00	15,747.69	7,930.41	228.83	210.26	87.99	-1,444.56	-7,836.82	547.39	109.84	437.54	1.251 Level 3		
16,800.00	7,950.00	15,843.47	7,930.69	231.49	212.80	88.03	-1,442.94	-7,932.58	549.16	106.62	442.53	1.241 Level 2		
16,900.00	7,950.00	15,943.05	7,931.09	234.15	215.45	88.07	-1,442.14	-8,032.16	550.07	102.22	447.85	1.228 Level 2		
17,000.00	7,950.00	16,033.51	7,931.92	236.81	217.86	88.17	-1,439.89	-8,122.59	552.62	100.31	452.32	1.222 Level 2		
17,100.00	7,950.00	16,145.87	7,932.96	239.47	220.85	88.28	-1,436.66	-8,234.90	555.67	96.84	458.83	1.211 Level 2		
17,200.00	7,950.00	16,255.67	7,934.01	242.14	223.78	88.39	-1,437.06	-8,344.68	555.36	90.41	464.94	1.194 Level 2		
17,300.00	7,950.00	16,373.10	7,935.14	244.80	226.91	88.50	-1,439.65	-8,462.07	553.27	81.99	471.28	1.174 Level 2		
17,400.00	7,950.00	16,480.02	7,936.17	247.46	229.75	88.60	-1,444.60	-8,568.88	548.73	71.83	476.90	1.151 Level 2		
17,500.00	7,950.00	16,575.72	7,937.12	250.13	232.30	88.68	-1,449.62	-8,664.44	543.59	61.49	482.10	1.128 Level 2		
17,600.00	7,950.00	16,655.20	7,937.93	252.79	234.41	88.76	-1,451.65	-8,743.88	541.12	54.79	486.33	1.113 Level 2		
17,616.00	7,950.00	16,668.04	7,938.06	253.22	234.76	88.78	-1,451.70	-8,756.72	541.07	54.12	486.95	1.111 Level 2		
17,700.00	7,950.00	16,735.40	7,938.74	255.46	236.55	88.85	-1,450.73	-8,824.07	542.36	52.40	489.96	1.107 Level 2		
17,800.00	7,950.00	16,829.92	7,939.76	258.13	239.07	88.97	-1,447.31	-8,918.52	546.07	51.32	494.75	1.104 Level 2		
17,900.00	7,950.00	16,922.34	7,940.78	260.79	241.53	89.08	-1,443.04	-9,010.84	550.79	51.55	499.24	1.103 Level 2		
18,000.00	7,950.00	17,027.21	7,941.87	263.46	244.33	89.20	-1,437.80	-9,115.57	555.89	50.68	505.21	1.100 Level 2		
18,100.00	7,950.00	17,132.22	7,943.02	266.13	247.13	89.33	-1,433.63	-9,220.49	559.96	48.81	511.15	1.096 Level 2		
18,200.00	7,950.00	17,227.87	7,944.05	268.80	249.68	89.44	-1,429.85	-9,316.06	564.01	47.97	516.04	1.093 Level 2		
18,300.00	7,950.00	17,322.26	7,945.10	271.47	252.20	89.55	-1,425.34	-9,410.33	568.90	48.13	520.77	1.092 Level 2		
18,400.00	7,950.00	17,420.58	7,946.18	274.14	254.82	89.66	-1,419.87	-9,508.50	574.55	48.61	525.95	1.092 Level 2		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - EXIST HZ LONE TREE 4-65 15-16 3BH - OWB - FINAL SURVEY										Offset Site Error:	0.00 usft
Survey Program:		94-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
18,481.45	7,950.00	17,512.12	7,947.13	276.31	257.26	89.75	-1,415.64	-9,599.93	578.41	46.92	531.49	1.088	Level 2, ES, SF

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - EXIST HZ PROSPER FARMS 4-65 13-14 1H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 2310-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	2,218.00	2,217.98	0.00	0.00	115.21	-447.77	950.94	2,457.50					
100.00	100.00	2,218.00	2,217.98	0.13	0.00	115.21	-447.77	950.94	2,367.50	2,365.43	2.06	1,148.579		
200.00	200.00	2,218.00	2,217.98	0.49	0.00	115.21	-447.77	950.94	2,278.32	2,276.26	2.06	1,106.015		
250.00	250.00	2,218.00	2,217.98	0.67	0.00	115.21	-447.77	950.94	2,234.08	2,232.02	2.07	1,081.359		
300.00	300.00	2,218.00	2,217.98	0.84	0.00	-41.12	-447.77	950.94	2,189.93	2,187.85	2.08	1,051.230		
400.00	399.93	2,218.00	2,217.98	1.19	0.00	-43.67	-447.77	950.94	2,101.46	2,099.32	2.14	983.085		
500.00	499.68	2,218.00	2,217.98	1.54	0.00	-46.38	-447.77	950.94	2,012.85	2,010.63	2.22	907.457		
600.00	599.13	2,218.00	2,217.98	1.92	0.00	-49.22	-447.77	950.94	1,924.19	1,921.87	2.32	829.949		
700.00	698.15	2,218.00	2,217.98	2.32	0.00	-52.17	-447.77	950.94	1,835.58	1,833.14	2.44	752.107		
800.00	796.63	2,218.00	2,217.98	2.75	0.00	-55.22	-447.77	950.94	1,747.16	1,744.58	2.59	675.182		
900.00	894.44	2,218.00	2,217.98	3.21	0.00	-58.34	-447.77	950.94	1,659.07	1,656.31	2.76	600.191		
1,000.00	991.46	2,218.00	2,217.98	3.71	0.00	-61.48	-447.77	950.94	1,571.49	1,568.51	2.98	527.988		
1,085.22	1,073.44	2,218.00	2,217.98	4.17	0.00	-64.15	-447.77	950.94	1,497.39	1,494.20	3.19	469.115		
1,100.00	1,087.59	2,218.00	2,217.98	4.25	0.00	-64.15	-447.77	950.94	1,484.61	1,481.38	3.24	458.794		
1,200.00	1,183.37	2,218.00	2,217.98	4.81	0.00	-64.15	-447.77	950.94	1,399.19	1,395.65	3.53	396.087		
1,300.00	1,279.15	2,218.00	2,217.98	5.39	0.00	-64.15	-447.77	950.94	1,315.81	1,311.93	3.89	338.382		
1,400.00	1,374.93	2,218.00	2,217.98	5.98	0.00	-64.15	-447.77	950.94	1,234.92	1,230.61	4.31	286.522		
1,500.00	1,470.71	2,218.00	2,217.98	6.57	0.00	-64.15	-447.77	950.94	1,157.01	1,152.20	4.80	240.891		
1,600.00	1,566.49	2,218.00	2,217.98	7.16	0.00	-64.15	-447.77	950.94	1,082.73	1,077.36	5.37	201.512		
1,700.00	1,662.27	2,218.00	2,217.98	7.76	0.00	-64.15	-447.77	950.94	1,012.89	1,006.87	6.02	168.153		
1,800.00	1,758.05	2,218.00	2,217.98	8.36	0.00	-64.15	-447.77	950.94	948.47	941.72	6.75	140.424		
1,900.00	1,853.83	2,218.00	2,217.98	8.96	0.00	-64.15	-447.77	950.94	890.64	883.09	7.56	117.851		
2,000.00	1,949.61	2,218.00	2,217.98	9.57	0.00	-64.15	-447.77	950.94	840.77	832.36	8.41	99.930		
2,100.00	2,045.39	2,218.00	2,217.98	10.17	0.00	-64.15	-447.77	950.94	800.34	791.05	9.29	86.160		
2,200.00	2,141.17	2,218.00	2,217.98	10.78	0.00	-64.15	-447.77	950.94	770.84	760.70	10.13	76.066		
2,300.00	2,236.95	2,231.96	2,231.94	11.39	0.03	-64.42	-447.84	950.96	753.42	742.51	10.91	69.087		
2,400.00	2,332.73	2,326.77	2,326.75	11.99	0.22	-66.29	-448.39	951.21	741.27	729.52	11.75	63.072		
2,500.00	2,428.51	2,419.52	2,419.49	12.60	0.55	-68.30	-447.29	951.69	730.33	717.60	12.74	57.332		
2,600.00	2,524.30	2,512.86	2,512.76	13.21	0.88	-70.55	-443.80	952.34	720.81	707.07	13.74	52.452		
2,700.00	2,620.08	2,607.63	2,607.41	13.82	1.22	-72.98	-439.08	953.08	712.80	698.04	14.76	48.284		
2,800.00	2,715.86	2,710.94	2,710.57	14.43	1.59	-75.73	-433.45	952.94	705.46	689.65	15.81	44.608		
2,900.00	2,811.64	2,808.25	2,807.71	15.04	1.95	-78.40	-427.90	951.96	698.91	682.06	16.85	41.488		
3,000.00	2,907.42	2,903.13	2,902.42	15.66	2.29	-81.06	-422.36	950.67	693.68	675.82	17.86	38.834		
3,100.00	3,003.20	2,996.21	2,995.34	16.27	2.64	-83.68	-417.01	949.47	690.17	671.31	18.86	36.592		
3,200.00	3,098.98	3,089.79	3,088.76	16.88	2.98	-86.34	-411.61	948.32	688.40	668.55	19.85	34.687		
3,246.31	3,143.33	3,132.64	3,131.53	17.16	3.14	-87.57	-409.12	947.83	688.20	667.90	20.29	33.911 CC		
3,300.00	3,194.76	3,180.87	3,179.67	17.49	3.32	-88.94	-406.32	947.35	688.49	667.69	20.80	33.099 ES		
3,400.00	3,290.54	3,268.75	3,267.45	18.10	3.64	-91.34	-401.95	947.57	691.02	669.30	21.72	31.818		
3,500.00	3,386.32	3,363.32	3,361.92	18.72	3.98	-93.84	-397.86	948.55	695.45	672.82	22.64	30.724		
3,600.00	3,482.10	3,459.96	3,458.48	19.33	4.33	-96.32	-394.10	949.67	701.22	677.68	23.54	29.788		
3,700.00	3,577.88	3,558.18	3,556.62	19.94	4.68	-98.83	-390.21	950.24	707.95	683.52	24.43	28.980		
3,800.00	3,673.66	3,654.01	3,652.37	20.55	5.03	-101.25	-386.38	950.45	715.79	690.51	25.28	28.310		
3,900.00	3,769.44	3,750.13	3,748.44	21.17	5.38	-103.60	-382.98	950.78	724.79	698.67	26.12	27.750		
4,000.00	3,865.22	3,844.76	3,843.01	21.78	5.72	-105.84	-379.82	951.14	734.95	708.03	26.92	27.297		
4,100.00	3,961.00	3,938.11	3,936.30	22.39	6.06	-107.99	-376.62	951.64	746.48	718.77	27.70	26.947		
4,200.00	4,056.78	4,033.48	4,031.59	23.01	6.40	-110.17	-372.81	951.70	759.21	730.74	28.47	26.670		
4,300.00	4,152.56	4,130.64	4,128.68	23.62	6.76	-112.33	-369.01	951.54	772.88	743.66	29.22	26.449		
4,400.00	4,248.34	4,225.95	4,223.94	24.23	7.10	-114.35	-365.79	951.48	787.30	757.35	29.95	26.285		
4,500.00	4,344.12	4,315.79	4,313.70	24.85	7.43	-116.21	-362.22	951.47	803.18	772.55	30.63	26.218		
4,600.00	4,439.90	4,413.05	4,410.89	25.46	7.78	-118.14	-358.37	951.65	820.14	788.80	31.35	26.164		
4,700.00	4,535.68	4,510.21	4,508.00	26.08	8.13	-119.95	-355.31	952.04	837.44	805.40	32.05	26.130 SF		
4,800.00	4,631.46	4,597.83	4,595.55	26.69	8.45	-121.55	-351.88	952.29	856.10	823.42	32.68	26.196		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - EXIST HZ PROSPER FARMS 4-65 13-14 1H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 2310-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		
4,900.00	4,727.24	4,692.64	4,690.27	27.30	8.79	-123.24	-347.74	952.42	875.85	842.50	33.35	26.266		
5,000.00	4,823.02	4,788.45	4,785.98	27.92	9.14	-124.89	-343.47	952.30	896.30	862.29	34.01	26.356		
5,100.00	4,918.80	4,887.39	4,884.85	28.53	9.50	-126.50	-339.46	952.21	917.13	882.44	34.68	26.442		
5,200.00	5,014.58	4,987.87	4,985.27	29.15	9.86	-128.04	-336.05	952.30	938.12	902.74	35.37	26.522		
5,300.00	5,110.36	5,084.50	5,081.86	29.76	10.21	-129.43	-333.52	952.55	959.09	923.06	36.03	26.617		
5,400.00	5,206.14	5,178.11	5,175.42	30.37	10.55	-130.75	-330.51	952.59	981.02	944.35	36.67	26.753		
5,500.00	5,301.92	5,279.82	5,277.10	30.99	10.91	-132.12	-327.96	952.31	1,002.72	965.36	37.36	26.843		
5,600.00	5,397.70	5,368.63	5,365.88	31.60	11.23	-133.28	-325.48	951.83	1,025.08	987.13	37.95	27.009		
5,700.00	5,493.48	5,449.95	5,447.14	32.22	11.52	-134.33	-322.47	951.21	1,048.68	1,010.19	38.49	27.244		
5,800.00	5,589.26	5,523.00	5,520.06	32.83	11.79	-135.25	-318.26	951.01	1,074.64	1,035.68	38.96	27.582		
5,900.00	5,685.04	5,595.93	5,592.78	33.45	12.06	-136.12	-312.72	951.30	1,102.86	1,063.44	39.42	27.978		
6,000.00	5,780.82	5,680.87	5,677.40	34.06	12.38	-137.10	-305.36	951.97	1,132.59	1,092.62	39.97	28.335		
6,100.00	5,876.60	5,792.43	5,788.55	34.67	12.80	-138.34	-295.81	952.40	1,162.56	1,121.81	40.74	28.533		
6,200.00	5,972.38	5,913.83	5,909.68	35.29	13.25	-139.66	-287.80	951.18	1,190.72	1,149.14	41.58	28.638		
6,300.00	6,068.16	6,056.13	6,051.85	35.90	13.76	-141.10	-282.75	949.03	1,216.36	1,173.83	42.53	28.599		
6,400.00	6,163.94	6,168.19	6,163.91	36.52	14.14	-142.13	-282.38	947.74	1,239.30	1,196.03	43.27	28.642		
6,500.00	6,259.72	6,266.33	6,262.05	37.13	14.47	-142.97	-282.57	946.83	1,262.10	1,218.18	43.92	28.739		
6,600.00	6,355.50	6,356.51	6,352.23	37.75	14.77	-143.71	-282.74	946.38	1,285.24	1,240.72	44.52	28.866		
6,700.00	6,451.28	6,444.46	6,440.17	38.36	15.07	-144.37	-282.54	946.69	1,309.13	1,264.00	45.13	29.008		
6,800.00	6,547.06	6,535.00	6,530.70	38.98	15.39	-145.01	-281.93	947.52	1,333.71	1,287.95	45.76	29.146		
6,900.00	6,642.84	6,653.68	6,649.38	39.59	15.79	-145.81	-281.69	948.76	1,358.09	1,311.53	46.57	29.165		
7,000.00	6,738.62	6,736.00	6,731.70	40.21	16.06	-146.36	-281.97	949.15	1,381.99	1,334.86	47.13	29.320		
7,100.00	6,834.40	6,813.75	6,809.44	40.82	16.33	-146.86	-281.38	949.81	1,407.16	1,359.48	47.68	29.512		
7,200.00	6,930.18	6,917.80	6,913.47	41.43	16.70	-147.50	-279.83	950.84	1,433.19	1,384.78	48.41	29.604		
7,300.00	7,025.96	7,022.90	7,018.57	42.05	17.07	-148.14	-279.37	951.42	1,458.29	1,409.14	49.15	29.673		
7,400.00	7,121.74	7,121.58	7,117.25	42.66	17.41	-148.70	-279.28	952.21	1,483.22	1,433.38	49.83	29.763		
7,500.00	7,217.52	7,218.39	7,214.05	43.28	17.74	-149.23	-279.34	953.25	1,508.16	1,457.64	50.51	29.858		
7,600.00	7,313.30	7,354.60	7,347.65	43.89	18.19	-149.10	-283.50	976.18	1,531.40	1,479.78	51.62	29.667		
7,617.92	7,330.46	7,362.84	7,355.52	44.00	18.22	-149.05	-283.89	978.63	1,535.49	1,483.78	51.71	29.697		
7,650.00	7,361.28	7,377.00	7,368.99	44.20	18.26	-160.22	-284.45	982.95	1,543.17	1,491.32	51.85	29.761		
7,700.00	7,409.49	7,397.36	7,388.29	44.47	18.33	-179.45	-285.01	989.39	1,556.25	1,504.19	52.06	29.894		
7,750.00	7,457.61	7,419.08	7,408.78	44.71	18.40	162.18	-285.26	996.59	1,570.60	1,518.33	52.27	30.048		
7,800.00	7,505.28	7,445.94	7,433.87	44.91	18.48	147.24	-285.32	1,006.20	1,586.04	1,533.51	52.53	30.192		
7,850.00	7,552.12	7,488.60	7,473.17	45.08	18.63	136.32	-285.48	1,022.77	1,602.22	1,549.24	52.98	30.243		
7,900.00	7,597.78	7,515.84	7,497.95	45.23	18.72	127.93	-285.72	1,034.07	1,619.06	1,565.79	53.27	30.392		
7,950.00	7,641.91	7,535.00	7,515.18	45.34	18.79	121.27	-285.78	1,042.46	1,636.93	1,583.45	53.48	30.606		
8,000.00	7,684.18	7,543.91	7,523.11	45.43	18.83	115.58	-285.76	1,046.51	1,655.84	1,602.25	53.58	30.902		
8,050.00	7,724.27	7,552.43	7,530.65	45.50	18.86	110.73	-285.69	1,050.48	1,675.74	1,622.05	53.69	31.214		
8,100.00	7,761.87	7,566.00	7,542.55	45.54	18.91	106.64	-285.47	1,057.00	1,696.55	1,642.68	53.87	31.492		
8,150.00	7,796.69	7,566.00	7,542.55	45.57	18.91	102.50	-285.47	1,057.00	1,718.03	1,664.13	53.90	31.875		
8,200.00	7,828.47	7,566.00	7,542.55	45.58	18.91	98.66	-285.47	1,057.00	1,740.12	1,686.17	53.95	32.254		
8,250.00	7,856.97	7,566.00	7,542.55	45.57	18.91	95.08	-285.47	1,057.00	1,762.65	1,708.62	54.03	32.623		
8,300.00	7,881.97	7,566.00	7,542.55	45.54	18.91	91.72	-285.47	1,057.00	1,785.43	1,731.29	54.15	32.973		
8,350.00	7,903.28	7,566.00	7,542.55	45.50	18.91	88.57	-285.47	1,057.00	1,808.28	1,753.98	54.30	33.300		
8,400.00	7,920.74	7,566.00	7,542.55	45.44	18.91	85.64	-285.47	1,057.00	1,831.03	1,776.53	54.50	33.598		
8,450.00	7,934.22	7,566.00	7,542.55	45.38	18.91	82.92	-285.47	1,057.00	1,853.50	1,798.77	54.73	33.864		
8,500.00	7,943.60	7,566.00	7,542.55	45.30	18.91	80.41	-285.47	1,057.00	1,875.55	1,820.54	55.01	34.096		
8,550.00	7,948.83	7,551.57	7,529.89	45.22	18.86	77.71	-285.70	1,050.08	1,896.83	1,841.70	55.12	34.410		
8,587.24	7,950.00	7,546.84	7,525.71	45.15	18.84	76.06	-285.74	1,047.86	1,912.21	1,856.89	55.31	34.570		
8,600.00	7,950.00	7,535.00	7,515.18	45.13	18.79	75.73	-285.78	1,042.46	1,917.52	1,862.27	55.25	34.707		
8,700.00	7,950.00	7,535.00	7,515.18	44.96	18.79	75.73	-285.78	1,042.46	1,960.56	1,904.58	55.98	35.021		
8,800.00	7,950.00	7,515.65	7,497.79	44.81	18.72	75.18	-285.71	1,033.99	2,007.40	1,950.89	56.50	35.527		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - EXIST HZ PROSPER FARMS 4-65 13-14 1H - OWB - FINAL SURVEY													Offset Site Error:	0.00 usft
Survey Program: 2310-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		
8,900.00	7,950.00	7,499.08	7,482.74	44.69	18.66	74.70	-285.57	1,027.04	2,057.72	2,000.64	57.08	36.050		
9,000.00	7,950.00	7,472.00	7,457.95	44.58	18.57	73.93	-285.38	1,016.15	2,111.15	2,053.60	57.55	36.682		
9,100.00	7,950.00	7,453.11	7,440.51	44.50	18.51	73.39	-285.33	1,008.88	2,167.46	2,109.34	58.12	37.292		
9,200.00	7,950.00	7,440.00	7,428.34	44.48	18.46	73.01	-285.32	1,004.01	2,226.53	2,167.79	58.74	37.904		
9,300.00	7,950.00	7,426.21	7,415.47	44.63	18.42	72.61	-285.30	999.06	2,288.23	2,228.90	59.34	38.564		
9,400.00	7,950.00	7,409.00	7,399.29	45.49	18.36	72.12	-285.18	993.20	2,352.46	2,292.58	59.88	39.288		
9,500.00	7,950.00	7,409.00	7,399.29	47.12	18.36	72.12	-285.18	993.20	2,418.91	2,358.36	60.55	39.952		
9,600.00	7,950.00	7,397.85	7,388.75	48.99	18.33	71.80	-285.02	989.55	2,487.51	2,426.43	61.09	40.721		
9,700.00	7,950.00	7,389.03	7,380.40	50.96	18.30	71.55	-284.82	986.72	2,558.08	2,496.46	61.62	41.516		
9,800.00	7,950.00	7,377.00	7,368.99	53.01	18.26	71.20	-284.45	982.95	2,630.45	2,568.36	62.09	42.362		
9,900.00	7,950.00	7,377.00	7,368.99	55.12	18.26	71.20	-284.45	982.95	2,704.49	2,641.86	62.63	43.184		
10,000.00	7,950.00	7,363.87	7,356.49	57.28	18.22	70.83	-283.93	978.94	2,780.04	2,717.00	63.04	44.098		
10,100.00	7,950.00	7,346.00	7,339.44	59.48	18.16	70.33	-283.04	973.68	2,857.09	2,793.69	63.40	45.062		
10,200.00	7,950.00	7,346.00	7,339.44	61.71	18.16	70.33	-283.04	973.68	2,935.32	2,871.47	63.85	45.972		
10,300.00	7,950.00	7,346.00	7,339.44	63.99	18.16	70.33	-283.04	973.68	3,014.84	2,950.57	64.27	46.910		
10,400.00	7,950.00	7,333.66	7,327.61	66.29	18.12	69.98	-282.38	970.23	3,095.45	3,030.85	64.59	47.921		
10,500.00	7,950.00	7,327.01	7,321.22	68.62	18.10	69.80	-282.05	968.45	3,177.12	3,112.19	64.93	48.932		
10,600.00	7,950.00	7,314.00	7,308.64	70.97	18.05	69.43	-281.43	965.14	3,259.79	3,194.57	65.21	49.988		
10,700.00	7,950.00	7,314.00	7,308.64	73.34	18.05	69.43	-281.43	965.14	3,343.30	3,277.76	65.54	51.012		
10,800.00	7,950.00	7,314.00	7,308.64	75.74	18.05	69.43	-281.43	965.14	3,427.69	3,361.85	65.85	52.056		
10,900.00	7,950.00	7,314.00	7,308.64	78.15	18.05	69.43	-281.43	965.14	3,512.91	3,446.77	66.13	53.117		
11,000.00	7,950.00	7,314.00	7,308.64	80.58	18.05	69.43	-281.43	965.14	3,598.88	3,532.48	66.41	54.196		
11,100.00	7,950.00	7,314.00	7,308.64	83.03	18.05	69.43	-281.43	965.14	3,685.56	3,618.90	66.66	55.289		
11,200.00	7,950.00	7,314.00	7,308.64	85.49	18.05	69.43	-281.43	965.14	3,772.91	3,706.01	66.90	56.397		
11,300.00	7,950.00	7,314.00	7,308.64	87.96	18.05	69.43	-281.43	965.14	3,860.86	3,793.74	67.13	57.517		
11,400.00	7,950.00	7,314.00	7,308.64	90.45	18.05	69.43	-281.43	965.14	3,949.39	3,882.05	67.34	58.650		
11,500.00	7,950.00	7,314.00	7,308.64	92.95	18.05	69.43	-281.43	965.14	4,038.46	3,970.92	67.54	59.794		
11,600.00	7,950.00	7,314.00	7,308.64	95.45	18.05	69.43	-281.43	965.14	4,128.02	4,060.29	67.73	60.948		
11,700.00	7,950.00	7,314.00	7,308.64	97.97	18.05	69.43	-281.43	965.14	4,218.06	4,150.15	67.91	62.111		
11,800.00	7,950.00	7,314.00	7,308.64	100.49	18.05	69.43	-281.43	965.14	4,308.53	4,240.45	68.08	63.284		
11,900.00	7,950.00	7,314.00	7,308.64	103.03	18.05	69.43	-281.43	965.14	4,399.42	4,331.17	68.25	64.465		
12,000.00	7,950.00	7,314.00	7,308.64	105.57	18.05	69.43	-281.43	965.14	4,490.69	4,422.29	68.40	65.653		
12,100.00	7,950.00	7,314.00	7,308.64	108.11	18.05	69.43	-281.43	965.14	4,582.33	4,513.78	68.55	66.848		
12,200.00	7,950.00	7,314.00	7,308.64	110.67	18.05	69.43	-281.43	965.14	4,674.31	4,605.62	68.69	68.050		
12,300.00	7,950.00	7,314.00	7,308.64	113.23	18.05	69.43	-281.43	965.14	4,766.62	4,697.79	68.82	69.258		
12,400.00	7,950.00	7,314.00	7,308.64	115.79	18.05	69.43	-281.43	965.14	4,859.22	4,790.27	68.95	70.471		
12,500.00	7,950.00	7,314.00	7,308.64	118.36	18.05	69.43	-281.43	965.14	4,952.12	4,883.04	69.08	71.690		
12,600.00	7,950.00	7,314.00	7,308.64	120.94	18.05	69.43	-281.43	965.14	5,045.29	4,976.09	69.20	72.913		
12,700.00	7,950.00	7,314.00	7,308.64	123.52	18.05	69.43	-281.43	965.14	5,138.71	5,069.40	69.31	74.141		
12,800.00	7,950.00	7,314.00	7,308.64	126.11	18.05	69.43	-281.43	965.14	5,232.38	5,162.96	69.42	75.373		
12,900.00	7,950.00	7,314.00	7,308.64	128.70	18.05	69.43	-281.43	965.14	5,326.28	5,256.75	69.53	76.609		
13,000.00	7,950.00	7,272.34	7,267.81	131.29	17.92	68.25	-279.99	957.09	5,418.24	5,348.71	69.53	77.927		
13,100.00	7,950.00	7,271.32	7,266.80	133.89	17.91	68.22	-279.96	956.95	5,512.45	5,442.82	69.63	79.170		
13,200.00	7,950.00	7,270.34	7,265.83	136.49	17.91	68.20	-279.94	956.81	5,606.86	5,537.14	69.72	80.415		
13,300.00	7,950.00	7,269.39	7,264.90	139.09	17.91	68.17	-279.92	956.69	5,701.46	5,631.64	69.82	81.664		
13,400.00	7,950.00	7,268.48	7,263.99	141.70	17.90	68.14	-279.89	956.57	5,796.24	5,726.33	69.91	82.915		
13,500.00	7,950.00	7,267.60	7,263.12	144.31	17.90	68.12	-279.87	956.45	5,891.19	5,821.19	69.99	84.168		
13,600.00	7,950.00	7,266.75	7,262.27	146.93	17.90	68.09	-279.85	956.34	5,986.30	5,916.22	70.08	85.423		
13,700.00	7,950.00	7,265.92	7,261.46	149.54	17.89	68.07	-279.84	956.24	6,081.57	6,011.40	70.16	86.680		
13,800.00	7,950.00	7,265.13	7,260.67	152.16	17.89	68.05	-279.82	956.14	6,176.98	6,106.74	70.24	87.939		
13,900.00	7,950.00	7,223.00	7,218.66	154.78	17.75	66.85	-279.35	953.31	6,274.69	6,204.48	70.21	89.368		
14,000.00	7,950.00	7,223.00	7,218.66	157.41	17.75	66.85	-279.35	953.31	6,370.31	6,300.01	70.29	90.626		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - EXIST HZ PROSPER FARMS 4-65 13-14 1H - OWB - FINAL SURVEY												Offset Site Error:	0.00 usft
Survey Program: 2310-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
14,100.00	7,950.00	7,223.00	7,218.66	160.03	17.75	66.85	-279.35	953.31	6,466.06	6,395.68	70.37	91.886	
14,200.00	7,950.00	7,223.00	7,218.66	162.66	17.75	66.85	-279.35	953.31	6,561.93	6,491.48	70.45	93.146	
14,300.00	7,950.00	7,223.00	7,218.66	165.29	17.75	66.85	-279.35	953.31	6,657.93	6,587.41	70.52	94.408	
14,400.00	7,950.00	7,223.00	7,218.66	167.92	17.75	66.85	-279.35	953.31	6,754.04	6,683.45	70.60	95.671	
14,500.00	7,950.00	7,223.00	7,218.66	170.55	17.75	66.85	-279.35	953.31	6,850.27	6,779.60	70.67	96.934	
14,600.00	7,950.00	7,223.00	7,218.66	173.19	17.75	66.85	-279.35	953.31	6,946.60	6,875.86	70.74	98.198	
14,700.00	7,950.00	7,223.00	7,218.66	175.83	17.75	66.85	-279.35	953.31	7,043.03	6,972.22	70.81	99.463	
14,800.00	7,950.00	7,223.00	7,218.66	178.46	17.75	66.85	-279.35	953.31	7,139.56	7,068.68	70.88	100.728	
14,900.00	7,950.00	7,223.00	7,218.66	181.10	17.75	66.85	-279.35	953.31	7,236.19	7,165.24	70.95	101.993	
15,000.00	7,950.00	7,223.00	7,218.66	183.75	17.75	66.85	-279.35	953.31	7,332.91	7,261.89	71.02	103.258	
15,100.00	7,950.00	7,223.00	7,218.66	186.39	17.75	66.85	-279.35	953.31	7,429.71	7,358.63	71.08	104.524	
15,200.00	7,950.00	7,223.00	7,218.66	189.03	17.75	66.85	-279.35	953.31	7,526.60	7,455.45	71.15	105.789	
15,300.00	7,950.00	7,223.00	7,218.66	191.68	17.75	66.85	-279.35	953.31	7,623.56	7,552.35	71.21	107.055	
15,400.00	7,950.00	7,223.00	7,218.66	194.33	17.75	66.85	-279.35	953.31	7,720.61	7,649.33	71.28	108.320	
15,500.00	7,950.00	7,223.00	7,218.66	196.97	17.75	66.85	-279.35	953.31	7,817.73	7,746.39	71.34	109.585	
15,600.00	7,950.00	7,223.00	7,218.66	199.62	17.75	66.85	-279.35	953.31	7,914.92	7,843.52	71.40	110.850	
15,700.00	7,950.00	7,223.00	7,218.66	202.27	17.75	66.85	-279.35	953.31	8,012.18	7,940.71	71.46	112.114	
15,800.00	7,950.00	7,223.00	7,218.66	204.93	17.75	66.85	-279.35	953.31	8,109.51	8,037.98	71.53	113.378	
15,900.00	7,950.00	7,223.00	7,218.66	207.58	17.75	66.85	-279.35	953.31	8,206.90	8,135.31	71.59	114.641	
16,000.00	7,950.00	7,223.00	7,218.66	210.23	17.75	66.85	-279.35	953.31	8,304.35	8,232.70	71.65	115.904	
16,100.00	7,950.00	7,223.00	7,218.66	212.89	17.75	66.85	-279.35	953.31	8,401.86	8,330.15	71.71	117.166	
16,200.00	7,950.00	7,223.00	7,218.66	215.54	17.75	66.85	-279.35	953.31	8,499.43	8,427.66	71.77	118.427	
16,300.00	7,950.00	7,223.00	7,218.66	218.20	17.75	66.85	-279.35	953.31	8,597.06	8,525.23	71.83	119.687	
16,400.00	7,950.00	7,223.00	7,218.66	220.85	17.75	66.85	-279.35	953.31	8,694.74	8,622.85	71.89	120.946	
16,500.00	7,950.00	7,223.00	7,218.66	223.51	17.75	66.85	-279.35	953.31	8,792.47	8,720.52	71.95	122.204	
16,600.00	7,950.00	7,223.00	7,218.66	226.17	17.75	66.85	-279.35	953.31	8,890.26	8,818.25	72.01	123.461	
16,700.00	7,950.00	7,223.00	7,218.66	228.83	17.75	66.85	-279.35	953.31	8,988.09	8,916.02	72.07	124.718	
16,800.00	7,950.00	7,223.00	7,218.66	231.49	17.75	66.85	-279.35	953.31	9,085.97	9,013.84	72.13	125.973	
16,900.00	7,950.00	7,223.00	7,218.66	234.15	17.75	66.85	-279.35	953.31	9,183.89	9,111.71	72.19	127.226	
17,000.00	7,950.00	7,223.00	7,218.66	236.81	17.75	66.85	-279.35	953.31	9,281.86	9,209.62	72.24	128.479	
17,100.00	7,950.00	7,223.00	7,218.66	239.47	17.75	66.85	-279.35	953.31	9,379.87	9,307.57	72.30	129.730	
17,200.00	7,950.00	7,223.00	7,218.66	242.14	17.75	66.85	-279.35	953.31	9,477.93	9,405.56	72.36	130.980	
17,300.00	7,950.00	7,223.00	7,218.66	244.80	17.75	66.85	-279.35	953.31	9,576.02	9,503.60	72.42	132.229	
17,400.00	7,950.00	7,223.00	7,218.66	247.46	17.75	66.85	-279.35	953.31	9,674.15	9,601.67	72.48	133.476	
17,500.00	7,950.00	7,223.00	7,218.66	250.13	17.75	66.85	-279.35	953.31	9,772.32	9,699.79	72.54	134.721	
17,600.00	7,950.00	7,223.00	7,218.66	252.79	17.75	66.85	-279.35	953.31	9,870.53	9,797.93	72.60	135.966	
17,700.00	7,950.00	7,223.00	7,218.66	255.46	17.75	66.85	-279.35	953.31	9,968.77	9,896.12	72.65	137.208	

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 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	5.60	5.60	0.00	0.01	-0.08	199.98	-0.28	199.98					
100.00	100.00	105.60	105.60	0.13	0.15	-0.08	199.98	-0.28	199.98	199.69	0.29	692.140		
200.00	200.00	205.60	205.60	0.49	0.51	-0.08	199.98	-0.28	199.98	198.97	1.01	198.812		
206.23	206.23	211.83	211.83	0.52	0.54	-0.08	199.98	-0.28	199.98	198.93	1.05	190.357 CC		
250.00	250.00	255.31	255.31	0.67	0.69	-0.08	199.98	-0.28	199.98	198.62	1.36	146.694 ES		
300.00	300.00	302.74	302.73	0.84	0.86	-155.14	200.35	0.03	200.77	199.07	1.71	117.717		
400.00	399.93	397.34	397.28	1.19	1.20	-154.90	202.92	2.11	206.64	204.25	2.39	86.370		
500.00	499.68	491.24	490.95	1.54	1.54	-154.48	207.85	6.13	218.21	215.12	3.10	70.490		
600.00	599.13	583.98	583.22	1.92	1.89	-153.92	215.06	12.00	235.43	231.62	3.80	61.879		
700.00	698.15	675.14	673.58	2.32	2.25	-153.29	224.39	19.61	258.20	253.68	4.52	57.162		
800.00	796.63	764.34	761.58	2.75	2.62	-152.61	235.68	28.80	286.40	281.17	5.23	54.740		
900.00	894.44	854.98	850.56	3.21	3.01	-151.95	249.04	39.69	319.62	313.66	5.96	53.593		
1,000.00	991.46	948.11	941.92	3.71	3.42	-151.54	263.05	51.09	356.03	349.30	6.73	52.927		
1,085.22	1,073.44	1,026.55	1,018.88	4.17	3.78	-151.37	274.84	60.70	389.30	381.93	7.38	52.768		
1,100.00	1,087.59	1,040.08	1,032.15	4.25	3.84	-151.42	276.87	62.36	395.25	387.76	7.50	52.729		
1,200.00	1,183.37	1,131.60	1,121.94	4.81	4.26	-151.69	290.64	73.57	435.50	427.25	8.26	52.731		
1,300.00	1,279.15	1,223.12	1,211.72	5.39	4.69	-151.92	304.40	84.78	475.76	466.73	9.03	52.687		
1,400.00	1,374.93	1,314.65	1,301.51	5.98	5.11	-152.11	318.16	95.99	516.03	506.22	9.81	52.616		
1,500.00	1,470.71	1,406.17	1,391.29	6.57	5.54	-152.27	331.92	107.20	556.30	545.71	10.59	52.531		
1,600.00	1,566.49	1,502.31	1,481.08	7.16	5.99	-152.41	345.68	118.41	596.57	585.17	11.40	52.530		
1,700.00	1,662.27	1,589.22	1,570.86	7.76	6.40	-152.53	359.44	129.62	636.84	624.68	12.17	52.344		
1,800.00	1,758.05	1,680.74	1,660.65	8.36	6.84	-152.64	373.20	140.83	677.12	664.16	12.96	52.251		
1,900.00	1,853.83	1,772.26	1,750.44	8.96	7.27	-152.74	386.96	152.03	717.40	703.65	13.75	52.160		
2,000.00	1,949.61	1,863.79	1,840.22	9.57	7.70	-152.82	400.73	163.24	757.68	743.13	14.55	52.073		
2,100.00	2,045.39	1,955.31	1,930.01	10.17	8.14	-152.90	414.49	174.45	797.96	782.61	15.35	51.990		
2,200.00	2,141.17	2,046.83	2,019.79	10.78	8.57	-152.97	428.25	185.66	838.24	822.10	16.15	51.910		
2,300.00	2,236.95	2,138.36	2,109.58	11.39	9.01	-153.03	442.01	196.87	878.53	861.58	16.95	51.835		
2,400.00	2,332.73	2,229.88	2,199.36	11.99	9.44	-153.09	455.77	208.08	918.81	901.06	17.75	51.763		
2,500.00	2,428.51	2,321.40	2,289.15	12.60	9.88	-153.14	469.53	219.29	959.10	940.54	18.55	51.695		
2,600.00	2,524.30	2,412.93	2,378.94	13.21	10.31	-153.19	483.29	230.50	999.38	980.02	19.36	51.631		
2,700.00	2,620.08	2,504.45	2,468.72	13.82	10.75	-153.24	497.05	241.71	1,039.67	1,019.51	20.16	51.570		
2,800.00	2,715.86	2,604.03	2,558.51	14.43	11.22	-153.28	510.82	252.92	1,079.95	1,058.95	21.00	51.429		
2,900.00	2,811.64	2,687.50	2,648.29	15.04	11.62	-153.32	524.58	264.13	1,120.24	1,098.47	21.77	51.458		
3,000.00	2,907.42	2,779.02	2,738.08	15.66	12.06	-153.35	538.34	275.34	1,160.53	1,137.95	22.58	51.406		
3,100.00	3,003.20	2,870.54	2,827.86	16.27	12.50	-153.39	552.10	286.55	1,200.82	1,177.43	23.38	51.356		
3,200.00	3,098.98	2,962.07	2,917.65	16.88	12.93	-153.42	565.86	297.76	1,241.10	1,216.92	24.19	51.309		
3,300.00	3,194.76	3,053.59	3,007.44	17.49	13.37	-153.45	579.62	308.97	1,281.39	1,256.40	25.00	51.264		
3,400.00	3,290.54	3,145.11	3,097.22	18.10	13.81	-153.48	593.38	320.18	1,321.68	1,295.88	25.80	51.222		
3,500.00	3,386.32	3,236.63	3,187.01	18.72	14.24	-153.50	607.14	331.39	1,361.97	1,335.36	26.61	51.181		
3,600.00	3,482.10	3,328.16	3,276.79	19.33	14.68	-153.53	620.91	342.60	1,402.26	1,374.84	27.42	51.142		
3,700.00	3,577.88	3,419.68	3,366.58	19.94	15.12	-153.55	634.67	353.81	1,442.55	1,414.32	28.23	51.104		
3,800.00	3,673.66	3,511.20	3,456.36	20.55	15.56	-153.57	648.43	365.02	1,482.84	1,453.80	29.04	51.068		
3,900.00	3,769.44	3,602.73	3,546.15	21.17	15.99	-153.59	662.19	376.23	1,523.13	1,493.28	29.85	51.034		
4,000.00	3,865.22	3,694.25	3,635.93	21.78	16.43	-153.61	675.95	387.44	1,563.42	1,532.76	30.65	51.001		
4,100.00	3,961.00	3,785.77	3,725.72	22.39	16.87	-153.63	689.71	398.65	1,603.71	1,572.24	31.46	50.969		
4,200.00	4,056.78	3,877.30	3,815.51	23.01	17.31	-153.65	703.47	409.86	1,644.00	1,611.72	32.27	50.939		
4,300.00	4,152.56	3,968.82	3,905.29	23.62	17.75	-153.67	717.23	421.07	1,684.29	1,651.20	33.08	50.910		
4,400.00	4,248.34	4,060.34	3,995.08	24.23	18.18	-153.68	731.00	432.28	1,724.58	1,690.68	33.89	50.881		
4,500.00	4,344.12	4,151.87	4,084.86	24.85	18.62	-153.70	744.76	443.49	1,764.87	1,730.16	34.70	50.854		
4,600.00	4,439.90	4,243.39	4,174.65	25.46	19.06	-153.71	758.52	454.70	1,805.16	1,769.64	35.52	50.827		
4,700.00	4,535.68	4,334.91	4,264.43	26.08	19.50	-153.73	772.28	465.91	1,845.45	1,809.12	36.33	50.802		
4,800.00	4,631.46	4,426.44	4,354.22	26.69	19.93	-153.74	786.04	477.12	1,885.74	1,848.60	37.14	50.777		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 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		
4,900.00	4,727.24	4,517.96	4,444.01	27.30	20.37	-153.75	799.80	488.33	1,926.03	1,888.08	37.95	50.753		
5,000.00	4,823.02	4,609.48	4,533.79	27.92	20.81	-153.76	813.56	499.54	1,966.32	1,927.56	38.76	50.730		
5,100.00	4,918.80	4,701.01	4,623.58	28.53	21.25	-153.78	827.32	510.75	2,006.61	1,967.04	39.57	50.708		
5,200.00	5,014.58	4,807.47	4,713.36	29.15	21.76	-153.79	841.09	521.96	2,046.91	2,006.46	40.45	50.606		
5,300.00	5,110.36	4,884.05	4,803.15	29.76	22.13	-153.80	854.85	533.17	2,087.20	2,046.00	41.20	50.665		
5,400.00	5,206.14	4,975.58	4,892.93	30.37	22.56	-153.81	868.61	544.38	2,127.49	2,085.48	42.01	50.644		
5,500.00	5,301.92	5,067.10	4,982.72	30.99	23.00	-153.82	882.37	555.59	2,167.78	2,124.96	42.82	50.624		
5,600.00	5,397.70	5,158.62	5,072.50	31.60	23.44	-153.83	896.13	566.80	2,208.07	2,164.44	43.63	50.604		
5,700.00	5,493.48	5,250.14	5,162.29	32.22	23.88	-153.84	909.89	578.01	2,248.36	2,203.91	44.45	50.585		
5,800.00	5,589.26	5,341.67	5,252.08	32.83	24.32	-153.85	923.65	589.22	2,288.65	2,243.39	45.26	50.567		
5,900.00	5,685.04	5,433.19	5,341.86	33.45	24.75	-153.86	937.41	600.43	2,328.94	2,282.87	46.07	50.549		
6,000.00	5,780.82	5,524.71	5,431.65	34.06	25.19	-153.86	951.18	611.64	2,369.24	2,322.35	46.89	50.531		
6,100.00	5,876.60	5,616.24	5,521.43	34.67	25.63	-153.87	964.94	622.85	2,409.53	2,361.83	47.70	50.514		
6,200.00	5,972.38	5,707.76	5,611.22	35.29	26.07	-153.88	978.70	634.06	2,449.82	2,401.30	48.51	50.497		
6,300.00	6,068.16	5,800.72	5,701.00	35.90	26.51	-153.89	992.46	645.27	2,490.11	2,440.78	49.33	50.474		
6,400.00	6,163.94	5,890.81	5,790.79	36.52	26.95	-153.90	1,006.22	656.48	2,530.40	2,480.26	50.14	50.464		
6,500.00	6,259.72	5,982.33	5,880.58	37.13	27.38	-153.90	1,019.98	667.68	2,570.69	2,519.74	50.96	50.448		
6,600.00	6,355.50	6,073.85	5,970.36	37.75	27.82	-153.91	1,033.74	678.89	2,610.99	2,559.21	51.77	50.432		
6,700.00	6,451.28	6,165.38	6,060.15	38.36	28.26	-153.92	1,047.50	690.10	2,651.28	2,598.69	52.59	50.417		
6,800.00	6,547.06	6,256.90	6,149.93	38.98	28.70	-153.92	1,061.27	701.31	2,691.57	2,638.17	53.40	50.402		
6,900.00	6,642.84	6,348.42	6,239.72	39.59	29.14	-153.93	1,075.03	712.52	2,731.86	2,677.64	54.22	50.387		
7,000.00	6,738.62	6,439.95	6,329.50	40.21	29.58	-153.94	1,088.79	723.73	2,772.15	2,717.12	55.03	50.373		
7,100.00	6,834.40	6,531.47	6,419.29	40.82	30.01	-153.94	1,102.55	734.94	2,812.45	2,756.60	55.85	50.358		
7,200.00	6,930.18	6,622.99	6,509.07	41.43	30.45	-153.95	1,116.31	746.15	2,852.74	2,796.07	56.66	50.344		
7,300.00	7,025.96	6,714.52	6,598.86	42.05	30.89	-153.95	1,130.07	757.36	2,893.03	2,835.55	57.48	50.330		
7,400.00	7,121.74	6,806.04	6,688.65	42.66	31.33	-153.96	1,143.83	768.57	2,933.32	2,875.02	58.30	50.317		
7,500.00	7,217.52	6,902.44	6,778.43	43.28	31.79	-153.96	1,157.59	779.78	2,973.61	2,914.48	59.13	50.286		
7,600.00	7,313.30	6,989.09	6,868.22	43.89	32.21	-153.97	1,171.36	790.99	3,013.90	2,953.97	59.93	50.290		
7,617.92	7,330.46	7,005.49	6,884.31	44.00	32.29	-153.97	1,173.82	793.00	3,021.13	2,961.05	60.08	50.288		
7,650.00	7,361.28	7,034.82	6,913.08	44.20	32.43	-165.85	1,178.23	796.59	3,034.07	2,973.74	60.33	50.288		
7,700.00	7,409.49	7,080.28	6,957.68	44.47	32.64	173.95	1,185.07	802.16	3,054.29	2,993.58	60.71	50.308		
7,750.00	7,457.61	7,125.12	7,001.67	44.71	32.86	154.74	1,191.81	807.65	3,074.42	3,013.36	61.06	50.350		
7,800.00	7,505.28	7,168.99	7,044.71	44.91	33.07	139.02	1,198.41	813.03	3,094.37	3,032.98	61.38	50.412		
7,850.00	7,552.12	7,211.56	7,086.47	45.08	33.27	127.07	1,204.81	818.24	3,114.01	3,052.34	61.67	50.492		
7,900.00	7,597.78	7,252.52	7,126.65	45.23	33.47	118.09	1,210.96	823.26	3,133.28	3,071.34	61.94	50.586		
7,950.00	7,641.91	7,291.53	7,164.92	45.34	33.66	111.21	1,216.83	828.04	3,152.11	3,089.93	62.18	50.692		
8,000.00	7,684.18	7,328.32	7,201.01	45.43	33.83	105.80	1,222.36	832.54	3,170.43	3,108.03	62.40	50.809		
8,050.00	7,724.27	7,362.60	7,234.64	45.50	34.00	101.42	1,227.52	836.74	3,188.20	3,125.61	62.60	50.933		
8,100.00	7,761.87	7,404.35	7,275.72	45.54	34.19	97.95	1,233.81	840.63	3,205.34	3,142.50	62.84	51.006		
8,150.00	7,796.69	7,450.85	7,321.67	45.57	34.37	95.13	1,240.82	841.40	3,221.69	3,158.59	63.10	51.054		
8,200.00	7,828.47	7,502.20	7,372.30	45.58	34.54	92.86	1,248.52	837.87	3,237.14	3,173.77	63.37	51.081		
8,250.00	7,856.97	7,560.18	7,428.83	45.57	34.69	91.07	1,257.09	828.40	3,251.57	3,187.91	63.66	51.080		
8,300.00	7,881.97	7,627.31	7,492.70	45.54	34.82	89.74	1,266.73	810.29	3,264.83	3,200.87	63.96	51.048		
8,350.00	7,903.28	7,707.22	7,565.39	45.50	34.93	88.85	1,277.64	779.07	3,276.75	3,212.47	64.27	50.982		
8,400.00	7,920.74	7,804.97	7,647.37	45.44	34.97	88.39	1,289.85	727.49	3,287.09	3,222.50	64.60	50.887		
8,450.00	7,934.22	7,926.70	7,735.47	45.38	34.92	88.31	1,302.81	644.83	3,295.53	3,230.59	64.94	50.745		
8,500.00	7,943.60	8,077.16	7,817.48	45.30	34.75	88.48	1,314.61	519.75	3,301.62	3,236.20	65.42	50.468		
8,550.00	7,948.83	8,253.17	7,868.86	45.22	34.50	88.63	1,321.48	352.27	3,304.84	3,238.59	66.25	49.883		
8,587.24	7,950.00	8,352.09	7,875.00	45.15	34.38	88.60	1,321.85	253.66	3,305.22	3,238.26	66.97	49.354		
8,600.00	7,950.00	8,364.85	7,875.00	45.13	34.37	88.60	1,321.78	240.89	3,305.17	3,238.03	67.13	49.233		
8,700.00	7,950.00	8,464.85	7,875.00	44.96	34.41	88.60	1,321.20	140.90	3,304.71	3,236.06	68.64	48.145		
8,800.00	7,950.00	8,564.85	7,875.00	44.81	34.81	88.60	1,320.63	40.90	3,304.24	3,233.73	70.52	46.858		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 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		
8,900.00	7,950.00	8,664.84	7,875.00	44.69	35.73	88.60	1,320.05	-59.10	3,303.78	3,231.04	72.74	45.419		
9,000.00	7,950.00	8,764.84	7,875.00	44.58	37.00	88.60	1,319.48	-159.09	3,303.32	3,228.04	75.29	43.877		
9,100.00	7,950.00	8,864.84	7,875.00	44.50	38.47	88.60	1,318.90	-259.09	3,302.86	3,224.74	78.12	42.280		
9,200.00	7,950.00	8,964.84	7,875.00	44.48	40.09	88.60	1,318.33	-359.09	3,302.40	3,221.19	81.21	40.665		
9,300.00	7,950.00	9,064.84	7,875.00	44.63	41.82	88.60	1,317.75	-459.09	3,301.94	3,217.41	84.53	39.061		
9,400.00	7,950.00	9,164.84	7,875.00	45.49	43.64	88.60	1,317.18	-559.08	3,301.48	3,213.42	88.06	37.492		
9,500.00	7,950.00	9,264.84	7,875.00	47.12	45.55	88.60	1,316.60	-659.08	3,301.02	3,209.26	91.76	35.973		
9,600.00	7,950.00	9,364.84	7,875.00	48.99	47.54	88.60	1,316.03	-759.08	3,300.56	3,204.93	95.63	34.514		
9,700.00	7,950.00	9,464.84	7,875.00	50.96	49.59	88.60	1,315.45	-859.08	3,300.10	3,200.46	99.63	33.122		
9,800.00	7,950.00	9,564.84	7,875.00	53.01	51.69	88.60	1,314.88	-959.07	3,299.64	3,195.87	103.77	31.799		
9,900.00	7,950.00	9,664.83	7,875.00	55.12	53.85	88.60	1,314.30	-1,059.07	3,299.18	3,191.17	108.01	30.546		
10,000.00	7,950.00	9,764.83	7,875.00	57.28	56.05	88.60	1,313.73	-1,159.07	3,298.72	3,186.37	112.35	29.362		
10,100.00	7,950.00	9,864.83	7,875.00	59.48	58.29	88.60	1,313.15	-1,259.06	3,298.26	3,181.48	116.77	28.245		
10,200.00	7,950.00	9,964.83	7,875.00	61.71	60.57	88.60	1,312.58	-1,359.06	3,297.80	3,176.52	121.27	27.193		
10,300.00	7,950.00	10,064.83	7,875.00	63.99	62.88	88.60	1,312.00	-1,459.06	3,297.33	3,171.49	125.85	26.201		
10,400.00	7,950.00	10,164.83	7,875.00	66.29	65.21	88.60	1,311.43	-1,559.06	3,296.87	3,166.39	130.48	25.267		
10,500.00	7,950.00	10,264.83	7,875.00	68.62	67.58	88.60	1,310.85	-1,659.05	3,296.41	3,161.24	135.17	24.387		
10,600.00	7,950.00	10,364.83	7,875.00	70.97	69.96	88.60	1,310.28	-1,759.05	3,295.95	3,156.04	139.91	23.558		
10,700.00	7,950.00	10,464.83	7,875.00	73.34	72.37	88.60	1,309.70	-1,859.05	3,295.49	3,150.80	144.69	22.776		
10,800.00	7,950.00	10,564.82	7,875.00	75.74	74.79	88.60	1,309.13	-1,959.05	3,295.03	3,145.51	149.52	22.038		
10,900.00	7,950.00	10,664.82	7,875.00	78.15	77.23	88.60	1,308.55	-2,059.04	3,294.57	3,140.19	154.38	21.340		
11,000.00	7,950.00	10,764.82	7,875.00	80.58	79.69	88.60	1,307.98	-2,159.04	3,294.11	3,134.83	159.28	20.682		
11,100.00	7,950.00	10,864.82	7,875.00	83.03	82.16	88.60	1,307.40	-2,259.04	3,293.65	3,129.45	164.20	20.058		
11,200.00	7,950.00	10,964.82	7,875.00	85.49	84.65	88.60	1,306.83	-2,359.03	3,293.19	3,124.03	169.16	19.468		
11,300.00	7,950.00	11,064.82	7,875.00	87.96	87.15	88.60	1,306.25	-2,459.03	3,292.73	3,118.59	174.14	18.909		
11,400.00	7,950.00	11,164.82	7,875.00	90.45	89.65	88.60	1,305.68	-2,559.03	3,292.27	3,113.13	179.14	18.378		
11,500.00	7,950.00	11,264.82	7,875.00	92.95	92.17	88.60	1,305.10	-2,659.03	3,291.81	3,107.64	184.16	17.875		
11,600.00	7,950.00	11,364.82	7,875.00	95.45	94.70	88.60	1,304.53	-2,759.02	3,291.35	3,102.14	189.21	17.396		
11,700.00	7,950.00	11,464.82	7,875.00	97.97	97.24	88.60	1,303.95	-2,859.02	3,290.89	3,096.62	194.27	16.940		
11,800.00	7,950.00	11,564.81	7,875.00	100.49	99.78	88.60	1,303.38	-2,959.02	3,290.42	3,091.08	199.35	16.506		
11,900.00	7,950.00	11,664.81	7,875.00	103.03	102.33	88.60	1,302.80	-3,059.02	3,289.96	3,085.52	204.44	16.093		
12,000.00	7,950.00	11,764.81	7,875.00	105.57	104.89	88.60	1,302.23	-3,159.01	3,289.50	3,079.96	209.55	15.698		
12,100.00	7,950.00	11,864.81	7,875.00	108.11	107.45	88.60	1,301.65	-3,259.01	3,289.04	3,074.37	214.67	15.321		
12,200.00	7,950.00	11,964.81	7,875.00	110.67	110.02	88.60	1,301.08	-3,359.01	3,288.58	3,068.78	219.80	14.961		
12,300.00	7,950.00	12,064.81	7,875.00	113.23	112.60	88.60	1,300.50	-3,459.00	3,288.12	3,063.17	224.95	14.617		
12,400.00	7,950.00	12,164.81	7,875.00	115.79	115.18	88.60	1,299.93	-3,559.00	3,287.66	3,057.55	230.11	14.288		
12,500.00	7,950.00	12,264.81	7,875.00	118.36	117.77	88.59	1,299.35	-3,659.00	3,287.20	3,051.93	235.27	13.972		
12,600.00	7,950.00	12,364.81	7,875.00	120.94	120.36	88.59	1,298.77	-3,759.00	3,286.74	3,046.29	240.45	13.669		
12,700.00	7,950.00	12,464.80	7,875.00	123.52	122.95	88.59	1,298.20	-3,858.99	3,286.28	3,040.64	245.64	13.379		
12,800.00	7,950.00	12,564.80	7,875.00	126.11	125.55	88.59	1,297.62	-3,958.99	3,285.82	3,034.99	250.83	13.100		
12,900.00	7,950.00	12,664.80	7,875.00	128.70	128.16	88.59	1,297.05	-4,058.99	3,285.36	3,029.33	256.03	12.832		
13,000.00	7,950.00	12,764.80	7,875.00	131.29	130.76	88.59	1,296.47	-4,158.99	3,284.90	3,023.66	261.24	12.574		
13,100.00	7,950.00	12,864.80	7,875.00	133.89	133.37	88.59	1,295.90	-4,258.98	3,284.44	3,017.98	266.45	12.326		
13,200.00	7,950.00	12,964.80	7,875.00	136.49	135.98	88.59	1,295.32	-4,358.98	3,283.98	3,012.30	271.68	12.088		
13,300.00	7,950.00	13,064.80	7,875.00	139.09	138.60	88.59	1,294.75	-4,458.98	3,283.51	3,006.61	276.90	11.858		
13,400.00	7,950.00	13,164.80	7,875.00	141.70	141.22	88.59	1,294.17	-4,558.98	3,283.05	3,000.92	282.14	11.636		
13,500.00	7,950.00	13,264.80	7,875.00	144.31	143.84	88.59	1,293.60	-4,658.97	3,282.59	2,995.22	287.38	11.423		
13,600.00	7,950.00	13,364.79	7,875.00	146.93	146.46	88.59	1,293.02	-4,758.97	3,282.13	2,989.51	292.62	11.216		
13,700.00	7,950.00	13,464.79	7,875.00	149.54	149.09	88.59	1,292.45	-4,858.97	3,281.67	2,983.80	297.87	11.017		
13,800.00	7,950.00	13,564.79	7,875.00	152.16	151.72	88.59	1,291.87	-4,958.96	3,281.21	2,978.09	303.13	10.825		
13,900.00	7,950.00	13,664.79	7,875.00	154.78	154.35	88.59	1,291.30	-5,058.96	3,280.75	2,972.37	308.38	10.639		
14,000.00	7,950.00	13,764.79	7,875.00	157.41	156.98	88.59	1,290.72	-5,158.96	3,280.29	2,966.64	313.65	10.459		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 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 Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	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		
14,100.00	7,950.00	13,864.79	7,875.00	160.03	159.61	88.59	1,290.15	-5,258.96	3,279.83	2,960.92	318.91	10.284		
14,200.00	7,950.00	13,964.79	7,875.00	162.66	162.25	88.59	1,289.57	-5,358.95	3,279.37	2,955.18	324.18	10.116		
14,300.00	7,950.00	14,064.79	7,875.00	165.29	164.89	88.59	1,289.00	-5,458.95	3,278.91	2,949.45	329.46	9.952		
14,400.00	7,950.00	14,164.79	7,875.00	167.92	167.53	88.59	1,288.42	-5,558.95	3,278.45	2,943.71	334.74	9.794		
14,500.00	7,950.00	14,264.79	7,875.00	170.55	170.17	88.59	1,287.85	-5,658.95	3,277.99	2,937.97	340.02	9.641		
14,600.00	7,950.00	14,364.78	7,875.00	173.19	172.81	88.59	1,287.27	-5,758.94	3,277.53	2,932.22	345.30	9.492		
14,700.00	7,950.00	14,464.78	7,875.00	175.83	175.45	88.59	1,286.70	-5,858.94	3,277.06	2,926.48	350.59	9.347		
14,800.00	7,950.00	14,564.78	7,875.00	178.46	178.10	88.59	1,286.12	-5,958.94	3,276.60	2,920.73	355.88	9.207		
14,900.00	7,950.00	14,664.78	7,875.00	181.10	180.75	88.59	1,285.55	-6,058.93	3,276.14	2,914.97	361.17	9.071		
15,000.00	7,950.00	14,764.78	7,875.00	183.75	183.39	88.59	1,284.97	-6,158.93	3,275.68	2,909.22	366.47	8.939		
15,100.00	7,950.00	14,864.78	7,875.00	186.39	186.04	88.59	1,284.40	-6,258.93	3,275.22	2,903.46	371.76	8.810		
15,200.00	7,950.00	14,964.78	7,875.00	189.03	188.69	88.59	1,283.82	-6,358.93	3,274.76	2,897.70	377.06	8.685		
15,300.00	7,950.00	15,064.78	7,875.00	191.68	191.35	88.59	1,283.25	-6,458.92	3,274.30	2,891.94	382.37	8.563		
15,400.00	7,950.00	15,164.78	7,875.00	194.33	194.00	88.59	1,282.67	-6,558.92	3,273.84	2,886.17	387.67	8.445		
15,500.00	7,950.00	15,264.77	7,875.00	196.97	196.65	88.59	1,282.10	-6,658.92	3,273.38	2,880.40	392.98	8.330		
15,600.00	7,950.00	15,364.77	7,875.00	199.62	199.31	88.59	1,281.52	-6,758.92	3,272.92	2,874.63	398.29	8.218		
15,700.00	7,950.00	15,464.77	7,875.00	202.27	201.96	88.59	1,280.95	-6,858.91	3,272.46	2,868.86	403.60	8.108		
15,800.00	7,950.00	15,564.77	7,875.00	204.93	204.62	88.59	1,280.37	-6,958.91	3,272.00	2,863.09	408.91	8.002		
15,900.00	7,950.00	15,664.77	7,875.00	207.58	207.28	88.59	1,279.80	-7,058.91	3,271.54	2,857.31	414.22	7.898		
16,000.00	7,950.00	15,764.77	7,875.00	210.23	209.94	88.59	1,279.22	-7,158.90	3,271.08	2,851.54	419.54	7.797		
16,100.00	7,950.00	15,864.77	7,875.00	212.89	212.59	88.59	1,278.65	-7,258.90	3,270.62	2,845.76	424.86	7.698		
16,200.00	7,950.00	15,964.77	7,875.00	215.54	215.25	88.59	1,278.07	-7,358.90	3,270.15	2,839.98	430.18	7.602		
16,300.00	7,950.00	16,064.77	7,875.00	218.20	217.92	88.59	1,277.50	-7,458.90	3,269.69	2,834.20	435.50	7.508		
16,400.00	7,950.00	16,164.77	7,875.00	220.85	220.58	88.59	1,276.92	-7,558.89	3,269.23	2,828.41	440.82	7.416		
16,500.00	7,950.00	16,264.76	7,875.00	223.51	223.24	88.59	1,276.35	-7,658.89	3,268.77	2,822.63	446.14	7.327		
16,600.00	7,950.00	16,364.76	7,875.00	226.17	225.90	88.59	1,275.77	-7,758.89	3,268.31	2,816.84	451.47	7.239		
16,700.00	7,950.00	16,464.76	7,875.00	228.83	228.57	88.59	1,275.20	-7,858.89	3,267.85	2,811.06	456.79	7.154		
16,800.00	7,950.00	16,564.76	7,875.00	231.49	231.23	88.59	1,274.62	-7,958.88	3,267.39	2,805.27	462.12	7.070		
16,900.00	7,950.00	16,664.76	7,875.00	234.15	233.89	88.59	1,274.05	-8,058.88	3,266.93	2,799.48	467.45	6.989		
17,000.00	7,950.00	16,764.76	7,875.00	236.81	236.56	88.59	1,273.47	-8,158.88	3,266.47	2,793.69	472.78	6.909		
17,100.00	7,950.00	16,864.76	7,875.00	239.47	239.23	88.59	1,272.90	-8,258.87	3,266.01	2,787.90	478.11	6.831		
17,200.00	7,950.00	16,964.76	7,875.00	242.14	241.89	88.59	1,272.32	-8,358.87	3,265.55	2,782.10	483.45	6.755		
17,300.00	7,950.00	17,064.76	7,875.00	244.80	244.56	88.59	1,271.75	-8,458.87	3,265.09	2,776.31	488.78	6.680		
17,400.00	7,950.00	17,164.75	7,875.00	247.46	247.23	88.59	1,271.17	-8,558.87	3,264.63	2,770.51	494.11	6.607		
17,500.00	7,950.00	17,264.75	7,875.00	250.13	249.89	88.59	1,270.60	-8,658.86	3,264.17	2,764.72	499.45	6.536		
17,600.00	7,950.00	17,364.75	7,875.00	252.79	252.56	88.58	1,270.02	-8,758.86	3,263.71	2,758.92	504.79	6.466		
17,700.00	7,950.00	17,464.75	7,875.00	255.46	255.23	88.58	1,269.45	-8,858.86	3,263.24	2,753.12	510.12	6.397		
17,800.00	7,950.00	17,564.75	7,875.00	258.13	257.90	88.58	1,268.87	-8,958.86	3,262.78	2,747.32	515.46	6.330		
17,900.00	7,950.00	17,664.75	7,875.00	260.79	260.57	88.58	1,268.30	-9,058.85	3,262.32	2,741.52	520.80	6.264		
18,000.00	7,950.00	17,764.75	7,875.00	263.46	263.24	88.58	1,267.72	-9,158.85	3,261.86	2,735.72	526.14	6.200		
18,100.00	7,950.00	17,864.75	7,875.00	266.13	265.91	88.58	1,267.15	-9,258.85	3,261.40	2,729.92	531.48	6.136		
18,200.00	7,950.00	17,964.75	7,875.00	268.80	268.58	88.58	1,266.57	-9,358.84	3,260.94	2,724.12	536.83	6.074		
18,300.00	7,950.00	18,064.75	7,875.00	271.47	271.26	88.58	1,266.00	-9,458.84	3,260.48	2,718.31	542.17	6.014		
18,400.00	7,950.00	18,164.74	7,875.00	274.14	273.93	88.58	1,265.42	-9,558.84	3,260.02	2,712.51	547.51	5.954		
18,472.00	7,950.00	18,221.72	7,875.00	276.06	275.45	88.58	1,265.09	-9,615.82	3,259.72	2,708.79	550.94	5.917		
18,481.45	7,950.00	18,221.72	7,875.00	276.31	275.45	88.58	1,265.09	-9,615.82	3,259.74	2,708.57	551.17	5.914 SF		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 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	4.80	4.80	0.00	0.01	-0.11	150.08	-0.28	150.08					
100.00	100.00	104.80	104.80	0.13	0.15	-0.11	150.08	-0.28	150.08	149.79	0.29	524.639		
200.00	200.00	204.80	204.80	0.49	0.51	-0.11	150.08	-0.28	150.08	149.08	1.00	149.629		
250.00	250.00	254.80	254.80	0.67	0.69	-0.11	150.08	-0.28	150.08	148.72	1.36	110.232 CC, ES		
300.00	300.00	303.44	303.44	0.84	0.86	-155.11	150.32	0.16	150.72	149.01	1.71	88.341		
400.00	399.93	400.77	400.70	1.19	1.21	-154.48	151.99	3.19	155.62	153.22	2.40	64.907		
500.00	499.68	497.54	497.23	1.54	1.56	-153.37	155.24	9.08	165.35	162.24	3.11	53.171		
600.00	599.13	593.39	592.57	1.92	1.92	-151.94	160.01	17.72	179.95	176.11	3.84	46.911		
700.00	698.15	689.55	687.87	2.32	2.30	-150.41	166.19	28.91	199.25	194.67	4.58	43.512		
800.00	796.63	786.91	784.30	2.75	2.69	-149.40	172.69	40.70	221.87	216.53	5.34	41.535		
900.00	894.44	883.58	880.04	3.21	3.09	-148.94	179.14	52.40	247.43	241.31	6.12	40.458		
1,000.00	991.46	979.44	974.98	3.71	3.49	-148.86	185.54	64.00	275.87	268.97	6.90	39.982		
1,085.22	1,073.44	1,060.41	1,055.17	4.17	3.82	-149.02	190.95	73.79	302.36	294.79	7.58	39.904		
1,100.00	1,087.59	1,074.39	1,069.02	4.25	3.88	-149.11	191.88	75.49	307.14	299.44	7.70	39.896		
1,200.00	1,183.37	1,168.97	1,162.69	4.81	4.28	-149.66	198.20	86.93	339.47	330.98	8.49	39.994		
1,300.00	1,279.15	1,263.56	1,256.37	5.39	4.67	-150.11	204.51	98.38	371.82	362.54	9.28	40.050		
1,400.00	1,374.93	1,358.14	1,350.05	5.98	5.07	-150.49	210.83	109.82	404.19	394.11	10.08	40.079		
1,500.00	1,470.71	1,452.73	1,443.72	6.57	5.47	-150.82	217.14	121.27	436.58	425.69	10.89	40.092		
1,600.00	1,566.49	1,547.31	1,537.40	7.16	5.86	-151.10	223.46	132.72	468.98	457.28	11.70	40.095		
1,700.00	1,662.27	1,641.89	1,631.08	7.76	6.26	-151.34	229.77	144.16	501.38	488.87	12.51	40.090		
1,800.00	1,758.05	1,736.48	1,724.75	8.36	6.66	-151.55	236.09	155.61	533.79	520.47	13.32	40.081		
1,900.00	1,853.83	1,831.06	1,818.43	8.96	7.06	-151.74	242.40	167.06	566.21	552.08	14.13	40.070		
2,000.00	1,949.61	1,925.65	1,912.10	9.57	7.46	-151.91	248.72	178.50	598.63	583.69	14.94	40.056		
2,100.00	2,045.39	2,020.23	2,005.78	10.17	7.86	-152.07	255.03	189.95	631.06	615.30	15.76	40.041		
2,200.00	2,141.17	2,114.81	2,099.46	10.78	8.26	-152.20	261.35	201.39	663.49	646.91	16.58	40.026		
2,300.00	2,236.95	2,209.40	2,193.13	11.39	8.66	-152.33	267.66	212.84	695.92	678.53	17.39	40.011		
2,400.00	2,332.73	2,303.98	2,286.81	11.99	9.06	-152.44	273.98	224.29	728.36	710.15	18.21	39.996		
2,500.00	2,428.51	2,401.43	2,380.49	12.60	9.47	-152.54	280.30	235.73	760.80	741.76	19.04	39.956		
2,600.00	2,524.30	2,506.85	2,474.16	13.21	9.92	-152.64	286.61	247.18	793.24	773.33	19.90	39.853		
2,700.00	2,620.08	2,587.73	2,567.84	13.82	10.26	-152.73	292.93	258.62	825.68	805.01	20.67	39.952		
2,800.00	2,715.86	2,682.32	2,661.51	14.43	10.66	-152.81	299.24	270.07	858.12	836.64	21.49	39.938		
2,900.00	2,811.64	2,776.90	2,755.19	15.04	11.06	-152.88	305.56	281.52	890.57	868.26	22.31	39.924		
3,000.00	2,907.42	2,871.49	2,848.87	15.66	11.46	-152.95	311.87	292.96	923.01	899.89	23.13	39.911		
3,100.00	3,003.20	2,966.07	2,942.54	16.27	11.86	-153.02	318.19	304.41	955.46	931.51	23.95	39.899		
3,200.00	3,098.98	3,060.65	3,036.22	16.88	12.27	-153.08	324.50	315.86	987.91	963.14	24.77	39.886		
3,300.00	3,194.76	3,155.24	3,129.90	17.49	12.67	-153.13	330.82	327.30	1,020.36	994.77	25.59	39.875		
3,400.00	3,290.54	3,249.82	3,223.57	18.10	13.07	-153.19	337.13	338.75	1,052.81	1,026.40	26.41	39.863		
3,500.00	3,386.32	3,344.41	3,317.25	18.72	13.47	-153.24	343.45	350.19	1,085.26	1,058.03	27.23	39.852		
3,600.00	3,482.10	3,438.99	3,410.92	19.33	13.87	-153.29	349.76	361.64	1,117.71	1,089.66	28.05	39.841		
3,700.00	3,577.88	3,533.57	3,504.60	19.94	14.27	-153.33	356.08	373.09	1,150.17	1,121.29	28.88	39.831		
3,800.00	3,673.66	3,628.16	3,598.28	20.55	14.67	-153.37	362.39	384.53	1,182.62	1,152.92	29.70	39.821		
3,900.00	3,769.44	3,722.74	3,691.95	21.17	15.07	-153.41	368.71	395.98	1,215.07	1,184.55	30.52	39.812		
4,000.00	3,865.22	3,817.33	3,785.63	21.78	15.47	-153.45	375.02	407.42	1,247.53	1,216.18	31.34	39.802		
4,100.00	3,961.00	3,911.91	3,879.31	22.39	15.88	-153.49	381.34	418.87	1,279.98	1,247.82	32.17	39.793		
4,200.00	4,056.78	4,006.49	3,972.98	23.01	16.28	-153.52	387.65	430.32	1,312.44	1,279.45	32.99	39.784		
4,300.00	4,152.56	4,101.08	4,066.66	23.62	16.68	-153.55	393.97	441.76	1,344.89	1,311.08	33.81	39.776		
4,400.00	4,248.34	4,204.34	4,160.33	24.23	17.12	-153.58	400.28	453.21	1,377.35	1,342.68	34.67	39.726		
4,500.00	4,344.12	4,309.75	4,254.01	24.85	17.56	-153.61	406.60	464.65	1,409.80	1,374.26	35.54	39.669		
4,600.00	4,439.90	4,384.83	4,347.69	25.46	17.88	-153.64	412.91	476.10	1,442.26	1,405.98	36.28	39.752		
4,700.00	4,535.68	4,479.41	4,441.36	26.08	18.28	-153.67	419.23	487.55	1,474.72	1,437.61	37.11	39.744		
4,800.00	4,631.46	4,574.00	4,535.04	26.69	18.68	-153.69	425.55	498.99	1,507.17	1,469.24	37.93	39.737		
4,900.00	4,727.24	4,668.58	4,628.72	27.30	19.09	-153.72	431.86	510.44	1,539.63	1,500.88	38.75	39.730		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 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		
5,000.00	4,823.02	4,763.17	4,722.39	27.92	19.49	-153.74	438.18	521.89	1,572.09	1,532.51	39.58	39.723		
5,100.00	4,918.80	4,857.75	4,816.07	28.53	19.89	-153.77	444.49	533.33	1,604.55	1,564.15	40.40	39.716		
5,200.00	5,014.58	4,952.33	4,909.74	29.15	20.29	-153.79	450.81	544.78	1,637.00	1,595.78	41.23	39.709		
5,300.00	5,110.36	5,046.92	5,003.42	29.76	20.69	-153.81	457.12	556.22	1,669.46	1,627.41	42.05	39.702		
5,400.00	5,206.14	5,141.50	5,097.10	30.37	21.09	-153.83	463.44	567.67	1,701.92	1,659.05	42.87	39.696		
5,500.00	5,301.92	5,236.09	5,190.77	30.99	21.49	-153.85	469.75	579.12	1,734.38	1,690.68	43.70	39.690		
5,600.00	5,397.70	5,330.67	5,284.45	31.60	21.90	-153.87	476.07	590.56	1,766.84	1,722.31	44.52	39.683		
5,700.00	5,493.48	5,425.25	5,378.13	32.22	22.30	-153.88	482.38	602.01	1,799.30	1,753.95	45.35	39.677		
5,800.00	5,589.26	5,519.84	5,471.80	32.83	22.70	-153.90	488.70	613.45	1,831.76	1,785.58	46.17	39.671		
5,900.00	5,685.04	5,614.42	5,565.48	33.45	23.10	-153.92	495.01	624.90	1,864.22	1,817.22	47.00	39.666		
6,000.00	5,780.82	5,709.01	5,659.15	34.06	23.50	-153.94	501.33	636.35	1,896.67	1,848.85	47.82	39.660		
6,100.00	5,876.60	5,803.59	5,752.83	34.67	23.90	-153.95	507.64	647.79	1,929.13	1,880.48	48.65	39.654		
6,200.00	5,972.38	5,901.83	5,846.51	35.29	24.32	-153.97	513.96	659.24	1,961.59	1,912.10	49.49	39.637		
6,300.00	6,068.16	6,007.24	5,940.18	35.90	24.77	-153.98	520.27	670.69	1,994.05	1,943.69	50.36	39.596		
6,400.00	6,163.94	6,087.34	6,033.86	36.52	25.11	-154.00	526.59	682.13	2,026.51	1,975.39	51.13	39.638		
6,500.00	6,259.72	6,181.93	6,127.54	37.13	25.51	-154.01	532.90	693.58	2,058.97	2,007.02	51.95	39.633		
6,600.00	6,355.50	6,276.51	6,221.21	37.75	25.91	-154.02	539.22	705.02	2,091.43	2,038.66	52.78	39.627		
6,700.00	6,451.28	6,371.09	6,314.89	38.36	26.31	-154.04	545.53	716.47	2,123.89	2,070.29	53.60	39.622		
6,800.00	6,547.06	6,465.68	6,408.57	38.98	26.71	-154.05	551.85	727.92	2,156.35	2,101.92	54.43	39.617		
6,900.00	6,642.84	6,560.26	6,502.24	39.59	27.12	-154.06	558.17	739.36	2,188.81	2,133.56	55.26	39.612		
7,000.00	6,738.62	6,654.85	6,595.92	40.21	27.52	-154.07	564.48	750.81	2,221.27	2,165.19	56.08	39.607		
7,100.00	6,834.40	6,749.43	6,689.59	40.82	27.92	-154.08	570.80	762.25	2,253.73	2,196.83	56.91	39.602		
7,200.00	6,930.18	6,844.02	6,783.27	41.43	28.32	-154.09	577.11	773.70	2,286.20	2,228.46	57.74	39.597		
7,300.00	7,025.96	6,938.60	6,876.95	42.05	28.72	-154.10	583.43	785.15	2,318.66	2,260.09	58.56	39.593		
7,400.00	7,121.74	7,033.18	6,970.62	42.66	29.12	-154.12	589.74	796.59	2,351.12	2,291.73	59.39	39.588		
7,500.00	7,217.52	7,127.77	7,064.30	43.28	29.53	-154.13	596.06	808.04	2,383.58	2,323.36	60.22	39.583		
7,600.00	7,313.30	7,222.35	7,157.98	43.89	29.93	-154.14	602.37	819.49	2,416.04	2,354.99	61.04	39.578		
7,617.92	7,330.46	7,239.30	7,174.76	44.00	30.00	-154.14	603.50	821.54	2,421.86	2,360.66	61.19	39.578		
7,650.00	7,361.28	7,269.62	7,204.79	44.20	30.13	-165.71	605.53	825.21	2,432.29	2,370.84	61.45	39.579		
7,700.00	7,409.49	7,316.63	7,251.35	44.47	30.33	174.60	608.67	830.89	2,448.60	2,386.76	61.85	39.592		
7,750.00	7,457.61	7,363.02	7,297.29	44.71	30.52	155.90	611.76	836.51	2,464.89	2,402.67	62.22	39.618		
7,800.00	7,505.28	7,409.73	7,343.67	44.91	30.71	140.68	614.88	841.10	2,481.05	2,418.49	62.56	39.658		
7,850.00	7,552.12	7,457.70	7,391.50	45.08	30.87	129.17	618.08	841.98	2,496.98	2,434.12	62.86	39.722		
7,900.00	7,597.78	7,506.88	7,440.45	45.23	31.01	120.57	621.33	838.72	2,512.57	2,449.45	63.12	39.808		
7,950.00	7,641.91	7,557.45	7,490.30	45.34	31.12	114.04	624.61	831.00	2,527.69	2,464.35	63.33	39.912		
8,000.00	7,684.18	7,609.57	7,540.77	45.43	31.21	108.95	627.90	818.46	2,542.23	2,478.72	63.51	40.028		
8,050.00	7,724.27	7,663.40	7,591.47	45.50	31.27	104.91	631.18	800.74	2,556.08	2,492.42	63.66	40.151		
8,100.00	7,761.87	7,719.10	7,641.95	45.54	31.32	101.63	634.42	777.48	2,569.13	2,505.34	63.78	40.278		
8,150.00	7,796.69	7,776.80	7,691.62	45.57	31.35	98.95	637.56	748.32	2,581.26	2,517.37	63.89	40.402		
8,200.00	7,828.47	7,836.61	7,739.74	45.58	31.36	96.75	640.57	712.97	2,592.38	2,528.39	63.99	40.513		
8,250.00	7,856.97	7,898.57	7,785.43	45.57	31.37	94.94	643.38	671.27	2,602.38	2,538.29	64.09	40.603		
8,300.00	7,881.97	7,962.65	7,827.69	45.54	31.37	93.47	645.92	623.20	2,611.17	2,546.94	64.23	40.655		
8,350.00	7,903.28	8,028.76	7,865.38	45.50	31.40	92.29	648.12	568.98	2,618.65	2,554.24	64.41	40.654		
8,400.00	7,920.74	8,096.69	7,897.37	45.44	31.46	91.37	649.91	509.13	2,624.75	2,560.08	64.67	40.587		
8,450.00	7,934.22	8,166.12	7,922.52	45.38	31.58	90.69	651.22	444.48	2,629.40	2,564.37	65.03	40.435		
8,500.00	7,943.60	8,236.64	7,939.90	45.30	31.78	90.22	651.99	376.18	2,632.55	2,567.05	65.50	40.194		
8,550.00	7,948.83	8,307.75	7,948.83	45.22	32.07	89.96	652.18	305.67	2,634.16	2,568.09	66.08	39.866		
8,587.24	7,950.00	8,355.94	7,950.00	45.15	32.33	89.90	651.98	257.51	2,634.36	2,567.80	66.56	39.578		
8,600.00	7,950.00	8,368.70	7,950.00	45.13	32.40	89.90	651.91	244.75	2,634.31	2,567.58	66.73	39.479		
8,700.00	7,950.00	8,468.70	7,950.00	44.96	33.14	89.90	651.33	144.75	2,633.84	2,565.60	68.24	38.594		
8,800.00	7,950.00	8,568.70	7,950.00	44.81	34.09	89.90	650.76	44.76	2,633.38	2,563.25	70.13	37.549		
8,900.00	7,950.00	8,668.70	7,950.00	44.69	35.23	89.90	650.18	-55.24	2,632.92	2,560.55	72.37	36.382		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 1BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSSG													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		
9,000.00	7,950.00	8,768.70	7,950.00	44.58	36.55	89.90	649.61	-155.24	2,632.46	2,557.53	74.93	35.133		
9,100.00	7,950.00	8,868.69	7,950.00	44.50	38.02	89.90	649.03	-255.24	2,632.00	2,554.23	77.78	33.841		
9,200.00	7,950.00	8,968.69	7,950.00	44.48	39.62	89.90	648.46	-355.23	2,631.54	2,550.66	80.88	32.535		
9,300.00	7,950.00	9,068.69	7,950.00	44.63	41.33	89.90	647.88	-455.23	2,631.08	2,546.86	84.22	31.241		
9,400.00	7,950.00	9,168.69	7,950.00	45.49	43.14	89.90	647.31	-555.23	2,630.62	2,542.86	87.76	29.976		
9,500.00	7,950.00	9,268.69	7,950.00	47.12	45.04	89.90	646.73	-655.23	2,630.16	2,538.68	91.48	28.752		
9,600.00	7,950.00	9,368.69	7,950.00	48.99	47.02	89.90	646.16	-755.22	2,629.70	2,534.34	95.36	27.577		
9,700.00	7,950.00	9,468.69	7,950.00	50.96	49.07	89.90	645.58	-855.22	2,629.24	2,529.86	99.38	26.458		
9,800.00	7,950.00	9,568.69	7,950.00	53.01	51.17	89.90	645.01	-955.22	2,628.78	2,525.26	103.52	25.394		
9,900.00	7,950.00	9,668.69	7,950.00	55.12	53.33	89.90	644.43	-1,055.21	2,628.32	2,520.54	107.77	24.388		
10,000.00	7,950.00	9,768.69	7,950.00	57.28	55.53	89.90	643.86	-1,155.21	2,627.86	2,515.73	112.12	23.438		
10,100.00	7,950.00	9,868.68	7,950.00	59.48	57.78	89.90	643.28	-1,255.21	2,627.39	2,510.84	116.56	22.542		
10,200.00	7,950.00	9,968.68	7,950.00	61.71	60.06	89.90	642.71	-1,355.21	2,626.93	2,505.86	121.07	21.698		
10,300.00	7,950.00	10,068.68	7,950.00	63.99	62.37	89.90	642.13	-1,455.20	2,626.47	2,500.82	125.65	20.903		
10,400.00	7,950.00	10,168.68	7,950.00	66.29	64.72	89.90	641.56	-1,555.20	2,626.01	2,495.72	130.29	20.154		
10,500.00	7,950.00	10,268.68	7,950.00	68.62	67.09	89.90	640.98	-1,655.20	2,625.55	2,490.56	134.99	19.450		
10,600.00	7,950.00	10,368.68	7,950.00	70.97	69.48	89.90	640.41	-1,755.20	2,625.09	2,485.35	139.74	18.786		
10,700.00	7,950.00	10,468.68	7,950.00	73.34	71.89	89.90	639.83	-1,855.19	2,624.63	2,480.10	144.53	18.160		
10,800.00	7,950.00	10,568.68	7,950.00	75.74	74.32	89.90	639.26	-1,955.19	2,624.17	2,474.81	149.36	17.569		
10,900.00	7,950.00	10,668.68	7,950.00	78.15	76.77	89.90	638.68	-2,055.19	2,623.71	2,469.48	154.23	17.011		
11,000.00	7,950.00	10,768.67	7,950.00	80.58	79.24	89.90	638.11	-2,155.18	2,623.25	2,464.11	159.13	16.484		
11,100.00	7,950.00	10,868.67	7,950.00	83.03	81.72	89.90	637.53	-2,255.18	2,622.79	2,458.72	164.07	15.986		
11,200.00	7,950.00	10,968.67	7,950.00	85.49	84.21	89.90	636.96	-2,355.18	2,622.33	2,453.30	169.03	15.514		
11,300.00	7,950.00	11,068.67	7,950.00	87.96	86.72	89.90	636.38	-2,455.18	2,621.87	2,447.86	174.01	15.067		
11,400.00	7,950.00	11,168.67	7,950.00	90.45	89.23	89.90	635.81	-2,555.17	2,621.41	2,442.39	179.02	14.643		
11,500.00	7,950.00	11,268.67	7,950.00	92.95	91.76	89.90	635.23	-2,655.17	2,620.94	2,436.90	184.05	14.241		
11,600.00	7,950.00	11,368.67	7,950.00	95.45	94.29	89.90	634.66	-2,755.17	2,620.48	2,431.39	189.10	13.858		
11,700.00	7,950.00	11,468.67	7,950.00	97.97	96.83	89.90	634.08	-2,855.17	2,620.02	2,425.86	194.16	13.494		
11,800.00	7,950.00	11,568.67	7,950.00	100.49	99.38	89.90	633.51	-2,955.16	2,619.56	2,420.32	199.25	13.147		
11,900.00	7,950.00	11,668.67	7,950.00	103.03	101.94	89.89	632.93	-3,055.16	2,619.10	2,414.76	204.35	12.817		
12,000.00	7,950.00	11,768.66	7,950.00	105.57	104.50	89.89	632.36	-3,155.16	2,618.64	2,409.18	209.46	12.502		
12,100.00	7,950.00	11,868.66	7,950.00	108.11	107.07	89.89	631.78	-3,255.16	2,618.18	2,403.60	214.58	12.201		
12,200.00	7,950.00	11,968.66	7,950.00	110.67	109.65	89.89	631.21	-3,355.15	2,617.72	2,398.00	219.72	11.914		
12,300.00	7,950.00	12,068.66	7,950.00	113.23	112.23	89.89	630.63	-3,455.15	2,617.26	2,392.39	224.87	11.639		
12,400.00	7,950.00	12,168.66	7,950.00	115.79	114.82	89.89	630.06	-3,555.15	2,616.80	2,386.77	230.03	11.376		
12,500.00	7,950.00	12,268.66	7,950.00	118.36	117.41	89.89	629.48	-3,655.14	2,616.34	2,381.13	235.20	11.124		
12,600.00	7,950.00	12,368.66	7,950.00	120.94	120.01	89.89	628.91	-3,755.14	2,615.88	2,375.49	240.38	10.882		
12,700.00	7,950.00	12,468.66	7,950.00	123.52	122.61	89.89	628.33	-3,855.14	2,615.42	2,369.84	245.57	10.650		
12,800.00	7,950.00	12,568.66	7,950.00	126.11	125.21	89.89	627.76	-3,955.14	2,614.96	2,364.19	250.77	10.428		
12,900.00	7,950.00	12,668.65	7,950.00	128.70	127.82	89.89	627.18	-4,055.13	2,614.50	2,358.52	255.97	10.214		
13,000.00	7,950.00	12,768.65	7,950.00	131.29	130.43	89.89	626.61	-4,155.13	2,614.03	2,352.85	261.19	10.008		
13,100.00	7,950.00	12,868.65	7,950.00	133.89	133.04	89.89	626.03	-4,255.13	2,613.57	2,347.17	266.40	9.811		
13,200.00	7,950.00	12,968.65	7,950.00	136.49	135.66	89.89	625.46	-4,355.13	2,613.11	2,341.48	271.63	9.620		
13,300.00	7,950.00	13,068.65	7,950.00	139.09	138.28	89.89	624.88	-4,455.12	2,612.65	2,335.79	276.86	9.437		
13,400.00	7,950.00	13,168.65	7,950.00	141.70	140.90	89.89	624.31	-4,555.12	2,612.19	2,330.09	282.10	9.260		
13,500.00	7,950.00	13,268.65	7,950.00	144.31	143.53	89.89	623.73	-4,655.12	2,611.73	2,324.39	287.34	9.089		
13,600.00	7,950.00	13,368.65	7,950.00	146.93	146.15	89.89	623.16	-4,755.11	2,611.27	2,318.68	292.59	8.925		
13,700.00	7,950.00	13,468.65	7,950.00	149.54	148.78	89.89	622.58	-4,855.11	2,610.81	2,312.97	297.84	8.766		
13,800.00	7,950.00	13,568.65	7,950.00	152.16	151.41	89.89	622.01	-4,955.11	2,610.35	2,307.25	303.10	8.612		
13,900.00	7,950.00	13,668.64	7,950.00	154.78	154.05	89.89	621.43	-5,055.11	2,609.89	2,301.53	308.36	8.464		
14,000.00	7,950.00	13,768.64	7,950.00	157.41	156.68	89.89	620.86	-5,155.10	2,609.43	2,295.80	313.62	8.320		
14,100.00	7,950.00	13,868.64	7,950.00	160.03	159.32	89.89	620.28	-5,255.10	2,608.97	2,290.07	318.89	8.181		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 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		
14,200.00	7,950.00	13,968.64	7,950.00	162.66	161.96	89.89	619.71	-5,355.10	2,608.51	2,284.34	324.17	8.047		
14,300.00	7,950.00	14,068.64	7,950.00	165.29	164.60	89.89	619.13	-5,455.10	2,608.05	2,278.60	329.44	7.917		
14,400.00	7,950.00	14,168.64	7,950.00	167.92	167.25	89.89	618.56	-5,555.09	2,607.58	2,272.86	334.72	7.790		
14,500.00	7,950.00	14,268.64	7,950.00	170.55	169.89	89.89	617.98	-5,655.09	2,607.12	2,267.12	340.01	7.668		
14,600.00	7,950.00	14,368.64	7,950.00	173.19	172.54	89.89	617.41	-5,755.09	2,606.66	2,261.37	345.29	7.549		
14,700.00	7,950.00	14,468.64	7,950.00	175.83	175.18	89.89	616.83	-5,855.08	2,606.20	2,255.62	350.58	7.434		
14,800.00	7,950.00	14,568.63	7,950.00	178.46	177.83	89.89	616.26	-5,955.08	2,605.74	2,249.87	355.87	7.322		
14,900.00	7,950.00	14,668.63	7,950.00	181.10	180.48	89.89	615.68	-6,055.08	2,605.28	2,244.11	361.17	7.213		
15,000.00	7,950.00	14,768.63	7,950.00	183.75	183.13	89.89	615.11	-6,155.08	2,604.82	2,238.35	366.47	7.108		
15,100.00	7,950.00	14,868.63	7,950.00	186.39	185.78	89.89	614.53	-6,255.07	2,604.36	2,232.59	371.77	7.005		
15,200.00	7,950.00	14,968.63	7,950.00	189.03	188.44	89.89	613.96	-6,355.07	2,603.90	2,226.83	377.07	6.906		
15,300.00	7,950.00	15,068.63	7,950.00	191.68	191.09	89.89	613.38	-6,455.07	2,603.44	2,221.06	382.37	6.809		
15,400.00	7,950.00	15,168.63	7,950.00	194.33	193.75	89.89	612.81	-6,555.07	2,602.98	2,215.30	387.68	6.714		
15,500.00	7,950.00	15,268.63	7,950.00	196.97	196.40	89.89	612.23	-6,655.06	2,602.52	2,209.53	392.99	6.622		
15,600.00	7,950.00	15,368.63	7,950.00	199.62	199.06	89.89	611.66	-6,755.06	2,602.06	2,203.76	398.30	6.533		
15,700.00	7,950.00	15,468.63	7,950.00	202.27	201.72	89.89	611.09	-6,855.06	2,601.60	2,197.98	403.61	6.446		
15,800.00	7,950.00	15,568.62	7,950.00	204.93	204.38	89.89	610.51	-6,955.05	2,601.14	2,192.21	408.93	6.361		
15,900.00	7,950.00	15,668.62	7,950.00	207.58	207.04	89.89	609.94	-7,055.05	2,600.67	2,186.43	414.24	6.278		
16,000.00	7,950.00	15,768.62	7,950.00	210.23	209.70	89.89	609.36	-7,155.05	2,600.21	2,180.65	419.56	6.197		
16,100.00	7,950.00	15,868.62	7,950.00	212.89	212.36	89.89	608.79	-7,255.05	2,599.75	2,174.87	424.88	6.119		
16,200.00	7,950.00	15,968.62	7,950.00	215.54	215.02	89.89	608.21	-7,355.04	2,599.29	2,169.09	430.20	6.042		
16,300.00	7,950.00	16,068.62	7,950.00	218.20	217.68	89.89	607.64	-7,455.04	2,598.83	2,163.31	435.53	5.967		
16,400.00	7,950.00	16,168.62	7,950.00	220.85	220.35	89.89	607.06	-7,555.04	2,598.37	2,157.52	440.85	5.894		
16,500.00	7,950.00	16,268.62	7,950.00	223.51	223.01	89.89	606.49	-7,655.04	2,597.91	2,151.73	446.18	5.823		
16,600.00	7,950.00	16,368.62	7,950.00	226.17	225.67	89.89	605.91	-7,755.03	2,597.45	2,145.95	451.50	5.753		
16,700.00	7,950.00	16,468.61	7,950.00	228.83	228.34	89.89	605.34	-7,855.03	2,596.99	2,140.16	456.83	5.685		
16,800.00	7,950.00	16,568.61	7,950.00	231.49	231.01	89.89	604.76	-7,955.03	2,596.53	2,134.37	462.16	5.618		
16,900.00	7,950.00	16,668.61	7,950.00	234.15	233.67	89.89	604.19	-8,055.02	2,596.07	2,128.57	467.49	5.553		
17,000.00	7,950.00	16,768.61	7,950.00	236.81	236.34	89.89	603.61	-8,155.02	2,595.61	2,122.78	472.82	5.490		
17,100.00	7,950.00	16,868.61	7,950.00	239.47	239.01	89.89	603.04	-8,255.02	2,595.15	2,116.99	478.16	5.427		
17,200.00	7,950.00	16,968.61	7,950.00	242.14	241.68	89.89	602.46	-8,355.02	2,594.69	2,111.19	483.49	5.367		
17,300.00	7,950.00	17,068.61	7,950.00	244.80	244.34	89.89	601.89	-8,455.01	2,594.22	2,105.40	488.83	5.307		
17,400.00	7,950.00	17,168.61	7,950.00	247.46	247.01	89.89	601.31	-8,555.01	2,593.76	2,099.60	494.16	5.249		
17,500.00	7,950.00	17,268.61	7,950.00	250.13	249.68	89.89	600.74	-8,655.01	2,593.30	2,093.80	499.50	5.192		
17,600.00	7,950.00	17,368.60	7,950.00	252.79	252.35	89.89	600.16	-8,755.01	2,592.84	2,088.00	504.84	5.136		
17,700.00	7,950.00	17,468.60	7,950.00	255.46	255.02	89.89	599.59	-8,855.00	2,592.38	2,082.20	510.18	5.081		
17,800.00	7,950.00	17,568.60	7,950.00	258.13	257.69	89.89	599.01	-8,955.00	2,591.92	2,076.40	515.52	5.028		
17,900.00	7,950.00	17,668.60	7,950.00	260.79	260.37	89.89	598.44	-9,055.00	2,591.46	2,070.60	520.86	4.975		
18,000.00	7,950.00	17,768.60	7,950.00	263.46	263.04	89.89	597.86	-9,155.00	2,591.00	2,064.80	526.20	4.924		
18,100.00	7,950.00	17,868.60	7,950.00	266.13	265.71	89.89	597.29	-9,254.99	2,590.54	2,058.99	531.55	4.874		
18,200.00	7,950.00	17,968.60	7,950.00	268.80	268.38	89.89	596.71	-9,354.99	2,590.08	2,053.19	536.89	4.824		
18,300.00	7,950.00	18,068.60	7,950.00	271.47	271.06	89.89	596.14	-9,454.99	2,589.62	2,047.38	542.23	4.776		
18,400.00	7,950.00	18,168.60	7,950.00	274.14	273.73	89.89	595.56	-9,554.98	2,589.16	2,041.58	547.58	4.728		
18,473.85	7,950.00	18,230.53	7,950.00	276.11	275.38	89.89	595.21	-9,616.91	2,588.84	2,037.68	551.17	4.697		
18,481.45	7,950.00	18,230.53	7,950.00	276.31	275.38	89.89	595.21	-9,616.91	2,588.86	2,037.52	551.34	4.696 SF		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 2AH - 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	4.40	4.40	0.00	0.01	-0.16	99.81	-0.28	99.81				
100.00	100.00	104.40	104.40	0.13	0.15	-0.16	99.81	-0.28	99.81	99.53	0.28	350.669	
200.00	200.00	204.40	204.40	0.49	0.51	-0.16	99.81	-0.28	99.81	98.81	1.00	99.653	
250.00	250.00	254.42	254.42	0.67	0.69	-0.16	99.81	-0.28	99.81	98.45	1.36	73.405	
250.71	250.71	255.13	255.13	0.67	0.69	-155.27	99.81	-0.28	99.81	98.44	1.36	73.139 CC	
300.00	300.00	304.64	304.63	0.84	0.86	-155.08	99.75	0.24	100.14	98.43	1.71	58.671 ES	
400.00	399.93	404.97	404.90	1.19	1.21	-153.85	99.29	3.88	102.88	100.48	2.40	42.894	
500.00	499.68	505.04	504.71	1.54	1.58	-151.65	98.41	10.98	108.49	105.37	3.12	34.801	
600.00	599.13	604.68	603.77	1.92	1.96	-148.80	97.11	21.48	117.15	113.29	3.86	30.346	
700.00	698.15	703.85	702.19	2.32	2.35	-146.40	95.60	33.61	128.97	124.34	4.63	27.871	
800.00	796.63	802.71	800.30	2.75	2.74	-145.15	94.10	45.70	143.79	138.38	5.41	26.573	
900.00	894.44	901.13	897.97	3.21	3.14	-144.80	92.61	57.74	161.46	155.25	6.21	26.003	
1,000.00	991.46	1,001.01	995.08	3.71	3.54	-145.09	91.12	69.71	181.94	174.91	7.03	25.888	
1,085.22	1,073.44	1,081.86	1,077.32	4.17	3.87	-145.68	89.86	79.84	201.62	193.90	7.72	26.120	
1,100.00	1,087.59	1,103.81	1,091.54	4.25	3.96	-145.85	89.65	81.60	205.21	197.34	7.87	26.062	
1,200.00	1,183.37	1,206.88	1,187.72	4.81	4.39	-146.81	88.18	93.45	229.56	220.85	8.72	26.335	
1,300.00	1,279.15	1,309.96	1,283.91	5.39	4.81	-147.58	86.70	105.31	253.96	244.40	9.56	26.552	
1,400.00	1,374.93	1,386.97	1,380.10	5.98	5.13	-148.22	85.23	117.16	278.40	268.09	10.31	27.006	
1,500.00	1,470.71	1,483.89	1,476.28	6.57	5.52	-148.76	83.76	129.02	302.87	291.73	11.14	27.194	
1,600.00	1,566.49	1,580.82	1,572.47	7.16	5.92	-149.22	82.29	140.87	327.35	315.38	11.97	27.353	
1,700.00	1,662.27	1,677.74	1,668.66	7.76	6.32	-149.61	80.82	152.73	351.85	339.05	12.80	27.490	
1,800.00	1,758.05	1,774.67	1,764.84	8.36	6.72	-149.95	79.35	164.58	376.37	362.74	13.63	27.608	
1,900.00	1,853.83	1,871.59	1,861.03	8.96	7.12	-150.25	77.88	176.44	400.90	386.43	14.47	27.711	
2,000.00	1,949.61	1,968.52	1,957.21	9.57	7.52	-150.52	76.40	188.29	425.43	410.13	15.30	27.803	
2,100.00	2,045.39	2,065.44	2,053.40	10.17	7.92	-150.76	74.93	200.15	449.98	433.84	16.14	27.884	
2,200.00	2,141.17	2,162.37	2,149.59	10.78	8.32	-150.97	73.46	212.00	474.53	457.55	16.97	27.956	
2,300.00	2,236.95	2,259.29	2,245.77	11.39	8.73	-151.16	71.99	223.85	499.08	481.27	17.81	28.022	
2,400.00	2,332.73	2,356.22	2,341.96	11.99	9.13	-151.33	70.52	235.71	523.64	505.00	18.65	28.081	
2,500.00	2,428.51	2,453.15	2,438.15	12.60	9.53	-151.49	69.05	247.56	548.21	528.72	19.49	28.134	
2,600.00	2,524.30	2,550.07	2,534.33	13.21	9.93	-151.64	67.58	259.42	572.78	552.45	20.32	28.183	
2,700.00	2,620.08	2,647.00	2,630.52	13.82	10.33	-151.77	66.11	271.27	597.35	576.19	21.16	28.228	
2,800.00	2,715.86	2,743.92	2,726.71	14.43	10.73	-151.89	64.63	283.13	621.92	599.92	22.00	28.269	
2,900.00	2,811.64	2,840.85	2,822.89	15.04	11.13	-152.00	63.16	294.98	646.50	623.66	22.84	28.307	
3,000.00	2,907.42	2,937.77	2,919.08	15.66	11.53	-152.11	61.69	306.84	671.08	647.40	23.68	28.342	
3,100.00	3,003.20	3,034.70	3,015.27	16.27	11.93	-152.21	60.22	318.69	695.66	671.14	24.52	28.375	
3,200.00	3,098.98	3,131.62	3,111.45	16.88	12.34	-152.30	58.75	330.55	720.24	694.88	25.36	28.405	
3,300.00	3,194.76	3,228.55	3,207.64	17.49	12.74	-152.38	57.28	342.40	744.83	718.63	26.20	28.433	
3,400.00	3,290.54	3,325.47	3,303.82	18.10	13.14	-152.46	55.81	354.26	769.41	742.38	27.04	28.459	
3,500.00	3,386.32	3,422.40	3,400.01	18.72	13.54	-152.53	54.33	366.11	794.00	766.12	27.88	28.484	
3,600.00	3,482.10	3,519.32	3,496.20	19.33	13.94	-152.60	52.86	377.97	818.59	789.87	28.72	28.507	
3,700.00	3,577.88	3,616.25	3,592.38	19.94	14.34	-152.67	51.39	389.82	843.17	813.62	29.56	28.529	
3,800.00	3,673.66	3,713.17	3,688.57	20.55	14.75	-152.73	49.92	401.68	867.76	837.37	30.40	28.549	
3,900.00	3,769.44	3,810.10	3,784.76	21.17	15.15	-152.79	48.45	413.53	892.36	861.12	31.24	28.568	
4,000.00	3,865.22	3,907.03	3,880.94	21.78	15.55	-152.84	46.98	425.39	916.95	884.87	32.08	28.587	
4,100.00	3,961.00	4,003.95	3,977.13	22.39	15.95	-152.90	45.51	437.24	941.54	908.62	32.92	28.604	
4,200.00	4,056.78	4,100.88	4,073.32	23.01	16.35	-152.95	44.03	449.10	966.13	932.38	33.76	28.620	
4,300.00	4,152.56	4,202.20	4,169.50	23.62	16.77	-152.99	42.56	460.95	990.73	956.11	34.62	28.620	
4,400.00	4,248.34	4,305.27	4,265.69	24.23	17.20	-153.04	41.09	472.81	1,015.32	979.84	35.48	28.615	
4,500.00	4,344.12	4,408.35	4,361.87	24.85	17.63	-153.08	39.62	484.66	1,039.92	1,003.57	36.35	28.610	
4,600.00	4,439.90	4,488.58	4,458.06	25.46	17.96	-153.12	38.15	496.52	1,064.51	1,027.39	37.12	28.677	
4,700.00	4,535.68	4,585.50	4,554.25	26.08	18.36	-153.16	36.68	508.37	1,089.11	1,051.15	37.96	28.690	
4,800.00	4,631.46	4,682.43	4,650.43	26.69	18.76	-153.20	35.21	520.23	1,113.71	1,074.90	38.80	28.702	

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 2AH - 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		
4,900.00	4,727.24	4,779.35	4,746.62	27.30	19.16	-153.24	33.74	532.08	1,138.30	1,098.66	39.64	28.713		
5,000.00	4,823.02	4,876.28	4,842.81	27.92	19.57	-153.27	32.26	543.94	1,162.90	1,122.41	40.49	28.724		
5,100.00	4,918.80	4,973.20	4,938.99	28.53	19.97	-153.30	30.79	555.79	1,187.50	1,146.17	41.33	28.735		
5,200.00	5,014.58	5,070.13	5,035.18	29.15	20.37	-153.33	29.32	567.65	1,212.10	1,169.93	42.17	28.745		
5,300.00	5,110.36	5,167.06	5,131.37	29.76	20.77	-153.36	27.85	579.50	1,236.69	1,193.68	43.01	28.754		
5,400.00	5,206.14	5,263.98	5,227.55	30.37	21.17	-153.39	26.38	591.36	1,261.29	1,217.44	43.85	28.763		
5,500.00	5,301.92	5,360.91	5,323.74	30.99	21.58	-153.42	24.91	603.21	1,285.89	1,241.20	44.69	28.772		
5,600.00	5,397.70	5,457.83	5,419.92	31.60	21.98	-153.45	23.44	615.07	1,310.49	1,264.96	45.53	28.780		
5,700.00	5,493.48	5,554.76	5,516.11	32.22	22.38	-153.47	21.96	626.92	1,335.09	1,288.71	46.38	28.788		
5,800.00	5,589.26	5,651.68	5,612.30	32.83	22.78	-153.50	20.49	638.78	1,359.69	1,312.47	47.22	28.796		
5,900.00	5,685.04	5,748.61	5,708.48	33.45	23.18	-153.52	19.02	650.63	1,384.29	1,336.23	48.06	28.803		
6,000.00	5,780.82	5,845.53	5,804.67	34.06	23.59	-153.55	17.55	662.49	1,408.89	1,359.99	48.90	28.811		
6,100.00	5,876.60	5,942.46	5,900.86	34.67	23.99	-153.57	16.08	674.34	1,433.49	1,383.75	49.74	28.817		
6,200.00	5,972.38	6,039.38	5,997.04	35.29	24.39	-153.59	14.61	686.20	1,458.09	1,407.51	50.59	28.824		
6,300.00	6,068.16	6,136.31	6,093.23	35.90	24.79	-153.61	13.14	698.05	1,482.69	1,431.26	51.43	28.830		
6,400.00	6,163.94	6,233.23	6,189.42	36.52	25.19	-153.63	11.66	709.91	1,507.29	1,455.02	52.27	28.836		
6,500.00	6,259.72	6,330.16	6,285.60	37.13	25.59	-153.65	10.19	721.76	1,531.90	1,478.78	53.11	28.842		
6,600.00	6,355.50	6,427.08	6,381.79	37.75	26.00	-153.67	8.72	733.62	1,556.50	1,502.54	53.96	28.848		
6,700.00	6,451.28	6,524.01	6,477.98	38.36	26.40	-153.69	7.25	745.47	1,581.10	1,526.30	54.80	28.853		
6,800.00	6,547.06	6,620.94	6,574.16	38.98	26.80	-153.71	5.78	757.33	1,605.70	1,550.06	55.64	28.858		
6,900.00	6,642.84	6,717.86	6,670.35	39.59	27.20	-153.72	4.31	769.18	1,630.30	1,573.82	56.48	28.864		
7,000.00	6,738.62	6,814.79	6,766.53	40.21	27.60	-153.74	2.84	781.04	1,654.90	1,597.58	57.33	28.868		
7,100.00	6,834.40	6,911.71	6,862.72	40.82	28.01	-153.76	1.37	792.89	1,679.51	1,621.34	58.17	28.873		
7,200.00	6,930.18	7,008.64	6,958.91	41.43	28.41	-153.77	-0.11	804.75	1,704.11	1,645.10	59.01	28.878		
7,300.00	7,025.96	7,105.56	7,055.09	42.05	28.81	-153.79	-1.58	816.60	1,728.71	1,668.86	59.85	28.882		
7,400.00	7,121.74	7,202.49	7,151.28	42.66	29.21	-153.80	-3.05	828.46	1,753.31	1,692.62	60.70	28.886		
7,500.00	7,217.52	7,300.08	7,248.15	43.28	29.61	-153.83	-4.53	840.17	1,777.91	1,716.37	61.54	28.889		
7,600.00	7,313.30	7,399.58	7,347.51	43.89	29.92	-154.21	-6.12	840.92	1,802.40	1,740.18	62.22	28.968		
7,617.92	7,330.46	7,416.85	7,364.71	44.00	29.96	-154.34	-6.40	839.29	1,806.79	1,744.48	62.31	28.997		
7,650.00	7,361.28	7,447.38	7,394.94	44.20	30.03	-165.87	-6.91	835.16	1,814.69	1,752.23	62.46	29.055		
7,700.00	7,409.49	7,494.28	7,440.85	44.47	30.11	174.43	-7.70	825.68	1,827.07	1,764.43	62.64	29.169		
7,750.00	7,457.61	7,540.43	7,485.13	44.71	30.17	155.64	-8.48	812.71	1,839.47	1,776.70	62.77	29.304		
7,800.00	7,505.28	7,585.94	7,527.62	44.91	30.22	140.27	-9.26	796.48	1,851.79	1,788.92	62.86	29.457		
7,850.00	7,552.12	7,630.87	7,568.19	45.08	30.26	128.61	-10.02	777.20	1,863.91	1,800.99	62.92	29.621		
7,900.00	7,597.78	7,675.31	7,606.70	45.23	30.29	119.87	-10.76	755.06	1,875.74	1,812.78	62.96	29.793		
7,950.00	7,641.91	7,719.31	7,643.03	45.34	30.32	113.18	-11.48	730.26	1,887.19	1,824.21	62.98	29.965		
8,000.00	7,684.18	7,762.95	7,677.07	45.43	30.34	107.95	-12.19	702.99	1,898.15	1,835.16	62.99	30.134		
8,050.00	7,724.27	7,806.28	7,708.72	45.50	30.36	103.76	-12.86	673.42	1,908.55	1,845.55	63.00	30.293		
8,100.00	7,761.87	7,849.33	7,737.87	45.54	30.40	100.33	-13.51	641.76	1,918.29	1,855.26	63.02	30.437		
8,150.00	7,796.69	7,892.16	7,764.43	45.57	30.44	97.51	-14.13	608.17	1,927.30	1,864.23	63.07	30.558		
8,200.00	7,828.47	7,934.80	7,788.31	45.58	30.50	95.16	-14.71	572.86	1,935.50	1,872.35	63.15	30.650		
8,250.00	7,856.97	7,977.28	7,809.42	45.57	30.58	93.22	-15.26	536.01	1,942.84	1,879.57	63.27	30.707		
8,300.00	7,881.97	8,019.63	7,827.69	45.54	30.68	91.62	-15.78	497.82	1,949.25	1,885.81	63.44	30.725		
8,350.00	7,903.28	8,061.87	7,843.05	45.50	30.80	90.33	-16.25	458.49	1,954.68	1,891.01	63.67	30.698		
8,400.00	7,920.74	8,104.01	7,855.45	45.44	30.95	89.31	-16.68	418.23	1,959.10	1,895.12	63.97	30.623		
8,450.00	7,934.22	8,146.07	7,864.84	45.38	31.13	88.55	-17.06	377.24	1,962.46	1,898.11	64.35	30.498		
8,500.00	7,943.60	8,188.07	7,871.20	45.30	31.34	88.03	-17.40	335.74	1,964.74	1,899.95	64.79	30.323		
8,550.00	7,948.83	8,230.01	7,874.49	45.22	31.58	87.75	-17.70	293.94	1,965.92	1,900.61	65.31	30.102		
8,587.24	7,950.00	8,262.59	7,875.00	45.15	31.78	87.69	-17.89	261.37	1,966.08	1,900.35	65.73	29.909		
8,600.00	7,950.00	8,275.35	7,875.00	45.13	31.86	87.69	-17.97	248.60	1,966.02	1,900.12	65.90	29.834		
8,700.00	7,950.00	8,375.35	7,875.00	44.96	32.65	87.68	-18.54	148.61	1,965.56	1,898.15	67.41	29.156		
8,800.00	7,950.00	8,475.35	7,875.00	44.81	33.63	87.68	-19.11	48.61	1,965.10	1,895.80	69.30	28.355		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 2AH - 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		
8,900.00	7,950.00	8,575.35	7,875.00	44.69	34.79	87.68	-19.69	-51.39	1,964.64	1,893.09	71.55	27.459		
9,000.00	7,950.00	8,675.34	7,875.00	44.58	36.12	87.68	-20.26	-151.39	1,964.18	1,890.07	74.12	26.502		
9,100.00	7,950.00	8,775.34	7,875.00	44.50	37.59	87.68	-20.84	-251.38	1,963.72	1,886.75	76.97	25.511		
9,200.00	7,950.00	8,875.34	7,875.00	44.48	39.19	87.68	-21.41	-351.38	1,963.26	1,883.17	80.09	24.512		
9,300.00	7,950.00	8,975.34	7,875.00	44.63	40.91	87.68	-21.99	-451.38	1,962.80	1,879.36	83.44	23.523		
9,400.00	7,950.00	9,075.34	7,875.00	45.49	42.73	87.68	-22.56	-551.37	1,962.34	1,875.35	86.99	22.557		
9,500.00	7,950.00	9,175.34	7,875.00	47.12	44.64	87.68	-23.14	-651.37	1,961.88	1,871.15	90.73	21.624		
9,600.00	7,950.00	9,275.34	7,875.00	48.99	46.63	87.68	-23.71	-751.37	1,961.42	1,866.80	94.62	20.730		
9,700.00	7,950.00	9,375.34	7,875.00	50.96	48.68	87.68	-24.29	-851.37	1,960.96	1,862.31	98.65	19.878		
9,800.00	7,950.00	9,475.34	7,875.00	53.01	50.79	87.68	-24.86	-951.36	1,960.50	1,857.70	102.80	19.070		
9,900.00	7,950.00	9,575.33	7,875.00	55.12	52.96	87.68	-25.44	-1,051.36	1,960.04	1,852.97	107.07	18.307		
10,000.00	7,950.00	9,675.33	7,875.00	57.28	55.17	87.68	-26.01	-1,151.36	1,959.58	1,848.15	111.43	17.586		
10,100.00	7,950.00	9,775.33	7,875.00	59.48	57.42	87.68	-26.59	-1,251.36	1,959.12	1,843.25	115.87	16.907		
10,200.00	7,950.00	9,875.33	7,875.00	61.71	59.71	87.68	-27.16	-1,351.35	1,958.66	1,838.26	120.40	16.268		
10,300.00	7,950.00	9,975.33	7,875.00	63.99	62.03	87.68	-27.74	-1,451.35	1,958.20	1,833.21	124.99	15.667		
10,400.00	7,950.00	10,075.33	7,875.00	66.29	64.39	87.68	-28.31	-1,551.35	1,957.74	1,828.10	129.64	15.102		
10,500.00	7,950.00	10,175.33	7,875.00	68.62	66.76	87.68	-28.89	-1,651.34	1,957.28	1,822.94	134.34	14.569		
10,600.00	7,950.00	10,275.33	7,875.00	70.97	69.16	87.67	-29.46	-1,751.34	1,956.82	1,817.72	139.10	14.068		
10,700.00	7,950.00	10,375.33	7,875.00	73.34	71.58	87.67	-30.04	-1,851.34	1,956.36	1,812.46	143.89	13.596		
10,800.00	7,950.00	10,475.33	7,875.00	75.74	74.02	87.67	-30.61	-1,951.34	1,955.90	1,807.17	148.73	13.150		
10,900.00	7,950.00	10,575.32	7,875.00	78.15	76.48	87.67	-31.19	-2,051.33	1,955.44	1,801.83	153.61	12.730		
11,000.00	7,950.00	10,675.32	7,875.00	80.58	78.95	87.67	-31.76	-2,151.33	1,954.98	1,796.46	158.51	12.333		
11,100.00	7,950.00	10,775.32	7,875.00	83.03	81.43	87.67	-32.34	-2,251.33	1,954.52	1,791.07	163.45	11.958		
11,200.00	7,950.00	10,875.32	7,875.00	85.49	83.93	87.67	-32.91	-2,351.33	1,954.06	1,785.64	168.41	11.603		
11,300.00	7,950.00	10,975.32	7,875.00	87.96	86.44	87.67	-33.49	-2,451.32	1,953.60	1,780.19	173.40	11.266		
11,400.00	7,950.00	11,075.32	7,875.00	90.45	88.96	87.67	-34.06	-2,551.32	1,953.14	1,774.72	178.41	10.947		
11,500.00	7,950.00	11,175.32	7,875.00	92.95	91.49	87.67	-34.64	-2,651.32	1,952.68	1,769.23	183.45	10.644		
11,600.00	7,950.00	11,275.32	7,875.00	95.45	94.03	87.67	-35.21	-2,751.31	1,952.22	1,763.72	188.50	10.357		
11,700.00	7,950.00	11,375.32	7,875.00	97.97	96.57	87.67	-35.78	-2,851.31	1,951.76	1,758.19	193.57	10.083		
11,800.00	7,950.00	11,475.31	7,875.00	100.49	99.13	87.67	-36.36	-2,951.31	1,951.30	1,752.64	198.65	9.823		
11,900.00	7,950.00	11,575.31	7,875.00	103.03	101.69	87.67	-36.93	-3,051.31	1,950.84	1,747.08	203.75	9.575		
12,000.00	7,950.00	11,675.31	7,875.00	105.57	104.26	87.67	-37.51	-3,151.30	1,950.38	1,741.51	208.87	9.338		
12,100.00	7,950.00	11,775.31	7,875.00	108.11	106.83	87.67	-38.08	-3,251.30	1,949.92	1,735.92	213.99	9.112		
12,200.00	7,950.00	11,875.31	7,875.00	110.67	109.41	87.67	-38.66	-3,351.30	1,949.46	1,730.32	219.13	8.896		
12,300.00	7,950.00	11,975.31	7,875.00	113.23	112.00	87.67	-39.23	-3,451.30	1,949.00	1,724.71	224.28	8.690		
12,400.00	7,950.00	12,075.31	7,875.00	115.79	114.59	87.66	-39.81	-3,551.29	1,948.53	1,719.09	229.45	8.492		
12,500.00	7,950.00	12,175.31	7,875.00	118.36	117.18	87.66	-40.38	-3,651.29	1,948.07	1,713.46	234.62	8.303		
12,600.00	7,950.00	12,275.31	7,875.00	120.94	119.78	87.66	-40.96	-3,751.29	1,947.61	1,707.82	239.80	8.122		
12,700.00	7,950.00	12,375.31	7,875.00	123.52	122.39	87.66	-41.53	-3,851.29	1,947.15	1,702.17	244.99	7.948		
12,800.00	7,950.00	12,475.30	7,875.00	126.11	124.99	87.66	-42.11	-3,951.28	1,946.69	1,696.51	250.18	7.781		
12,900.00	7,950.00	12,575.30	7,875.00	128.70	127.60	87.66	-42.68	-4,051.28	1,946.23	1,690.85	255.39	7.621		
13,000.00	7,950.00	12,675.30	7,875.00	131.29	130.22	87.66	-43.26	-4,151.28	1,945.77	1,685.18	260.60	7.467		
13,100.00	7,950.00	12,775.30	7,875.00	133.89	132.83	87.66	-43.83	-4,251.27	1,945.31	1,679.50	265.82	7.318		
13,200.00	7,950.00	12,875.30	7,875.00	136.49	135.45	87.66	-44.41	-4,351.27	1,944.85	1,673.81	271.04	7.175		
13,300.00	7,950.00	12,975.30	7,875.00	139.09	138.07	87.66	-44.98	-4,451.27	1,944.39	1,668.12	276.27	7.038		
13,400.00	7,950.00	13,075.30	7,875.00	141.70	140.70	87.66	-45.56	-4,551.27	1,943.93	1,662.42	281.51	6.905		
13,500.00	7,950.00	13,175.30	7,875.00	144.31	143.33	87.66	-46.13	-4,651.26	1,943.47	1,656.72	286.75	6.778		
13,600.00	7,950.00	13,275.30	7,875.00	146.93	145.96	87.66	-46.71	-4,751.26	1,943.01	1,651.02	292.00	6.654		
13,700.00	7,950.00	13,375.29	7,875.00	149.54	148.59	87.66	-47.28	-4,851.26	1,942.55	1,645.31	297.25	6.535		
13,800.00	7,950.00	13,475.29	7,875.00	152.16	151.22	87.66	-47.86	-4,951.26	1,942.09	1,639.59	302.50	6.420		
13,900.00	7,950.00	13,575.29	7,875.00	154.78	153.86	87.66	-48.43	-5,051.25	1,941.63	1,633.87	307.76	6.309		
14,000.00	7,950.00	13,675.29	7,875.00	157.41	156.50	87.66	-49.01	-5,151.25	1,941.17	1,628.14	313.03	6.201		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 2AH - 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		
14,100.00	7,950.00	13,775.29	7,875.00	160.03	159.13	87.66	-49.58	-5,251.25	1,940.71	1,622.42	318.30	6.097		
14,200.00	7,950.00	13,875.29	7,875.00	162.66	161.78	87.65	-50.16	-5,351.24	1,940.25	1,616.68	323.57	5.996		
14,300.00	7,950.00	13,975.29	7,875.00	165.29	164.42	87.65	-50.73	-5,451.24	1,939.79	1,610.95	328.84	5.899		
14,400.00	7,950.00	14,075.29	7,875.00	167.92	167.06	87.65	-51.31	-5,551.24	1,939.33	1,605.21	334.12	5.804		
14,500.00	7,950.00	14,175.29	7,875.00	170.55	169.71	87.65	-51.88	-5,651.24	1,938.87	1,599.47	339.40	5.713		
14,600.00	7,950.00	14,275.28	7,875.00	173.19	172.36	87.65	-52.45	-5,751.23	1,938.41	1,593.72	344.69	5.624		
14,700.00	7,950.00	14,375.28	7,875.00	175.83	175.01	87.65	-53.03	-5,851.23	1,937.95	1,587.98	349.97	5.537		
14,800.00	7,950.00	14,475.28	7,875.00	178.46	177.66	87.65	-53.60	-5,951.23	1,937.49	1,582.23	355.26	5.454		
14,900.00	7,950.00	14,575.28	7,875.00	181.10	180.31	87.65	-54.18	-6,051.23	1,937.03	1,576.47	360.56	5.372		
15,000.00	7,950.00	14,675.28	7,875.00	183.75	182.96	87.65	-54.75	-6,151.22	1,936.57	1,570.72	365.85	5.293		
15,100.00	7,950.00	14,775.28	7,875.00	186.39	185.61	87.65	-55.33	-6,251.22	1,936.11	1,564.96	371.15	5.217		
15,200.00	7,950.00	14,875.28	7,875.00	189.03	188.27	87.65	-55.90	-6,351.22	1,935.65	1,559.20	376.45	5.142		
15,300.00	7,950.00	14,975.28	7,875.00	191.68	190.92	87.65	-56.48	-6,451.21	1,935.19	1,553.44	381.75	5.069		
15,400.00	7,950.00	15,075.28	7,875.00	194.33	193.58	87.65	-57.05	-6,551.21	1,934.73	1,547.67	387.06	4.999		
15,500.00	7,950.00	15,175.28	7,875.00	196.97	196.24	87.65	-57.63	-6,651.21	1,934.27	1,541.90	392.36	4.930		
15,600.00	7,950.00	15,275.27	7,875.00	199.62	198.90	87.65	-58.20	-6,751.21	1,933.81	1,536.14	397.67	4.863		
15,700.00	7,950.00	15,375.27	7,875.00	202.27	201.55	87.65	-58.78	-6,851.20	1,933.35	1,530.36	402.98	4.798		
15,800.00	7,950.00	15,475.27	7,875.00	204.93	204.21	87.65	-59.35	-6,951.20	1,932.89	1,524.59	408.30	4.734		
15,900.00	7,950.00	15,575.27	7,875.00	207.58	206.88	87.65	-59.93	-7,051.20	1,932.43	1,518.82	413.61	4.672		
16,000.00	7,950.00	15,675.27	7,875.00	210.23	209.54	87.64	-60.50	-7,151.20	1,931.97	1,513.04	418.93	4.612		
16,100.00	7,950.00	15,775.27	7,875.00	212.89	212.20	87.64	-61.08	-7,251.19	1,931.51	1,507.27	424.24	4.553		
16,200.00	7,950.00	15,875.27	7,875.00	215.54	214.86	87.64	-61.65	-7,351.19	1,931.05	1,501.49	429.56	4.495		
16,300.00	7,950.00	15,975.27	7,875.00	218.20	217.53	87.64	-62.23	-7,451.19	1,930.59	1,495.71	434.88	4.439		
16,400.00	7,950.00	16,075.27	7,875.00	220.85	220.19	87.64	-62.80	-7,551.18	1,930.13	1,489.92	440.20	4.385		
16,500.00	7,950.00	16,175.26	7,875.00	223.51	222.86	87.64	-63.38	-7,651.18	1,929.67	1,484.14	445.53	4.331		
16,600.00	7,950.00	16,275.26	7,875.00	226.17	225.52	87.64	-63.95	-7,751.18	1,929.21	1,478.36	450.85	4.279		
16,700.00	7,950.00	16,375.26	7,875.00	228.83	228.19	87.64	-64.53	-7,851.18	1,928.75	1,472.57	456.18	4.228		
16,800.00	7,950.00	16,475.26	7,875.00	231.49	230.86	87.64	-65.10	-7,951.17	1,928.29	1,466.78	461.50	4.178		
16,900.00	7,950.00	16,575.26	7,875.00	234.15	233.52	87.64	-65.68	-8,051.17	1,927.83	1,460.99	466.83	4.130		
17,000.00	7,950.00	16,675.26	7,875.00	236.81	236.19	87.64	-66.25	-8,151.17	1,927.37	1,455.20	472.16	4.082		
17,100.00	7,950.00	16,775.26	7,875.00	239.47	238.86	87.64	-66.83	-8,251.17	1,926.91	1,449.41	477.49	4.035		
17,200.00	7,950.00	16,875.26	7,875.00	242.14	241.53	87.64	-67.40	-8,351.16	1,926.45	1,443.62	482.82	3.990		
17,300.00	7,950.00	16,975.26	7,875.00	244.80	244.20	87.64	-67.97	-8,451.16	1,925.99	1,437.83	488.16	3.945		
17,400.00	7,950.00	17,075.26	7,875.00	247.46	246.87	87.64	-68.55	-8,551.16	1,925.53	1,432.04	493.49	3.902		
17,500.00	7,950.00	17,175.25	7,875.00	250.13	249.54	87.64	-69.12	-8,651.15	1,925.07	1,426.24	498.82	3.859		
17,600.00	7,950.00	17,275.25	7,875.00	252.79	252.21	87.64	-69.70	-8,751.15	1,924.61	1,420.45	504.16	3.817		
17,700.00	7,950.00	17,375.25	7,875.00	255.46	254.88	87.63	-70.27	-8,851.15	1,924.14	1,414.65	509.50	3.777		
17,800.00	7,950.00	17,475.25	7,875.00	258.13	257.55	87.63	-70.85	-8,951.15	1,923.68	1,408.85	514.83	3.737		
17,900.00	7,950.00	17,575.25	7,875.00	260.79	260.23	87.63	-71.42	-9,051.14	1,923.22	1,403.05	520.17	3.697		
18,000.00	7,950.00	17,675.25	7,875.00	263.46	262.90	87.63	-72.00	-9,151.14	1,922.76	1,397.25	525.51	3.659		
18,100.00	7,950.00	17,775.25	7,875.00	266.13	265.57	87.63	-72.57	-9,251.14	1,922.30	1,391.45	530.85	3.621		
18,200.00	7,950.00	17,875.25	7,875.00	268.80	268.24	87.63	-73.15	-9,351.14	1,921.84	1,385.65	536.19	3.584		
18,300.00	7,950.00	17,975.25	7,875.00	271.47	270.92	87.63	-73.72	-9,451.13	1,921.38	1,379.85	541.53	3.548		
18,400.00	7,950.00	18,075.24	7,875.00	274.14	273.59	87.63	-74.30	-9,551.13	1,920.92	1,374.05	546.88	3.513		
18,475.41	7,950.00	18,142.12	7,875.00	276.15	275.38	87.63	-74.68	-9,618.01	1,920.60	1,369.98	550.62	3.488		
18,481.45	7,950.00	18,142.12	7,875.00	276.31	275.38	87.63	-74.68	-9,618.01	1,920.60	1,369.88	550.73	3.487 SF		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 2BH - 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	0.00	49.90	0.00	49.90					
100.00	100.00	100.00	100.00	0.13	0.13	0.00	49.90	0.00	49.90	49.64	0.27	185.620		
200.00	200.00	200.00	200.00	0.49	0.49	0.00	49.90	0.00	49.90	48.92	0.99	50.624		
250.00	250.00	250.00	250.00	0.67	0.67	0.00	49.90	0.00	49.90	48.56	1.34	37.124 CC		
300.00	300.00	300.55	300.55	0.84	0.85	-154.92	49.63	0.35	50.03	48.33	1.69	29.594 ES		
400.00	399.93	401.63	401.56	1.19	1.20	-153.46	47.40	3.13	51.01	48.63	2.38	21.456		
500.00	499.68	502.65	502.32	1.54	1.56	-150.69	42.95	8.69	53.06	49.97	3.09	17.180		
600.00	599.13	603.56	602.67	1.92	1.94	-146.95	36.29	17.02	56.35	52.52	3.83	14.727		
700.00	698.15	704.27	702.37	2.32	2.34	-142.62	27.46	28.06	61.05	56.45	4.60	13.272		
800.00	796.63	803.96	800.85	2.75	2.76	-139.68	17.79	40.14	68.09	62.68	5.41	12.591		
900.00	894.44	903.48	899.16	3.21	3.19	-138.98	8.14	52.21	77.87	71.63	6.24	12.484		
1,000.00	991.46	1,002.69	997.17	3.71	3.62	-139.86	-1.48	64.24	90.27	83.20	7.08	12.756		
1,085.22	1,073.44	1,086.90	1,080.36	4.17	3.98	-141.36	-9.65	74.45	102.99	95.19	7.80	13.210		
1,100.00	1,087.59	1,101.48	1,094.76	4.25	4.05	-141.68	-11.06	76.21	105.37	97.45	7.92	13.300		
1,200.00	1,183.37	1,200.09	1,192.18	4.81	4.48	-143.53	-20.62	88.17	121.56	112.80	8.76	13.873		
1,300.00	1,279.15	1,301.29	1,289.60	5.39	4.92	-144.94	-30.19	100.12	137.85	128.24	9.62	14.335		
1,400.00	1,374.93	1,402.68	1,387.02	5.98	5.37	-146.06	-39.75	112.08	154.21	143.73	10.47	14.724		
1,500.00	1,470.71	1,504.07	1,484.44	6.57	5.82	-146.96	-49.31	124.03	170.61	159.27	11.33	15.055		
1,600.00	1,566.49	1,605.45	1,581.85	7.16	6.27	-147.70	-58.88	135.99	187.04	174.85	12.19	15.341		
1,700.00	1,662.27	1,706.84	1,679.27	7.76	6.72	-148.33	-68.44	147.94	203.50	190.45	13.05	15.589		
1,800.00	1,758.05	1,808.22	1,776.69	8.36	7.17	-148.86	-78.00	159.90	219.98	206.06	13.92	15.808		
1,900.00	1,853.83	1,909.61	1,874.11	8.96	7.62	-149.31	-87.57	171.85	236.47	221.69	14.78	16.001		
2,000.00	1,949.61	1,989.00	1,971.53	9.57	7.97	-149.71	-97.13	183.81	252.98	237.43	15.55	16.269		
2,100.00	2,045.39	2,087.62	2,068.95	10.17	8.41	-150.06	-106.69	195.76	269.50	253.10	16.40	16.430		
2,200.00	2,141.17	2,186.23	2,166.37	10.78	8.85	-150.36	-116.26	207.72	286.03	268.77	17.26	16.576		
2,300.00	2,236.95	2,284.85	2,263.78	11.39	9.29	-150.64	-125.82	219.68	302.56	284.45	18.11	16.708		
2,400.00	2,332.73	2,383.46	2,361.20	11.99	9.73	-150.88	-135.38	231.63	319.10	300.14	18.96	16.828		
2,500.00	2,428.51	2,482.07	2,458.62	12.60	10.17	-151.11	-144.94	243.59	335.64	315.83	19.82	16.937		
2,600.00	2,524.30	2,580.69	2,556.04	13.21	10.61	-151.31	-154.51	255.54	352.19	331.52	20.67	17.037		
2,700.00	2,620.08	2,679.30	2,653.46	13.82	11.05	-151.49	-164.07	267.50	368.75	347.22	21.53	17.130		
2,800.00	2,715.86	2,777.92	2,750.88	14.43	11.49	-151.66	-173.63	279.45	385.30	362.92	22.38	17.215		
2,900.00	2,811.64	2,876.53	2,848.29	15.04	11.93	-151.81	-183.20	291.41	401.86	378.62	23.24	17.294		
3,000.00	2,907.42	2,975.14	2,945.71	15.66	12.37	-151.95	-192.76	303.36	418.42	394.33	24.09	17.368		
3,100.00	3,003.20	3,073.76	3,043.13	16.27	12.81	-152.08	-202.32	315.32	434.99	410.04	24.95	17.436		
3,200.00	3,098.98	3,172.37	3,140.55	16.88	13.25	-152.20	-211.89	327.27	451.55	425.75	25.80	17.500		
3,300.00	3,194.76	3,270.99	3,237.97	17.49	13.69	-152.31	-221.45	339.23	468.12	441.46	26.66	17.560		
3,400.00	3,290.54	3,369.60	3,335.39	18.10	14.13	-152.42	-231.01	351.18	484.69	457.18	27.52	17.615		
3,500.00	3,386.32	3,468.21	3,432.80	18.72	14.57	-152.51	-240.58	363.14	501.26	472.89	28.37	17.668		
3,600.00	3,482.10	3,566.83	3,530.22	19.33	15.01	-152.61	-250.14	375.09	517.83	488.61	29.23	17.717		
3,700.00	3,577.88	3,665.44	3,627.64	19.94	15.45	-152.69	-259.70	387.05	534.41	504.32	30.08	17.764		
3,800.00	3,673.66	3,764.06	3,725.06	20.55	15.89	-152.77	-269.27	399.00	550.98	520.04	30.94	17.808		
3,900.00	3,769.44	3,862.67	3,822.48	21.17	16.33	-152.85	-278.83	410.96	567.56	535.76	31.80	17.850		
4,000.00	3,865.22	3,961.28	3,919.90	21.78	16.78	-152.92	-288.39	422.91	584.13	551.48	32.65	17.889		
4,100.00	3,961.00	4,059.90	4,017.31	22.39	17.22	-152.99	-297.96	434.87	600.71	567.20	33.51	17.926		
4,200.00	4,056.78	4,158.51	4,114.73	23.01	17.66	-153.05	-307.52	446.82	617.29	582.92	34.37	17.962		
4,300.00	4,152.56	4,257.13	4,212.15	23.62	18.10	-153.11	-317.08	458.78	633.87	598.65	35.22	17.996		
4,400.00	4,248.34	4,355.74	4,309.57	24.23	18.54	-153.17	-326.65	470.73	650.45	614.37	36.08	18.028		
4,500.00	4,344.12	4,454.35	4,406.99	24.85	18.98	-153.22	-336.21	482.69	667.03	630.09	36.94	18.058		
4,600.00	4,439.90	4,552.97	4,504.41	25.46	19.42	-153.28	-345.77	494.64	683.61	645.81	37.79	18.088		
4,700.00	4,535.68	4,651.58	4,601.82	26.08	19.86	-153.33	-355.34	506.60	700.19	661.54	38.65	18.115		
4,800.00	4,631.46	4,750.20	4,699.24	26.69	20.30	-153.37	-364.90	518.55	716.77	677.26	39.51	18.142		
4,900.00	4,727.24	4,848.81	4,796.66	27.30	20.75	-153.42	-374.46	530.51	733.35	692.99	40.37	18.168		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 2BH - 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		
5,000.00	4,823.02	4,947.42	4,894.08	27.92	21.19	-153.46	-384.03	542.47	749.94	708.71	41.22	18.192		
5,100.00	4,918.80	5,046.04	4,991.50	28.53	21.63	-153.50	-393.59	554.42	766.52	724.44	42.08	18.216		
5,200.00	5,014.58	5,144.65	5,088.92	29.15	22.07	-153.54	-403.15	566.38	783.10	740.17	42.94	18.238		
5,300.00	5,110.36	5,243.27	5,186.33	29.76	22.51	-153.58	-412.71	578.33	799.69	755.89	43.80	18.260		
5,400.00	5,206.14	5,341.88	5,283.75	30.37	22.95	-153.62	-422.28	590.29	816.27	771.62	44.65	18.280		
5,500.00	5,301.92	5,440.49	5,381.17	30.99	23.39	-153.65	-431.84	602.24	832.85	787.34	45.51	18.300		
5,600.00	5,397.70	5,539.11	5,478.59	31.60	23.83	-153.68	-441.40	614.20	849.44	803.07	46.37	18.320		
5,700.00	5,493.48	5,637.72	5,576.01	32.22	24.28	-153.72	-450.97	626.15	866.02	818.80	47.23	18.338		
5,800.00	5,589.26	5,736.34	5,673.43	32.83	24.72	-153.75	-460.53	638.11	882.61	834.53	48.08	18.356		
5,900.00	5,685.04	5,834.95	5,770.84	33.45	25.16	-153.78	-470.09	650.06	899.19	850.25	48.94	18.373		
6,000.00	5,780.82	5,933.56	5,868.26	34.06	25.60	-153.81	-479.66	662.02	915.78	865.98	49.80	18.390		
6,100.00	5,876.60	6,032.18	5,965.68	34.67	26.04	-153.83	-489.22	673.97	932.37	881.71	50.66	18.406		
6,200.00	5,972.38	6,130.79	6,063.10	35.29	26.48	-153.86	-498.78	685.93	948.95	897.44	51.51	18.421		
6,300.00	6,068.16	6,229.41	6,160.52	35.90	26.92	-153.89	-508.35	697.88	965.54	913.17	52.37	18.436		
6,400.00	6,163.94	6,328.02	6,257.94	36.52	27.36	-153.91	-517.91	709.84	982.12	928.90	53.23	18.451		
6,500.00	6,259.72	6,426.63	6,355.35	37.13	27.81	-153.94	-527.47	721.79	998.71	944.62	54.09	18.465		
6,600.00	6,355.50	6,525.25	6,452.77	37.75	28.25	-153.96	-537.04	733.75	1,015.30	960.35	54.95	18.478		
6,700.00	6,451.28	6,623.86	6,550.19	38.36	28.69	-153.98	-546.60	745.70	1,031.89	976.08	55.80	18.491		
6,800.00	6,547.06	6,722.48	6,647.61	38.98	29.13	-154.00	-556.16	757.66	1,048.47	991.81	56.66	18.504		
6,900.00	6,642.84	6,821.09	6,745.03	39.59	29.57	-154.03	-565.73	769.61	1,065.06	1,007.54	57.52	18.516		
7,000.00	6,738.62	6,919.70	6,842.45	40.21	30.01	-154.05	-575.29	781.57	1,081.65	1,023.27	58.38	18.528		
7,100.00	6,834.40	7,018.32	6,939.86	40.82	30.45	-154.07	-584.85	793.52	1,098.23	1,039.00	59.24	18.540		
7,200.00	6,930.18	7,116.93	7,037.28	41.43	30.90	-154.09	-594.42	805.48	1,114.82	1,054.73	60.09	18.551		
7,300.00	7,025.96	7,215.55	7,134.70	42.05	31.34	-154.10	-603.98	817.43	1,131.41	1,070.46	60.95	18.562		
7,400.00	7,121.74	7,314.16	7,232.12	42.66	31.78	-154.12	-613.54	829.39	1,148.00	1,086.19	61.81	18.573		
7,500.00	7,217.52	7,413.49	7,330.28	43.28	32.22	-154.16	-623.18	841.10	1,164.58	1,101.92	62.66	18.585		
7,600.00	7,313.30	7,514.10	7,430.27	43.89	32.66	-154.77	-633.07	841.08	1,181.02	1,117.76	63.26	18.669		
7,617.92	7,330.46	7,531.53	7,447.53	44.00	32.61	-154.97	-634.78	839.28	1,183.97	1,120.64	63.33	18.696		
7,650.00	7,361.28	7,562.32	7,477.84	44.20	32.68	-166.35	-637.81	834.82	1,189.29	1,125.87	63.42	18.752		
7,700.00	7,409.49	7,609.58	7,523.79	44.47	32.77	174.18	-642.41	824.82	1,197.70	1,134.17	63.53	18.852		
7,750.00	7,457.61	7,656.02	7,567.98	44.71	32.84	155.62	-646.85	811.31	1,206.18	1,142.58	63.60	18.964		
7,800.00	7,505.28	7,701.72	7,610.26	44.91	32.89	140.49	-651.13	794.55	1,214.64	1,151.00	63.64	19.086		
7,850.00	7,552.12	7,746.74	7,650.49	45.08	32.92	129.06	-655.22	774.78	1,223.02	1,159.36	63.65	19.214		
7,900.00	7,597.78	7,791.17	7,688.55	45.23	32.94	120.54	-659.11	752.22	1,231.23	1,167.58	63.65	19.343		
7,950.00	7,641.91	7,835.06	7,724.33	45.34	32.95	114.07	-662.80	727.09	1,239.21	1,175.56	63.65	19.471		
8,000.00	7,684.18	7,878.47	7,757.73	45.43	32.95	109.05	-666.26	699.59	1,246.87	1,183.23	63.64	19.593		
8,050.00	7,724.27	7,921.46	7,788.67	45.50	32.94	105.04	-669.49	669.93	1,254.16	1,190.52	63.64	19.706		
8,100.00	7,761.87	7,964.07	7,817.08	45.54	32.93	101.80	-672.48	638.32	1,261.01	1,197.35	63.66	19.807		
8,150.00	7,796.69	8,006.36	7,842.87	45.57	32.91	99.14	-675.22	604.93	1,267.35	1,203.64	63.71	19.891		
8,200.00	7,828.47	8,048.37	7,866.00	45.58	32.90	96.94	-677.71	569.96	1,273.14	1,209.34	63.80	19.955		
8,250.00	7,856.97	8,090.12	7,886.40	45.57	32.88	95.12	-679.93	533.61	1,278.32	1,214.38	63.94	19.993		
8,300.00	7,881.97	8,131.67	7,904.02	45.54	32.87	93.64	-681.89	496.05	1,282.85	1,218.71	64.13	20.002		
8,350.00	7,903.28	8,173.04	7,918.84	45.50	32.87	92.44	-683.58	457.47	1,286.68	1,222.29	64.39	19.982		
8,400.00	7,920.74	8,214.26	7,930.81	45.44	32.88	91.49	-684.99	418.06	1,289.79	1,225.07	64.72	19.929		
8,450.00	7,934.22	8,255.37	7,939.91	45.38	32.90	90.79	-686.12	378.00	1,292.14	1,227.02	65.12	19.844		
8,500.00	7,943.60	8,296.38	7,946.11	45.30	32.94	90.31	-686.96	337.47	1,293.72	1,228.14	65.59	19.725		
8,550.00	7,948.83	8,337.33	7,949.41	45.22	33.00	90.05	-687.52	296.67	1,294.52	1,228.39	66.13	19.575		
8,587.24	7,950.00	8,368.79	7,950.00	45.15	33.07	90.00	-687.76	265.22	1,294.60	1,228.02	66.57	19.446		
8,600.00	7,950.00	8,381.55	7,950.00	45.13	33.11	90.00	-687.84	252.46	1,294.54	1,227.80	66.74	19.398		
8,700.00	7,950.00	8,481.55	7,950.00	44.96	33.54	90.00	-688.41	152.46	1,294.08	1,225.84	68.24	18.964		
8,800.00	7,950.00	8,581.55	7,950.00	44.81	34.27	90.00	-688.99	52.46	1,293.62	1,223.50	70.11	18.450		
8,900.00	7,950.00	8,681.55	7,950.00	44.69	35.28	90.00	-689.56	-47.54	1,293.16	1,220.82	72.34	17.876		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 2BH - 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		
9,000.00	7,950.00	8,781.55	7,950.00	44.58	36.53	90.00	-690.13	-147.53	1,292.69	1,217.81	74.89	17.261		
9,100.00	7,950.00	8,881.55	7,950.00	44.50	37.96	90.00	-690.71	-247.53	1,292.23	1,214.51	77.73	16.625		
9,200.00	7,950.00	8,981.55	7,950.00	44.48	39.54	90.00	-691.28	-347.53	1,291.77	1,210.95	80.83	15.982		
9,300.00	7,950.00	9,081.55	7,950.00	44.63	41.24	90.00	-691.86	-447.52	1,291.31	1,207.16	84.15	15.345		
9,400.00	7,950.00	9,181.54	7,950.00	45.49	43.05	90.00	-692.43	-547.52	1,290.85	1,203.17	87.69	14.721		
9,500.00	7,950.00	9,281.54	7,950.00	47.12	44.95	90.00	-693.01	-647.52	1,290.39	1,198.99	91.40	14.118		
9,600.00	7,950.00	9,381.54	7,950.00	48.99	46.92	90.00	-693.58	-747.52	1,289.93	1,194.66	95.27	13.539		
9,700.00	7,950.00	9,481.54	7,950.00	50.96	48.97	90.00	-694.16	-847.51	1,289.47	1,190.18	99.29	12.987		
9,800.00	7,950.00	9,581.54	7,950.00	53.01	51.07	90.00	-694.73	-947.51	1,289.01	1,185.59	103.43	12.463		
9,900.00	7,950.00	9,681.54	7,950.00	55.12	53.23	90.00	-695.31	-1,047.51	1,288.55	1,180.88	107.67	11.967		
10,000.00	7,950.00	9,781.54	7,950.00	57.28	55.44	90.00	-695.88	-1,147.51	1,288.09	1,176.07	112.02	11.499		
10,100.00	7,950.00	9,881.54	7,950.00	59.48	57.68	90.00	-696.46	-1,247.50	1,287.63	1,171.18	116.45	11.057		
10,200.00	7,950.00	9,981.54	7,950.00	61.71	59.96	90.00	-697.03	-1,347.50	1,287.17	1,166.21	120.96	10.641		
10,300.00	7,950.00	10,081.54	7,950.00	63.99	62.28	90.00	-697.61	-1,447.50	1,286.71	1,161.17	125.54	10.249		
10,400.00	7,950.00	10,181.53	7,950.00	66.29	64.62	90.00	-698.18	-1,547.50	1,286.25	1,156.07	130.18	9.880		
10,500.00	7,950.00	10,281.53	7,950.00	68.62	66.99	90.00	-698.76	-1,647.49	1,285.79	1,150.91	134.88	9.533		
10,600.00	7,950.00	10,381.53	7,950.00	70.97	69.38	90.00	-699.33	-1,747.49	1,285.33	1,145.70	139.62	9.206		
10,700.00	7,950.00	10,481.53	7,950.00	73.34	71.80	90.00	-699.90	-1,847.49	1,284.87	1,140.45	144.41	8.897		
10,800.00	7,950.00	10,581.53	7,950.00	75.74	74.23	90.00	-700.48	-1,947.48	1,284.41	1,135.16	149.24	8.606		
10,900.00	7,950.00	10,681.53	7,950.00	78.15	76.68	90.00	-701.05	-2,047.48	1,283.95	1,129.84	154.11	8.331		
11,000.00	7,950.00	10,781.53	7,950.00	80.58	79.14	90.00	-701.63	-2,147.48	1,283.49	1,124.47	159.01	8.072		
11,100.00	7,950.00	10,881.53	7,950.00	83.03	81.62	90.00	-702.20	-2,247.48	1,283.03	1,119.08	163.94	7.826		
11,200.00	7,950.00	10,981.53	7,950.00	85.49	84.11	90.00	-702.78	-2,347.47	1,282.57	1,113.66	168.90	7.594		
11,300.00	7,950.00	11,081.52	7,950.00	87.96	86.61	90.00	-703.35	-2,447.47	1,282.10	1,108.22	173.88	7.373		
11,400.00	7,950.00	11,181.52	7,950.00	90.45	89.13	90.00	-703.93	-2,547.47	1,281.64	1,102.75	178.89	7.164		
11,500.00	7,950.00	11,281.52	7,950.00	92.95	91.65	90.00	-704.50	-2,647.47	1,281.18	1,097.26	183.92	6.966		
11,600.00	7,950.00	11,381.52	7,950.00	95.45	94.19	90.00	-705.08	-2,747.46	1,280.72	1,091.76	188.97	6.778		
11,700.00	7,950.00	11,481.52	7,950.00	97.97	96.73	90.00	-705.65	-2,847.46	1,280.26	1,086.23	194.03	6.598		
11,800.00	7,950.00	11,581.52	7,950.00	100.49	99.28	90.00	-706.23	-2,947.46	1,279.80	1,080.69	199.11	6.427		
11,900.00	7,950.00	11,681.52	7,950.00	103.03	101.83	90.00	-706.80	-3,047.45	1,279.34	1,075.13	204.21	6.265		
12,000.00	7,950.00	11,781.52	7,950.00	105.57	104.40	90.00	-707.38	-3,147.45	1,278.88	1,069.56	209.32	6.110		
12,100.00	7,950.00	11,881.52	7,950.00	108.11	106.97	90.00	-707.95	-3,247.45	1,278.42	1,063.97	214.45	5.961		
12,200.00	7,950.00	11,981.52	7,950.00	110.67	109.54	90.00	-708.52	-3,347.45	1,277.96	1,058.37	219.59	5.820		
12,300.00	7,950.00	12,081.51	7,950.00	113.23	112.12	90.00	-709.10	-3,447.44	1,277.50	1,052.76	224.74	5.684		
12,400.00	7,950.00	12,181.51	7,950.00	115.79	114.71	90.00	-709.67	-3,547.44	1,277.04	1,047.14	229.90	5.555		
12,500.00	7,950.00	12,281.51	7,950.00	118.36	117.30	90.00	-710.25	-3,647.44	1,276.58	1,041.51	235.07	5.431		
12,600.00	7,950.00	12,381.51	7,950.00	120.94	119.90	90.00	-710.82	-3,747.44	1,276.12	1,035.87	240.25	5.312		
12,700.00	7,950.00	12,481.51	7,950.00	123.52	122.50	90.00	-711.40	-3,847.43	1,275.66	1,030.22	245.43	5.198		
12,800.00	7,950.00	12,581.51	7,950.00	126.11	125.10	90.00	-711.97	-3,947.43	1,275.20	1,024.57	250.63	5.088		
12,900.00	7,950.00	12,681.51	7,950.00	128.70	127.71	90.00	-712.55	-4,047.43	1,274.74	1,018.90	255.83	4.983		
13,000.00	7,950.00	12,781.51	7,950.00	131.29	130.32	90.00	-713.12	-4,147.42	1,274.28	1,013.23	261.05	4.881		
13,100.00	7,950.00	12,881.51	7,950.00	133.89	132.93	90.00	-713.70	-4,247.42	1,273.82	1,007.55	266.26	4.784		
13,200.00	7,950.00	12,981.50	7,950.00	136.49	135.54	90.00	-714.27	-4,347.42	1,273.36	1,001.87	271.49	4.690		
13,300.00	7,950.00	13,081.50	7,950.00	139.09	138.16	90.00	-714.85	-4,447.42	1,272.90	996.18	276.72	4.600		
13,400.00	7,950.00	13,181.50	7,950.00	141.70	140.79	90.00	-715.42	-4,547.41	1,272.44	990.48	281.96	4.513		
13,500.00	7,950.00	13,281.50	7,950.00	144.31	143.41	90.00	-716.00	-4,647.41	1,271.98	984.78	287.20	4.429		
13,600.00	7,950.00	13,381.50	7,950.00	146.93	146.04	90.00	-716.57	-4,747.41	1,271.51	979.07	292.45	4.348		
13,700.00	7,950.00	13,481.50	7,950.00	149.54	148.67	90.00	-717.15	-4,847.41	1,271.05	973.36	297.70	4.270		
13,800.00	7,950.00	13,581.50	7,950.00	152.16	151.30	90.00	-717.72	-4,947.40	1,270.59	967.64	302.95	4.194		
13,900.00	7,950.00	13,681.50	7,950.00	154.78	153.93	90.00	-718.29	-5,047.40	1,270.13	961.92	308.22	4.121		
14,000.00	7,950.00	13,781.50	7,950.00	157.41	156.57	90.00	-718.87	-5,147.40	1,269.67	956.19	313.48	4.050		
14,100.00	7,950.00	13,881.50	7,950.00	160.03	159.20	90.00	-719.44	-5,247.39	1,269.21	950.46	318.75	3.982		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 2BH - 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		
14,200.00	7,950.00	13,981.49	7,950.00	162.66	161.84	90.00	-720.02	-5,347.39	1,268.75	944.73	324.02	3.916		
14,300.00	7,950.00	14,081.49	7,950.00	165.29	164.48	90.00	-720.59	-5,447.39	1,268.29	938.99	329.30	3.851		
14,400.00	7,950.00	14,181.49	7,950.00	167.92	167.12	90.00	-721.17	-5,547.39	1,267.83	933.25	334.58	3.789		
14,500.00	7,950.00	14,281.49	7,950.00	170.55	169.77	90.00	-721.74	-5,647.38	1,267.37	927.51	339.86	3.729		
14,600.00	7,950.00	14,381.49	7,950.00	173.19	172.41	90.00	-722.32	-5,747.38	1,266.91	921.76	345.15	3.671		
14,700.00	7,950.00	14,481.49	7,950.00	175.83	175.06	90.00	-722.89	-5,847.38	1,266.45	916.01	350.44	3.614		
14,800.00	7,950.00	14,581.49	7,950.00	178.46	177.71	90.00	-723.47	-5,947.38	1,265.99	910.26	355.73	3.559		
14,900.00	7,950.00	14,681.49	7,950.00	181.10	180.36	90.00	-724.04	-6,047.37	1,265.53	904.51	361.02	3.505		
15,000.00	7,950.00	14,781.49	7,950.00	183.75	183.01	90.00	-724.62	-6,147.37	1,265.07	898.75	366.32	3.453		
15,100.00	7,950.00	14,881.48	7,950.00	186.39	185.66	90.00	-725.19	-6,247.37	1,264.61	892.99	371.62	3.403		
15,200.00	7,950.00	14,981.48	7,950.00	189.03	188.31	90.00	-725.77	-6,347.36	1,264.15	887.23	376.92	3.354		
15,300.00	7,950.00	15,081.48	7,950.00	191.68	190.97	90.00	-726.34	-6,447.36	1,263.69	881.46	382.23	3.306		
15,400.00	7,950.00	15,181.48	7,950.00	194.33	193.62	90.00	-726.91	-6,547.36	1,263.23	875.69	387.53	3.260		
15,500.00	7,950.00	15,281.48	7,950.00	196.97	196.28	90.00	-727.49	-6,647.36	1,262.77	869.92	392.84	3.214		
15,600.00	7,950.00	15,381.48	7,950.00	199.62	198.93	90.00	-728.06	-6,747.35	1,262.31	864.15	398.15	3.170		
15,700.00	7,950.00	15,481.48	7,950.00	202.27	201.59	90.00	-728.64	-6,847.35	1,261.85	858.38	403.47	3.128		
15,800.00	7,950.00	15,581.48	7,950.00	204.93	204.25	90.00	-729.21	-6,947.35	1,261.38	852.61	408.78	3.086		
15,900.00	7,950.00	15,681.48	7,950.00	207.58	206.91	90.00	-729.79	-7,047.35	1,260.92	846.83	414.10	3.045		
16,000.00	7,950.00	15,781.48	7,950.00	210.23	209.57	90.00	-730.36	-7,147.34	1,260.46	841.05	419.41	3.005		
16,100.00	7,950.00	15,881.47	7,950.00	212.89	212.23	90.00	-730.94	-7,247.34	1,260.00	835.27	424.73	2.967		
16,200.00	7,950.00	15,981.47	7,950.00	215.54	214.89	90.00	-731.51	-7,347.34	1,259.54	829.49	430.05	2.929		
16,300.00	7,950.00	16,081.47	7,950.00	218.20	217.55	90.00	-732.09	-7,447.34	1,259.08	823.71	435.38	2.892		
16,400.00	7,950.00	16,181.47	7,950.00	220.85	220.22	90.00	-732.66	-7,547.33	1,258.62	817.92	440.70	2.856		
16,500.00	7,950.00	16,281.47	7,950.00	223.51	222.88	90.00	-733.24	-7,647.33	1,258.16	812.13	446.03	2.821		
16,600.00	7,950.00	16,381.47	7,950.00	226.17	225.54	90.00	-733.81	-7,747.33	1,257.70	806.35	451.35	2.787		
16,700.00	7,950.00	16,481.47	7,950.00	228.83	228.21	90.00	-734.39	-7,847.32	1,257.24	800.56	456.68	2.753		
16,800.00	7,950.00	16,581.47	7,950.00	231.49	230.88	90.00	-734.96	-7,947.32	1,256.78	794.77	462.01	2.720		
16,900.00	7,950.00	16,681.47	7,950.00	234.15	233.54	90.00	-735.54	-8,047.32	1,256.32	788.98	467.34	2.688		
17,000.00	7,950.00	16,781.46	7,950.00	236.81	236.21	90.00	-736.11	-8,147.32	1,255.86	783.18	472.68	2.657		
17,100.00	7,950.00	16,881.46	7,950.00	239.47	238.88	90.00	-736.68	-8,247.31	1,255.40	777.39	478.01	2.626		
17,200.00	7,950.00	16,981.46	7,950.00	242.14	241.54	90.00	-737.26	-8,347.31	1,254.94	771.60	483.34	2.596		
17,300.00	7,950.00	17,081.46	7,950.00	244.80	244.21	90.00	-737.83	-8,447.31	1,254.48	765.80	488.68	2.567		
17,400.00	7,950.00	17,181.46	7,950.00	247.46	246.88	90.00	-738.41	-8,547.31	1,254.02	760.00	494.01	2.538		
17,500.00	7,950.00	17,281.46	7,950.00	250.13	249.55	90.00	-738.98	-8,647.30	1,253.56	754.21	499.35	2.510		
17,600.00	7,950.00	17,381.46	7,950.00	252.79	252.22	90.00	-739.56	-8,747.30	1,253.10	748.41	504.69	2.483		
17,700.00	7,950.00	17,481.46	7,950.00	255.46	254.89	90.00	-740.13	-8,847.30	1,252.64	742.61	510.03	2.456		
17,800.00	7,950.00	17,581.46	7,950.00	258.13	257.56	90.00	-740.71	-8,947.29	1,252.18	736.81	515.37	2.430		
17,900.00	7,950.00	17,681.46	7,950.00	260.79	260.23	90.00	-741.28	-9,047.29	1,251.72	731.00	520.71	2.404		
18,000.00	7,950.00	17,781.45	7,950.00	263.46	262.90	90.00	-741.86	-9,147.29	1,251.26	725.20	526.05	2.379		
18,100.00	7,950.00	17,881.45	7,950.00	266.13	265.58	90.00	-742.43	-9,247.29	1,250.79	719.40	531.40	2.354		
18,200.00	7,950.00	17,981.45	7,950.00	268.80	268.25	90.00	-743.01	-9,347.28	1,250.33	713.59	536.74	2.329		
18,300.00	7,950.00	18,081.45	7,950.00	271.47	270.92	90.00	-743.58	-9,447.28	1,249.87	707.79	542.08	2.306		
18,400.00	7,950.00	18,181.45	7,950.00	274.14	273.59	90.00	-744.16	-9,547.28	1,249.41	701.98	547.43	2.282		
18,476.23	7,950.00	18,257.68	7,950.00	276.17	275.63	90.00	-744.59	-9,623.50	1,249.06	697.56	551.50	2.265 SF		
18,481.45	7,950.00	18,253.56	7,950.00	276.31	275.52	90.00	-744.57	-9,619.39	1,249.07	697.68	551.39	2.265		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 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							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	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
0.00	0.00	0.10	-0.10	0.00	0.00	180.00	-49.90	0.00	49.90				
100.00	100.00	100.10	99.90	0.13	0.13	180.00	-49.90	0.00	49.90	49.64	0.27	185.373	
200.00	200.00	200.10	199.90	0.49	0.49	180.00	-49.90	0.00	49.90	48.92	0.99	50.605	
250.00	250.00	249.90	249.90	0.67	0.67	180.00	-49.90	0.00	49.90	48.56	1.34	37.134 CC	
300.00	300.00	299.10	299.09	0.84	0.84	24.93	-50.30	0.14	49.91	48.23	1.68	29.633	
400.00	399.93	397.49	397.42	1.19	1.18	25.27	-53.47	1.30	49.97	47.61	2.36	21.194	
500.00	499.68	495.88	495.57	1.54	1.53	25.93	-59.81	3.60	50.10	47.05	3.05	16.421	
600.00	599.13	594.27	593.44	1.92	1.89	26.92	-69.32	7.06	50.30	46.54	3.76	13.390	
700.00	698.15	692.66	690.90	2.32	2.29	28.22	-81.98	11.66	50.60	46.12	4.48	11.300	
800.00	796.63	791.06	787.85	2.75	2.71	29.83	-97.78	17.41	51.00	45.79	5.22	9.772	
900.00	894.44	889.46	884.16	3.21	3.16	31.71	-116.70	24.28	51.55	45.55	5.99	8.604	
1,000.00	991.46	987.87	979.73	3.71	3.64	33.85	-138.72	32.29	52.25	45.44	6.80	7.680 ES	
1,085.22	1,073.44	1,071.73	1,060.51	4.17	4.09	35.84	-159.91	39.99	52.99	45.45	7.54	7.030	
1,100.00	1,087.59	1,086.27	1,074.45	4.25	4.17	36.18	-163.81	41.41	53.16	45.49	7.67	6.933	
1,200.00	1,183.37	1,184.64	1,168.15	4.81	4.74	37.32	-191.93	51.64	56.04	47.48	8.56	6.544	
1,300.00	1,279.15	1,282.77	1,260.55	5.39	5.35	36.61	-222.97	62.92	61.82	52.38	9.44	6.551	
1,400.00	1,374.93	1,382.37	1,353.67	5.98	6.01	35.19	-256.17	74.99	69.25	58.92	10.33	6.704	
1,500.00	1,470.71	1,482.08	1,446.89	6.57	6.68	34.04	-289.42	87.08	76.72	65.49	11.23	6.832	
1,600.00	1,566.49	1,581.79	1,540.12	7.16	7.35	33.10	-322.66	99.17	84.21	72.08	12.13	6.941	
1,700.00	1,662.27	1,681.50	1,633.35	7.76	8.04	32.31	-355.90	111.25	91.73	78.69	13.04	7.036	
1,800.00	1,758.05	1,781.21	1,726.57	8.36	8.72	31.64	-389.14	123.34	99.26	85.31	13.94	7.118	
1,900.00	1,853.83	1,880.92	1,819.80	8.96	9.41	31.06	-422.38	135.42	106.80	91.94	14.85	7.191	
2,000.00	1,949.61	1,980.63	1,913.02	9.57	10.11	30.56	-455.63	147.51	114.35	98.58	15.76	7.255	
2,100.00	2,045.39	2,080.34	2,006.25	10.17	10.80	30.12	-488.87	159.60	121.90	105.23	16.67	7.312	
2,200.00	2,141.17	2,180.05	2,099.47	10.78	11.50	29.73	-522.11	171.68	129.47	111.88	17.58	7.363	
2,300.00	2,236.95	2,279.76	2,192.70	11.39	12.20	29.39	-555.35	183.77	137.04	118.54	18.49	7.410	
2,400.00	2,332.73	2,379.47	2,285.92	11.99	12.90	29.08	-588.60	195.85	144.61	125.20	19.41	7.452	
2,500.00	2,428.51	2,479.18	2,379.15	12.60	13.61	28.80	-621.84	207.94	152.18	131.87	20.32	7.490	
2,600.00	2,524.30	2,578.89	2,472.37	13.21	14.31	28.55	-655.08	220.03	159.76	138.53	21.23	7.524	
2,700.00	2,620.08	2,678.60	2,565.60	13.82	15.02	28.32	-688.32	232.11	167.35	145.20	22.15	7.556	
2,800.00	2,715.86	2,778.31	2,658.82	14.43	15.72	28.12	-721.56	244.20	174.93	151.87	23.06	7.586	
2,900.00	2,811.64	2,878.02	2,752.05	15.04	16.43	27.92	-754.81	256.28	182.52	158.55	23.97	7.613	
3,000.00	2,907.42	2,977.73	2,845.27	15.66	17.13	27.75	-788.05	268.37	190.11	165.22	24.89	7.638	
3,100.00	3,003.20	3,077.44	2,938.50	16.27	17.84	27.59	-821.29	280.45	197.70	171.90	25.80	7.661	
3,200.00	3,098.98	3,177.15	3,031.73	16.88	18.55	27.44	-854.53	292.54	205.29	178.57	26.72	7.683	
3,300.00	3,194.76	3,276.86	3,124.95	17.49	19.26	27.30	-887.78	304.63	212.89	185.25	27.64	7.703	
3,400.00	3,290.54	3,376.57	3,218.18	18.10	19.96	27.17	-921.02	316.71	220.48	191.93	28.55	7.722	
3,500.00	3,386.32	3,476.28	3,311.40	18.72	20.67	27.04	-954.26	328.80	228.08	198.61	29.47	7.740	
3,600.00	3,482.10	3,575.99	3,404.63	19.33	21.38	26.93	-987.50	340.88	235.67	205.29	30.38	7.757	
3,700.00	3,577.88	3,675.70	3,497.85	19.94	22.09	26.82	-1,020.74	352.97	243.27	211.97	31.30	7.773	
3,800.00	3,673.66	3,775.41	3,591.08	20.55	22.80	26.72	-1,053.99	365.06	250.87	218.66	32.21	7.787	
3,900.00	3,769.44	3,875.12	3,684.30	21.17	23.51	26.63	-1,087.23	377.14	258.47	225.34	33.13	7.801	
4,000.00	3,865.22	3,974.83	3,777.53	21.78	24.22	26.54	-1,120.47	389.23	266.07	232.02	34.05	7.815	
4,100.00	3,961.00	4,074.54	3,870.75	22.39	24.93	26.46	-1,153.71	401.31	273.67	238.71	34.96	7.827	
4,200.00	4,056.78	4,174.25	3,963.98	23.01	25.64	26.38	-1,186.96	413.40	281.27	245.39	35.88	7.839	
4,300.00	4,152.56	4,273.96	4,057.20	23.62	26.35	26.30	-1,220.20	425.49	288.87	252.07	36.80	7.850	
4,400.00	4,248.34	4,373.67	4,150.43	24.23	27.06	26.23	-1,253.44	437.57	296.47	258.76	37.71	7.861	
4,500.00	4,344.12	4,473.38	4,243.65	24.85	27.77	26.16	-1,286.68	449.66	304.08	265.44	38.63	7.871	
4,600.00	4,439.90	4,573.09	4,336.88	25.46	28.48	26.10	-1,319.92	461.74	311.68	272.13	39.55	7.881	
4,700.00	4,535.68	4,672.80	4,430.10	26.08	29.19	26.04	-1,353.17	473.83	319.28	278.82	40.47	7.890	
4,800.00	4,631.46	4,772.51	4,523.33	26.69	29.90	25.98	-1,386.41	485.92	326.89	285.50	41.38	7.899	
4,900.00	4,727.24	4,872.22	4,616.56	27.30	30.61	25.92	-1,419.65	498.00	334.49	292.19	42.30	7.908	

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 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		
5,000.00	4,823.02	4,971.93	4,709.78	27.92	31.32	25.87	-1,452.89	510.09	342.09	298.88	43.22	7.916		
5,100.00	4,918.80	5,071.64	4,803.01	28.53	32.03	25.82	-1,486.14	522.17	349.70	305.56	44.13	7.923		
5,200.00	5,014.58	5,171.35	4,896.23	29.15	32.74	25.77	-1,519.38	534.26	357.30	312.25	45.05	7.931		
5,300.00	5,110.36	5,271.06	4,989.46	29.76	33.46	25.72	-1,552.62	546.35	364.91	318.94	45.97	7.938		
5,400.00	5,206.14	5,370.77	5,082.68	30.37	34.17	25.68	-1,585.86	558.43	372.51	325.63	46.89	7.945		
5,500.00	5,301.92	5,470.48	5,175.91	30.99	34.88	25.63	-1,619.10	570.52	380.12	332.31	47.80	7.952		
5,600.00	5,397.70	5,570.19	5,269.13	31.60	35.59	25.59	-1,652.35	582.60	387.72	339.00	48.72	7.958		
5,700.00	5,493.48	5,669.90	5,362.36	32.22	36.30	25.55	-1,685.59	594.69	395.33	345.69	49.64	7.964		
5,800.00	5,589.26	5,769.61	5,455.58	32.83	37.01	25.52	-1,718.83	606.78	402.94	352.38	50.56	7.970		
5,900.00	5,685.04	5,869.32	5,548.81	33.45	37.72	25.48	-1,752.07	618.86	410.54	359.07	51.47	7.976		
6,000.00	5,780.82	5,969.03	5,642.03	34.06	38.43	25.44	-1,785.32	630.95	418.15	365.76	52.39	7.981		
6,100.00	5,876.60	6,068.74	5,735.26	34.67	39.15	25.41	-1,818.56	643.03	425.75	372.44	53.31	7.986		
6,200.00	5,972.38	6,168.45	5,828.48	35.29	39.86	25.38	-1,851.80	655.12	433.36	379.13	54.23	7.991		
6,300.00	6,068.16	6,268.16	5,921.71	35.90	40.57	25.34	-1,885.04	667.21	440.97	385.82	55.15	7.996		
6,400.00	6,163.94	6,367.87	6,014.94	36.52	41.28	25.31	-1,918.28	679.29	448.57	392.51	56.06	8.001		
6,500.00	6,259.72	6,467.58	6,108.16	37.13	41.99	25.28	-1,951.53	691.38	456.18	399.20	56.98	8.006		
6,600.00	6,355.50	6,567.29	6,201.39	37.75	42.70	25.25	-1,984.77	703.46	463.79	405.89	57.90	8.010		
6,700.00	6,451.28	6,667.00	6,294.61	38.36	43.42	25.23	-2,018.01	715.55	471.40	412.58	58.82	8.015		
6,800.00	6,547.06	6,766.71	6,387.84	38.98	44.13	25.20	-2,051.25	727.64	479.00	419.27	59.74	8.019		
6,900.00	6,642.84	6,866.42	6,481.06	39.59	44.84	25.17	-2,084.50	739.72	486.61	425.96	60.65	8.023		
7,000.00	6,738.62	6,966.13	6,574.29	40.21	45.55	25.15	-2,117.74	751.81	494.22	432.65	61.57	8.027		
7,100.00	6,834.40	7,065.84	6,667.51	40.82	46.26	25.12	-2,150.98	763.89	501.83	439.34	62.49	8.031		
7,200.00	6,930.18	7,165.55	6,760.74	41.43	46.98	25.10	-2,184.22	775.98	509.43	446.03	63.41	8.034		
7,300.00	7,025.96	7,265.26	6,853.96	42.05	47.69	25.08	-2,217.46	788.07	517.04	452.72	64.33	8.038		
7,400.00	7,121.74	7,364.97	6,947.19	42.66	48.40	25.05	-2,250.71	800.15	524.65	459.41	65.24	8.041		
7,500.00	7,217.52	7,464.68	7,040.41	43.28	49.11	25.03	-2,283.95	812.24	532.26	466.10	66.16	8.045		
7,600.00	7,313.30	7,564.39	7,133.64	43.89	49.82	25.01	-2,317.19	824.32	539.87	472.79	67.08	8.048		
7,617.92	7,330.46	7,582.26	7,150.35	44.00	49.95	25.01	-2,323.15	826.49	541.23	473.98	67.24	8.049		
7,650.00	7,361.28	7,614.23	7,180.24	44.20	50.18	14.66	-2,333.81	830.36	543.65	476.16	67.49	8.055		
7,700.00	7,409.49	7,663.82	7,226.60	44.47	50.53	-3.58	-2,350.34	836.38	547.37	479.69	67.68	8.087		
7,750.00	7,457.61	7,712.78	7,272.38	44.71	50.88	-21.36	-2,366.66	842.31	551.11	483.46	67.65	8.146		
7,800.00	7,505.28	7,761.80	7,318.41	44.91	51.22	-35.92	-2,383.08	845.96	555.01	487.48	67.52	8.219		
7,850.00	7,552.12	7,811.81	7,365.50	45.08	51.53	-46.82	-2,399.88	845.36	559.06	491.66	67.40	8.295		
7,900.00	7,597.78	7,862.88	7,413.34	45.23	51.81	-54.85	-2,416.95	840.26	563.25	495.95	67.30	8.370		
7,950.00	7,641.91	7,915.06	7,461.58	45.34	52.07	-60.87	-2,434.17	830.40	567.52	500.29	67.23	8.442		
8,000.00	7,684.18	7,968.41	7,509.81	45.43	52.29	-65.50	-2,451.39	815.55	571.83	504.64	67.19	8.510		
8,050.00	7,724.27	8,022.98	7,557.58	45.50	52.48	-69.16	-2,468.46	795.50	576.12	508.92	67.20	8.573		
8,100.00	7,761.87	8,078.80	7,604.36	45.54	52.64	-72.10	-2,485.17	770.09	580.34	513.09	67.26	8.629		
8,150.00	7,796.69	8,135.88	7,649.57	45.57	52.78	-74.51	-2,501.33	739.23	584.43	517.08	67.35	8.678		
8,200.00	7,828.47	8,194.24	7,692.54	45.58	52.88	-76.50	-2,516.71	702.92	588.30	520.82	67.49	8.717		
8,250.00	7,856.97	8,253.82	7,732.61	45.57	52.95	-78.15	-2,531.05	661.24	591.91	524.23	67.68	8.745		
8,300.00	7,881.97	8,314.59	7,769.04	45.54	52.99	-79.51	-2,544.10	614.43	595.18	527.23	67.95	8.759		
8,350.00	7,903.28	8,376.44	7,801.12	45.50	53.00	-80.61	-2,555.60	562.85	598.05	529.74	68.31	8.755		
8,400.00	7,920.74	8,439.25	7,828.14	45.44	52.99	-81.48	-2,565.30	507.02	600.46	531.68	68.78	8.730		
8,450.00	7,934.22	8,502.87	7,849.48	45.38	52.95	-82.14	-2,572.98	447.62	602.35	532.98	69.38	8.682		
8,500.00	7,943.60	8,567.10	7,864.60	45.30	52.89	-82.58	-2,578.45	385.46	603.69	533.56	70.13	8.608		
8,550.00	7,948.83	8,631.74	7,873.10	45.22	52.81	-82.83	-2,581.55	321.50	604.44	533.43	71.01	8.512		
8,587.24	7,950.00	8,680.00	7,875.00	45.15	52.74	-82.88	-2,582.28	273.29	604.61	532.86	71.75	8.427		
8,591.78	7,950.00	8,685.89	7,874.97	45.14	52.73	-82.88	-2,582.28	267.41	604.60	532.76	71.84	8.416		
8,600.00	7,950.00	8,707.28	7,875.00	45.13	52.69	-82.88	-2,582.30	260.58	604.61	532.60	72.00	8.397		
8,700.00	7,950.00	8,807.28	7,875.00	44.96	52.55	-82.88	-2,582.41	160.58	604.61	531.13	73.48	8.229		
8,800.00	7,950.00	8,907.28	7,875.00	44.81	52.43	-82.88	-2,582.53	60.58	604.61	529.30	75.30	8.029		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 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		
8,900.00	7,950.00	9,007.28	7,875.00	44.69	52.34	-82.88	-2,582.64	-39.42	604.61	527.15	77.46	7.806		
9,000.00	7,950.00	9,107.28	7,875.00	44.58	52.26	-82.88	-2,582.76	-139.42	604.61	524.69	79.91	7.566		
9,100.00	7,950.00	9,207.28	7,875.00	44.50	52.21	-82.88	-2,582.87	-239.42	604.61	521.97	82.64	7.316		
9,200.00	7,950.00	9,307.28	7,875.00	44.48	52.20	-82.88	-2,582.98	-339.42	604.61	518.99	85.61	7.062		
9,300.00	7,950.00	9,407.28	7,875.00	44.63	52.24	-82.88	-2,583.10	-439.42	604.61	515.79	88.81	6.808		
9,400.00	7,950.00	9,507.28	7,875.00	45.49	52.37	-82.88	-2,583.21	-539.42	604.61	512.40	92.21	6.557		
9,500.00	7,950.00	9,607.28	7,875.00	47.12	52.65	-82.88	-2,583.33	-639.42	604.61	508.82	95.78	6.312		
9,600.00	7,950.00	9,707.28	7,875.00	48.99	53.21	-82.88	-2,583.44	-739.42	604.61	505.09	99.52	6.075		
9,700.00	7,950.00	9,807.28	7,875.00	50.96	54.22	-82.88	-2,583.56	-839.42	604.61	501.21	103.39	5.848		
9,800.00	7,950.00	9,907.28	7,875.00	53.01	55.66	-82.88	-2,583.67	-939.42	604.61	497.21	107.39	5.630		
9,900.00	7,950.00	10,007.28	7,875.00	55.12	57.42	-82.88	-2,583.78	-1,039.42	604.61	493.10	111.51	5.422		
10,000.00	7,950.00	10,107.28	7,875.00	57.28	59.36	-82.88	-2,583.90	-1,139.42	604.61	488.88	115.72	5.225		
10,100.00	7,950.00	10,207.28	7,875.00	59.48	61.41	-82.88	-2,584.01	-1,239.42	604.61	484.58	120.03	5.037		
10,200.00	7,950.00	10,307.28	7,875.00	61.71	63.54	-82.88	-2,584.13	-1,339.42	604.61	480.19	124.41	4.860		
10,300.00	7,950.00	10,407.28	7,875.00	63.99	65.73	-82.88	-2,584.24	-1,439.42	604.60	475.74	128.87	4.692		
10,400.00	7,950.00	10,507.28	7,875.00	66.29	67.97	-82.88	-2,584.36	-1,539.42	604.60	471.21	133.39	4.533		
10,500.00	7,950.00	10,607.28	7,875.00	68.62	70.24	-82.88	-2,584.47	-1,639.42	604.60	466.63	137.97	4.382		
10,600.00	7,950.00	10,707.28	7,875.00	70.97	72.54	-82.88	-2,584.58	-1,739.42	604.60	462.00	142.61	4.240		
10,700.00	7,950.00	10,807.28	7,875.00	73.34	74.88	-82.88	-2,584.70	-1,839.42	604.60	457.31	147.29	4.105		
10,800.00	7,950.00	10,907.28	7,875.00	75.74	77.23	-82.88	-2,584.81	-1,939.42	604.60	452.59	152.02	3.977		
10,900.00	7,950.00	11,007.28	7,875.00	78.15	79.61	-82.88	-2,584.93	-2,039.42	604.60	447.82	156.79	3.856		
11,000.00	7,950.00	11,107.28	7,875.00	80.58	82.01	-82.88	-2,585.04	-2,139.42	604.60	443.02	161.59	3.742		
11,100.00	7,950.00	11,207.28	7,875.00	83.03	84.43	-82.88	-2,585.15	-2,239.42	604.60	438.18	166.42	3.633		
11,200.00	7,950.00	11,307.28	7,875.00	85.49	86.87	-82.88	-2,585.27	-2,339.42	604.60	433.31	171.29	3.530		
11,300.00	7,950.00	11,407.28	7,875.00	87.96	89.31	-82.88	-2,585.38	-2,439.42	604.60	428.42	176.18	3.432		
11,400.00	7,950.00	11,507.28	7,875.00	90.45	91.78	-82.88	-2,585.50	-2,539.42	604.60	423.50	181.10	3.338		
11,500.00	7,950.00	11,607.28	7,875.00	92.95	94.25	-82.88	-2,585.61	-2,639.42	604.60	418.56	186.05	3.250		
11,600.00	7,950.00	11,707.28	7,875.00	95.45	96.74	-82.88	-2,585.73	-2,739.42	604.60	413.59	191.01	3.165		
11,700.00	7,950.00	11,807.28	7,875.00	97.97	99.23	-82.88	-2,585.84	-2,839.42	604.60	408.61	196.00	3.085		
11,800.00	7,950.00	11,907.28	7,875.00	100.49	101.74	-82.88	-2,585.95	-2,939.42	604.60	403.61	201.00	3.008		
11,900.00	7,950.00	12,007.28	7,875.00	103.03	104.26	-82.88	-2,586.07	-3,039.42	604.60	398.59	206.02	2.935		
12,000.00	7,950.00	12,107.28	7,875.00	105.57	106.78	-82.88	-2,586.18	-3,139.42	604.60	393.55	211.06	2.865		
12,100.00	7,950.00	12,207.28	7,875.00	108.11	109.31	-82.88	-2,586.30	-3,239.42	604.60	388.50	216.11	2.798		
12,200.00	7,950.00	12,307.28	7,875.00	110.67	111.85	-82.88	-2,586.41	-3,339.42	604.60	383.43	221.17	2.734		
12,300.00	7,950.00	12,407.28	7,875.00	113.23	114.40	-82.88	-2,586.53	-3,439.42	604.60	378.36	226.25	2.672		
12,400.00	7,950.00	12,507.28	7,875.00	115.79	116.95	-82.88	-2,586.64	-3,539.42	604.60	373.27	231.34	2.613		
12,500.00	7,950.00	12,607.28	7,875.00	118.36	119.51	-82.88	-2,586.75	-3,639.42	604.60	368.16	236.44	2.557		
12,600.00	7,950.00	12,707.28	7,875.00	120.94	122.07	-82.88	-2,586.87	-3,739.42	604.60	363.05	241.55	2.503		
12,700.00	7,950.00	12,807.28	7,875.00	123.52	124.64	-82.88	-2,586.98	-3,839.42	604.60	357.93	246.67	2.451		
12,800.00	7,950.00	12,907.28	7,875.00	126.11	127.21	-82.88	-2,587.10	-3,939.42	604.60	352.80	251.80	2.401		
12,900.00	7,950.00	13,007.28	7,875.00	128.70	129.79	-82.88	-2,587.21	-4,039.42	604.60	347.66	256.94	2.353		
13,000.00	7,950.00	13,107.28	7,875.00	131.29	132.37	-82.88	-2,587.33	-4,139.42	604.60	342.51	262.09	2.307		
13,100.00	7,950.00	13,207.28	7,875.00	133.89	134.96	-82.88	-2,587.44	-4,239.42	604.60	337.36	267.25	2.262		
13,200.00	7,950.00	13,307.28	7,875.00	136.49	137.55	-82.88	-2,587.55	-4,339.42	604.60	332.19	272.41	2.219		
13,300.00	7,950.00	13,407.28	7,875.00	139.09	140.14	-82.88	-2,587.67	-4,439.42	604.60	327.02	277.58	2.178		
13,400.00	7,950.00	13,507.28	7,875.00	141.70	142.74	-82.88	-2,587.78	-4,539.42	604.60	321.85	282.76	2.138		
13,500.00	7,950.00	13,607.28	7,875.00	144.31	145.34	-82.88	-2,587.90	-4,639.42	604.60	316.67	287.94	2.100		
13,600.00	7,950.00	13,707.28	7,875.00	146.93	147.95	-82.88	-2,588.01	-4,739.42	604.60	311.48	293.13	2.063		
13,700.00	7,950.00	13,807.28	7,875.00	149.54	150.56	-82.88	-2,588.12	-4,839.42	604.60	306.28	298.32	2.027		
13,800.00	7,950.00	13,907.28	7,875.00	152.16	153.17	-82.88	-2,588.24	-4,939.42	604.60	301.08	303.52	1.992		
13,900.00	7,950.00	13,992.72	7,875.00	154.78	155.40	-82.88	-2,588.35	-5,039.42	604.60	296.26	308.34	1.961		
14,000.00	7,950.00	14,107.28	7,875.00	157.41	158.39	-82.88	-2,588.47	-5,139.42	604.60	290.67	313.93	1.926		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 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		
14,100.00	7,950.00	14,207.28	7,875.00	160.03	161.01	-82.88	-2,588.58	-5,239.42	604.60	285.46	319.15	1.894		
14,200.00	7,950.00	14,292.72	7,875.00	162.66	163.25	-82.88	-2,588.70	-5,339.42	604.60	280.62	323.98	1.866		
14,300.00	7,950.00	14,407.28	7,875.00	165.29	166.26	-82.88	-2,588.81	-5,439.42	604.60	275.02	329.59	1.834		
14,400.00	7,950.00	14,507.28	7,875.00	167.92	168.88	-82.88	-2,588.92	-5,539.42	604.60	269.79	334.81	1.806		
14,500.00	7,950.00	14,592.72	7,875.00	170.55	171.12	-82.88	-2,589.04	-5,639.42	604.60	264.94	339.66	1.780		
14,600.00	7,950.00	14,707.28	7,875.00	173.19	174.14	-82.88	-2,589.15	-5,739.42	604.60	259.33	345.27	1.751		
14,700.00	7,950.00	14,807.28	7,875.00	175.83	176.77	-82.88	-2,589.27	-5,839.42	604.60	254.09	350.51	1.725		
14,800.00	7,950.00	14,907.28	7,875.00	178.46	179.40	-82.88	-2,589.38	-5,939.41	604.60	248.86	355.75	1.700		
14,900.00	7,950.00	15,007.28	7,875.00	181.10	182.03	-82.88	-2,589.50	-6,039.41	604.60	243.61	360.99	1.675		
15,000.00	7,950.00	15,107.28	7,875.00	183.75	184.67	-82.88	-2,589.61	-6,139.41	604.60	238.37	366.24	1.651		
15,100.00	7,950.00	15,192.72	7,875.00	186.39	186.92	-82.88	-2,589.72	-6,239.41	604.60	233.50	371.10	1.629		
15,200.00	7,950.00	15,307.28	7,875.00	189.03	189.94	-82.88	-2,589.84	-6,339.41	604.60	227.87	376.74	1.605		
15,300.00	7,950.00	15,407.28	7,875.00	191.68	192.58	-82.88	-2,589.95	-6,439.41	604.60	222.61	381.99	1.583		
15,400.00	7,950.00	15,507.28	7,875.00	194.33	195.22	-82.88	-2,590.07	-6,539.41	604.60	217.36	387.25	1.561		
15,500.00	7,950.00	15,592.72	7,875.00	196.97	197.48	-82.88	-2,590.18	-6,639.41	604.60	212.48	392.12	1.542		
15,600.00	7,950.00	15,707.28	7,875.00	199.62	200.51	-82.88	-2,590.29	-6,739.41	604.60	206.84	397.77	1.520		
15,700.00	7,950.00	15,807.28	7,875.00	202.27	203.16	-82.88	-2,590.41	-6,839.41	604.60	201.57	403.03	1.500		
15,800.00	7,950.00	15,907.28	7,875.00	204.93	205.80	-82.88	-2,590.52	-6,939.41	604.60	196.31	408.29	1.481 Level 3		
15,900.00	7,950.00	16,007.28	7,875.00	207.58	208.45	-82.88	-2,590.64	-7,039.41	604.60	191.04	413.56	1.462 Level 3		
16,000.00	7,950.00	16,107.28	7,875.00	210.23	211.10	-82.88	-2,590.75	-7,139.41	604.60	185.77	418.83	1.444 Level 3		
16,100.00	7,950.00	16,207.28	7,875.00	212.89	213.75	-82.88	-2,590.87	-7,239.41	604.60	180.50	424.10	1.426 Level 3		
16,200.00	7,950.00	16,307.28	7,875.00	215.54	216.40	-82.88	-2,590.98	-7,339.41	604.60	175.23	429.38	1.408 Level 3		
16,300.00	7,950.00	16,407.28	7,875.00	218.20	219.05	-82.88	-2,591.09	-7,439.41	604.60	169.95	434.65	1.391 Level 3		
16,400.00	7,950.00	16,507.28	7,875.00	220.85	221.70	-82.88	-2,591.21	-7,539.41	604.60	164.68	439.93	1.374 Level 3		
16,500.00	7,950.00	16,607.28	7,875.00	223.51	224.36	-82.88	-2,591.32	-7,639.41	604.60	159.40	445.20	1.358 Level 3		
16,600.00	7,950.00	16,707.28	7,875.00	226.17	227.01	-82.88	-2,591.44	-7,739.41	604.60	154.12	450.48	1.342 Level 3		
16,700.00	7,950.00	16,807.28	7,875.00	228.83	229.67	-82.88	-2,591.55	-7,839.41	604.60	148.84	455.77	1.327 Level 3		
16,800.00	7,950.00	16,907.28	7,875.00	231.49	232.32	-82.88	-2,591.67	-7,939.41	604.60	143.56	461.05	1.311 Level 3		
16,900.00	7,950.00	17,007.28	7,875.00	234.15	234.98	-82.88	-2,591.78	-8,039.41	604.60	138.27	466.33	1.297 Level 3		
17,000.00	7,950.00	17,107.28	7,875.00	236.81	237.64	-82.88	-2,591.89	-8,139.41	604.60	132.99	471.62	1.282 Level 3		
17,100.00	7,950.00	17,207.28	7,875.00	239.47	240.30	-82.88	-2,592.01	-8,239.41	604.60	127.70	476.90	1.268 Level 3		
17,200.00	7,950.00	17,307.28	7,875.00	242.14	242.96	-82.88	-2,592.12	-8,339.41	604.60	122.41	482.19	1.254 Level 3		
17,300.00	7,950.00	17,407.28	7,875.00	244.80	245.62	-82.88	-2,592.24	-8,439.41	604.60	117.12	487.48	1.240 Level 2		
17,400.00	7,950.00	17,507.28	7,875.00	247.46	248.28	-82.88	-2,592.35	-8,539.41	604.60	111.83	492.77	1.227 Level 2		
17,500.00	7,950.00	17,607.28	7,875.00	250.13	250.94	-82.88	-2,592.47	-8,639.41	604.60	106.54	498.06	1.214 Level 2		
17,600.00	7,950.00	17,707.28	7,875.00	252.79	253.60	-82.88	-2,592.58	-8,739.41	604.60	101.25	503.36	1.201 Level 2		
17,700.00	7,950.00	17,807.28	7,875.00	255.46	256.26	-82.88	-2,592.69	-8,839.41	604.60	95.95	508.65	1.189 Level 2		
17,800.00	7,950.00	17,907.28	7,875.00	258.13	258.92	-82.88	-2,592.81	-8,939.41	604.60	90.66	513.95	1.176 Level 2		
17,900.00	7,950.00	18,007.28	7,875.00	260.79	261.59	-82.88	-2,592.92	-9,039.41	604.60	85.36	519.24	1.164 Level 2		
18,000.00	7,950.00	18,107.28	7,875.00	263.46	264.25	-82.88	-2,593.04	-9,139.41	604.60	80.06	524.54	1.153 Level 2		
18,100.00	7,950.00	18,207.28	7,875.00	266.13	266.92	-82.88	-2,593.15	-9,239.41	604.60	74.77	529.84	1.141 Level 2		
18,200.00	7,950.00	18,307.28	7,875.00	268.80	269.58	-82.88	-2,593.26	-9,339.41	604.60	69.47	535.14	1.130 Level 2		
18,300.00	7,950.00	18,407.28	7,875.00	271.47	272.25	-82.88	-2,593.38	-9,439.41	604.60	64.17	540.44	1.119 Level 2		
18,400.00	7,950.00	18,507.28	7,875.00	274.14	274.91	-82.88	-2,593.49	-9,539.41	604.60	58.87	545.74	1.108 Level 2		
18,481.45	7,950.00	18,574.16	7,875.00	276.31	276.70	-82.88	-2,593.59	-9,620.86	604.60	54.93	549.67	1.100 Level 2, SF		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 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	0.10	-0.10	0.00	0.00	179.84	-100.17	0.28	100.17					
100.00	100.00	100.10	99.90	0.13	0.13	179.84	-100.17	0.28	100.17	99.90	0.27	372.100		
200.00	200.00	200.10	199.90	0.49	0.49	179.84	-100.17	0.28	100.17	99.19	0.99	101.580		
250.00	250.00	249.90	249.90	0.67	0.67	179.84	-100.17	0.28	100.17	98.83	1.34	74.539 CC		
300.00	300.00	298.28	298.28	0.84	0.84	24.77	-100.56	0.40	100.18	98.50	1.68	59.579		
400.00	399.93	395.04	394.97	1.19	1.17	25.04	-103.69	1.33	100.25	97.90	2.35	42.672		
500.00	499.68	491.79	491.50	1.54	1.51	25.60	-109.95	3.20	100.39	97.36	3.04	33.070		
600.00	599.13	588.55	587.76	1.92	1.87	26.43	-119.32	5.99	100.63	96.89	3.73	26.946		
700.00	698.15	685.30	683.63	2.32	2.26	27.52	-131.80	9.72	100.98	96.53	4.45	22.710		
800.00	796.63	782.06	779.01	2.75	2.67	28.88	-147.38	14.36	101.47	96.29	5.18	19.603		
900.00	894.44	878.82	873.78	3.21	3.11	30.48	-166.04	19.93	102.13	96.20	5.93	17.220 ES		
1,000.00	991.46	975.57	967.84	3.71	3.58	32.32	-187.75	26.40	103.01	96.29	6.72	15.328		
1,085.22	1,073.44	1,058.03	1,047.36	4.17	4.02	34.06	-208.65	32.64	103.96	96.53	7.43	13.997		
1,100.00	1,087.59	1,072.33	1,061.09	4.25	4.09	34.37	-212.50	33.79	104.17	96.62	7.55	13.794		
1,200.00	1,183.37	1,169.07	1,153.38	4.81	4.65	35.93	-240.24	42.06	107.42	99.00	8.42	12.751		
1,300.00	1,279.15	1,265.59	1,244.45	5.39	5.24	36.59	-270.88	51.20	113.70	104.39	9.31	12.215		
1,400.00	1,374.93	1,361.68	1,333.99	5.98	5.88	36.44	-304.29	61.16	122.92	112.74	10.18	12.070		
1,500.00	1,470.71	1,457.14	1,421.74	6.57	6.55	35.66	-340.31	71.91	135.07	124.04	11.04	12.237		
1,600.00	1,566.49	1,555.53	1,511.33	7.16	7.29	34.62	-379.26	83.53	149.12	137.18	11.94	12.488		
1,700.00	1,662.27	1,654.50	1,601.44	7.76	8.04	33.74	-418.47	95.22	163.24	150.38	12.86	12.695		
1,800.00	1,758.05	1,753.47	1,691.56	8.36	8.80	33.01	-457.69	106.92	177.39	163.61	13.78	12.874		
1,900.00	1,853.83	1,852.44	1,781.67	8.96	9.56	32.38	-496.90	118.61	191.57	176.87	14.70	13.029		
2,000.00	1,949.61	1,951.41	1,871.79	9.57	10.33	31.84	-536.11	130.31	205.77	190.14	15.63	13.166		
2,100.00	2,045.39	2,050.38	1,961.90	10.17	11.10	31.37	-575.33	142.01	219.98	203.42	16.56	13.286		
2,200.00	2,141.17	2,149.35	2,052.01	10.78	11.88	30.96	-614.54	153.70	234.20	216.71	17.49	13.394		
2,300.00	2,236.95	2,248.32	2,142.13	11.39	12.66	30.59	-653.76	165.40	248.43	230.02	18.42	13.490		
2,400.00	2,332.73	2,347.29	2,232.24	11.99	13.44	30.26	-692.97	177.10	262.68	243.33	19.35	13.577		
2,500.00	2,428.51	2,446.26	2,322.36	12.60	14.22	29.97	-732.18	188.79	276.93	256.65	20.28	13.656		
2,600.00	2,524.30	2,545.23	2,412.47	13.21	15.01	29.71	-771.40	200.49	291.19	269.97	21.21	13.727		
2,700.00	2,620.08	2,644.20	2,502.58	13.82	15.80	29.47	-810.61	212.19	305.45	283.30	22.15	13.793		
2,800.00	2,715.86	2,743.17	2,592.70	14.43	16.58	29.25	-849.83	223.88	319.72	296.64	23.08	13.853		
2,900.00	2,811.64	2,842.14	2,682.81	15.04	17.37	29.05	-889.04	235.58	333.99	309.97	24.01	13.908		
3,000.00	2,907.42	2,941.11	2,772.93	15.66	18.16	28.87	-928.25	247.28	348.26	323.31	24.95	13.958		
3,100.00	3,003.20	3,040.08	2,863.04	16.27	18.95	28.70	-967.47	258.97	362.54	336.66	25.89	14.006		
3,200.00	3,098.98	3,139.05	2,953.15	16.88	19.74	28.54	-1,006.68	270.67	376.82	350.00	26.82	14.049		
3,300.00	3,194.76	3,238.02	3,043.27	17.49	20.53	28.40	-1,045.90	282.37	391.11	363.35	27.76	14.090		
3,400.00	3,290.54	3,336.99	3,133.38	18.10	21.32	28.26	-1,085.11	294.06	405.39	376.70	28.69	14.128		
3,500.00	3,386.32	3,435.96	3,223.50	18.72	22.11	28.14	-1,124.32	305.76	419.68	390.05	29.63	14.163		
3,600.00	3,482.10	3,534.93	3,313.61	19.33	22.91	28.02	-1,163.54	317.46	433.97	403.40	30.57	14.196		
3,700.00	3,577.88	3,633.90	3,403.72	19.94	23.70	27.91	-1,202.75	329.15	448.26	416.75	31.51	14.228		
3,800.00	3,673.66	3,732.87	3,493.84	20.55	24.49	27.81	-1,241.97	340.85	462.55	430.11	32.44	14.257		
3,900.00	3,769.44	3,831.84	3,583.95	21.17	25.28	27.71	-1,281.18	352.55	476.85	443.47	33.38	14.284		
4,000.00	3,865.22	3,930.81	3,674.06	21.78	26.08	27.62	-1,320.39	364.24	491.14	456.82	34.32	14.311		
4,100.00	3,961.00	4,029.78	3,764.18	22.39	26.87	27.53	-1,359.61	375.94	505.44	470.18	35.26	14.335		
4,200.00	4,056.78	4,128.75	3,854.29	23.01	27.67	27.45	-1,398.82	387.63	519.74	483.54	36.20	14.359		
4,300.00	4,152.56	4,227.72	3,944.41	23.62	28.46	27.38	-1,438.03	399.33	534.04	496.90	37.14	14.381		
4,400.00	4,248.34	4,326.69	4,034.52	24.23	29.25	27.30	-1,477.25	411.03	548.34	510.26	38.07	14.402		
4,500.00	4,344.12	4,425.66	4,124.63	24.85	30.05	27.23	-1,516.46	422.72	562.64	523.62	39.01	14.422		
4,600.00	4,439.90	4,524.63	4,214.75	25.46	30.84	27.17	-1,555.68	434.42	576.94	536.99	39.95	14.441		
4,700.00	4,535.68	4,623.60	4,304.86	26.08	31.64	27.11	-1,594.89	446.12	591.24	550.35	40.89	14.459		
4,800.00	4,631.46	4,722.57	4,394.98	26.69	32.43	27.05	-1,634.10	457.81	605.54	563.71	41.83	14.476		
4,900.00	4,727.24	4,821.54	4,485.09	27.30	33.23	26.99	-1,673.32	469.51	619.85	577.08	42.77	14.492		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 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		
5,000.00	4,823.02	4,920.51	4,575.20	27.92	34.02	26.94	-1,712.53	481.21	634.15	590.44	43.71	14.508		
5,100.00	4,918.80	5,019.48	4,665.32	28.53	34.82	26.88	-1,751.75	492.90	648.46	603.81	44.65	14.523		
5,200.00	5,014.58	5,118.45	4,755.43	29.15	35.61	26.83	-1,790.96	504.60	662.76	617.17	45.59	14.538		
5,300.00	5,110.36	5,217.42	4,845.55	29.76	36.41	26.79	-1,830.17	516.30	677.07	630.54	46.53	14.552		
5,400.00	5,206.14	5,316.39	4,935.66	30.37	37.20	26.74	-1,869.39	527.99	691.37	643.90	47.47	14.565		
5,500.00	5,301.92	5,415.36	5,025.77	30.99	38.00	26.70	-1,908.60	539.69	705.68	657.27	48.41	14.578		
5,600.00	5,397.70	5,514.33	5,115.89	31.60	38.80	26.66	-1,947.82	551.39	719.98	670.64	49.35	14.590		
5,700.00	5,493.48	5,613.30	5,206.00	32.22	39.59	26.62	-1,987.03	563.08	734.29	684.00	50.29	14.602		
5,800.00	5,589.26	5,712.27	5,296.12	32.83	40.39	26.58	-2,026.24	574.78	748.60	697.37	51.23	14.613		
5,900.00	5,685.04	5,811.24	5,386.23	33.45	41.18	26.54	-2,065.46	586.48	762.91	710.74	52.17	14.624		
6,000.00	5,780.82	5,910.21	5,476.34	34.06	41.98	26.50	-2,104.67	598.17	777.21	724.11	53.11	14.634		
6,100.00	5,876.60	6,009.18	5,566.46	34.67	42.78	26.47	-2,143.89	609.87	791.52	737.47	54.05	14.644		
6,200.00	5,972.38	6,108.15	5,656.57	35.29	43.57	26.44	-2,183.10	621.56	805.83	750.84	54.99	14.654		
6,300.00	6,068.16	6,207.12	5,746.68	35.90	44.37	26.40	-2,222.31	633.26	820.14	764.21	55.93	14.664		
6,400.00	6,163.94	6,306.09	5,836.80	36.52	45.16	26.37	-2,261.53	644.96	834.45	777.58	56.87	14.673		
6,500.00	6,259.72	6,405.06	5,926.91	37.13	45.96	26.34	-2,300.74	656.65	848.76	790.95	57.81	14.682		
6,600.00	6,355.50	6,504.03	6,017.03	37.75	46.76	26.31	-2,339.96	668.35	863.07	804.32	58.75	14.690		
6,700.00	6,451.28	6,603.00	6,107.14	38.36	47.55	26.29	-2,379.17	680.05	877.38	817.68	59.69	14.698		
6,800.00	6,547.06	6,701.97	6,197.25	38.98	48.35	26.26	-2,418.38	691.74	891.69	831.05	60.63	14.706		
6,900.00	6,642.84	6,800.94	6,287.37	39.59	49.15	26.23	-2,457.60	703.44	906.00	844.42	61.57	14.714		
7,000.00	6,738.62	6,900.09	6,377.48	40.21	49.94	26.21	-2,496.81	715.14	920.31	857.79	62.52	14.721		
7,100.00	6,834.40	6,998.88	6,467.60	40.82	50.74	26.18	-2,536.02	726.83	934.62	871.16	63.46	14.729		
7,200.00	6,930.18	7,097.85	6,557.71	41.43	51.53	26.16	-2,575.24	738.53	948.93	884.53	64.40	14.736		
7,300.00	7,025.96	7,203.18	6,647.82	42.05	52.38	26.13	-2,614.45	750.23	963.24	897.87	65.37	14.735		
7,400.00	7,121.74	7,304.21	6,737.94	42.66	53.20	26.11	-2,653.67	761.92	977.55	911.23	66.32	14.740		
7,500.00	7,217.52	7,405.24	6,828.05	43.28	54.01	26.09	-2,692.88	773.62	991.86	924.59	67.27	14.744		
7,600.00	7,313.30	7,493.73	6,918.17	43.89	54.72	26.07	-2,732.09	785.32	1,006.17	938.01	68.16	14.762		
7,617.92	7,330.46	7,511.46	6,934.32	44.00	54.86	26.06	-2,739.12	787.41	1,008.74	940.41	68.33	14.763		
7,650.00	7,361.28	7,543.20	6,963.21	44.20	55.12	15.98	-2,751.70	791.16	1,013.29	944.69	68.60	14.771		
7,700.00	7,409.49	7,607.57	7,008.04	44.47	55.64	-1.70	-2,771.20	796.98	1,020.24	951.27	68.97	14.792		
7,750.00	7,457.61	7,641.05	7,052.31	44.71	55.91	-18.73	-2,790.47	802.73	1,027.02	957.98	69.05	14.874		
7,800.00	7,505.28	7,688.70	7,095.69	44.91	56.29	-32.59	-2,809.35	808.36	1,033.70	964.64	69.06	14.967		
7,850.00	7,552.12	7,735.00	7,137.85	45.08	56.66	-42.98	-2,827.69	813.83	1,040.38	971.42	68.96	15.087		
7,900.00	7,597.78	7,779.61	7,178.47	45.23	57.02	-50.65	-2,845.37	819.10	1,047.22	978.46	68.76	15.229		
7,950.00	7,641.91	7,822.19	7,217.24	45.34	57.36	-56.41	-2,862.24	824.13	1,054.40	985.91	68.50	15.394		
8,000.00	7,684.18	7,862.41	7,253.86	45.43	57.69	-60.82	-2,878.17	828.89	1,062.12	993.93	68.19	15.575		
8,050.00	7,724.27	7,900.04	7,288.05	45.50	57.99	-64.25	-2,893.05	833.33	1,070.59	1,002.70	67.89	15.770		
8,100.00	7,761.87	7,934.57	7,319.56	45.54	58.27	-66.91	-2,906.77	837.42	1,080.02	1,012.40	67.62	15.972		
8,150.00	7,796.69	7,965.97	7,348.15	45.57	58.52	-68.90	-2,919.21	841.13	1,090.62	1,023.19	67.43	16.174		
8,200.00	7,828.47	8,000.94	7,380.02	45.58	58.80	-70.62	-2,933.08	844.95	1,102.51	1,035.09	67.42	16.353		
8,250.00	7,856.97	8,047.31	7,422.49	45.57	59.15	-72.43	-2,951.56	847.04	1,115.46	1,047.79	67.67	16.483		
8,300.00	7,881.97	8,100.22	7,470.94	45.54	59.53	-74.18	-2,972.65	844.84	1,129.33	1,061.22	68.11	16.581		
8,350.00	7,903.28	8,350.00	7,507.64	45.50	61.12	-75.05	-2,988.64	839.56	1,143.92	1,074.42	69.51	16.458		
8,400.00	7,920.74	8,242.07	7,597.76	45.44	60.34	-78.21	-3,027.90	815.14	1,158.96	1,089.73	69.23	16.740		
8,450.00	7,934.22	8,348.39	7,686.30	45.38	60.78	-81.06	-3,066.49	771.06	1,173.83	1,104.27	69.55	16.877		
8,500.00	7,943.60	8,502.70	7,798.09	45.30	61.18	-84.81	-3,115.26	677.28	1,187.35	1,118.01	69.34	17.123		
8,550.00	7,948.83	8,732.91	7,912.85	45.22	61.37	-88.74	-3,165.44	485.98	1,197.04	1,127.70	69.34	17.264		
8,587.24	7,950.00	8,951.43	7,950.00	45.15	61.20	-90.00	-3,181.87	272.61	1,199.53	1,127.74	71.79	16.708		
8,588.65	7,950.00	8,588.65	7,949.24	45.15	61.81	-89.97	-3,181.52	293.40	1,199.38	1,129.83	69.56	17.244		
8,600.00	7,950.00	8,962.73	7,950.00	45.13	61.19	-90.00	-3,181.88	261.31	1,199.53	1,127.61	71.92	16.679		
8,700.00	7,950.00	9,062.73	7,950.00	44.96	61.06	-90.00	-3,182.00	161.31	1,199.54	1,126.22	73.32	16.361		
8,800.00	7,950.00	9,162.73	7,950.00	44.81	60.96	-90.00	-3,182.12	61.31	1,199.54	1,124.48	75.06	15.981		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 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		
8,900.00	7,950.00	9,262.73	7,950.00	44.69	60.88	-90.00	-3,182.24	-38.69	1,199.54	1,122.40	77.14	15.550		
9,000.00	7,950.00	9,362.73	7,950.00	44.58	60.81	-90.00	-3,182.35	-138.69	1,199.55	1,120.02	79.53	15.083		
9,100.00	7,950.00	9,462.73	7,950.00	44.50	60.77	-90.00	-3,182.47	-238.69	1,199.55	1,117.35	82.20	14.592		
9,200.00	7,950.00	9,562.73	7,950.00	44.48	60.76	-90.00	-3,182.59	-338.69	1,199.55	1,114.42	85.14	14.090		
9,300.00	7,950.00	9,662.73	7,950.00	44.63	60.77	-90.00	-3,182.71	-438.69	1,199.56	1,111.26	88.30	13.585		
9,400.00	7,950.00	9,762.73	7,950.00	45.49	60.83	-90.00	-3,182.83	-538.69	1,199.56	1,107.89	91.67	13.086		
9,500.00	7,950.00	9,862.73	7,950.00	47.12	60.93	-90.00	-3,182.94	-638.69	1,199.56	1,104.34	95.22	12.597		
9,600.00	7,950.00	9,962.73	7,950.00	48.99	61.12	-90.00	-3,183.06	-738.69	1,199.57	1,100.62	98.95	12.124		
9,700.00	7,950.00	10,062.73	7,950.00	50.96	61.41	-90.00	-3,183.18	-838.69	1,199.57	1,096.76	102.81	11.667		
9,800.00	7,950.00	10,162.73	7,950.00	53.01	61.86	-90.00	-3,183.30	-938.69	1,199.58	1,092.76	106.81	11.231		
9,900.00	7,950.00	10,262.73	7,950.00	55.12	62.54	-90.00	-3,183.42	-1,038.69	1,199.58	1,088.65	110.93	10.814		
10,000.00	7,950.00	10,362.73	7,950.00	57.28	63.51	-90.00	-3,183.53	-1,138.69	1,199.58	1,084.43	115.15	10.417		
10,100.00	7,950.00	10,462.73	7,950.00	59.48	64.80	-90.00	-3,183.65	-1,238.69	1,199.59	1,080.12	119.47	10.041		
10,200.00	7,950.00	10,562.73	7,950.00	61.71	66.36	-90.00	-3,183.77	-1,338.69	1,199.59	1,075.73	123.86	9.685		
10,300.00	7,950.00	10,662.73	7,950.00	63.99	68.14	-90.00	-3,183.89	-1,438.69	1,199.59	1,071.26	128.34	9.347		
10,400.00	7,950.00	10,762.73	7,950.00	66.29	70.08	-90.00	-3,184.00	-1,538.69	1,199.60	1,066.72	132.88	9.028		
10,500.00	7,950.00	10,862.73	7,950.00	68.62	72.13	-90.00	-3,184.12	-1,638.69	1,199.60	1,062.12	137.48	8.726		
10,600.00	7,950.00	10,962.73	7,950.00	70.97	74.26	-90.00	-3,184.24	-1,738.69	1,199.60	1,057.47	142.14	8.440		
10,700.00	7,950.00	11,062.73	7,950.00	73.34	76.45	-90.00	-3,184.36	-1,838.69	1,199.61	1,052.76	146.84	8.169		
10,800.00	7,950.00	11,162.73	7,950.00	75.74	78.69	-90.00	-3,184.48	-1,938.69	1,199.61	1,048.02	151.60	7.913		
10,900.00	7,950.00	11,262.73	7,950.00	78.15	80.97	-90.00	-3,184.59	-2,038.69	1,199.62	1,043.23	156.39	7.671		
11,000.00	7,950.00	11,362.73	7,950.00	80.58	83.29	-90.00	-3,184.71	-2,138.69	1,199.62	1,038.40	161.22	7.441		
11,100.00	7,950.00	11,462.73	7,950.00	83.03	85.64	-90.00	-3,184.83	-2,238.69	1,199.62	1,033.54	166.08	7.223		
11,200.00	7,950.00	11,562.73	7,950.00	85.49	88.00	-90.00	-3,184.95	-2,338.69	1,199.63	1,028.65	170.98	7.016		
11,300.00	7,950.00	11,662.73	7,950.00	87.96	90.40	-90.00	-3,185.07	-2,438.69	1,199.63	1,023.73	175.90	6.820		
11,400.00	7,950.00	11,762.73	7,950.00	90.45	92.81	-90.00	-3,185.18	-2,538.69	1,199.63	1,018.78	180.85	6.633		
11,500.00	7,950.00	11,862.73	7,950.00	92.95	95.23	-90.00	-3,185.30	-2,638.69	1,199.64	1,013.81	185.83	6.456		
11,600.00	7,950.00	11,962.73	7,950.00	95.45	97.67	-90.00	-3,185.42	-2,738.69	1,199.64	1,008.82	190.82	6.287		
11,700.00	7,950.00	12,062.73	7,950.00	97.97	100.13	-90.00	-3,185.54	-2,838.69	1,199.64	1,003.80	195.84	6.126		
11,800.00	7,950.00	12,162.73	7,950.00	100.49	102.60	-90.00	-3,185.65	-2,938.69	1,199.65	998.77	200.88	5.972		
11,900.00	7,950.00	12,262.73	7,950.00	103.03	105.08	-90.00	-3,185.77	-3,038.69	1,199.65	993.72	205.93	5.826		
12,000.00	7,950.00	12,362.73	7,950.00	105.57	107.57	-90.00	-3,185.89	-3,138.69	1,199.66	988.66	211.00	5.686		
12,100.00	7,950.00	12,462.73	7,950.00	108.11	110.07	-90.00	-3,186.01	-3,238.69	1,199.66	983.57	216.09	5.552		
12,200.00	7,950.00	12,562.73	7,950.00	110.67	112.58	-90.00	-3,186.13	-3,338.69	1,199.66	978.48	221.19	5.424		
12,300.00	7,950.00	12,662.73	7,950.00	113.23	115.10	-90.00	-3,186.24	-3,438.69	1,199.67	973.37	226.30	5.301		
12,400.00	7,950.00	12,762.73	7,950.00	115.79	117.63	-90.00	-3,186.36	-3,538.69	1,199.67	968.25	231.42	5.184		
12,500.00	7,950.00	12,862.73	7,950.00	118.36	120.16	-90.00	-3,186.48	-3,638.69	1,199.67	963.11	236.56	5.071		
12,600.00	7,950.00	12,962.73	7,950.00	120.94	122.70	-90.00	-3,186.60	-3,738.69	1,199.68	957.97	241.71	4.963		
12,700.00	7,950.00	13,062.73	7,950.00	123.52	125.25	-90.00	-3,186.72	-3,838.69	1,199.68	952.82	246.86	4.860		
12,800.00	7,950.00	13,162.73	7,950.00	126.11	127.80	-90.00	-3,186.83	-3,938.69	1,199.68	947.65	252.03	4.760		
12,900.00	7,950.00	13,262.73	7,950.00	128.70	130.36	-90.00	-3,186.95	-4,038.69	1,199.69	942.48	257.21	4.664		
13,000.00	7,950.00	13,362.73	7,950.00	131.29	132.92	-90.00	-3,187.07	-4,138.69	1,199.69	937.30	262.39	4.572		
13,100.00	7,950.00	13,462.73	7,950.00	133.89	135.49	-90.00	-3,187.19	-4,238.69	1,199.70	932.11	267.58	4.483		
13,200.00	7,950.00	13,562.73	7,950.00	136.49	138.06	-90.00	-3,187.31	-4,338.69	1,199.70	926.92	272.78	4.398		
13,300.00	7,950.00	13,662.73	7,950.00	139.09	140.64	-90.00	-3,187.42	-4,438.69	1,199.70	921.71	277.99	4.316		
13,400.00	7,950.00	13,762.73	7,950.00	141.70	143.22	-90.00	-3,187.54	-4,538.69	1,199.71	916.50	283.20	4.236		
13,500.00	7,950.00	13,862.73	7,950.00	144.31	145.81	-90.00	-3,187.66	-4,638.69	1,199.71	911.29	288.42	4.160		
13,600.00	7,950.00	13,962.73	7,950.00	146.93	148.40	-90.00	-3,187.78	-4,738.69	1,199.71	906.07	293.65	4.086		
13,700.00	7,950.00	14,062.73	7,950.00	149.54	150.99	-90.00	-3,187.89	-4,838.69	1,199.72	900.84	298.88	4.014		
13,800.00	7,950.00	14,162.73	7,950.00	152.16	153.59	-90.00	-3,188.01	-4,938.69	1,199.72	895.61	304.12	3.945		
13,900.00	7,950.00	14,262.73	7,950.00	154.78	156.19	-90.00	-3,188.13	-5,038.69	1,199.72	890.37	309.36	3.878		
14,000.00	7,950.00	14,362.73	7,950.00	157.41	158.79	-90.00	-3,188.25	-5,138.69	1,199.73	885.12	314.60	3.813		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - LONE TREE 4-65 15-16 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		
14,100.00	7,950.00	14,462.73	7,950.00	160.03	161.40	-90.00	-3,188.37	-5,238.69	1,199.73	879.88	319.85	3.751		
14,200.00	7,950.00	14,562.73	7,950.00	162.66	164.00	-90.00	-3,188.48	-5,338.69	1,199.74	874.63	325.11	3.690		
14,300.00	7,950.00	14,662.73	7,950.00	165.29	166.61	-90.00	-3,188.60	-5,438.69	1,199.74	869.37	330.37	3.632		
14,400.00	7,950.00	14,762.73	7,950.00	167.92	169.23	-90.00	-3,188.72	-5,538.69	1,199.74	864.11	335.63	3.575		
14,500.00	7,950.00	14,862.73	7,950.00	170.55	171.84	-90.00	-3,188.84	-5,638.69	1,199.75	858.85	340.90	3.519		
14,600.00	7,950.00	14,962.73	7,950.00	173.19	174.46	-90.00	-3,188.96	-5,738.69	1,199.75	853.58	346.17	3.466		
14,700.00	7,950.00	15,062.73	7,950.00	175.83	177.08	-90.00	-3,189.07	-5,838.69	1,199.75	848.31	351.44	3.414		
14,800.00	7,950.00	15,162.73	7,950.00	178.46	179.70	-90.00	-3,189.19	-5,938.69	1,199.76	843.03	356.72	3.363		
14,900.00	7,950.00	15,262.73	7,950.00	181.10	182.33	-90.00	-3,189.31	-6,038.69	1,199.76	837.76	362.00	3.314		
15,000.00	7,950.00	15,362.73	7,950.00	183.75	184.95	-90.00	-3,189.43	-6,138.69	1,199.76	832.48	367.29	3.267		
15,100.00	7,950.00	15,462.73	7,950.00	186.39	187.58	-90.00	-3,189.54	-6,238.69	1,199.77	827.19	372.57	3.220		
15,200.00	7,950.00	15,562.73	7,950.00	189.03	190.21	-90.00	-3,189.66	-6,338.69	1,199.77	821.91	377.86	3.175		
15,300.00	7,950.00	15,662.73	7,950.00	191.68	192.84	-90.00	-3,189.78	-6,438.69	1,199.78	816.62	383.16	3.131		
15,400.00	7,950.00	15,762.73	7,950.00	194.33	195.48	-90.00	-3,189.90	-6,538.69	1,199.78	811.33	388.45	3.089		
15,500.00	7,950.00	15,862.73	7,950.00	196.97	198.11	-90.00	-3,190.02	-6,638.69	1,199.78	806.04	393.75	3.047		
15,600.00	7,950.00	15,962.73	7,950.00	199.62	200.75	-90.00	-3,190.13	-6,738.69	1,199.79	800.74	399.05	3.007		
15,700.00	7,950.00	16,062.73	7,950.00	202.27	203.38	-90.00	-3,190.25	-6,838.69	1,199.79	795.44	404.35	2.967		
15,800.00	7,950.00	16,162.73	7,950.00	204.93	206.02	-90.00	-3,190.37	-6,938.69	1,199.79	790.14	409.65	2.929		
15,900.00	7,950.00	16,262.73	7,950.00	207.58	208.66	-90.00	-3,190.49	-7,038.69	1,199.80	784.84	414.96	2.891		
16,000.00	7,950.00	16,362.73	7,950.00	210.23	211.30	-90.00	-3,190.61	-7,138.69	1,199.80	779.54	420.27	2.855		
16,100.00	7,950.00	16,462.73	7,950.00	212.89	213.95	-90.00	-3,190.72	-7,238.69	1,199.80	774.23	425.57	2.819		
16,200.00	7,950.00	16,562.73	7,950.00	215.54	216.59	-90.00	-3,190.84	-7,338.69	1,199.81	768.92	430.89	2.785		
16,300.00	7,950.00	16,662.73	7,950.00	218.20	219.24	-90.00	-3,190.96	-7,438.68	1,199.81	763.61	436.20	2.751		
16,400.00	7,950.00	16,762.73	7,950.00	220.85	221.88	-90.00	-3,191.08	-7,538.68	1,199.82	758.30	441.52	2.717		
16,500.00	7,950.00	16,862.73	7,950.00	223.51	224.53	-90.00	-3,191.20	-7,638.68	1,199.82	752.99	446.83	2.685		
16,600.00	7,950.00	16,962.73	7,950.00	226.17	227.18	-90.00	-3,191.31	-7,738.68	1,199.82	747.67	452.15	2.654		
16,700.00	7,950.00	17,062.73	7,950.00	228.83	229.83	-90.00	-3,191.43	-7,838.68	1,199.83	742.36	457.47	2.623		
16,800.00	7,950.00	17,162.73	7,950.00	231.49	232.48	-90.00	-3,191.55	-7,938.68	1,199.83	737.04	462.79	2.593		
16,900.00	7,950.00	17,262.73	7,950.00	234.15	235.13	-90.00	-3,191.67	-8,038.68	1,199.83	731.72	468.11	2.563		
17,000.00	7,950.00	17,362.73	7,950.00	236.81	237.78	-90.00	-3,191.78	-8,138.68	1,199.84	726.40	473.44	2.534		
17,100.00	7,950.00	17,462.73	7,950.00	239.47	240.43	-90.00	-3,191.90	-8,238.68	1,199.84	721.08	478.76	2.506		
17,200.00	7,950.00	17,562.73	7,950.00	242.14	243.09	-90.00	-3,192.02	-8,338.68	1,199.84	715.75	484.09	2.479		
17,300.00	7,950.00	17,662.73	7,950.00	244.80	245.74	-90.00	-3,192.14	-8,438.68	1,199.85	710.43	489.42	2.452		
17,400.00	7,950.00	17,762.73	7,950.00	247.46	248.40	-90.00	-3,192.26	-8,538.68	1,199.85	705.10	494.75	2.425		
17,500.00	7,950.00	17,862.73	7,950.00	250.13	251.05	-90.00	-3,192.37	-8,638.68	1,199.86	699.78	500.08	2.399		
17,600.00	7,950.00	17,962.73	7,950.00	252.79	253.71	-90.00	-3,192.49	-8,738.68	1,199.86	694.45	505.41	2.374		
17,700.00	7,950.00	18,062.73	7,950.00	255.46	256.37	-90.00	-3,192.61	-8,838.68	1,199.86	689.12	510.74	2.349		
17,800.00	7,950.00	18,162.73	7,950.00	258.13	259.02	-90.00	-3,192.73	-8,938.68	1,199.87	683.79	516.08	2.325		
17,900.00	7,950.00	18,262.73	7,950.00	260.79	261.68	-90.00	-3,192.85	-9,038.68	1,199.87	678.46	521.41	2.301		
18,000.00	7,950.00	18,362.73	7,950.00	263.46	264.34	-90.00	-3,192.96	-9,138.68	1,199.87	673.12	526.75	2.278		
18,100.00	7,950.00	18,462.73	7,950.00	266.13	267.00	-90.00	-3,193.08	-9,238.68	1,199.88	667.79	532.09	2.255		
18,200.00	7,950.00	18,562.73	7,950.00	268.80	269.66	-90.00	-3,193.20	-9,338.68	1,199.88	662.46	537.42	2.233		
18,300.00	7,950.00	18,662.73	7,950.00	271.47	272.33	-90.00	-3,193.32	-9,438.68	1,199.88	657.12	542.76	2.211		
18,400.00	7,950.00	18,762.73	7,950.00	274.14	274.99	-90.00	-3,193.43	-9,538.68	1,199.89	651.79	548.10	2.189		
18,481.45	7,950.00	18,844.18	7,950.00	276.31	277.16	-90.00	-3,193.53	-9,620.13	1,199.89	647.44	552.45	2.172 SF		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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	5.20	5.20	0.00	0.01	-0.09	174.85	-0.28	174.85					
100.00	100.00	105.20	105.20	0.13	0.15	-0.09	174.85	-0.28	174.85	174.56	0.29	608.181		
200.00	200.00	205.20	205.20	0.49	0.51	-0.09	174.85	-0.28	174.85	173.84	1.00	174.076		
206.40	206.40	211.60	211.60	0.52	0.53	-0.09	174.85	-0.28	174.85	173.80	1.05	166.473 CC		
250.00	250.00	254.92	254.92	0.67	0.69	-0.09	174.85	-0.28	174.85	173.49	1.36	128.386 ES		
300.00	300.00	302.17	302.16	0.84	0.86	-155.20	175.30	-0.13	175.72	174.02	1.70	103.080		
400.00	399.93	396.37	396.31	1.19	1.20	-155.26	178.40	0.89	182.17	179.78	2.39	76.108		
500.00	499.68	489.74	489.46	1.54	1.54	-155.37	184.36	2.87	194.87	191.78	3.10	62.953		
600.00	599.13	581.73	580.99	1.92	1.88	-155.50	193.06	5.75	213.73	209.93	3.80	56.282		
700.00	698.15	671.86	670.34	2.32	2.23	-155.63	204.28	9.47	238.63	234.13	4.50	53.083		
800.00	796.63	763.41	760.73	2.75	2.61	-155.77	218.05	14.04	269.08	263.88	5.20	51.737		
900.00	894.44	857.47	853.54	3.21	3.00	-156.06	232.55	18.84	302.92	297.00	5.92	51.128		
1,000.00	991.46	950.34	945.18	3.71	3.39	-156.46	246.86	23.59	339.79	333.14	6.65	51.074		
1,085.22	1,073.44	1,028.47	1,022.27	4.17	3.73	-156.85	258.90	27.58	373.58	366.30	7.27	51.359		
1,100.00	1,087.59	1,041.94	1,035.56	4.25	3.79	-156.97	260.98	28.27	379.63	372.24	7.39	51.395		
1,200.00	1,183.37	1,133.05	1,125.46	4.81	4.18	-157.69	275.02	32.92	420.59	412.49	8.10	51.893		
1,300.00	1,279.15	1,224.16	1,215.36	5.39	4.57	-158.28	289.06	37.57	461.61	452.78	8.83	52.283		
1,400.00	1,374.93	1,315.27	1,305.26	5.98	4.97	-158.78	303.11	42.23	502.65	493.09	9.56	52.593		
1,500.00	1,470.71	1,406.38	1,395.16	6.57	5.37	-159.20	317.15	46.88	543.72	533.43	10.29	52.844		
1,600.00	1,566.49	1,502.52	1,485.06	7.16	5.79	-159.56	331.19	51.54	584.82	573.77	11.04	52.956		
1,700.00	1,662.27	1,588.59	1,574.96	7.76	6.17	-159.88	345.23	56.19	625.93	614.17	11.76	53.221		
1,800.00	1,758.05	1,679.70	1,664.86	8.36	6.57	-160.15	359.27	60.84	667.05	654.55	12.50	53.365		
1,900.00	1,853.83	1,770.81	1,754.76	8.96	6.97	-160.40	373.32	65.50	708.19	694.95	13.24	53.488		
2,000.00	1,949.61	1,861.92	1,844.66	9.57	7.37	-160.62	387.36	70.15	749.33	735.35	13.98	53.593		
2,100.00	2,045.39	1,953.03	1,934.56	10.17	7.77	-160.81	401.40	74.81	790.48	775.76	14.72	53.684		
2,200.00	2,141.17	2,044.14	2,024.46	10.78	8.17	-160.99	415.44	79.46	831.64	816.17	15.47	53.763		
2,300.00	2,236.95	2,135.24	2,114.36	11.39	8.57	-161.14	429.48	84.11	872.81	856.59	16.21	53.832		
2,400.00	2,332.73	2,226.35	2,204.26	11.99	8.97	-161.29	443.52	88.77	913.98	897.02	16.96	53.894		
2,500.00	2,428.51	2,317.46	2,294.16	12.60	9.38	-161.42	457.57	93.42	955.15	937.45	17.71	53.948		
2,600.00	2,524.30	2,408.57	2,384.06	13.21	9.78	-161.54	471.61	98.08	996.33	977.88	18.45	53.997		
2,700.00	2,620.08	2,500.32	2,473.96	13.82	10.18	-161.65	485.65	102.73	1,037.51	1,018.31	19.20	54.033		
2,800.00	2,715.86	2,590.79	2,563.86	14.43	10.58	-161.76	499.69	107.39	1,078.70	1,058.75	19.95	54.079		
2,900.00	2,811.64	2,681.90	2,653.76	15.04	10.99	-161.85	513.73	112.04	1,119.89	1,099.19	20.70	54.114		
3,000.00	2,907.42	2,773.00	2,743.66	15.66	11.39	-161.94	527.78	116.69	1,161.08	1,139.63	21.44	54.146		
3,100.00	3,003.20	2,864.11	2,833.56	16.27	11.79	-162.02	541.82	121.35	1,202.27	1,180.08	22.19	54.174		
3,200.00	3,098.98	2,955.22	2,923.46	16.88	12.20	-162.10	555.86	126.00	1,243.46	1,220.52	22.94	54.200		
3,300.00	3,194.76	3,046.33	3,013.36	17.49	12.60	-162.17	569.90	130.66	1,284.66	1,260.97	23.69	54.224		
3,400.00	3,290.54	3,137.44	3,103.26	18.10	13.00	-162.24	583.94	135.31	1,325.86	1,301.42	24.44	54.246		
3,500.00	3,386.32	3,228.55	3,193.15	18.72	13.40	-162.30	597.99	139.96	1,367.06	1,341.87	25.19	54.265		
3,600.00	3,482.10	3,319.66	3,283.05	19.33	13.81	-162.36	612.03	144.62	1,408.26	1,382.31	25.94	54.284		
3,700.00	3,577.88	3,410.77	3,372.95	19.94	14.21	-162.42	626.07	149.27	1,449.46	1,422.77	26.69	54.300		
3,800.00	3,673.66	3,501.87	3,462.85	20.55	14.61	-162.47	640.11	153.93	1,490.66	1,463.22	27.44	54.315		
3,900.00	3,769.44	3,592.98	3,552.75	21.17	15.02	-162.52	654.15	158.58	1,531.87	1,503.67	28.20	54.329		
4,000.00	3,865.22	3,684.09	3,642.65	21.78	15.42	-162.57	668.20	163.23	1,573.07	1,544.12	28.95	54.342		
4,100.00	3,961.00	3,775.20	3,732.55	22.39	15.82	-162.62	682.24	167.89	1,614.28	1,584.58	29.70	54.354		
4,200.00	4,056.78	3,866.31	3,822.45	23.01	16.23	-162.66	696.28	172.54	1,655.48	1,625.03	30.45	54.365		
4,300.00	4,152.56	3,957.42	3,912.35	23.62	16.63	-162.70	710.32	177.20	1,696.69	1,665.49	31.20	54.375		
4,400.00	4,248.34	4,048.53	4,002.25	24.23	17.04	-162.74	724.36	181.85	1,737.90	1,705.94	31.96	54.384		
4,500.00	4,344.12	4,139.63	4,092.15	24.85	17.44	-162.78	738.40	186.50	1,779.11	1,746.40	32.71	54.392		
4,600.00	4,439.90	4,230.74	4,182.05	25.46	17.84	-162.81	752.45	191.16	1,820.31	1,786.85	33.46	54.400		
4,700.00	4,535.68	4,321.85	4,271.95	26.08	18.25	-162.85	766.49	195.81	1,861.52	1,827.31	34.21	54.407		
4,800.00	4,631.46	4,412.96	4,361.85	26.69	18.65	-162.88	780.53	200.47	1,902.73	1,867.77	34.97	54.413		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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		
4,900.00	4,727.24	4,504.07	4,451.75	27.30	19.05	-162.91	794.57	205.12	1,943.94	1,908.22	35.72	54.419		
5,000.00	4,823.02	4,604.82	4,541.65	27.92	19.50	-162.94	808.61	209.77	1,985.16	1,948.64	36.51	54.368		
5,100.00	4,918.80	4,686.29	4,631.55	28.53	19.86	-162.97	822.66	214.43	2,026.37	1,989.14	37.23	54.429		
5,200.00	5,014.58	4,777.39	4,721.45	29.15	20.27	-163.00	836.70	219.08	2,067.58	2,029.60	37.98	54.434		
5,300.00	5,110.36	4,868.50	4,811.35	29.76	20.67	-163.02	850.74	223.74	2,108.79	2,070.05	38.74	54.437		
5,400.00	5,206.14	4,959.61	4,901.25	30.37	21.07	-163.05	864.78	228.39	2,150.00	2,110.51	39.49	54.441		
5,500.00	5,301.92	5,050.72	4,991.15	30.99	21.48	-163.07	878.82	233.04	2,191.22	2,150.97	40.25	54.444		
5,600.00	5,397.70	5,141.83	5,081.05	31.60	21.88	-163.10	892.87	237.70	2,232.43	2,191.43	41.00	54.447		
5,700.00	5,493.48	5,232.94	5,170.95	32.22	22.28	-163.12	906.91	242.35	2,273.64	2,231.89	41.76	54.449		
5,800.00	5,589.26	5,324.05	5,260.85	32.83	22.69	-163.14	920.95	247.01	2,314.86	2,272.34	42.51	54.451		
5,900.00	5,685.04	5,415.15	5,350.75	33.45	23.09	-163.16	934.99	251.66	2,356.07	2,312.80	43.27	54.453		
6,000.00	5,780.82	5,506.26	5,440.65	34.06	23.50	-163.18	949.03	256.32	2,397.29	2,353.26	44.02	54.454		
6,100.00	5,876.60	5,602.63	5,530.55	34.67	23.92	-163.20	963.07	260.97	2,438.50	2,393.70	44.80	54.431		
6,200.00	5,972.38	5,688.48	5,620.45	35.29	24.30	-163.22	977.12	265.62	2,479.71	2,434.18	45.54	54.456		
6,300.00	6,068.16	5,779.59	5,710.35	35.90	24.71	-163.24	991.16	270.28	2,520.93	2,474.64	46.29	54.457		
6,400.00	6,163.94	5,870.70	5,800.24	36.52	25.11	-163.26	1,005.20	274.93	2,562.15	2,515.10	47.05	54.457		
6,500.00	6,259.72	5,961.81	5,890.14	37.13	25.52	-163.27	1,019.24	279.59	2,603.36	2,555.56	47.81	54.458		
6,600.00	6,355.50	6,052.92	5,980.04	37.75	25.92	-163.29	1,033.28	284.24	2,644.58	2,596.01	48.56	54.457		
6,700.00	6,451.28	6,144.02	6,069.94	38.36	26.32	-163.31	1,047.33	288.89	2,685.79	2,636.47	49.32	54.457		
6,800.00	6,547.06	6,235.13	6,159.84	38.98	26.73	-163.32	1,061.37	293.55	2,727.01	2,676.93	50.08	54.457		
6,900.00	6,642.84	6,326.24	6,249.74	39.59	27.13	-163.34	1,075.41	298.20	2,768.22	2,717.39	50.83	54.456		
7,000.00	6,738.62	6,417.35	6,339.64	40.21	27.54	-163.35	1,089.45	302.86	2,809.44	2,757.85	51.59	54.455		
7,100.00	6,834.40	6,508.46	6,429.54	40.82	27.94	-163.37	1,103.49	307.51	2,850.66	2,798.31	52.35	54.454		
7,200.00	6,930.18	6,599.57	6,519.44	41.43	28.34	-163.38	1,117.54	312.16	2,891.87	2,838.77	53.11	54.452		
7,300.00	7,025.96	6,709.32	6,609.34	42.05	28.83	-163.40	1,131.58	316.82	2,933.09	2,879.15	53.94	54.377		
7,400.00	7,121.74	6,781.78	6,699.24	42.66	29.15	-163.41	1,145.62	321.47	2,974.31	2,919.68	54.63	54.449		
7,500.00	7,217.52	6,872.89	6,789.14	43.28	29.56	-163.42	1,159.66	326.13	3,015.52	2,960.14	55.38	54.447		
7,600.00	7,313.30	6,964.00	6,879.04	43.89	29.96	-163.43	1,173.70	330.78	3,056.74	3,000.60	56.14	54.445		
7,617.92	7,330.46	6,980.33	6,895.15	44.00	30.03	-163.44	1,176.22	331.61	3,064.13	3,007.85	56.28	54.445		
7,650.00	7,361.28	7,009.59	6,924.03	44.20	30.16	-175.33	1,180.73	333.11	3,077.24	3,020.72	56.52	54.446		
7,700.00	7,409.49	7,055.20	6,969.03	44.47	30.36	164.53	1,187.76	335.44	3,097.17	3,040.29	56.88	54.452		
7,750.00	7,457.61	7,100.50	7,013.73	44.71	30.56	145.48	1,194.74	337.75	3,116.36	3,059.14	57.22	54.464		
7,800.00	7,505.28	7,145.14	7,057.77	44.91	30.76	130.00	1,201.62	340.03	3,134.70	3,077.17	57.54	54.481		
7,850.00	7,552.12	7,188.78	7,100.84	45.08	30.96	118.37	1,208.35	342.26	3,152.11	3,094.28	57.83	54.502		
7,900.00	7,597.78	7,231.09	7,142.59	45.23	31.14	109.78	1,214.87	344.42	3,168.52	3,110.41	58.11	54.524		
7,950.00	7,641.91	7,271.76	7,182.71	45.34	31.32	103.35	1,221.14	346.50	3,183.88	3,125.51	58.37	54.546		
8,000.00	7,684.18	7,310.46	7,220.90	45.43	31.50	98.45	1,227.10	348.48	3,198.16	3,139.54	58.61	54.565		
8,050.00	7,724.27	7,346.91	7,256.87	45.50	31.66	94.64	1,232.72	350.34	3,211.33	3,152.49	58.84	54.580		
8,100.00	7,761.87	7,380.83	7,290.33	45.54	31.81	91.63	1,237.95	352.07	3,223.40	3,164.34	59.05	54.585		
8,150.00	7,796.69	7,411.95	7,321.05	45.57	31.95	89.24	1,242.74	353.66	3,234.36	3,175.10	59.26	54.578		
8,200.00	7,828.47	7,455.72	7,364.19	45.58	32.14	87.55	1,249.47	356.58	3,244.21	3,184.62	59.59	54.443		
8,250.00	7,856.97	7,499.99	7,407.51	45.57	32.35	86.34	1,256.18	362.69	3,252.83	3,192.87	59.96	54.249		
8,300.00	7,881.97	7,526.41	7,433.09	45.54	32.47	85.20	1,260.12	367.94	3,260.42	3,200.18	60.24	54.125		
8,350.00	7,903.28	7,540.73	7,446.86	45.50	32.54	84.14	1,262.24	371.29	3,267.05	3,206.60	60.46	54.039		
8,400.00	7,920.74	7,546.69	7,452.57	45.44	32.57	83.19	1,263.11	372.78	3,272.77	3,212.12	60.65	53.959		
8,450.00	7,934.22	7,546.76	7,452.63	45.38	32.57	82.37	1,263.12	372.80	3,277.55	3,216.71	60.85	53.866		
8,500.00	7,943.60	7,542.55	7,448.60	45.30	32.55	81.69	1,262.50	371.74	3,281.37	3,220.32	61.05	53.747		
8,550.00	7,948.83	7,535.17	7,441.52	45.22	32.52	81.16	1,261.42	369.95	3,284.19	3,222.91	61.28	53.596		
8,587.24	7,950.00	7,528.08	7,434.70	45.15	32.48	80.88	1,260.37	368.31	3,285.61	3,224.15	61.46	53.461		
8,600.00	7,950.00	7,525.50	7,432.22	45.13	32.47	80.84	1,259.99	367.74	3,286.02	3,224.49	61.52	53.410		
8,700.00	7,950.00	7,508.33	7,415.62	44.96	32.39	80.54	1,257.43	364.22	3,290.87	3,228.72	62.16	52.943		
8,800.00	7,950.00	7,495.21	7,402.86	44.81	32.32	80.32	1,255.47	361.87	3,298.67	3,235.70	62.97	52.387		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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		
8,900.00	7,950.00	7,484.87	7,392.77	44.69	32.28	80.14	1,253.90	360.22	3,309.41	3,245.48	63.92	51.771		
9,000.00	7,950.00	7,476.51	7,384.59	44.58	32.24	80.00	1,252.64	359.03	3,323.08	3,258.08	65.00	51.124		
9,100.00	7,950.00	7,469.62	7,377.84	44.50	32.21	79.88	1,251.59	358.13	3,339.66	3,273.48	66.18	50.466		
9,200.00	7,950.00	7,463.84	7,372.16	44.48	32.18	79.78	1,250.71	357.45	3,359.11	3,291.68	67.43	49.816		
9,300.00	7,950.00	7,450.00	7,358.56	44.63	32.12	79.54	1,248.60	356.04	3,381.42	3,312.75	68.68	49.238		
9,400.00	7,950.00	7,450.00	7,358.56	45.49	32.12	79.54	1,248.60	356.04	3,406.46	3,336.39	70.07	48.617		
9,500.00	7,950.00	7,450.00	7,358.56	47.12	32.12	79.54	1,248.60	356.04	3,434.23	3,362.75	71.48	48.041		
9,600.00	7,950.00	7,450.00	7,358.56	48.99	32.12	79.54	1,248.60	356.04	3,464.67	3,391.75	72.92	47.516		
9,700.00	7,950.00	7,450.00	7,358.56	50.96	32.12	79.54	1,248.60	356.04	3,497.70	3,423.34	74.35	47.043		
9,800.00	7,950.00	7,442.38	7,351.06	53.01	32.08	79.40	1,247.43	355.40	3,533.22	3,457.50	75.72	46.659		
9,900.00	7,950.00	7,440.10	7,348.81	55.12	32.07	79.37	1,247.08	355.23	3,571.20	3,494.08	77.13	46.304		
10,000.00	7,950.00	7,438.04	7,346.78	57.28	32.06	79.33	1,246.76	355.09	3,611.55	3,533.04	78.51	46.002		
10,100.00	7,950.00	7,436.17	7,344.94	59.48	32.05	79.30	1,246.47	354.96	3,654.18	3,574.31	79.87	45.752		
10,200.00	7,950.00	7,427.77	7,336.65	61.71	32.02	79.15	1,245.18	354.47	3,699.05	3,617.89	81.15	45.581		
10,300.00	7,950.00	7,427.77	7,336.65	63.99	32.02	79.15	1,245.18	354.47	3,746.01	3,663.54	82.47	45.424		
10,400.00	7,950.00	7,427.77	7,336.65	66.29	32.02	79.15	1,245.18	354.47	3,795.03	3,711.28	83.75	45.315		
10,500.00	7,950.00	7,427.77	7,336.65	68.62	32.02	79.15	1,245.18	354.47	3,846.02	3,761.03	84.99	45.252		
10,600.00	7,950.00	7,427.77	7,336.65	70.97	32.02	79.15	1,245.18	354.47	3,898.92	3,812.72	86.19	45.234 SF		
10,700.00	7,950.00	7,428.20	7,337.08	73.34	32.02	79.16	1,245.25	354.49	3,953.63	3,866.27	87.36	45.255		
10,800.00	7,950.00	7,423.07	7,332.02	75.74	31.99	79.07	1,244.46	354.23	4,010.09	3,921.64	88.45	45.337		
10,900.00	7,950.00	7,417.95	7,326.96	78.15	31.97	78.98	1,243.67	353.97	4,068.22	3,978.72	89.50	45.456		
11,000.00	7,950.00	7,412.82	7,321.90	80.58	31.95	78.89	1,242.88	353.71	4,127.95	4,037.44	90.51	45.609		
11,100.00	7,950.00	7,407.69	7,316.85	83.03	31.93	78.80	1,242.09	353.45	4,189.20	4,097.73	91.48	45.796		
11,200.00	7,950.00	7,402.57	7,311.79	85.49	31.90	78.71	1,241.30	353.18	4,251.92	4,159.51	92.41	46.013		
11,300.00	7,950.00	7,402.56	7,306.73	87.96	31.90	78.62	1,240.51	352.92	4,316.04	4,222.72	93.32	46.251		
11,400.00	7,950.00	7,392.32	7,301.67	90.45	31.86	78.53	1,239.72	352.66	4,381.50	4,287.34	94.15	46.536		
11,500.00	7,950.00	7,387.19	7,296.61	92.95	31.84	78.44	1,238.93	352.40	4,448.23	4,353.26	94.97	46.837		
11,600.00	7,950.00	7,382.06	7,291.56	95.45	31.81	78.36	1,238.14	352.14	4,516.19	4,420.44	95.76	47.164		
11,700.00	7,950.00	7,376.94	7,286.50	97.97	31.79	78.27	1,237.35	351.87	4,585.32	4,488.81	96.51	47.513		
11,800.00	7,950.00	7,371.81	7,281.44	100.49	31.77	78.18	1,236.56	351.61	4,655.56	4,558.34	97.22	47.885		
11,900.00	7,950.00	7,366.69	7,276.38	103.03	31.74	78.09	1,235.77	351.35	4,726.87	4,628.96	97.91	48.279		
12,000.00	7,950.00	7,361.56	7,271.33	105.57	31.72	78.00	1,234.98	351.09	4,799.20	4,700.63	98.56	48.691		
12,100.00	7,950.00	7,356.44	7,266.27	108.11	31.70	77.91	1,234.19	350.83	4,872.50	4,773.31	99.19	49.123		
12,200.00	7,950.00	7,351.31	7,261.21	110.67	31.68	77.82	1,233.40	350.56	4,946.73	4,846.94	99.79	49.572		
12,300.00	7,950.00	7,346.18	7,256.15	113.23	31.65	77.73	1,232.61	350.30	5,021.85	4,921.49	100.36	50.039		
12,400.00	7,950.00	7,341.06	7,251.09	115.79	31.63	77.64	1,231.82	350.04	5,097.82	4,996.92	100.91	50.521		
12,500.00	7,950.00	7,335.93	7,246.04	118.36	31.61	77.55	1,231.03	349.78	5,174.60	5,073.18	101.43	51.018		
12,600.00	7,950.00	7,330.81	7,240.98	120.94	31.59	77.47	1,230.24	349.52	5,252.16	5,150.24	101.92	51.530		
12,700.00	7,950.00	7,325.68	7,235.92	123.52	31.56	77.38	1,229.45	349.26	5,330.46	5,228.06	102.40	52.055		
12,800.00	7,950.00	7,320.55	7,230.86	126.11	31.54	77.29	1,228.66	348.99	5,409.47	5,306.62	102.86	52.593		
12,900.00	7,950.00	7,315.43	7,225.80	128.70	31.52	77.20	1,227.87	348.73	5,489.17	5,385.88	103.29	53.143		
13,000.00	7,950.00	7,310.30	7,220.75	131.29	31.49	77.11	1,227.08	348.47	5,569.51	5,465.80	103.71	53.705		
13,100.00	7,950.00	7,305.18	7,215.69	133.89	31.47	77.02	1,226.29	348.21	5,650.47	5,546.37	104.10	54.278		
13,200.00	7,950.00	7,300.05	7,210.63	136.49	31.45	76.93	1,225.50	347.95	5,732.03	5,627.55	104.48	54.862		
13,300.00	7,950.00	7,294.93	7,205.57	139.09	31.43	76.84	1,224.71	347.68	5,814.17	5,709.32	104.84	55.455		
13,400.00	7,950.00	7,289.80	7,200.52	141.70	31.40	76.75	1,223.92	347.42	5,896.85	5,791.65	105.19	56.058		
13,500.00	7,950.00	7,284.67	7,195.46	144.31	31.38	76.67	1,223.13	347.16	5,980.05	5,874.53	105.52	56.670		
13,600.00	7,950.00	7,279.55	7,190.40	146.93	31.36	76.58	1,222.34	346.90	6,063.76	5,957.92	105.84	57.291		
13,700.00	7,950.00	7,274.42	7,185.34	149.54	31.34	76.49	1,221.55	346.64	6,147.95	6,041.80	106.15	57.920		
13,800.00	7,950.00	7,269.30	7,180.28	152.16	31.31	76.40	1,220.76	346.38	6,232.60	6,126.17	106.44	58.557		
13,900.00	7,950.00	7,264.17	7,175.23	154.78	31.29	76.31	1,219.97	346.11	6,317.70	6,210.98	106.72	59.202		
14,000.00	7,950.00	7,259.04	7,170.17	157.41	31.27	76.22	1,219.18	345.85	6,403.22	6,296.24	106.98	59.853		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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		
14,100.00	7,950.00	7,253.92	7,165.11	160.03	31.24	76.13	1,218.39	345.59	6,489.16	6,381.92	107.24	60.512		
14,200.00	7,950.00	7,248.79	7,160.05	162.66	31.22	76.04	1,217.60	345.33	6,575.49	6,468.00	107.48	61.177		
14,300.00	7,950.00	7,243.67	7,154.99	165.29	31.20	75.96	1,216.81	345.07	6,662.19	6,554.47	107.72	61.848		
14,400.00	7,950.00	7,238.54	7,149.94	167.92	31.18	75.87	1,216.02	344.80	6,749.26	6,641.32	107.94	62.526		
14,500.00	7,950.00	7,233.41	7,144.88	170.55	31.15	75.78	1,215.23	344.54	6,836.68	6,728.52	108.16	63.209		
14,600.00	7,950.00	7,228.29	7,139.82	173.19	31.13	75.69	1,214.44	344.28	6,924.44	6,816.07	108.37	63.898		
14,700.00	7,950.00	7,223.16	7,134.76	175.83	31.11	75.60	1,213.65	344.02	7,012.52	6,903.95	108.57	64.592		
14,800.00	7,950.00	7,218.04	7,129.71	178.46	31.09	75.51	1,212.86	343.76	7,100.91	6,992.15	108.76	65.291		
14,900.00	7,950.00	7,212.91	7,124.65	181.10	31.06	75.43	1,212.07	343.50	7,189.61	7,080.66	108.94	65.995		
15,000.00	7,950.00	7,207.79	7,119.59	183.75	31.04	75.34	1,211.28	343.23	7,278.59	7,169.47	109.12	66.703		
15,100.00	7,950.00	7,202.66	7,114.53	186.39	31.02	75.25	1,210.49	342.97	7,367.85	7,258.56	109.29	67.416		
15,200.00	7,950.00	7,197.53	7,109.47	189.03	30.99	75.16	1,209.70	342.71	7,457.38	7,347.93	109.45	68.134		
15,300.00	7,950.00	7,207.59	7,104.42	191.68	31.04	75.07	1,208.91	342.45	7,547.17	7,437.50	109.67	68.816		
15,400.00	7,950.00	7,187.28	7,099.36	194.33	30.95	74.98	1,208.12	342.19	7,637.21	7,527.45	109.76	69.580		
15,500.00	7,950.00	7,182.16	7,094.30	196.97	30.93	74.90	1,207.33	341.92	7,727.50	7,617.59	109.91	70.310		
15,600.00	7,950.00	7,177.03	7,089.24	199.62	30.90	74.81	1,206.54	341.66	7,818.01	7,707.96	110.05	71.043		
15,700.00	7,950.00	7,171.90	7,084.18	202.27	30.88	74.72	1,205.75	341.40	7,908.75	7,798.57	110.18	71.779		
15,800.00	7,950.00	7,166.78	7,079.13	204.93	30.86	74.63	1,204.96	341.14	7,999.71	7,889.40	110.31	72.519		
15,900.00	7,950.00	7,161.65	7,074.07	207.58	30.84	74.54	1,204.17	340.88	8,090.88	7,980.44	110.44	73.262		
16,000.00	7,950.00	7,156.53	7,069.01	210.23	30.81	74.45	1,203.38	340.61	8,182.25	8,071.69	110.56	74.008		
16,100.00	7,950.00	7,151.40	7,063.95	212.89	30.79	74.37	1,202.59	340.35	8,273.82	8,163.14	110.68	74.757		
16,200.00	7,950.00	7,146.28	7,058.90	215.54	30.77	74.28	1,201.80	340.09	8,365.58	8,254.79	110.79	75.509		
16,300.00	7,950.00	7,141.15	7,053.84	218.20	30.74	74.19	1,201.01	339.83	8,457.52	8,346.62	110.90	76.264		
16,400.00	7,950.00	7,136.02	7,048.78	220.85	30.72	74.10	1,200.22	339.57	8,549.64	8,438.63	111.00	77.021		
16,500.00	7,950.00	7,130.90	7,043.72	223.51	30.70	74.01	1,199.43	339.31	8,641.93	8,530.82	111.11	77.781		
16,600.00	7,950.00	7,125.77	7,038.66	226.17	30.68	73.93	1,198.64	339.04	8,734.39	8,623.18	111.20	78.544		
16,700.00	7,950.00	7,120.65	7,033.61	228.83	30.65	73.84	1,197.85	338.78	8,827.01	8,715.71	111.30	79.309		
16,800.00	7,950.00	7,115.52	7,028.55	231.49	30.63	73.75	1,197.06	338.52	8,919.78	8,808.39	111.39	80.076		
16,900.00	7,950.00	7,110.39	7,023.49	234.15	30.61	73.66	1,196.27	338.26	9,012.71	8,901.23	111.48	80.846		
17,000.00	7,950.00	7,105.27	7,018.43	236.81	30.59	73.57	1,195.48	338.00	9,105.78	8,994.22	111.57	81.617		
17,100.00	7,950.00	7,100.14	7,013.37	239.47	30.56	73.49	1,194.69	337.73	9,199.00	9,087.35	111.65	82.391		
17,200.00	7,950.00	7,104.98	7,008.32	242.14	30.58	73.40	1,193.90	337.47	9,292.36	9,180.58	111.77	83.136		
17,300.00	7,950.00	7,089.89	7,003.26	244.80	30.52	73.31	1,193.11	337.21	9,385.85	9,274.04	111.81	83.944		
17,400.00	7,950.00	7,084.76	6,998.20	247.46	30.49	73.22	1,192.32	336.95	9,479.47	9,367.58	111.89	84.724		
17,500.00	7,950.00	7,079.64	6,993.14	250.13	30.47	73.14	1,191.53	336.69	9,573.21	9,461.25	111.96	85.505		
17,600.00	7,950.00	7,074.51	6,988.09	252.79	30.45	73.05	1,190.74	336.43	9,667.08	9,555.05	112.03	86.288		
17,700.00	7,950.00	7,069.39	6,983.03	255.46	30.43	72.96	1,189.95	336.16	9,761.07	9,648.96	112.10	87.072		
17,800.00	7,950.00	7,064.26	6,977.97	258.13	30.40	72.87	1,189.16	335.90	9,855.17	9,743.00	112.17	87.858		
17,900.00	7,950.00	7,059.14	6,972.91	260.79	30.38	72.79	1,188.37	335.64	9,949.39	9,837.15	112.24	88.646		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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	4.30	4.30	0.00	0.01	-0.13	124.94	-0.28	124.94					
100.00	100.00	104.30	104.30	0.13	0.15	-0.13	124.94	-0.28	124.94	124.66	0.28	439.529		
200.00	200.00	204.30	204.30	0.49	0.51	-0.13	124.94	-0.28	124.94	123.94	1.00	124.793		
250.00	250.00	254.30	254.30	0.67	0.69	-0.13	124.94	-0.28	124.94	123.58	1.36	91.892 CC, ES		
300.00	300.00	302.59	302.59	0.84	0.86	-155.16	125.30	0.04	125.71	124.00	1.70	73.739		
400.00	399.93	399.20	399.13	1.19	1.21	-154.73	127.82	2.33	131.49	129.09	2.40	54.823		
500.00	499.68	503.80	495.91	1.54	1.59	-154.05	132.66	6.70	142.79	139.66	3.14	45.508		
600.00	599.13	604.94	594.49	1.92	1.96	-153.78	138.17	11.69	157.82	153.95	3.87	40.786		
700.00	698.15	693.39	692.54	2.32	2.29	-154.02	143.65	16.66	175.94	171.37	4.56	38.561		
800.00	796.63	808.92	789.95	2.75	2.72	-154.60	149.10	21.58	197.15	191.79	5.36	36.763		
900.00	894.44	888.00	886.60	3.21	3.02	-155.40	154.50	26.48	221.48	215.45	6.04	36.694 SF		
1,000.00	991.46	984.04	982.37	3.71	3.38	-156.31	159.86	31.32	248.96	242.18	6.78	36.729		
1,085.22	1,073.44	1,065.10	1,063.20	4.17	3.68	-157.13	164.37	35.41	274.86	267.44	7.41	37.073		
1,100.00	1,087.59	1,079.09	1,077.15	4.25	3.73	-157.30	165.15	36.12	279.55	272.02	7.53	37.135		
1,200.00	1,183.37	1,173.76	1,171.55	4.81	4.09	-158.36	170.43	40.89	311.36	303.09	8.26	37.683		
1,300.00	1,279.15	1,268.43	1,265.95	5.39	4.44	-159.22	175.71	45.67	343.24	334.24	9.00	38.135		
1,400.00	1,374.93	1,363.09	1,360.35	5.98	4.80	-159.94	180.99	50.45	375.18	365.44	9.74	38.513		
1,500.00	1,470.71	1,457.76	1,454.75	6.57	5.16	-160.54	186.26	55.23	407.17	396.68	10.48	38.835		
1,600.00	1,566.49	1,552.42	1,549.14	7.16	5.51	-161.06	191.54	60.00	439.19	427.96	11.23	39.111		
1,700.00	1,662.27	1,647.09	1,643.54	7.76	5.87	-161.50	196.82	64.78	471.24	459.26	11.98	39.350		
1,800.00	1,758.05	1,741.76	1,737.94	8.36	6.23	-161.89	202.09	69.56	503.31	490.59	12.72	39.560		
1,900.00	1,853.83	1,836.42	1,832.34	8.96	6.58	-162.24	207.37	74.33	535.40	521.93	13.47	39.745		
2,000.00	1,949.61	1,931.09	1,926.74	9.57	6.94	-162.54	212.65	79.11	567.50	553.28	14.22	39.910		
2,100.00	2,045.39	2,025.75	2,021.13	10.17	7.30	-162.81	217.93	83.89	599.62	584.65	14.97	40.057		
2,200.00	2,141.17	2,120.42	2,115.53	10.78	7.65	-163.05	223.20	88.66	631.75	616.03	15.72	40.189		
2,300.00	2,236.95	2,215.09	2,209.93	11.39	8.01	-163.27	228.48	93.44	663.89	647.42	16.47	40.308		
2,400.00	2,332.73	2,309.75	2,304.33	11.99	8.37	-163.47	233.76	98.22	696.03	678.81	17.22	40.417		
2,500.00	2,428.51	2,404.42	2,398.73	12.60	8.72	-163.66	239.03	102.99	728.18	710.21	17.97	40.515		
2,600.00	2,524.30	2,500.92	2,493.12	13.21	9.09	-163.82	244.31	107.77	760.34	741.61	18.73	40.591		
2,700.00	2,620.08	2,606.25	2,587.52	13.82	9.49	-163.98	249.59	112.55	792.51	772.98	19.52	40.592		
2,800.00	2,715.86	2,688.41	2,681.92	14.43	9.80	-164.12	254.87	117.33	824.67	804.44	20.23	40.765		
2,900.00	2,811.64	2,783.08	2,776.32	15.04	10.15	-164.25	260.14	122.10	856.85	835.86	20.98	40.836		
3,000.00	2,907.42	2,877.75	2,870.71	15.66	10.51	-164.37	265.42	126.88	889.02	867.29	21.74	40.901		
3,100.00	3,003.20	2,972.41	2,965.11	16.27	10.87	-164.48	270.70	131.66	921.20	898.71	22.49	40.962		
3,200.00	3,098.98	3,067.08	3,059.51	16.88	11.22	-164.59	275.97	136.43	953.38	930.14	23.24	41.019		
3,300.00	3,194.76	3,161.74	3,153.91	17.49	11.58	-164.68	281.25	141.21	985.57	961.57	24.00	41.072		
3,400.00	3,290.54	3,256.41	3,248.31	18.10	11.94	-164.78	286.53	145.99	1,017.76	993.01	24.75	41.121		
3,500.00	3,386.32	3,351.08	3,342.70	18.72	12.29	-164.86	291.81	150.76	1,049.95	1,024.44	25.50	41.167		
3,600.00	3,482.10	3,445.74	3,437.10	19.33	12.65	-164.94	297.08	155.54	1,082.14	1,055.88	26.26	41.211		
3,700.00	3,577.88	3,540.41	3,531.50	19.94	13.01	-165.02	302.36	160.32	1,114.33	1,087.32	27.01	41.251		
3,800.00	3,673.66	3,635.07	3,625.90	20.55	13.37	-165.09	307.64	165.09	1,146.53	1,118.76	27.77	41.290		
3,900.00	3,769.44	3,729.74	3,720.30	21.17	13.72	-165.16	312.91	169.87	1,178.72	1,150.20	28.52	41.326		
4,000.00	3,865.22	3,824.41	3,814.69	21.78	14.08	-165.23	318.19	174.65	1,210.92	1,181.64	29.28	41.360		
4,100.00	3,961.00	3,919.07	3,909.09	22.39	14.44	-165.29	323.47	179.43	1,243.12	1,213.09	30.03	41.393		
4,200.00	4,056.78	4,013.74	4,003.49	23.01	14.79	-165.35	328.75	184.20	1,275.32	1,244.53	30.79	41.423		
4,300.00	4,152.56	4,108.40	4,097.89	23.62	15.15	-165.40	334.02	188.98	1,307.52	1,275.98	31.54	41.452		
4,400.00	4,248.34	4,203.07	4,192.29	24.23	15.51	-165.45	339.30	193.76	1,339.73	1,307.43	32.30	41.480		
4,500.00	4,344.12	4,302.26	4,286.68	24.85	15.88	-165.50	344.58	198.53	1,371.93	1,338.86	33.07	41.485		
4,600.00	4,439.90	4,407.60	4,381.08	25.46	16.28	-165.55	349.85	203.31	1,404.14	1,370.27	33.87	41.461		
4,700.00	4,535.68	4,487.07	4,475.48	26.08	16.58	-165.60	355.13	208.09	1,436.34	1,401.78	34.57	41.554		
4,800.00	4,631.46	4,581.73	4,569.88	26.69	16.94	-165.64	360.41	212.86	1,468.55	1,433.23	35.32	41.577		
4,900.00	4,727.24	4,676.40	4,664.28	27.30	17.29	-165.68	365.69	217.64	1,500.75	1,464.68	36.08	41.598		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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	
5,000.00	4,823.02	4,771.07	4,758.67	27.92	17.65	-165.72	370.96	222.42	1,532.96	1,496.13	36.83	41.618	
5,100.00	4,918.80	4,865.73	4,853.07	28.53	18.01	-165.76	376.24	227.19	1,565.17	1,527.58	37.59	41.638	
5,200.00	5,014.58	4,960.40	4,947.47	29.15	18.37	-165.80	381.52	231.97	1,597.38	1,559.03	38.35	41.656	
5,300.00	5,110.36	5,055.06	5,041.87	29.76	18.72	-165.83	386.79	236.75	1,629.59	1,590.49	39.10	41.674	
5,400.00	5,206.14	5,149.73	5,136.27	30.37	19.08	-165.87	392.07	241.53	1,661.80	1,621.94	39.86	41.691	
5,500.00	5,301.92	5,244.40	5,230.66	30.99	19.44	-165.90	397.35	246.30	1,694.01	1,653.39	40.62	41.707	
5,600.00	5,397.70	5,339.06	5,325.06	31.60	19.80	-165.93	402.63	251.08	1,726.22	1,684.85	41.37	41.723	
5,700.00	5,493.48	5,433.73	5,419.46	32.22	20.15	-165.96	407.90	255.86	1,758.43	1,716.30	42.13	41.738	
5,800.00	5,589.26	5,528.39	5,513.86	32.83	20.51	-165.99	413.18	260.63	1,790.65	1,747.76	42.89	41.752	
5,900.00	5,685.04	5,623.06	5,608.26	33.45	20.87	-166.02	418.46	265.41	1,822.86	1,779.21	43.65	41.765	
6,000.00	5,780.82	5,717.73	5,702.65	34.06	21.22	-166.05	423.73	270.19	1,855.07	1,810.67	44.40	41.778	
6,100.00	5,876.60	5,812.39	5,797.05	34.67	21.58	-166.07	429.01	274.96	1,887.28	1,842.12	45.16	41.791	
6,200.00	5,972.38	5,907.06	5,891.45	35.29	21.94	-166.10	434.29	279.74	1,919.50	1,873.58	45.92	41.803	
6,300.00	6,068.16	6,001.72	5,985.85	35.90	22.30	-166.12	439.57	284.52	1,951.71	1,905.04	46.68	41.814	
6,400.00	6,163.94	6,103.61	6,080.25	36.52	22.68	-166.15	444.84	289.29	1,983.93	1,936.47	47.46	41.802	
6,500.00	6,259.72	6,208.94	6,174.64	37.13	23.08	-166.17	450.12	294.07	2,016.14	1,967.88	48.26	41.778	
6,600.00	6,355.50	6,285.72	6,269.04	37.75	23.37	-166.19	455.40	298.85	2,048.36	1,999.41	48.95	41.846	
6,700.00	6,451.28	6,380.39	6,363.44	38.36	23.72	-166.22	460.67	303.63	2,080.57	2,030.86	49.71	41.856	
6,800.00	6,547.06	6,475.05	6,457.84	38.98	24.08	-166.24	465.95	308.40	2,112.79	2,062.32	50.47	41.865	
6,900.00	6,642.84	6,569.72	6,552.24	39.59	24.44	-166.26	471.23	313.18	2,145.00	2,093.78	51.23	41.874	
7,000.00	6,738.62	6,664.39	6,646.63	40.21	24.80	-166.28	476.51	317.96	2,177.22	2,125.23	51.98	41.883	
7,100.00	6,834.40	6,759.05	6,741.03	40.82	25.15	-166.30	481.78	322.73	2,209.43	2,156.69	52.74	41.891	
7,200.00	6,930.18	6,853.72	6,835.43	41.43	25.51	-166.31	487.06	327.51	2,241.65	2,188.15	53.50	41.899	
7,300.00	7,025.96	6,948.38	6,929.83	42.05	25.87	-166.33	492.34	332.29	2,273.87	2,219.61	54.26	41.906	
7,400.00	7,121.74	7,043.05	7,024.23	42.66	26.23	-166.35	497.61	337.06	2,306.08	2,251.06	55.02	41.914	
7,500.00	7,217.52	7,137.71	7,118.62	43.28	26.58	-166.37	502.89	341.84	2,338.30	2,282.52	55.78	41.921	
7,600.00	7,313.30	7,232.38	7,213.02	43.89	26.94	-166.38	508.17	346.62	2,370.52	2,313.98	56.54	41.927	
7,617.92	7,330.46	7,249.35	7,229.94	44.00	27.00	-166.39	509.11	347.47	2,376.29	2,319.62	56.67	41.929	
7,650.00	7,361.28	7,279.76	7,260.26	44.20	27.12	-177.91	510.81	349.01	2,386.47	2,329.55	56.92	41.929	
7,700.00	7,409.49	7,327.16	7,307.53	44.47	27.30	162.56	513.45	351.40	2,401.66	2,344.37	57.28	41.925	
7,750.00	7,457.61	7,374.25	7,354.49	44.71	27.48	144.13	516.08	353.78	2,415.95	2,358.31	57.64	41.915	
7,800.00	7,505.28	7,420.67	7,400.78	44.91	27.65	129.29	518.66	356.12	2,429.27	2,371.29	57.98	41.898	
7,850.00	7,552.12	7,467.01	7,447.04	45.08	28.94	121.88	532.88	437.41	2,439.58	2,379.39	60.19	40.528	
7,900.00	7,597.78	7,847.62	7,782.32	45.23	29.76	116.70	537.90	523.66	2,446.79	2,385.25	61.54	39.761	
7,950.00	7,641.91	7,903.36	7,819.71	45.34	30.14	112.00	539.44	564.94	2,453.45	2,391.25	62.21	39.440	
8,000.00	7,684.18	7,924.25	7,832.66	45.43	30.30	107.90	539.94	581.32	2,460.22	2,397.69	62.54	39.339	
8,050.00	7,724.27	7,928.43	7,835.19	45.50	30.33	104.33	540.04	584.65	2,467.23	2,404.55	62.68	39.363	
8,100.00	7,761.87	7,923.51	7,832.22	45.54	30.29	101.22	539.93	580.73	2,474.45	2,411.74	62.71	39.459	
8,150.00	7,796.69	7,913.14	7,825.85	45.57	30.22	98.47	539.68	572.55	2,481.79	2,419.12	62.67	39.598	
8,200.00	7,828.47	7,899.29	7,817.12	45.58	30.11	96.01	539.34	561.81	2,489.18	2,426.57	62.61	39.759	
8,250.00	7,856.97	7,883.10	7,806.59	45.57	30.00	93.82	538.91	549.52	2,496.49	2,433.96	62.53	39.922	
8,300.00	7,881.97	7,865.27	7,794.59	45.54	29.88	91.85	538.42	536.34	2,503.62	2,441.16	62.46	40.081	
8,350.00	7,903.28	7,846.27	7,781.37	45.50	29.75	90.09	537.86	522.71	2,510.47	2,448.05	62.41	40.224	
8,400.00	7,920.74	7,826.41	7,767.06	45.44	29.63	88.53	537.25	508.93	2,516.92	2,454.52	62.39	40.340	
8,450.00	7,934.22	7,805.90	7,751.81	45.38	29.50	87.15	536.58	495.25	2,522.87	2,460.47	62.41	40.427	
8,500.00	7,943.60	7,784.91	7,735.70	45.30	29.38	85.97	535.86	481.81	2,528.24	2,465.78	62.46	40.476	
8,550.00	7,948.83	7,763.55	7,718.82	45.22	29.25	84.98	535.08	468.75	2,532.93	2,470.37	62.56	40.488	
8,587.24	7,950.00	7,747.46	7,705.78	45.15	29.16	84.36	534.48	459.34	2,535.94	2,473.28	62.66	40.473	
8,600.00	7,950.00	7,741.99	7,701.30	45.13	29.13	84.26	534.27	456.23	2,536.91	2,474.22	62.70	40.462	
8,700.00	7,950.00	7,700.00	7,665.87	44.96	28.90	83.46	532.58	433.75	2,546.30	2,483.20	63.10	40.352	
8,800.00	7,950.00	7,672.82	7,642.11	44.81	28.76	82.92	531.42	420.62	2,558.86	2,495.07	63.79	40.112	
8,900.00	7,950.00	7,650.00	7,621.69	44.69	28.65	82.46	530.41	410.47	2,574.75	2,510.12	64.63	39.840	

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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		
9,000.00	7,950.00	7,625.48	7,599.33	44.58	28.53	81.96	529.28	400.49	2,594.00	2,528.47	65.53	39.584		
9,100.00	7,950.00	7,600.00	7,575.66	44.50	28.41	81.42	528.07	391.13	2,616.66	2,550.18	66.49	39.357		
9,200.00	7,950.00	7,600.00	7,575.66	44.48	28.41	81.42	528.07	391.13	2,642.68	2,574.95	67.73	39.020		
9,300.00	7,950.00	7,577.89	7,554.81	44.63	28.31	80.95	526.99	383.88	2,671.96	2,603.17	68.78	38.845		
9,400.00	7,950.00	7,566.03	7,543.51	45.49	28.25	80.70	526.40	380.32	2,704.51	2,634.56	69.95	38.666		
9,500.00	7,950.00	7,550.00	7,528.13	47.12	28.18	80.36	525.60	375.88	2,740.22	2,669.15	71.07	38.558		
9,600.00	7,950.00	7,550.00	7,528.13	48.99	28.18	80.36	525.60	375.88	2,778.95	2,706.64	72.31	38.431		
9,700.00	7,950.00	7,550.00	7,528.13	50.96	28.18	80.36	525.60	375.88	2,820.70	2,747.17	73.53	38.363		
9,800.00	7,950.00	7,530.71	7,509.46	53.01	28.10	79.94	524.61	371.12	2,865.12	2,790.56	74.56	38.429		
9,900.00	7,950.00	7,524.04	7,502.97	55.12	28.07	79.79	524.26	369.62	2,912.31	2,836.66	75.65	38.497		
10,000.00	7,950.00	7,517.99	7,497.07	57.28	28.04	79.66	523.94	368.32	2,962.09	2,885.38	76.71	38.614		
10,100.00	7,950.00	7,500.00	7,479.45	59.48	27.96	79.27	523.00	364.84	3,014.41	2,936.78	77.63	38.828		
10,200.00	7,950.00	7,500.00	7,479.45	61.71	27.96	79.27	523.00	364.84	3,068.92	2,990.26	78.65	39.019		
10,300.00	7,950.00	7,500.00	7,479.45	63.99	27.96	79.27	523.00	364.84	3,125.67	3,046.05	79.62	39.258		
10,400.00	7,950.00	7,500.00	7,479.45	66.29	27.96	79.27	523.00	364.84	3,184.55	3,104.01	80.54	39.540		
10,500.00	7,950.00	7,500.00	7,479.45	68.62	27.96	79.27	523.00	364.84	3,245.45	3,164.04	81.41	39.864		
10,600.00	7,950.00	7,500.00	7,479.45	70.97	27.96	79.27	523.00	364.84	3,308.25	3,226.01	82.24	40.227		
10,700.00	7,950.00	7,500.00	7,479.45	73.34	27.96	79.27	523.00	364.84	3,372.84	3,289.82	83.02	40.627		
10,800.00	7,950.00	7,500.00	7,479.45	75.74	27.96	79.27	523.00	364.84	3,439.13	3,355.37	83.76	41.060		
10,900.00	7,950.00	7,500.00	7,479.45	78.15	27.96	79.27	523.00	364.84	3,507.02	3,422.56	84.46	41.525		
11,000.00	7,950.00	7,478.87	7,458.62	80.58	27.88	78.80	521.86	361.46	3,576.08	3,491.09	84.99	42.077		
11,100.00	7,950.00	7,476.30	7,456.08	83.03	27.87	78.75	521.72	361.10	3,646.81	3,561.21	85.60	42.605		
11,200.00	7,950.00	7,473.89	7,453.69	85.49	27.86	78.69	521.59	360.78	3,718.87	3,632.70	86.17	43.158		
11,300.00	7,950.00	7,471.61	7,451.44	87.96	27.85	78.64	521.47	360.48	3,792.19	3,705.48	86.71	43.734		
11,400.00	7,950.00	7,450.00	7,429.99	90.45	27.76	78.17	520.29	358.09	3,866.99	3,779.89	87.11	44.394		
11,500.00	7,950.00	7,450.00	7,429.99	92.95	27.76	78.17	520.29	358.09	3,942.57	3,854.97	87.60	45.006		
11,600.00	7,950.00	7,450.00	7,429.99	95.45	27.76	78.17	520.29	358.09	4,019.21	3,931.15	88.07	45.638		
11,700.00	7,950.00	7,450.00	7,429.99	97.97	27.76	78.17	520.29	358.09	4,096.86	4,008.36	88.51	46.289		
11,800.00	7,950.00	7,450.00	7,429.99	100.49	27.76	78.17	520.29	358.09	4,175.46	4,086.54	88.92	46.957		
11,900.00	7,950.00	7,450.00	7,429.99	103.03	27.76	78.17	520.29	358.09	4,254.96	4,165.65	89.31	47.641		
12,000.00	7,950.00	7,450.00	7,429.99	105.57	27.76	78.17	520.29	358.09	4,335.31	4,245.63	89.68	48.341		
12,100.00	7,950.00	7,450.00	7,429.99	108.11	27.76	78.17	520.29	358.09	4,416.46	4,326.43	90.03	49.055		
12,200.00	7,950.00	7,450.00	7,429.99	110.67	27.76	78.17	520.29	358.09	4,498.37	4,408.01	90.36	49.783		
12,300.00	7,950.00	7,450.00	7,429.99	113.23	27.76	78.17	520.29	358.09	4,581.00	4,490.33	90.67	50.523		
12,400.00	7,950.00	7,450.00	7,429.99	115.79	27.76	78.17	520.29	358.09	4,664.31	4,573.34	90.97	51.275		
12,500.00	7,950.00	7,450.00	7,429.99	118.36	27.76	78.17	520.29	358.09	4,748.26	4,657.01	91.25	52.038		
12,600.00	7,950.00	7,450.00	7,429.99	120.94	27.76	78.17	520.29	358.09	4,832.82	4,741.31	91.51	52.812		
12,700.00	7,950.00	7,450.00	7,429.99	123.52	27.76	78.17	520.29	358.09	4,917.97	4,826.20	91.76	53.595		
12,800.00	7,950.00	7,450.00	7,429.99	126.11	27.76	78.17	520.29	358.09	5,003.66	4,911.66	92.00	54.388		
12,900.00	7,950.00	7,450.00	7,429.99	128.70	27.76	78.17	520.29	358.09	5,089.87	4,997.65	92.22	55.190		
13,000.00	7,950.00	7,450.00	7,429.99	131.29	27.76	78.17	520.29	358.09	5,176.58	5,084.14	92.44	56.000		
13,100.00	7,950.00	7,450.00	7,429.99	133.89	27.76	78.17	520.29	358.09	5,263.77	5,171.12	92.64	56.817		
13,200.00	7,950.00	7,450.00	7,429.99	136.49	27.76	78.17	520.29	358.09	5,351.40	5,258.56	92.84	57.642		
13,300.00	7,950.00	7,450.00	7,429.99	139.09	27.76	78.17	520.29	358.09	5,439.45	5,346.43	93.02	58.474		
13,400.00	7,950.00	7,450.00	7,429.99	141.70	27.76	78.17	520.29	358.09	5,527.92	5,434.72	93.20	59.312		
13,500.00	7,950.00	7,450.00	7,429.99	144.31	27.76	78.17	520.29	358.09	5,616.77	5,523.40	93.37	60.157		
13,600.00	7,950.00	7,450.00	7,429.99	146.93	27.76	78.17	520.29	358.09	5,705.99	5,612.46	93.53	61.007		
13,700.00	7,950.00	7,450.00	7,429.99	149.54	27.76	78.17	520.29	358.09	5,795.56	5,701.87	93.68	61.863		
13,800.00	7,950.00	7,450.00	7,429.99	152.16	27.76	78.17	520.29	358.09	5,885.46	5,791.63	93.83	62.724		
13,900.00	7,950.00	7,439.22	7,419.26	154.78	27.72	77.93	519.70	357.20	5,975.59	5,881.67	93.93	63.621		
14,000.00	7,950.00	7,438.53	7,418.57	157.41	27.72	77.91	519.66	357.15	6,066.11	5,972.05	94.06	64.493		
14,100.00	7,950.00	7,437.86	7,417.91	160.03	27.72	77.90	519.62	357.10	6,156.93	6,062.74	94.19	65.370		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)	(usft)			
14,200.00	7,950.00	7,437.21	7,417.26	162.66	27.71	77.88	519.58	357.06	6,248.02	6,153.71	94.31	66.251		
14,300.00	7,950.00	7,426.28	7,406.37	165.29	27.67	77.64	518.98	356.40	6,339.47	6,245.09	94.38	67.169		
14,400.00	7,950.00	7,426.28	7,406.37	167.92	27.67	77.64	518.98	356.40	6,431.08	6,336.58	94.50	68.056		
14,500.00	7,950.00	7,426.28	7,406.37	170.55	27.67	77.64	518.98	356.40	6,522.93	6,428.33	94.61	68.946		
14,600.00	7,950.00	7,426.28	7,406.37	173.19	27.67	77.64	518.98	356.40	6,615.02	6,520.31	94.72	69.840		
14,700.00	7,950.00	7,426.28	7,406.37	175.83	27.67	77.64	518.98	356.40	6,707.34	6,612.52	94.82	70.736		
14,800.00	7,950.00	7,426.28	7,406.37	178.46	27.67	77.64	518.98	356.40	6,799.87	6,704.95	94.92	71.636		
14,900.00	7,950.00	7,426.28	7,406.37	181.10	27.67	77.64	518.98	356.40	6,892.62	6,797.60	95.02	72.538		
15,000.00	7,950.00	7,426.28	7,406.37	183.75	27.67	77.64	518.98	356.40	6,985.56	6,890.44	95.12	73.443		
15,100.00	7,950.00	7,426.28	7,406.37	186.39	27.67	77.64	518.98	356.40	7,078.69	6,983.49	95.21	74.351		
15,200.00	7,950.00	7,426.28	7,406.37	189.03	27.67	77.64	518.98	356.40	7,172.01	7,076.72	95.30	75.260		
15,300.00	7,950.00	7,426.28	7,406.37	191.68	27.67	77.64	518.98	356.40	7,265.51	7,170.13	95.38	76.172		
15,400.00	7,950.00	7,426.28	7,406.37	194.33	27.67	77.64	518.98	356.40	7,359.18	7,263.71	95.47	77.087		
15,500.00	7,950.00	7,426.28	7,406.37	196.97	27.67	77.64	518.98	356.40	7,453.01	7,357.46	95.55	78.003		
15,600.00	7,950.00	7,426.28	7,406.37	199.62	27.67	77.64	518.98	356.40	7,547.00	7,451.38	95.63	78.920		
15,700.00	7,950.00	7,426.28	7,406.37	202.27	27.67	77.64	518.98	356.40	7,641.15	7,545.44	95.71	79.840		
15,800.00	7,950.00	7,426.28	7,406.37	204.93	27.67	77.64	518.98	356.40	7,735.44	7,639.66	95.78	80.761		
15,900.00	7,950.00	7,426.28	7,406.37	207.58	27.67	77.64	518.98	356.40	7,829.87	7,734.02	95.86	81.684		
16,000.00	7,950.00	7,426.28	7,406.37	210.23	27.67	77.64	518.98	356.40	7,924.44	7,828.51	95.93	82.608		
16,100.00	7,950.00	7,426.28	7,406.37	212.89	27.67	77.64	518.98	356.40	8,019.14	7,923.14	96.00	83.534		
16,200.00	7,950.00	7,426.28	7,406.37	215.54	27.67	77.64	518.98	356.40	8,113.97	8,017.90	96.07	84.461		
16,300.00	7,950.00	7,426.28	7,406.37	218.20	27.67	77.64	518.98	356.40	8,208.92	8,112.78	96.14	85.388		
16,400.00	7,950.00	7,426.28	7,406.37	220.85	27.67	77.64	518.98	356.40	8,303.99	8,207.79	96.20	86.317		
16,500.00	7,950.00	7,426.28	7,406.37	223.51	27.67	77.64	518.98	356.40	8,399.17	8,302.91	96.27	87.247		
16,600.00	7,950.00	7,424.16	7,404.25	226.17	27.66	77.60	518.86	356.29	8,494.47	8,398.14	96.32	88.186		
16,700.00	7,950.00	7,419.10	7,399.22	228.83	27.64	77.49	518.58	356.04	8,589.87	8,493.50	96.37	89.137		
16,800.00	7,950.00	7,414.05	7,394.18	231.49	27.63	77.37	518.30	355.78	8,685.37	8,588.96	96.41	90.088		
16,900.00	7,950.00	7,409.00	7,389.14	234.15	27.61	77.26	518.01	355.53	8,780.96	8,684.51	96.45	91.041		
17,000.00	7,950.00	7,403.95	7,384.10	236.81	27.59	77.15	517.73	355.27	8,876.65	8,780.16	96.49	91.994		
17,100.00	7,950.00	7,398.89	7,379.06	239.47	27.57	77.04	517.45	355.02	8,972.44	8,875.90	96.53	92.948		
17,200.00	7,950.00	7,393.84	7,374.03	242.14	27.55	76.93	517.17	354.76	9,068.31	8,971.74	96.57	93.903		
17,300.00	7,950.00	7,388.79	7,368.99	244.80	27.53	76.82	516.89	354.51	9,164.26	9,067.65	96.61	94.859		
17,400.00	7,950.00	7,383.74	7,363.95	247.46	27.51	76.71	516.61	354.26	9,260.30	9,163.65	96.65	95.815		
17,500.00	7,950.00	7,378.68	7,358.91	250.13	27.49	76.60	516.32	354.00	9,356.42	9,259.73	96.69	96.772		
17,600.00	7,950.00	7,373.63	7,353.87	252.79	27.47	76.49	516.04	353.75	9,452.62	9,355.89	96.72	97.729		
17,700.00	7,950.00	7,368.58	7,348.83	255.46	27.45	76.38	515.76	353.49	9,548.89	9,452.13	96.76	98.687		
17,800.00	7,950.00	7,363.53	7,343.80	258.13	27.43	76.26	515.48	353.24	9,645.23	9,548.44	96.80	99.645		
17,900.00	7,950.00	7,358.47	7,338.76	260.79	27.42	76.15	515.20	352.98	9,741.65	9,644.82	96.83	100.604		
18,000.00	7,950.00	7,353.42	7,333.72	263.46	27.40	76.04	514.92	352.73	9,838.14	9,741.27	96.87	101.563		
18,100.00	7,950.00	7,348.37	7,328.68	266.13	27.38	75.93	514.63	352.47	9,934.69	9,837.79	96.90	102.522		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 2BH - 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	0.30	-0.30	0.00	0.00	0.01	75.03	0.00	75.03					
100.00	100.00	100.30	99.70	0.13	0.14	0.01	75.03	0.00	75.03	74.76	0.27	277.979		
200.00	200.00	200.30	199.70	0.49	0.49	0.01	75.03	0.00	75.03	74.05	0.99	76.033		
250.00	250.00	249.70	249.70	0.67	0.67	0.01	75.03	0.00	75.03	73.69	1.34	55.863		
300.00	300.00	300.93	300.92	0.84	0.85	-155.12	74.62	0.18	75.02	73.33	1.69	44.376		
400.00	399.93	403.39	403.32	1.19	1.20	-155.17	71.26	1.61	74.91	72.53	2.38	31.495		
500.00	499.68	505.85	505.51	1.54	1.56	-155.27	64.54	4.49	74.68	71.59	3.09	24.201		
600.00	599.13	608.31	607.37	1.92	1.95	-155.43	54.46	8.80	74.32	70.52	3.81	19.528		
628.82	627.72	637.49	636.32	2.03	2.06	-155.49	51.01	10.28	74.23	70.21	4.02	18.479 CC, ES		
700.00	698.15	708.66	706.88	2.32	2.35	-156.00	42.50	13.92	75.05	70.51	4.54	16.543		
800.00	796.63	808.55	805.93	2.75	2.75	-157.54	30.57	19.02	78.96	73.68	5.28	14.964		
900.00	894.44	908.24	904.76	3.21	3.16	-159.74	18.65	24.12	86.18	80.16	6.02	14.312		
1,000.00	991.46	1,007.58	1,003.26	3.71	3.57	-162.22	6.78	29.20	96.83	90.06	6.77	14.303 SF		
1,085.22	1,073.44	1,108.12	1,086.85	4.17	3.99	-164.32	-3.29	33.51	108.65	101.18	7.47	14.547		
1,100.00	1,087.59	1,106.47	1,101.32	4.25	3.98	-164.68	-5.04	34.25	110.92	103.40	7.52	14.746		
1,200.00	1,183.37	1,205.18	1,199.18	4.81	4.39	-166.78	-16.83	39.30	126.40	118.13	8.27	15.288		
1,300.00	1,279.15	1,303.88	1,297.05	5.39	4.80	-168.41	-28.63	44.34	142.01	132.99	9.02	15.749		
1,400.00	1,374.93	1,402.58	1,394.91	5.98	5.22	-169.72	-40.43	49.39	157.71	147.94	9.77	16.143		
1,500.00	1,470.71	1,501.28	1,492.78	6.57	5.63	-170.80	-52.22	54.43	173.48	162.95	10.52	16.483		
1,600.00	1,566.49	1,599.98	1,590.64	7.16	6.05	-171.69	-64.02	59.48	189.29	178.01	11.28	16.779		
1,700.00	1,662.27	1,701.32	1,688.51	7.76	6.47	-172.45	-75.81	64.53	205.14	193.09	12.05	17.025		
1,800.00	1,758.05	1,802.61	1,786.37	8.36	6.90	-173.10	-87.61	69.57	221.03	208.21	12.82	17.241		
1,900.00	1,853.83	1,903.91	1,884.24	8.96	7.33	-173.66	-99.40	74.62	236.93	223.34	13.59	17.433		
2,000.00	1,949.61	2,005.21	1,982.10	9.57	7.75	-174.15	-111.20	79.66	252.86	238.50	14.36	17.605		
2,100.00	2,045.39	2,106.51	2,079.96	10.17	8.18	-174.58	-123.00	84.71	268.80	253.67	15.14	17.758		
2,200.00	2,141.17	2,207.81	2,177.83	10.78	8.61	-174.96	-134.79	89.75	284.76	268.85	15.91	17.897		
2,300.00	2,236.95	2,309.10	2,275.69	11.39	9.04	-175.31	-146.59	94.80	300.73	284.04	16.69	18.022		
2,400.00	2,332.73	2,389.60	2,373.56	11.99	9.38	-175.61	-158.38	99.85	316.70	299.32	17.39	18.217		
2,500.00	2,428.51	2,488.30	2,471.42	12.60	9.79	-175.89	-170.18	104.89	332.69	314.53	18.15	18.328		
2,600.00	2,524.30	2,587.00	2,569.29	13.21	10.21	-176.15	-181.97	109.94	348.68	329.76	18.92	18.430		
2,700.00	2,620.08	2,685.70	2,667.15	13.82	10.63	-176.38	-193.77	114.98	364.68	344.99	19.69	18.524		
2,800.00	2,715.86	2,784.41	2,765.02	14.43	11.04	-176.59	-205.57	120.03	380.68	360.22	20.45	18.611		
2,900.00	2,811.64	2,883.11	2,862.88	15.04	11.46	-176.78	-217.36	125.07	396.69	375.46	21.22	18.691		
3,000.00	2,907.42	2,981.81	2,960.75	15.66	11.88	-176.96	-229.16	130.12	412.70	390.70	21.99	18.765		
3,100.00	3,003.20	3,080.51	3,058.61	16.27	12.30	-177.13	-240.95	135.17	428.71	405.95	22.76	18.835		
3,200.00	3,098.98	3,179.21	3,156.47	16.88	12.71	-177.28	-252.75	140.21	444.73	421.20	23.53	18.900		
3,300.00	3,194.76	3,277.92	3,254.34	17.49	13.13	-177.43	-264.54	145.26	460.75	436.45	24.30	18.960		
3,400.00	3,290.54	3,376.62	3,352.20	18.10	13.55	-177.56	-276.34	150.30	476.78	451.70	25.07	19.017		
3,500.00	3,386.32	3,475.32	3,450.07	18.72	13.97	-177.69	-288.14	155.35	492.80	466.96	25.84	19.070		
3,600.00	3,482.10	3,574.02	3,547.93	19.33	14.38	-177.80	-299.93	160.39	508.83	482.22	26.61	19.120		
3,700.00	3,577.88	3,672.72	3,645.80	19.94	14.80	-177.91	-311.73	165.44	524.86	497.48	27.38	19.168		
3,800.00	3,673.66	3,771.43	3,743.66	20.55	15.22	-178.02	-323.52	170.49	540.89	512.74	28.15	19.212		
3,900.00	3,769.44	3,870.13	3,841.53	21.17	15.64	-178.11	-335.32	175.53	556.93	528.00	28.92	19.255		
4,000.00	3,865.22	3,968.83	3,939.39	21.78	16.05	-178.21	-347.11	180.58	572.96	543.27	29.70	19.295		
4,100.00	3,961.00	4,067.53	4,037.26	22.39	16.47	-178.29	-358.91	185.62	589.00	558.53	30.47	19.332		
4,200.00	4,056.78	4,166.23	4,135.12	23.01	16.89	-178.38	-370.71	190.67	605.04	573.80	31.24	19.368		
4,300.00	4,152.56	4,264.93	4,232.98	23.62	17.31	-178.45	-382.50	195.71	621.08	589.07	32.01	19.403		
4,400.00	4,248.34	4,363.64	4,330.85	24.23	17.72	-178.53	-394.30	200.76	637.12	604.33	32.78	19.435		
4,500.00	4,344.12	4,462.34	4,428.71	24.85	18.14	-178.60	-406.09	205.81	653.16	619.60	33.55	19.466		
4,600.00	4,439.90	4,561.04	4,526.58	25.46	18.56	-178.67	-417.89	210.85	669.20	634.87	34.33	19.496		
4,700.00	4,535.68	4,659.74	4,624.44	26.08	18.98	-178.73	-429.68	215.90	685.24	650.14	35.10	19.524		
4,800.00	4,631.46	4,758.44	4,722.31	26.69	19.40	-178.79	-441.48	220.94	701.28	665.42	35.87	19.551		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 2BH - 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		
4,900.00	4,727.24	4,857.15	4,820.17	27.30	19.81	-178.85	-453.28	225.99	717.33	680.69	36.64	19.577		
5,000.00	4,823.02	4,955.85	4,918.04	27.92	20.23	-178.91	-465.07	231.03	733.37	695.96	37.41	19.602		
5,100.00	4,918.80	5,054.55	5,015.90	28.53	20.65	-178.96	-476.87	236.08	749.42	711.23	38.19	19.625		
5,200.00	5,014.58	5,153.25	5,113.77	29.15	21.07	-179.01	-488.66	241.13	765.47	726.51	38.96	19.648		
5,300.00	5,110.36	5,251.95	5,211.63	29.76	21.49	-179.06	-500.46	246.17	781.51	741.78	39.73	19.670		
5,400.00	5,206.14	5,350.66	5,309.49	30.37	21.90	-179.11	-512.25	251.22	797.56	757.06	40.50	19.691		
5,500.00	5,301.92	5,449.36	5,407.36	30.99	22.32	-179.15	-524.05	256.26	813.61	772.33	41.28	19.711		
5,600.00	5,397.70	5,548.06	5,505.22	31.60	22.74	-179.20	-535.85	261.31	829.66	787.61	42.05	19.730		
5,700.00	5,493.48	5,646.76	5,603.09	32.22	23.16	-179.24	-547.64	266.35	845.71	802.88	42.82	19.749		
5,800.00	5,589.26	5,745.46	5,700.95	32.83	23.58	-179.28	-559.44	271.40	861.76	818.16	43.60	19.767		
5,900.00	5,685.04	5,844.17	5,798.82	33.45	23.99	-179.32	-571.23	276.44	877.81	833.44	44.37	19.785		
6,000.00	5,780.82	5,942.87	5,896.68	34.06	24.41	-179.35	-583.03	281.49	893.86	848.71	45.14	19.801		
6,100.00	5,876.60	6,041.57	5,994.55	34.67	24.83	-179.39	-594.82	286.54	909.91	863.99	45.91	19.817		
6,200.00	5,972.38	6,140.27	6,092.41	35.29	25.25	-179.43	-606.62	291.58	925.96	879.27	46.69	19.833		
6,300.00	6,068.16	6,238.97	6,190.28	35.90	25.67	-179.46	-618.42	296.63	942.01	894.55	47.46	19.848		
6,400.00	6,163.94	6,337.68	6,288.14	36.52	26.08	-179.49	-630.21	301.67	958.06	909.82	48.23	19.863		
6,500.00	6,259.72	6,436.38	6,386.00	37.13	26.50	-179.52	-642.01	306.72	974.11	925.10	49.01	19.877		
6,600.00	6,355.50	6,535.08	6,483.87	37.75	26.92	-179.55	-653.80	311.76	990.16	940.38	49.78	19.890		
6,700.00	6,451.28	6,633.78	6,581.73	38.36	27.34	-179.58	-665.60	316.81	1,006.21	955.66	50.55	19.904		
6,800.00	6,547.06	6,732.48	6,679.60	38.98	27.76	-179.61	-677.39	321.86	1,022.27	970.94	51.33	19.916		
6,900.00	6,642.84	6,831.18	6,777.46	39.59	28.17	-179.64	-689.19	326.90	1,038.32	986.22	52.10	19.929		
7,000.00	6,738.62	6,929.89	6,875.33	40.21	28.59	-179.67	-700.99	331.95	1,054.37	1,001.50	52.88	19.941		
7,100.00	6,834.40	7,028.59	6,973.19	40.82	29.01	-179.69	-712.78	336.99	1,070.43	1,016.78	53.65	19.953		
7,200.00	6,930.18	7,127.29	7,071.06	41.43	29.43	-179.72	-724.58	342.04	1,086.48	1,032.06	54.42	19.964		
7,300.00	7,025.96	7,225.99	7,168.92	42.05	29.85	-179.74	-736.37	347.08	1,102.53	1,047.34	55.20	19.975		
7,400.00	7,121.74	7,324.69	7,266.79	42.66	30.26	-179.77	-748.17	352.13	1,118.59	1,062.62	55.97	19.985		
7,500.00	7,217.52	7,423.40	7,364.65	43.28	30.68	-179.79	-759.96	357.18	1,134.64	1,077.90	56.74	19.996		
7,600.00	7,313.30	7,521.18	7,462.43	43.89	31.09	-179.82	-771.75	362.22	1,150.70	1,093.00	57.51	20.007		
7,617.92	7,330.46	7,538.34	7,479.59	44.00	32.95	-173.42	-811.70	520.00	1,142.67	1,084.26	58.40	19.566		
7,650.00	7,361.28	7,569.49	7,510.21	44.20	33.65	-179.51	-821.49	605.18	1,138.02	1,078.89	59.12	19.248		
7,700.00	7,409.49	7,617.70	7,558.21	44.47	34.36	167.61	-828.49	690.56	1,128.90	1,068.24	60.66	18.612		
7,750.00	7,457.61	7,665.91	7,606.30	44.71	34.74	153.62	-831.25	734.19	1,120.01	1,057.95	62.07	18.046		
7,800.00	7,505.28	7,713.58	7,653.97	44.91	32.59	140.66	-831.34	736.31	1,112.56	1,052.81	59.74	18.622		
7,850.00	7,552.12	7,760.42	7,701.30	45.08	34.98	132.40	-832.68	760.52	1,107.04	1,043.02	64.03	17.291		
7,900.00	7,597.78	7,807.16	7,747.94	45.23	34.96	125.35	-832.59	758.64	1,103.61	1,038.96	64.65	17.072		
7,950.00	7,641.91	7,851.29	7,791.38	45.34	34.89	119.80	-832.21	751.48	1,102.30	1,037.22	65.08	16.938		
7,956.42	7,647.45	7,856.83	7,802.38	45.35	34.88	119.17	-832.15	750.28	1,102.28	1,037.16	65.12	16.926		
8,000.00	7,684.18	7,893.56	7,839.37	45.43	34.80	115.23	-831.63	740.82	1,103.05	1,037.69	65.36	16.875		
8,050.00	7,724.27	7,933.65	7,879.38	45.50	34.68	111.29	-830.88	727.75	1,105.76	1,040.23	65.53	16.873		
8,100.00	7,761.87	7,971.25	7,916.98	45.54	34.55	107.77	-829.98	713.02	1,110.27	1,044.67	65.61	16.924		
8,150.00	7,796.69	8,009.26	7,954.57	45.57	34.41	104.53	-828.94	697.14	1,116.42	1,050.81	65.61	17.017		
8,200.00	7,828.47	8,041.04	7,986.57	45.58	34.27	101.50	-827.78	680.47	1,123.99	1,058.42	65.57	17.141		
8,250.00	7,856.97	8,068.53	8,013.56	45.57	34.13	98.62	-826.51	663.29	1,132.79	1,067.28	65.51	17.291		
8,300.00	7,881.97	8,091.53	8,036.56	45.54	33.98	95.87	-825.11	645.82	1,142.60	1,077.14	65.46	17.456		
8,350.00	7,903.28	8,112.84	8,057.56	45.50	33.83	93.26	-823.61	628.22	1,153.20	1,087.77	65.43	17.626		
8,400.00	7,920.74	8,130.30	8,075.03	45.44	33.69	90.77	-822.00	610.55	1,164.37	1,098.95	65.42	17.799		
8,450.00	7,934.22	8,144.80	8,089.51	45.38	33.55	88.43	-820.31	593.20	1,175.91	1,110.44	65.47	17.960		
8,500.00	7,943.60	8,154.18	8,098.58	45.30	33.41	86.24	-818.51	575.98	1,187.62	1,122.05	65.57	18.112		
8,550.00	7,948.83	8,159.41	8,103.58	45.22	33.27	84.22	-816.62	559.08	1,199.30	1,133.57	65.73	18.246		
8,587.24	7,950.00	8,160.65	8,104.62	45.15	33.17	82.84	-815.15	546.74	1,207.87	1,141.99	65.88	18.335		
8,600.00	7,950.00	8,160.65	8,104.62	45.13	33.14	82.66	-814.64	542.61	1,210.82	1,144.89	65.94	18.364		
8,700.00	7,950.00	8,160.65	8,104.62	44.96	32.90	81.32	-810.84	513.81	1,236.90	1,170.39	66.51	18.596		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 2BH - 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		
8,800.00	7,950.00	7,837.28	7,744.69	44.81	32.69	80.10	-807.37	490.49	1,268.29	1,201.04	67.25	18.859		
8,900.00	7,950.00	7,800.00	7,715.48	44.69	32.49	78.76	-803.55	467.66	1,305.02	1,237.07	67.94	19.207		
9,000.00	7,950.00	7,779.73	7,698.98	44.58	32.38	78.01	-801.41	456.07	1,346.84	1,277.84	69.00	19.519		
9,100.00	7,950.00	7,750.00	7,674.09	44.50	32.22	76.90	-798.20	440.15	1,393.65	1,323.87	69.78	19.971		
9,200.00	7,950.00	7,735.41	7,661.57	44.48	32.14	76.34	-796.60	432.81	1,445.01	1,374.20	70.81	20.406		
9,300.00	7,950.00	7,717.00	7,645.53	44.63	32.05	75.63	-794.56	424.03	1,500.67	1,429.00	71.67	20.940		
9,400.00	7,950.00	7,700.00	7,630.47	45.49	31.96	74.98	-792.64	416.37	1,560.24	1,487.78	72.45	21.535		
9,500.00	7,950.00	7,700.00	7,630.47	47.12	31.96	74.98	-792.64	416.37	1,623.55	1,550.13	73.42	22.113		
9,600.00	7,950.00	7,672.76	7,605.89	48.99	31.82	73.92	-789.54	405.06	1,689.72	1,615.85	73.87	22.876		
9,700.00	7,950.00	7,650.00	7,584.96	50.96	31.71	73.03	-786.91	396.52	1,759.08	1,684.77	74.31	23.671		
9,800.00	7,950.00	7,650.00	7,584.96	53.01	31.71	73.03	-786.91	396.52	1,830.84	1,755.84	75.00	24.411		
9,900.00	7,950.00	7,650.00	7,584.96	55.12	31.71	73.03	-786.91	396.52	1,905.14	1,829.54	75.60	25.201		
10,000.00	7,950.00	7,631.26	7,567.48	57.28	31.62	72.30	-784.73	390.13	1,981.37	1,905.46	75.91	26.102		
10,100.00	7,950.00	7,623.03	7,559.74	59.48	31.58	71.98	-783.76	387.50	2,059.58	1,983.30	76.29	26.998		
10,200.00	7,950.00	7,600.00	7,537.89	61.71	31.47	71.08	-781.05	380.75	2,139.73	2,063.26	76.47	27.983		
10,300.00	7,950.00	7,600.00	7,537.89	63.99	31.47	71.08	-781.05	380.75	2,221.01	2,144.17	76.84	28.906		
10,400.00	7,950.00	7,600.00	7,537.89	66.29	31.47	71.08	-781.05	380.75	2,303.76	2,226.60	77.16	29.858		
10,500.00	7,950.00	7,600.00	7,537.89	68.62	31.47	71.08	-781.05	380.75	2,387.84	2,310.40	77.44	30.836		
10,600.00	7,950.00	7,600.00	7,537.89	70.97	31.47	71.08	-781.05	380.75	2,473.10	2,395.42	77.68	31.837		
10,700.00	7,950.00	7,600.00	7,537.89	73.34	31.47	71.08	-781.05	380.75	2,559.42	2,481.53	77.89	32.858		
10,800.00	7,950.00	7,580.43	7,519.13	75.74	31.38	70.31	-778.73	375.71	2,646.34	2,568.39	77.95	33.949		
10,900.00	7,950.00	7,575.89	7,514.75	78.15	31.35	70.14	-778.19	374.63	2,734.31	2,656.22	78.09	35.013		
11,000.00	7,950.00	7,571.63	7,510.64	80.58	31.33	69.97	-777.69	373.65	2,823.04	2,744.82	78.22	36.091		
11,100.00	7,950.00	7,550.00	7,489.64	83.03	31.23	69.14	-775.11	369.16	2,912.78	2,834.55	78.23	37.234		
11,200.00	7,950.00	7,550.00	7,489.64	85.49	31.23	69.14	-775.11	369.16	3,002.73	2,924.38	78.36	38.322		
11,300.00	7,950.00	7,550.00	7,489.64	87.96	31.23	69.14	-775.11	369.16	3,093.30	3,014.84	78.47	39.421		
11,400.00	7,950.00	7,550.00	7,489.64	90.45	31.23	69.14	-775.11	369.16	3,184.44	3,105.87	78.57	40.531		
11,500.00	7,950.00	7,550.00	7,489.64	92.95	31.23	69.14	-775.11	369.16	3,276.09	3,197.44	78.66	41.650		
11,600.00	7,950.00	7,550.00	7,489.64	95.45	31.23	69.14	-775.11	369.16	3,368.22	3,289.48	78.74	42.778		
11,700.00	7,950.00	7,550.00	7,489.64	97.97	31.23	69.14	-775.11	369.16	3,460.79	3,381.98	78.81	43.913		
11,800.00	7,950.00	7,550.00	7,489.64	100.49	31.23	69.14	-775.11	369.16	3,553.76	3,474.88	78.88	45.055		
11,900.00	7,950.00	7,550.00	7,489.64	103.03	31.23	69.14	-775.11	369.16	3,647.10	3,568.16	78.93	46.204		
12,000.00	7,950.00	7,550.00	7,489.64	105.57	31.23	69.14	-775.11	369.16	3,740.78	3,661.79	78.99	47.359		
12,100.00	7,950.00	7,550.00	7,489.64	108.11	31.23	69.14	-775.11	369.16	3,834.78	3,755.75	79.04	48.519		
12,200.00	7,950.00	7,550.00	7,489.64	110.67	31.23	69.14	-775.11	369.16	3,929.08	3,850.00	79.08	49.684		
12,300.00	7,950.00	7,550.00	7,489.64	113.23	31.23	69.14	-775.11	369.16	4,023.66	3,944.54	79.12	50.854		
12,400.00	7,950.00	7,550.00	7,489.64	115.79	31.23	69.14	-775.11	369.16	4,118.49	4,039.33	79.16	52.027		
12,500.00	7,950.00	7,550.00	7,489.64	118.36	31.23	69.14	-775.11	369.16	4,213.56	4,134.36	79.20	53.204		
12,600.00	7,950.00	7,527.61	7,467.74	120.94	31.13	68.28	-772.43	365.36	4,308.37	4,229.21	79.16	54.425		
12,700.00	7,950.00	7,525.82	7,465.98	123.52	31.13	68.21	-772.21	365.09	4,403.80	4,324.61	79.19	55.611		
12,800.00	7,950.00	7,524.10	7,464.29	126.11	31.12	68.14	-772.01	364.84	4,499.41	4,420.20	79.22	56.799		
12,900.00	7,950.00	7,522.45	7,462.67	128.70	31.11	68.08	-771.81	364.60	4,595.21	4,515.97	79.24	57.990		
13,000.00	7,950.00	7,500.00	7,440.55	131.29	31.01	67.23	-769.12	361.86	4,691.59	4,612.39	79.21	59.232		
13,100.00	7,950.00	7,500.00	7,440.55	133.89	31.01	67.23	-769.12	361.86	4,787.66	4,708.43	79.24	60.422		
13,200.00	7,950.00	7,500.00	7,440.55	136.49	31.01	67.23	-769.12	361.86	4,883.89	4,804.62	79.27	61.614		
13,300.00	7,950.00	7,500.00	7,440.55	139.09	31.01	67.23	-769.12	361.86	4,980.27	4,900.97	79.29	62.808		
13,400.00	7,950.00	7,500.00	7,440.55	141.70	31.01	67.23	-769.12	361.86	5,076.78	4,997.46	79.32	64.003		
13,500.00	7,950.00	7,500.00	7,440.55	144.31	31.01	67.23	-769.12	361.86	5,173.43	5,094.08	79.35	65.200		
13,600.00	7,950.00	7,500.00	7,440.55	146.93	31.01	67.23	-769.12	361.86	5,270.20	5,190.83	79.37	66.397		
13,700.00	7,950.00	7,500.00	7,440.55	149.54	31.01	67.23	-769.12	361.86	5,367.10	5,287.70	79.40	67.596		
13,800.00	7,950.00	7,500.00	7,440.55	152.16	31.01	67.23	-769.12	361.86	5,464.10	5,384.68	79.43	68.796		
13,900.00	7,950.00	7,500.00	7,440.55	154.78	31.01	67.23	-769.12	361.86	5,561.21	5,481.76	79.45	69.996		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 2BH - 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		
14,000.00	7,950.00	7,500.00	7,440.55	157.41	31.01	67.23	-769.12	361.86	5,658.42	5,578.95	79.48	71.197		
14,100.00	7,950.00	7,500.00	7,440.55	160.03	31.01	67.23	-769.12	361.86	5,755.73	5,676.23	79.50	72.398		
14,200.00	7,950.00	7,500.00	7,440.55	162.66	31.01	67.23	-769.12	361.86	5,853.13	5,773.60	79.53	73.600		
14,300.00	7,950.00	7,500.00	7,440.55	165.29	31.01	67.23	-769.12	361.86	5,950.61	5,871.06	79.55	74.802		
14,400.00	7,950.00	7,500.00	7,440.55	167.92	31.01	67.23	-769.12	361.86	6,048.18	5,968.60	79.58	76.004		
14,500.00	7,950.00	7,500.00	7,440.55	170.55	31.01	67.23	-769.12	361.86	6,145.82	6,066.22	79.60	77.206		
14,600.00	7,950.00	7,500.00	7,440.55	173.19	31.01	67.23	-769.12	361.86	6,243.54	6,163.91	79.63	78.408		
14,700.00	7,950.00	7,500.00	7,440.55	175.83	31.01	67.23	-769.12	361.86	6,341.33	6,261.67	79.66	79.610		
14,800.00	7,950.00	7,500.00	7,440.55	178.46	31.01	67.23	-769.12	361.86	6,439.18	6,359.50	79.68	80.811		
14,900.00	7,950.00	7,500.00	7,440.55	181.10	31.01	67.23	-769.12	361.86	6,537.11	6,457.40	79.71	82.013		
15,000.00	7,950.00	7,500.00	7,440.55	183.75	31.01	67.23	-769.12	361.86	6,635.09	6,555.36	79.74	83.213		
15,100.00	7,950.00	7,500.00	7,440.55	186.39	31.01	67.23	-769.12	361.86	6,733.14	6,653.37	79.76	84.414		
15,200.00	7,950.00	7,500.00	7,440.55	189.03	31.01	67.23	-769.12	361.86	6,831.24	6,751.44	79.79	85.614		
15,300.00	7,950.00	7,500.00	7,440.55	191.68	31.01	67.23	-769.12	361.86	6,929.39	6,849.57	79.82	86.813		
15,400.00	7,950.00	7,500.00	7,440.55	194.33	31.01	67.23	-769.12	361.86	7,027.60	6,947.75	79.85	88.011		
15,500.00	7,950.00	7,500.00	7,440.55	196.97	31.01	67.23	-769.12	361.86	7,125.85	7,045.98	79.88	89.209		
15,600.00	7,950.00	7,500.00	7,440.55	199.62	31.01	67.23	-769.12	361.86	7,224.16	7,144.25	79.91	90.406		
15,700.00	7,950.00	7,500.00	7,440.55	202.27	31.01	67.23	-769.12	361.86	7,322.51	7,242.57	79.94	91.602		
15,800.00	7,950.00	7,500.00	7,440.55	204.93	31.01	67.23	-769.12	361.86	7,420.90	7,340.93	79.97	92.797		
15,900.00	7,950.00	7,500.00	7,440.55	207.58	31.01	67.23	-769.12	361.86	7,519.34	7,439.34	80.00	93.992		
16,000.00	7,950.00	7,500.00	7,440.55	210.23	31.01	67.23	-769.12	361.86	7,617.82	7,537.79	80.03	95.185		
16,100.00	7,950.00	7,500.00	7,440.55	212.89	31.01	67.23	-769.12	361.86	7,716.33	7,636.27	80.06	96.377		
16,200.00	7,950.00	7,500.00	7,440.55	215.54	31.01	67.23	-769.12	361.86	7,814.89	7,734.79	80.10	97.568		
16,300.00	7,950.00	7,500.00	7,440.55	218.20	31.01	67.23	-769.12	361.86	7,913.48	7,833.35	80.13	98.757		
16,400.00	7,950.00	7,500.00	7,440.55	220.85	31.01	67.23	-769.12	361.86	8,012.10	7,931.94	80.16	99.946		
16,500.00	7,950.00	7,500.00	7,440.55	223.51	31.01	67.23	-769.12	361.86	8,110.76	8,030.57	80.20	101.133		
16,600.00	7,950.00	7,500.00	7,440.55	226.17	31.01	67.23	-769.12	361.86	8,209.46	8,129.22	80.23	102.319		
16,700.00	7,950.00	7,500.00	7,440.55	228.83	31.01	67.23	-769.12	361.86	8,308.18	8,227.91	80.27	103.503		
16,800.00	7,950.00	7,500.00	7,440.55	231.49	31.01	67.23	-769.12	361.86	8,406.93	8,326.63	80.31	104.686		
16,900.00	7,950.00	7,500.00	7,440.55	234.15	31.01	67.23	-769.12	361.86	8,505.71	8,425.37	80.34	105.868		
17,000.00	7,950.00	7,485.81	7,426.52	236.81	30.95	66.70	-767.42	360.58	8,604.34	8,523.98	80.36	107.075		
17,100.00	7,950.00	7,485.33	7,426.04	239.47	30.95	66.68	-767.37	360.54	8,703.16	8,622.77	80.40	108.255		
17,200.00	7,950.00	7,484.85	7,425.57	242.14	30.94	66.66	-767.31	360.50	8,802.01	8,721.58	80.43	109.433		
17,300.00	7,950.00	7,484.38	7,425.11	244.80	30.94	66.65	-767.25	360.47	8,900.89	8,820.42	80.47	110.609		
17,400.00	7,950.00	7,470.29	7,411.15	247.46	30.88	66.12	-765.57	359.57	8,999.96	8,919.47	80.49	111.816		
17,500.00	7,950.00	7,470.29	7,411.15	250.13	30.88	66.12	-765.57	359.57	9,098.88	9,018.35	80.53	112.988		
17,600.00	7,950.00	7,470.29	7,411.15	252.79	30.88	66.12	-765.57	359.57	9,197.81	9,117.24	80.57	114.158		
17,700.00	7,950.00	7,470.29	7,411.15	255.46	30.88	66.12	-765.57	359.57	9,296.77	9,216.16	80.61	115.327		
17,800.00	7,950.00	7,470.29	7,411.15	258.13	30.88	66.12	-765.57	359.57	9,395.75	9,315.10	80.65	116.494		
17,900.00	7,950.00	7,470.29	7,411.15	260.79	30.88	66.12	-765.57	359.57	9,494.76	9,414.06	80.70	117.659		
18,000.00	7,950.00	7,470.29	7,411.15	263.46	30.88	66.12	-765.57	359.57	9,593.78	9,513.04	80.74	118.823		
18,100.00	7,950.00	7,470.29	7,411.15	266.13	30.88	66.12	-765.57	359.57	9,692.82	9,612.04	80.78	119.985		
18,200.00	7,950.00	7,470.29	7,411.15	268.80	30.88	66.12	-765.57	359.57	9,791.89	9,711.06	80.83	121.144		
18,300.00	7,950.00	7,470.29	7,411.15	271.47	30.88	66.12	-765.57	359.57	9,890.97	9,810.10	80.87	122.302		
18,400.00	7,950.00	7,470.29	7,411.15	274.14	30.88	66.12	-765.57	359.57	9,990.07	9,909.15	80.92	123.458		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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	0.00	0.00	0.00	0.00	0.00	25.13	0.00	25.13					
100.00	100.00	100.00	100.00	0.13	0.13	0.00	25.13	0.00	25.13	24.87	0.27	93.487		
200.00	200.00	200.00	200.00	0.49	0.49	0.00	25.13	0.00	25.13	24.15	0.99	25.497		
250.00	250.00	250.00	250.00	0.67	0.67	0.00	25.13	0.00	25.13	23.79	1.34	18.698		
300.00	300.00	300.43	300.42	0.84	0.84	-155.27	24.71	0.11	25.11	23.42	1.69	14.866		
400.00	399.93	401.28	401.21	1.19	1.19	-156.59	21.27	1.03	24.88	22.51	2.37	10.495		
500.00	499.68	502.12	501.80	1.54	1.55	-159.29	14.42	2.85	24.46	21.39	3.07	7.967		
600.00	599.13	602.95	602.05	1.92	1.93	-163.49	4.15	5.57	23.94	20.17	3.78	6.338		
700.00	698.15	703.75	701.85	2.32	2.33	-169.33	-9.52	9.21	23.46	18.97	4.49	5.225		
800.00	796.63	804.52	801.06	2.75	2.76	-176.85	-26.57	13.73	23.21	18.00	5.21	4.456		
810.94	807.36	815.54	811.87	2.80	2.81	-177.77	-28.64	14.28	23.21	17.92	5.29	4.388	CC, ES	
900.00	894.44	904.68	899.18	3.21	3.22	174.74	-46.02	18.90	24.30	18.33	5.97	4.072	SF	
1,000.00	991.46	1,004.52	996.96	3.71	3.69	168.61	-65.55	24.09	29.12	22.36	6.76	4.305		
1,085.22	1,073.44	1,089.44	1,080.12	4.17	4.09	165.94	-82.16	28.50	36.09	28.63	7.46	4.838		
1,100.00	1,087.59	1,104.15	1,094.52	4.25	4.16	165.66	-85.03	29.26	37.51	29.93	7.58	4.948		
1,200.00	1,183.37	1,203.68	1,191.99	4.81	4.64	164.25	-104.50	34.43	47.18	38.78	8.40	5.616		
1,300.00	1,279.15	1,303.20	1,289.46	5.39	5.13	163.31	-123.97	39.60	56.86	47.64	9.23	6.162		
1,400.00	1,374.93	1,402.73	1,386.93	5.98	5.61	162.65	-143.43	44.77	66.56	56.50	10.06	6.616		
1,500.00	1,470.71	1,502.26	1,484.39	6.57	6.10	162.16	-162.90	49.95	76.26	65.36	10.90	6.998		
1,600.00	1,566.49	1,601.78	1,581.86	7.16	6.59	161.77	-182.36	55.12	85.97	74.23	11.74	7.323		
1,700.00	1,662.27	1,701.31	1,679.33	7.76	7.08	161.47	-201.83	60.29	95.68	83.09	12.58	7.603		
1,800.00	1,758.05	1,800.83	1,776.79	8.36	7.57	161.22	-221.29	65.46	105.39	91.96	13.43	7.847		
1,900.00	1,853.83	1,900.36	1,874.26	8.96	8.06	161.01	-240.76	70.63	115.10	100.82	14.28	8.061		
2,000.00	1,949.61	2,000.11	1,971.73	9.57	8.56	160.84	-260.22	75.80	124.82	109.69	15.13	8.249		
2,100.00	2,045.39	2,100.59	2,069.20	10.17	9.05	160.69	-279.69	80.97	134.53	118.55	15.99	8.415		
2,200.00	2,141.17	2,201.06	2,166.66	10.78	9.55	160.56	-299.16	86.14	144.25	127.41	16.84	8.564		
2,300.00	2,236.95	2,301.53	2,264.13	11.39	10.05	160.45	-318.62	91.31	153.97	136.26	17.70	8.698		
2,400.00	2,332.73	2,402.01	2,361.60	11.99	10.55	160.35	-338.09	96.48	163.68	145.12	18.56	8.819		
2,500.00	2,428.51	2,502.48	2,459.07	12.60	11.05	160.26	-357.55	101.65	173.40	153.98	19.42	8.929		
2,600.00	2,524.30	2,602.95	2,556.53	13.21	11.55	160.18	-377.02	106.82	183.12	162.84	20.28	9.030		
2,700.00	2,620.08	2,703.43	2,654.00	13.82	12.05	160.11	-396.48	111.99	192.84	171.70	21.14	9.122		
2,800.00	2,715.86	2,803.90	2,751.47	14.43	12.55	160.05	-415.95	117.16	202.56	180.55	22.00	9.206		
2,900.00	2,811.64	2,904.38	2,848.93	15.04	13.05	159.99	-435.42	122.33	212.27	189.41	22.86	9.284		
3,000.00	2,907.42	3,004.85	2,946.40	15.66	13.55	159.93	-454.88	127.50	221.99	198.27	23.73	9.357		
3,100.00	3,003.20	3,105.32	3,043.87	16.27	14.05	159.89	-474.35	132.67	231.71	207.12	24.59	9.424		
3,200.00	3,098.98	3,205.80	3,141.34	16.88	14.55	159.84	-493.81	137.84	241.43	215.98	25.45	9.486		
3,300.00	3,194.76	3,306.27	3,238.80	17.49	15.05	159.80	-513.28	143.01	251.15	224.84	26.31	9.544		
3,400.00	3,290.54	3,406.74	3,336.27	18.10	15.56	159.76	-532.74	148.18	260.87	233.69	27.18	9.599		
3,500.00	3,386.32	3,507.22	3,433.74	18.72	16.06	159.73	-552.21	153.36	270.59	242.55	28.04	9.650		
3,600.00	3,482.10	3,607.69	3,531.20	19.33	16.56	159.69	-571.67	158.53	280.31	251.41	28.90	9.698		
3,700.00	3,577.88	3,691.84	3,628.67	19.94	16.98	159.66	-591.14	163.70	290.03	260.33	29.70	9.765		
3,800.00	3,673.66	3,808.64	3,726.14	20.55	17.56	159.63	-610.61	168.87	299.75	269.12	30.63	9.785		
3,900.00	3,769.44	3,890.89	3,823.61	21.17	17.97	159.61	-630.07	174.04	309.47	278.05	31.42	9.849		
4,000.00	3,865.22	4,009.59	3,921.07	21.78	18.56	159.58	-649.54	179.21	319.19	286.83	32.36	9.863		
4,100.00	3,961.00	4,089.94	4,018.54	22.39	18.97	159.56	-669.00	184.38	328.91	295.77	33.14	9.924		
4,200.00	4,056.78	4,189.47	4,116.01	23.01	19.46	159.53	-688.47	189.55	338.63	304.63	34.00	9.959		
4,300.00	4,152.56	4,288.99	4,213.47	23.62	19.96	159.51	-707.93	194.72	348.35	313.49	34.86	9.992		
4,400.00	4,248.34	4,388.52	4,310.94	24.23	20.46	159.49	-727.40	199.89	358.07	322.35	35.73	10.023		
4,500.00	4,344.12	4,488.05	4,408.41	24.85	20.95	159.47	-746.87	205.06	367.79	331.21	36.59	10.053		
4,600.00	4,439.90	4,587.57	4,505.88	25.46	21.45	159.46	-766.33	210.23	377.51	340.07	37.45	10.081		
4,700.00	4,535.68	4,687.10	4,603.34	26.08	21.95	159.44	-785.80	215.40	387.23	348.92	38.31	10.108		
4,800.00	4,631.46	4,786.63	4,700.81	26.69	22.45	159.42	-805.26	220.57	396.96	357.78	39.17	10.134		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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: 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	
4,900.00	4,727.24	4,886.15	4,798.28	27.30	22.94	159.41	-824.73	225.74	406.68	366.64	40.03	10.158	
5,000.00	4,823.02	4,985.68	4,895.75	27.92	23.44	159.39	-844.19	230.91	416.40	375.50	40.89	10.182	
5,100.00	4,918.80	5,085.21	4,993.21	28.53	23.94	159.38	-863.66	236.08	426.12	384.36	41.76	10.205	
5,200.00	5,014.58	5,184.73	5,090.68	29.15	24.44	159.36	-883.12	241.25	435.84	393.22	42.62	10.227	
5,300.00	5,110.36	5,284.26	5,188.15	29.76	24.93	159.35	-902.59	246.42	445.56	402.08	43.48	10.247	
5,400.00	5,206.14	5,383.78	5,285.61	30.37	25.43	159.34	-922.06	251.59	455.28	410.94	44.34	10.267	
5,500.00	5,301.92	5,483.31	5,383.08	30.99	25.93	159.33	-941.52	256.76	465.00	419.80	45.20	10.287	
5,600.00	5,397.70	5,582.84	5,480.55	31.60	26.42	159.32	-960.99	261.94	474.72	428.65	46.07	10.305	
5,700.00	5,493.48	5,682.36	5,578.02	32.22	26.92	159.30	-980.45	267.11	484.44	437.51	46.93	10.323	
5,800.00	5,589.26	5,781.89	5,675.48	32.83	27.42	159.29	-999.92	272.28	494.16	446.37	47.79	10.340	
5,900.00	5,685.04	5,881.42	5,772.95	33.45	27.92	159.28	-1,019.38	277.45	503.88	455.23	48.65	10.357	
6,000.00	5,780.82	5,980.94	5,870.42	34.06	28.41	159.27	-1,038.85	282.62	513.60	464.09	49.52	10.373	
6,100.00	5,876.60	6,080.47	5,967.88	34.67	28.91	159.27	-1,058.31	287.79	523.32	472.95	50.38	10.388	
6,200.00	5,972.38	6,180.00	6,065.35	35.29	29.41	159.26	-1,077.78	292.96	533.05	481.81	51.24	10.403	
6,300.00	6,068.16	6,279.52	6,162.82	35.90	29.91	159.25	-1,097.25	298.13	542.77	490.66	52.10	10.417	
6,400.00	6,163.94	6,379.05	6,260.29	36.52	30.41	159.24	-1,116.71	303.30	552.49	499.52	52.97	10.431	
6,500.00	6,259.72	6,478.57	6,357.75	37.13	30.90	159.23	-1,136.18	308.47	562.21	508.38	53.83	10.445	
6,600.00	6,355.50	6,578.10	6,455.22	37.75	31.40	159.22	-1,155.64	313.64	571.93	517.24	54.69	10.458	
6,700.00	6,451.28	6,677.63	6,552.69	38.36	31.90	159.22	-1,175.11	318.81	581.65	526.10	55.55	10.470	
6,800.00	6,547.06	6,777.15	6,650.15	38.98	32.40	159.21	-1,194.57	323.98	591.37	534.96	56.42	10.482	
6,900.00	6,642.84	6,876.68	6,747.62	39.59	32.89	159.20	-1,214.04	329.15	601.09	543.81	57.28	10.494	
7,000.00	6,738.62	6,976.21	6,845.09	40.21	33.39	159.19	-1,233.51	334.32	610.81	552.67	58.14	10.506	
7,100.00	6,834.40	7,075.73	6,942.56	40.82	33.89	159.19	-1,252.97	339.49	620.53	561.53	59.00	10.517	
7,200.00	6,930.18	7,175.26	7,040.02	41.43	34.39	159.18	-1,272.44	344.66	630.25	570.39	59.87	10.528	
7,300.00	7,025.96	7,274.79	7,137.49	42.05	34.88	159.18	-1,291.90	349.83	639.98	579.25	60.73	10.538	
7,400.00	7,121.74	7,374.31	7,234.96	42.66	35.38	159.17	-1,311.37	355.00	649.70	588.10	61.59	10.548	
7,500.00	7,217.52	7,473.84	7,332.42	43.28	35.88	159.16	-1,330.83	360.17	659.42	596.96	62.46	10.558	
7,600.00	7,313.30	7,600.00	7,696.53	43.89	36.60	168.04	-1,405.09	513.88	644.34	587.57	56.77	11.350	
7,617.92	7,330.46	7,975.47	7,756.70	44.00	38.69	172.97	-1,417.82	580.26	637.11	582.03	55.08	11.566	
7,650.00	7,361.28	8,051.96	7,798.66	44.20	39.18	169.43	-1,426.90	643.49	622.24	568.24	54.00	11.523	
7,700.00	7,409.49	8,123.76	7,830.20	44.47	39.66	160.61	-1,433.91	707.55	597.00	542.43	54.57	10.941	
7,750.00	7,457.61	7,750.00	7,836.30	44.71	37.69	147.98	-1,435.31	723.67	572.17	518.12	54.05	10.586	
7,800.00	7,505.28	8,178.18	7,848.72	44.91	40.05	140.78	-1,438.18	758.53	549.66	491.03	58.62	9.376	
7,850.00	7,552.12	8,183.74	7,850.34	45.08	40.09	133.35	-1,438.57	763.84	530.48	469.65	60.83	8.720	
7,900.00	7,597.78	8,181.78	7,849.78	45.23	40.08	127.42	-1,438.43	761.96	515.38	452.54	62.84	8.201	
7,950.00	7,641.91	8,174.77	7,847.70	45.34	40.03	122.41	-1,437.94	755.29	504.79	440.27	64.53	7.823	
8,000.00	7,684.18	8,164.23	7,844.42	45.43	39.95	117.89	-1,437.18	745.29	498.94	433.12	65.81	7.581	
8,036.96	7,714.05	8,154.75	7,841.33	45.48	39.88	114.69	-1,436.46	736.36	497.66	431.17	66.49	7.484	
8,050.00	7,724.27	8,151.13	7,840.10	45.50	39.86	113.57	-1,436.17	732.96	497.82	431.13	66.69	7.465	
8,100.00	7,761.87	8,136.11	7,834.82	45.54	39.75	109.30	-1,434.96	718.97	501.23	434.05	67.18	7.461	
8,150.00	7,796.69	8,119.64	7,828.60	45.57	39.63	104.99	-1,433.55	703.77	508.80	441.43	67.37	7.553	
8,200.00	7,828.47	8,102.02	7,821.49	45.58	39.51	100.62	-1,431.95	687.74	520.02	452.69	67.34	7.723	
8,250.00	7,856.97	8,083.51	7,813.49	45.57	39.39	96.19	-1,430.17	671.14	534.35	467.14	67.20	7.951	
8,300.00	7,881.97	8,064.26	7,804.62	45.54	39.26	91.76	-1,428.21	654.17	551.17	484.12	67.05	8.220	
8,350.00	7,903.28	8,044.42	7,794.89	45.50	39.13	87.39	-1,426.08	637.01	569.92	502.98	66.94	8.513	
8,400.00	7,920.74	8,024.08	7,784.33	45.44	39.00	83.16	-1,423.78	619.79	590.06	523.11	66.94	8.814	
8,450.00	7,934.22	8,000.00	7,771.06	45.38	38.84	78.88	-1,420.91	599.90	611.10	544.26	66.84	9.143	
8,500.00	7,943.60	7,982.26	7,760.76	45.30	38.73	75.34	-1,418.69	585.63	632.59	565.27	67.31	9.397	
8,550.00	7,948.83	7,960.89	7,747.78	45.22	38.60	71.87	-1,415.92	568.88	654.16	586.47	67.69	9.664	
8,587.24	7,950.00	7,950.00	7,740.93	45.15	38.53	69.78	-1,414.46	560.54	670.12	601.76	68.37	9.802	
8,600.00	7,950.00	7,939.32	7,734.07	45.13	38.47	69.22	-1,413.00	552.49	675.57	607.39	68.18	9.908	
8,700.00	7,950.00	7,900.00	7,707.56	44.96	38.23	67.13	-1,407.40	524.01	722.54	653.18	69.36	10.418	

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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		
8,800.00	7,950.00	7,864.46	7,681.99	44.81	38.02	65.20	-1,402.03	499.92	776.20	705.66	70.54	11.004		
8,900.00	7,950.00	7,833.82	7,658.81	44.69	37.84	63.53	-1,397.19	480.48	835.83	764.10	71.73	11.652		
9,000.00	7,950.00	7,800.00	7,632.07	44.58	37.65	61.70	-1,391.64	460.53	900.73	828.18	72.55	12.415		
9,100.00	7,950.00	7,783.13	7,618.32	44.50	37.55	60.79	-1,388.80	451.19	970.00	896.15	73.85	13.135		
9,200.00	7,950.00	7,750.00	7,590.54	44.48	37.36	59.04	-1,383.07	434.08	1,043.32	969.00	74.32	14.038		
9,300.00	7,950.00	7,750.00	7,590.54	44.63	37.36	59.04	-1,383.07	434.08	1,119.60	1,043.91	75.69	14.792		
9,400.00	7,950.00	7,726.62	7,570.37	45.49	37.23	57.82	-1,378.93	423.00	1,198.71	1,122.55	76.15	15.741		
9,500.00	7,950.00	7,700.00	7,546.90	47.12	37.08	56.46	-1,374.12	411.42	1,280.38	1,203.95	76.43	16.751		
9,600.00	7,950.00	7,700.00	7,546.90	48.99	37.08	56.46	-1,374.12	411.42	1,363.75	1,286.52	77.24	17.657		
9,700.00	7,950.00	7,700.00	7,546.90	50.96	37.08	56.46	-1,374.12	411.42	1,449.23	1,371.35	77.88	18.608		
9,800.00	7,950.00	7,674.66	7,524.08	53.01	36.94	55.20	-1,369.46	401.44	1,535.73	1,457.77	77.96	19.700		
9,900.00	7,950.00	7,650.00	7,501.47	55.12	36.81	54.00	-1,364.86	392.72	1,623.98	1,545.96	78.01	20.817		
10,000.00	7,950.00	7,650.00	7,501.47	57.28	36.81	54.00	-1,364.86	392.72	1,712.89	1,634.46	78.43	21.840		
10,100.00	7,950.00	7,650.00	7,501.47	59.48	36.81	54.00	-1,364.86	392.72	1,802.97	1,724.20	78.77	22.888		
10,200.00	7,950.00	7,650.00	7,501.47	61.71	36.81	54.00	-1,364.86	392.72	1,894.05	1,814.99	79.06	23.958		
10,300.00	7,950.00	7,631.57	7,484.35	63.99	36.71	53.13	-1,361.39	386.86	1,985.61	1,906.53	79.08	25.109		
10,400.00	7,950.00	7,624.85	7,478.06	66.29	36.67	52.82	-1,360.11	384.87	2,077.98	1,998.75	79.22	26.230		
10,500.00	7,950.00	7,618.61	7,472.21	68.62	36.64	52.53	-1,358.93	383.08	2,170.93	2,091.59	79.34	27.361		
10,600.00	7,950.00	7,600.00	7,454.62	70.97	36.54	51.68	-1,355.37	378.14	2,264.59	2,185.26	79.33	28.548		
10,700.00	7,950.00	7,600.00	7,454.62	73.34	36.54	51.68	-1,355.37	378.14	2,358.42	2,278.94	79.48	29.674		
10,800.00	7,950.00	7,600.00	7,454.62	75.74	36.54	51.68	-1,355.37	378.14	2,452.74	2,373.13	79.61	30.810		
10,900.00	7,950.00	7,600.00	7,454.62	78.15	36.54	51.68	-1,355.37	378.14	2,547.49	2,467.77	79.72	31.955		
11,000.00	7,950.00	7,600.00	7,454.62	80.58	36.54	51.68	-1,355.37	378.14	2,642.63	2,562.82	79.82	33.108		
11,100.00	7,950.00	7,600.00	7,454.62	83.03	36.54	51.68	-1,355.37	378.14	2,738.12	2,658.22	79.90	34.267		
11,200.00	7,950.00	7,600.00	7,454.62	85.49	36.54	51.68	-1,355.37	378.14	2,833.92	2,753.94	79.98	35.433		
11,300.00	7,950.00	7,600.00	7,454.62	87.96	36.54	51.68	-1,355.37	378.14	2,930.00	2,849.95	80.05	36.603		
11,400.00	7,950.00	7,577.76	7,433.41	90.45	36.42	50.70	-1,351.09	373.01	3,025.83	2,945.86	79.97	37.839		
11,500.00	7,950.00	7,574.43	7,430.22	92.95	36.40	50.55	-1,350.44	372.31	3,122.23	3,042.23	80.00	39.026		
11,600.00	7,950.00	7,571.28	7,427.19	95.45	36.38	50.42	-1,349.83	371.67	3,218.83	3,138.79	80.04	40.215		
11,700.00	7,950.00	7,550.00	7,406.68	97.97	36.27	49.52	-1,345.71	367.78	3,315.96	3,235.99	79.97	41.466		
11,800.00	7,950.00	7,550.00	7,406.68	100.49	36.27	49.52	-1,345.71	367.78	3,412.81	3,332.79	80.02	42.650		
11,900.00	7,950.00	7,550.00	7,406.68	103.03	36.27	49.52	-1,345.71	367.78	3,509.85	3,429.78	80.06	43.838		
12,000.00	7,950.00	7,550.00	7,406.68	105.57	36.27	49.52	-1,345.71	367.78	3,607.04	3,526.93	80.11	45.028		
12,100.00	7,950.00	7,550.00	7,406.68	108.11	36.27	49.52	-1,345.71	367.78	3,704.38	3,624.24	80.15	46.220		
12,200.00	7,950.00	7,550.00	7,406.68	110.67	36.27	49.52	-1,345.71	367.78	3,801.87	3,721.68	80.18	47.414		
12,300.00	7,950.00	7,550.00	7,406.68	113.23	36.27	49.52	-1,345.71	367.78	3,899.47	3,819.25	80.22	48.610		
12,400.00	7,950.00	7,550.00	7,406.68	115.79	36.27	49.52	-1,345.71	367.78	3,997.20	3,916.95	80.25	49.807		
12,500.00	7,950.00	7,550.00	7,406.68	118.36	36.27	49.52	-1,345.71	367.78	4,095.04	4,014.75	80.29	51.006		
12,600.00	7,950.00	7,550.00	7,406.68	120.94	36.27	49.52	-1,345.71	367.78	4,192.98	4,112.66	80.32	52.206		
12,700.00	7,950.00	7,550.00	7,406.68	123.52	36.27	49.52	-1,345.71	367.78	4,291.01	4,210.67	80.35	53.406		
12,800.00	7,950.00	7,550.00	7,406.68	126.11	36.27	49.52	-1,345.71	367.78	4,389.14	4,308.76	80.38	54.608		
12,900.00	7,950.00	7,550.00	7,406.68	128.70	36.27	49.52	-1,345.71	367.78	4,487.34	4,406.94	80.40	55.810		
13,000.00	7,950.00	7,550.00	7,406.68	131.29	36.27	49.52	-1,345.71	367.78	4,585.63	4,505.19	80.43	57.012		
13,100.00	7,950.00	7,550.00	7,406.68	133.89	36.27	49.52	-1,345.71	367.78	4,683.98	4,603.52	80.46	58.215		
13,200.00	7,950.00	7,550.00	7,406.68	136.49	36.27	49.52	-1,345.71	367.78	4,782.41	4,701.92	80.49	59.418		
13,300.00	7,950.00	7,550.00	7,406.68	139.09	36.27	49.52	-1,345.71	367.78	4,880.89	4,800.38	80.51	60.621		
13,400.00	7,950.00	7,550.00	7,406.68	141.70	36.27	49.52	-1,345.71	367.78	4,979.44	4,898.90	80.54	61.825		
13,500.00	7,950.00	7,550.00	7,406.68	144.31	36.27	49.52	-1,345.71	367.78	5,078.05	4,997.48	80.57	63.028		
13,600.00	7,950.00	7,550.00	7,406.68	146.93	36.27	49.52	-1,345.71	367.78	5,176.71	5,096.11	80.60	64.230		
13,700.00	7,950.00	7,550.00	7,406.68	149.54	36.27	49.52	-1,345.71	367.78	5,275.42	5,194.79	80.62	65.433		
13,800.00	7,950.00	7,550.00	7,406.68	152.16	36.27	49.52	-1,345.71	367.78	5,374.17	5,293.52	80.65	66.635		
13,900.00	7,950.00	7,527.27	7,384.63	154.78	36.15	48.59	-1,341.28	364.49	5,472.48	5,391.88	80.60	67.897		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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		
14,000.00	7,950.00	7,526.10	7,383.49	157.41	36.15	48.54	-1,341.05	364.35	5,571.27	5,490.65	80.62	69.101		
14,100.00	7,950.00	7,524.96	7,382.39	160.03	36.14	48.49	-1,340.83	364.21	5,670.11	5,589.46	80.65	70.305		
14,200.00	7,950.00	7,523.87	7,381.32	162.66	36.13	48.45	-1,340.61	364.08	5,768.98	5,688.30	80.68	71.508		
14,300.00	7,950.00	7,522.80	7,380.28	165.29	36.13	48.41	-1,340.41	363.95	5,867.89	5,787.18	80.70	72.710		
14,400.00	7,950.00	7,500.00	7,358.03	167.92	36.01	47.51	-1,335.95	361.73	5,967.28	5,886.62	80.66	73.982		
14,500.00	7,950.00	7,500.00	7,358.03	170.55	36.01	47.51	-1,335.95	361.73	6,066.21	5,985.52	80.69	75.179		
14,600.00	7,950.00	7,500.00	7,358.03	173.19	36.01	47.51	-1,335.95	361.73	6,165.18	6,084.46	80.72	76.376		
14,700.00	7,950.00	7,500.00	7,358.03	175.83	36.01	47.51	-1,335.95	361.73	6,264.18	6,183.43	80.75	77.571		
14,800.00	7,950.00	7,500.00	7,358.03	178.46	36.01	47.51	-1,335.95	361.73	6,363.21	6,282.43	80.79	78.765		
14,900.00	7,950.00	7,500.00	7,358.03	181.10	36.01	47.51	-1,335.95	361.73	6,462.27	6,381.45	80.82	79.959		
15,000.00	7,950.00	7,500.00	7,358.03	183.75	36.01	47.51	-1,335.95	361.73	6,561.36	6,480.51	80.85	81.151		
15,100.00	7,950.00	7,500.00	7,358.03	186.39	36.01	47.51	-1,335.95	361.73	6,660.48	6,579.59	80.89	82.342		
15,200.00	7,950.00	7,500.00	7,358.03	189.03	36.01	47.51	-1,335.95	361.73	6,759.63	6,678.70	80.92	83.532		
15,300.00	7,950.00	7,500.00	7,358.03	191.68	36.01	47.51	-1,335.95	361.73	6,858.79	6,777.84	80.96	84.721		
15,400.00	7,950.00	7,500.00	7,358.03	194.33	36.01	47.51	-1,335.95	361.73	6,957.99	6,876.99	80.99	85.909		
15,500.00	7,950.00	7,500.00	7,358.03	196.97	36.01	47.51	-1,335.95	361.73	7,057.20	6,976.17	81.03	87.095		
15,600.00	7,950.00	7,500.00	7,358.03	199.62	36.01	47.51	-1,335.95	361.73	7,156.44	7,075.37	81.07	88.280		
15,700.00	7,950.00	7,500.00	7,358.03	202.27	36.01	47.51	-1,335.95	361.73	7,255.69	7,174.59	81.10	89.463		
15,800.00	7,950.00	7,500.00	7,358.03	204.93	36.01	47.51	-1,335.95	361.73	7,354.97	7,273.83	81.14	90.645		
15,900.00	7,950.00	7,500.00	7,358.03	207.58	36.01	47.51	-1,335.95	361.73	7,454.27	7,373.09	81.18	91.826		
16,000.00	7,950.00	7,500.00	7,358.03	210.23	36.01	47.51	-1,335.95	361.73	7,553.58	7,472.37	81.22	93.005		
16,100.00	7,950.00	7,500.00	7,358.03	212.89	36.01	47.51	-1,335.95	361.73	7,652.92	7,571.66	81.26	94.182		
16,200.00	7,950.00	7,500.00	7,358.03	215.54	36.01	47.51	-1,335.95	361.73	7,752.27	7,670.97	81.30	95.358		
16,300.00	7,950.00	7,500.00	7,358.03	218.20	36.01	47.51	-1,335.95	361.73	7,851.64	7,770.30	81.34	96.532		
16,400.00	7,950.00	7,500.00	7,358.03	220.85	36.01	47.51	-1,335.95	361.73	7,951.02	7,869.64	81.38	97.705		
16,500.00	7,950.00	7,500.00	7,358.03	223.51	36.01	47.51	-1,335.95	361.73	8,050.42	7,969.00	81.42	98.876		
16,600.00	7,950.00	7,500.00	7,358.03	226.17	36.01	47.51	-1,335.95	361.73	8,149.83	8,068.37	81.46	100.045		
16,700.00	7,950.00	7,500.00	7,358.03	228.83	36.01	47.51	-1,335.95	361.73	8,249.26	8,167.75	81.50	101.213		
16,800.00	7,950.00	7,500.00	7,358.03	231.49	36.01	47.51	-1,335.95	361.73	8,348.70	8,267.15	81.55	102.379		
16,900.00	7,950.00	7,500.00	7,358.03	234.15	36.01	47.51	-1,335.95	361.73	8,448.15	8,366.56	81.59	103.543		
17,000.00	7,950.00	7,500.00	7,358.03	236.81	36.01	47.51	-1,335.95	361.73	8,547.62	8,465.98	81.64	104.705		
17,100.00	7,950.00	7,500.00	7,358.03	239.47	36.01	47.51	-1,335.95	361.73	8,647.10	8,565.42	81.68	105.865		
17,200.00	7,950.00	7,500.00	7,358.03	242.14	36.01	47.51	-1,335.95	361.73	8,746.59	8,664.86	81.73	107.023		
17,300.00	7,950.00	7,500.00	7,358.03	244.80	36.01	47.51	-1,335.95	361.73	8,846.09	8,764.32	81.77	108.180		
17,400.00	7,950.00	7,500.00	7,358.03	247.46	36.01	47.51	-1,335.95	361.73	8,945.60	8,863.79	81.82	109.335		
17,500.00	7,950.00	7,500.00	7,358.03	250.13	36.01	47.51	-1,335.95	361.73	9,045.13	8,963.26	81.87	110.487		
17,600.00	7,950.00	7,500.00	7,358.03	252.79	36.01	47.51	-1,335.95	361.73	9,144.66	9,062.75	81.91	111.638		
17,700.00	7,950.00	7,500.00	7,358.03	255.46	36.01	47.51	-1,335.95	361.73	9,244.21	9,162.25	81.96	112.786		
17,800.00	7,950.00	7,500.00	7,358.03	258.13	36.01	47.51	-1,335.95	361.73	9,343.76	9,261.75	82.01	113.933		
17,900.00	7,950.00	7,500.00	7,358.03	260.79	36.01	47.51	-1,335.95	361.73	9,443.33	9,361.27	82.06	115.077		
18,000.00	7,950.00	7,500.00	7,358.03	263.46	36.01	47.51	-1,335.95	361.73	9,542.90	9,460.79	82.11	116.220		
18,100.00	7,950.00	7,500.00	7,358.03	266.13	36.01	47.51	-1,335.95	361.73	9,642.48	9,560.32	82.16	117.360		
18,200.00	7,950.00	7,500.00	7,358.03	268.80	36.01	47.51	-1,335.95	361.73	9,742.07	9,659.86	82.21	118.499		
18,300.00	7,950.00	7,500.00	7,358.03	271.47	36.01	47.51	-1,335.95	361.73	9,841.67	9,759.41	82.26	119.635		
18,400.00	7,950.00	7,500.00	7,358.03	274.14	36.01	47.51	-1,335.95	361.73	9,941.28	9,858.96	82.32	120.769		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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	-180.00	-25.13	0.00	25.13					
100.00	100.00	100.00	100.00	0.13	0.13	-180.00	-25.13	0.00	25.13	24.87	0.27	93.487		
200.00	200.00	200.00	200.00	0.49	0.49	-180.00	-25.13	0.00	25.13	24.15	0.99	25.497		
250.00	250.00	250.00	250.00	0.67	0.67	-180.00	-25.13	0.00	25.13	23.79	1.34	18.698 CC		
300.00	300.00	299.57	299.57	0.84	0.84	25.12	-25.56	0.08	25.16	23.48	1.69	14.926		
400.00	399.93	398.71	398.65	1.19	1.18	26.91	-28.92	0.74	25.41	23.05	2.36	10.761		
500.00	499.68	497.84	497.53	1.54	1.53	30.39	-35.65	2.06	25.97	22.92	3.06	8.497		
600.00	599.13	596.95	596.10	1.92	1.90	35.30	-45.73	4.03	26.99	23.22	3.77	7.162		
700.00	698.15	696.02	694.22	2.32	2.30	41.22	-59.14	6.65	28.63	24.12	4.51	6.351		
800.00	796.63	795.05	791.76	2.75	2.72	47.64	-75.87	9.92	31.05	25.76	5.29	5.865		
900.00	894.44	894.03	888.62	3.21	3.18	54.02	-95.88	13.84	34.39	28.24	6.15	5.592		
1,000.00	991.46	992.95	984.65	3.71	3.67	59.97	-119.15	18.39	38.71	31.62	7.09	5.458		
1,085.22	1,073.44	1,077.67	1,066.33	4.17	4.11	65.01	-141.23	22.70	42.91	34.93	7.98	5.374		
1,100.00	1,087.59	1,107.58	1,080.53	4.25	4.27	66.02	-145.11	23.46	43.60	35.38	8.22	5.302		
1,200.00	1,183.37	1,207.83	1,176.65	4.81	4.82	72.09	-171.33	28.59	48.60	39.22	9.37	5.185		
1,300.00	1,279.15	1,291.93	1,272.76	5.39	5.29	76.99	-197.55	33.72	54.03	43.57	10.46	5.165		
1,400.00	1,374.93	1,408.32	1,368.87	5.98	5.94	80.97	-223.77	38.84	59.79	48.06	11.73	5.097		
1,500.00	1,470.71	1,508.56	1,464.98	6.57	6.50	84.24	-249.99	43.97	65.79	52.87	12.92	5.092		
1,600.00	1,566.49	1,608.80	1,561.09	7.16	7.07	86.96	-276.20	49.10	71.96	57.85	14.11	5.100		
1,700.00	1,662.27	1,709.05	1,657.21	7.76	7.64	89.25	-302.42	54.23	78.27	62.97	15.30	5.116		
1,800.00	1,758.05	1,809.29	1,753.32	8.36	8.21	91.19	-328.64	59.35	84.68	68.20	16.49	5.136		
1,900.00	1,853.83	1,909.54	1,849.43	8.96	8.79	92.85	-354.86	64.48	91.18	73.51	17.67	5.159		
2,000.00	1,949.61	1,990.22	1,945.54	9.57	9.25	94.30	-381.08	69.61	97.75	79.00	18.75	5.214		
2,100.00	2,045.39	2,089.98	2,041.65	10.17	9.83	95.56	-407.30	74.74	104.36	84.44	19.93	5.237		
2,200.00	2,141.17	2,189.73	2,137.77	10.78	10.40	96.67	-433.52	79.86	111.03	89.92	21.11	5.260		
2,300.00	2,236.95	2,289.49	2,233.88	11.39	10.98	97.65	-459.74	84.99	117.72	95.44	22.28	5.283		
2,400.00	2,332.73	2,389.24	2,329.99	11.99	11.55	98.53	-485.96	90.12	124.46	101.00	23.46	5.305		
2,500.00	2,428.51	2,489.00	2,426.10	12.60	12.13	99.32	-512.18	95.25	131.21	106.58	24.63	5.326		
2,600.00	2,524.30	2,588.76	2,522.22	13.21	12.71	100.03	-538.40	100.37	137.99	112.18	25.81	5.347		
2,700.00	2,620.08	2,688.51	2,618.33	13.82	13.29	100.67	-564.62	105.50	144.79	117.81	26.98	5.366		
2,800.00	2,715.86	2,788.27	2,714.44	14.43	13.86	101.26	-590.84	110.63	151.60	123.45	28.16	5.384		
2,900.00	2,811.64	2,888.02	2,810.55	15.04	14.44	101.80	-617.06	115.76	158.43	129.10	29.33	5.402		
3,000.00	2,907.42	2,987.78	2,906.66	15.66	15.02	102.29	-643.28	120.88	165.27	134.77	30.50	5.419		
3,100.00	3,003.20	3,087.54	3,002.78	16.27	15.60	102.74	-669.50	126.01	172.13	140.45	31.67	5.435		
3,200.00	3,098.98	3,187.29	3,098.89	16.88	16.18	103.16	-695.72	131.14	178.99	146.15	32.84	5.450		
3,300.00	3,194.76	3,287.05	3,195.00	17.49	16.76	103.55	-721.94	136.27	185.86	151.85	34.01	5.464		
3,400.00	3,290.54	3,386.81	3,291.11	18.10	17.34	103.91	-748.16	141.39	192.74	157.55	35.18	5.478		
3,500.00	3,386.32	3,486.56	3,387.22	18.72	17.92	104.24	-774.38	146.52	199.62	163.27	36.35	5.491		
3,600.00	3,482.10	3,586.32	3,483.34	19.33	18.50	104.55	-800.59	151.65	206.52	168.99	37.52	5.504		
3,700.00	3,577.88	3,686.07	3,579.45	19.94	19.08	104.84	-826.81	156.78	213.41	174.72	38.69	5.516		
3,800.00	3,673.66	3,785.83	3,675.56	20.55	19.66	105.12	-853.03	161.90	220.32	180.46	39.86	5.527		
3,900.00	3,769.44	3,885.59	3,771.67	21.17	20.24	105.37	-879.25	167.03	227.23	186.19	41.03	5.538		
4,000.00	3,865.22	3,985.34	3,867.78	21.78	20.82	105.62	-905.47	172.16	234.14	191.94	42.20	5.548		
4,100.00	3,961.00	4,085.10	3,963.90	22.39	21.40	105.84	-931.69	177.29	241.05	197.69	43.37	5.558		
4,200.00	4,056.78	4,184.85	4,060.01	23.01	21.98	106.06	-957.91	182.41	247.97	203.44	44.54	5.568		
4,300.00	4,152.56	4,284.61	4,156.12	23.62	22.57	106.26	-984.13	187.54	254.90	209.19	45.71	5.577		
4,400.00	4,248.34	4,384.37	4,252.23	24.23	23.15	106.46	-1,010.35	192.67	261.82	214.95	46.87	5.586		
4,500.00	4,344.12	4,484.12	4,348.34	24.85	23.73	106.64	-1,036.57	197.80	268.75	220.71	48.04	5.594		
4,600.00	4,439.90	4,583.88	4,444.46	25.46	24.31	106.81	-1,062.79	202.92	275.68	226.47	49.21	5.602		
4,700.00	4,535.68	4,683.63	4,540.57	26.08	24.89	106.98	-1,089.01	208.05	282.62	232.24	50.38	5.610		
4,800.00	4,631.46	4,783.39	4,636.68	26.69	25.47	107.14	-1,115.23	213.18	289.55	238.01	51.55	5.617		
4,900.00	4,727.24	4,883.15	4,732.79	27.30	26.05	107.29	-1,141.45	218.31	296.49	243.78	52.72	5.624		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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		
5,000.00	4,823.02	4,982.90	4,828.90	27.92	26.63	107.43	-1,167.67	223.43	303.43	249.55	53.88	5.631		
5,100.00	4,918.80	5,082.66	4,925.02	28.53	27.21	107.57	-1,193.89	228.56	310.37	255.32	55.05	5.638		
5,200.00	5,014.58	5,182.41	5,021.13	29.15	27.80	107.70	-1,220.11	233.69	317.32	261.10	56.22	5.644		
5,300.00	5,110.36	5,282.17	5,117.24	29.76	28.38	107.82	-1,246.33	238.82	324.26	266.88	57.39	5.651		
5,400.00	5,206.14	5,381.93	5,213.35	30.37	28.96	107.94	-1,272.55	243.94	331.21	272.66	58.55	5.657		
5,500.00	5,301.92	5,481.68	5,309.46	30.99	29.54	108.06	-1,298.76	249.07	338.16	278.44	59.72	5.662		
5,600.00	5,397.70	5,581.44	5,405.58	31.60	30.12	108.17	-1,324.98	254.20	345.11	284.22	60.89	5.668		
5,700.00	5,493.48	5,681.20	5,501.69	32.22	30.70	108.27	-1,351.20	259.33	352.06	290.00	62.06	5.673		
5,800.00	5,589.26	5,780.95	5,597.80	32.83	31.29	108.37	-1,377.42	264.45	359.01	295.79	63.22	5.678		
5,900.00	5,685.04	5,880.71	5,693.91	33.45	31.87	108.47	-1,403.64	269.58	365.96	301.57	64.39	5.683		
6,000.00	5,780.82	5,980.46	5,790.02	34.06	32.45	108.57	-1,429.86	274.71	372.92	307.36	65.56	5.688		
6,100.00	5,876.60	6,080.22	5,886.14	34.67	33.03	108.66	-1,456.08	279.84	379.87	313.15	66.73	5.693		
6,200.00	5,972.38	6,179.98	5,982.25	35.29	33.61	108.75	-1,482.30	284.96	386.83	318.94	67.89	5.698		
6,300.00	6,068.16	6,279.73	6,078.36	35.90	34.19	108.83	-1,508.52	290.09	393.78	324.72	69.06	5.702		
6,400.00	6,163.94	6,379.49	6,174.47	36.52	34.78	108.91	-1,534.74	295.22	400.74	330.51	70.23	5.706		
6,500.00	6,259.72	6,479.24	6,270.58	37.13	35.36	108.99	-1,560.96	300.35	407.70	336.31	71.39	5.711		
6,600.00	6,355.50	6,579.00	6,366.70	37.75	35.94	109.07	-1,587.18	305.47	414.66	342.10	72.56	5.715		
6,700.00	6,451.28	6,678.76	6,462.81	38.36	36.52	109.14	-1,613.40	310.60	421.62	347.89	73.73	5.719		
6,800.00	6,547.06	6,778.51	6,558.92	38.98	37.10	109.21	-1,639.62	315.73	428.58	353.68	74.89	5.722		
6,900.00	6,642.84	6,878.27	6,655.03	39.59	37.69	109.28	-1,665.84	320.86	435.54	359.48	76.06	5.726		
7,000.00	6,738.62	6,978.02	6,751.14	40.21	38.27	109.35	-1,692.06	325.98	442.50	365.27	77.23	5.730		
7,100.00	6,834.40	7,077.78	6,847.26	40.82	38.85	109.41	-1,718.28	331.11	449.46	371.07	78.40	5.733		
7,200.00	6,930.18	7,177.54	6,943.37	41.43	39.43	109.47	-1,744.50	336.24	456.43	376.86	79.56	5.737		
7,300.00	7,025.96	7,277.29	7,039.48	42.05	40.01	109.54	-1,770.72	341.37	463.39	382.66	80.73	5.740		
7,400.00	7,121.74	7,377.05	7,135.59	42.66	40.60	109.59	-1,796.93	346.49	470.35	388.46	81.90	5.743		
7,500.00	7,217.52	7,476.80	7,231.70	43.28	41.18	109.65	-1,823.15	351.62	477.32	394.25	83.06	5.746		
7,600.00	7,313.30	7,576.56	7,327.82	43.89	41.76	109.71	-1,849.37	356.75	484.28	400.05	84.23	5.750		
7,617.92	7,330.46	7,605.56	7,345.04	44.00	41.93	109.72	-1,854.07	357.67	485.53	401.03	84.50	5.746		
7,650.00	7,361.28	7,626.48	7,375.92	44.20	42.05	99.25	-1,862.50	359.32	486.87	402.06	84.81	5.741		
7,700.00	7,409.49	7,676.45	7,424.05	44.47	42.34	81.14	-1,875.63	361.88	485.39	400.00	85.39	5.685		
7,750.00	7,457.61	7,939.43	7,665.91	44.71	43.95	62.73	-1,942.27	432.72	468.92	388.37	80.56	5.821		
7,800.00	7,505.28	8,101.18	7,789.86	44.91	44.95	45.46	-1,977.12	529.74	432.90	362.58	70.32	6.156		
7,850.00	7,552.12	8,180.84	7,840.00	45.08	45.45	28.65	-1,991.45	589.87	388.53	324.77	63.76	6.094		
7,900.00	7,597.78	8,218.97	7,861.02	45.23	45.69	8.15	-1,997.53	621.08	340.80	280.30	60.50	5.633		
7,950.00	7,641.91	8,235.39	7,869.46	45.34	45.79	-23.66	-1,999.98	634.96	291.75	232.45	59.30	4.920		
8,000.00	7,684.18	8,239.48	7,871.49	45.43	45.82	-62.82	-2,000.58	638.46	242.34	182.96	59.38	4.081		
8,050.00	7,724.27	8,235.99	7,869.76	45.50	45.80	-87.21	-2,000.07	635.48	193.21	132.81	60.40	3.199		
8,100.00	7,761.87	8,227.57	7,865.49	45.54	45.74	-96.66	-1,998.83	628.32	144.90	82.64	62.26	2.327		
8,150.00	7,796.69	8,215.75	7,859.33	45.57	45.67	-96.52	-1,997.04	618.40	98.41	33.17	65.25	1.508		
8,200.00	7,828.47	8,201.51	7,851.65	45.58	45.58	-87.56	-1,994.81	606.62	56.99	-12.90	69.90	0.815 Level 1		
8,244.55	7,854.03	8,187.31	7,843.71	45.57	45.49	-71.17	-1,992.52	595.07	38.11	-29.47	67.58	0.564 Level 1, ES, SF		
8,250.00	7,856.97	8,185.49	7,842.67	45.57	45.48	-68.67	-1,992.22	593.60	38.46	-27.44	65.89	0.584 Level 1		
8,300.00	7,881.97	8,168.12	7,832.54	45.54	45.37	-44.24	-1,989.30	579.79	64.19	5.12	59.07	1.087 Level 2		
8,350.00	7,903.28	8,149.70	7,821.37	45.50	45.26	-24.56	-1,986.10	565.51	104.30	42.68	61.62	1.693		
8,400.00	7,920.74	8,130.46	7,809.22	45.44	45.14	-12.37	-1,982.63	550.99	146.37	82.05	64.31	2.276		
8,450.00	7,934.22	8,110.55	7,796.17	45.38	45.01	-5.08	-1,978.91	536.43	188.16	121.48	66.68	2.822		
8,500.00	7,943.60	8,090.10	7,782.26	45.30	44.88	-0.50	-1,974.96	521.97	229.00	160.19	68.81	3.328		
8,550.00	7,948.83	8,069.21	7,767.55	45.22	44.75	2.57	-1,970.79	507.74	268.59	197.82	70.78	3.795		
8,587.24	7,950.00	8,050.00	7,753.58	45.15	44.64	4.44	-1,966.84	495.16	297.20	225.58	71.62	4.150		
8,600.00	7,950.00	8,050.00	7,753.58	45.13	44.64	4.44	-1,966.84	495.16	306.87	233.96	72.91	4.209		
8,700.00	7,950.00	8,009.71	7,723.01	44.96	44.38	6.00	-1,958.24	470.38	385.37	309.73	75.64	5.095		
8,800.00	7,950.00	7,977.36	7,697.28	44.81	44.18	7.02	-1,951.03	452.14	467.67	389.75	77.92	6.002		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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		
8,900.00	7,950.00	7,950.00	7,674.78	44.69	44.01	7.74	-1,944.74	437.91	552.89	473.23	79.66	6.940		
9,000.00	7,950.00	7,926.26	7,654.74	44.58	43.87	8.29	-1,939.16	426.48	640.39	559.41	80.99	7.907		
9,100.00	7,950.00	7,900.00	7,632.06	44.50	43.70	8.82	-1,932.85	414.86	729.77	648.01	81.76	8.925		
9,200.00	7,950.00	7,900.00	7,632.06	44.48	43.70	8.82	-1,932.85	414.86	820.71	737.42	83.30	9.853		
9,300.00	7,950.00	7,872.59	7,607.86	44.63	43.53	9.30	-1,926.14	403.88	912.48	828.97	83.51	10.926		
9,400.00	7,950.00	7,850.00	7,587.55	45.49	43.39	9.66	-1,920.52	395.75	1,005.55	921.76	83.79	12.000		
9,500.00	7,950.00	7,850.00	7,587.55	47.12	43.39	9.66	-1,920.52	395.75	1,099.24	1,014.67	84.56	12.999		
9,600.00	7,950.00	7,850.00	7,587.55	48.99	43.39	9.66	-1,920.52	395.75	1,193.95	1,108.80	85.15	14.022		
9,700.00	7,950.00	7,826.00	7,565.64	50.96	43.25	10.00	-1,914.47	388.03	1,288.73	1,203.59	85.14	15.137		
9,800.00	7,950.00	7,817.17	7,557.51	53.01	43.19	10.11	-1,912.22	385.43	1,384.27	1,298.88	85.39	16.212		
9,900.00	7,950.00	7,800.00	7,541.59	55.12	43.09	10.32	-1,907.83	380.75	1,480.33	1,394.89	85.44	17.325		
10,000.00	7,950.00	7,800.00	7,541.59	57.28	43.09	10.32	-1,907.83	380.75	1,576.57	1,490.82	85.75	18.386		
10,100.00	7,950.00	7,800.00	7,541.59	59.48	43.09	10.32	-1,907.83	380.75	1,673.25	1,587.25	86.00	19.457		
10,200.00	7,950.00	7,800.00	7,541.59	61.71	43.09	10.32	-1,907.83	380.75	1,770.30	1,684.09	86.21	20.536		
10,300.00	7,950.00	7,800.00	7,541.59	63.99	43.09	10.32	-1,907.83	380.75	1,867.66	1,781.28	86.38	21.621		
10,400.00	7,950.00	7,778.28	7,521.25	66.29	42.95	10.57	-1,902.24	375.53	1,964.75	1,878.47	86.28	22.773		
10,500.00	7,950.00	7,773.47	7,516.73	68.62	42.92	10.62	-1,901.00	374.49	2,062.35	1,975.98	86.36	23.880		
10,600.00	7,950.00	7,769.00	7,512.51	70.97	42.90	10.66	-1,899.84	373.55	2,160.12	2,073.68	86.44	24.989		
10,700.00	7,950.00	7,750.00	7,494.53	73.34	42.78	10.85	-1,894.90	369.95	2,258.29	2,171.93	86.36	26.150		
10,800.00	7,950.00	7,750.00	7,494.53	75.74	42.78	10.85	-1,894.90	369.95	2,356.25	2,269.78	86.47	27.250		
10,900.00	7,950.00	7,750.00	7,494.53	78.15	42.78	10.85	-1,894.90	369.95	2,454.37	2,367.81	86.56	28.354		
11,000.00	7,950.00	7,750.00	7,494.53	80.58	42.78	10.85	-1,894.90	369.95	2,552.64	2,465.99	86.65	29.461		
11,100.00	7,950.00	7,750.00	7,494.53	83.03	42.78	10.85	-1,894.90	369.95	2,651.04	2,564.31	86.72	30.569		
11,200.00	7,950.00	7,750.00	7,494.53	85.49	42.78	10.85	-1,894.90	369.95	2,749.55	2,662.76	86.79	31.680		
11,300.00	7,950.00	7,750.00	7,494.53	87.96	42.78	10.85	-1,894.90	369.95	2,848.17	2,761.31	86.85	32.792		
11,400.00	7,950.00	7,750.00	7,494.53	90.45	42.78	10.85	-1,894.90	369.95	2,946.88	2,859.96	86.91	33.906		
11,500.00	7,950.00	7,750.00	7,494.53	92.95	42.78	10.85	-1,894.90	369.95	3,045.67	2,958.71	86.97	35.021		
11,600.00	7,950.00	7,750.00	7,494.53	95.45	42.78	10.85	-1,894.90	369.95	3,144.54	3,057.53	87.02	36.137		
11,700.00	7,950.00	7,750.00	7,494.53	97.97	42.78	10.85	-1,894.90	369.95	3,243.48	3,156.42	87.06	37.254		
11,800.00	7,950.00	7,750.00	7,494.53	100.49	42.78	10.85	-1,894.90	369.95	3,342.49	3,255.38	87.11	38.372		
11,900.00	7,950.00	7,750.00	7,494.53	103.03	42.78	10.85	-1,894.90	369.95	3,441.55	3,354.40	87.15	39.490		
12,000.00	7,950.00	7,728.91	7,474.43	105.57	42.65	11.05	-1,889.39	366.68	3,540.21	3,453.17	87.04	40.674		
12,100.00	7,950.00	7,727.05	7,472.65	108.11	42.64	11.06	-1,888.91	366.43	3,639.29	3,552.22	87.07	41.798		
12,200.00	7,950.00	7,725.28	7,470.96	110.67	42.63	11.08	-1,888.44	366.20	3,738.41	3,651.32	87.09	42.923		
12,300.00	7,950.00	7,723.59	7,469.34	113.23	42.62	11.09	-1,888.00	365.98	3,837.58	3,750.45	87.12	44.048		
12,400.00	7,950.00	7,721.97	7,467.80	115.79	42.61	11.11	-1,887.58	365.77	3,936.78	3,849.63	87.15	45.173		
12,500.00	7,950.00	7,700.00	7,446.72	118.36	42.48	11.28	-1,881.82	363.45	4,036.43	3,949.39	87.04	46.376		
12,600.00	7,950.00	7,700.00	7,446.72	120.94	42.48	11.28	-1,881.82	363.45	4,135.64	4,048.56	87.08	47.495		
12,700.00	7,950.00	7,700.00	7,446.72	123.52	42.48	11.28	-1,881.82	363.45	4,234.88	4,147.77	87.11	48.614		
12,800.00	7,950.00	7,700.00	7,446.72	126.11	42.48	11.28	-1,881.82	363.45	4,334.16	4,247.01	87.15	49.733		
12,900.00	7,950.00	7,700.00	7,446.72	128.70	42.48	11.28	-1,881.82	363.45	4,433.47	4,346.29	87.18	50.852		
13,000.00	7,950.00	7,700.00	7,446.72	131.29	42.48	11.28	-1,881.82	363.45	4,532.82	4,445.60	87.22	51.970		
13,100.00	7,950.00	7,700.00	7,446.72	133.89	42.48	11.28	-1,881.82	363.45	4,632.19	4,544.93	87.26	53.088		
13,200.00	7,950.00	7,700.00	7,446.72	136.49	42.48	11.28	-1,881.82	363.45	4,731.58	4,644.29	87.29	54.205		
13,300.00	7,950.00	7,700.00	7,446.72	139.09	42.48	11.28	-1,881.82	363.45	4,831.01	4,743.68	87.32	55.322		
13,400.00	7,950.00	7,700.00	7,446.72	141.70	42.48	11.28	-1,881.82	363.45	4,930.45	4,843.09	87.36	56.439		
13,500.00	7,950.00	7,700.00	7,446.72	144.31	42.48	11.28	-1,881.82	363.45	5,029.92	4,942.53	87.39	57.554		
13,600.00	7,950.00	7,700.00	7,446.72	146.93	42.48	11.28	-1,881.82	363.45	5,129.41	5,041.98	87.43	58.670		
13,700.00	7,950.00	7,700.00	7,446.72	149.54	42.48	11.28	-1,881.82	363.45	5,228.92	5,141.45	87.46	59.784		
13,800.00	7,950.00	7,700.00	7,446.72	152.16	42.48	11.28	-1,881.82	363.45	5,328.44	5,240.94	87.50	60.898		
13,900.00	7,950.00	7,700.00	7,446.72	154.78	42.48	11.28	-1,881.82	363.45	5,427.99	5,340.45	87.53	62.011		
14,000.00	7,950.00	7,700.00	7,446.72	157.41	42.48	11.28	-1,881.82	363.45	5,527.55	5,439.98	87.57	63.123		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)	(usft)			
14,100.00	7,950.00	7,700.00	7,446.72	160.03	42.48	11.28	-1,881.82	363.45	5,627.12	5,539.52	87.60	64.234		
14,200.00	7,950.00	7,700.00	7,446.72	162.66	42.48	11.28	-1,881.82	363.45	5,726.71	5,639.07	87.64	65.344		
14,300.00	7,950.00	7,700.00	7,446.72	165.29	42.48	11.28	-1,881.82	363.45	5,826.32	5,738.64	87.68	66.453		
14,400.00	7,950.00	7,700.00	7,446.72	167.92	42.48	11.28	-1,881.82	363.45	5,925.93	5,838.22	87.71	67.561		
14,500.00	7,950.00	7,700.00	7,446.72	170.55	42.48	11.28	-1,881.82	363.45	6,025.56	5,937.82	87.75	68.669		
14,600.00	7,950.00	7,700.00	7,446.72	173.19	42.48	11.28	-1,881.82	363.45	6,125.21	6,037.42	87.79	69.775		
14,700.00	7,950.00	7,700.00	7,446.72	175.83	42.48	11.28	-1,881.82	363.45	6,224.86	6,137.04	87.82	70.880		
14,800.00	7,950.00	7,700.00	7,446.72	178.46	42.48	11.28	-1,881.82	363.45	6,324.53	6,236.67	87.86	71.984		
14,900.00	7,950.00	7,700.00	7,446.72	181.10	42.48	11.28	-1,881.82	363.45	6,424.20	6,336.30	87.90	73.087		
15,000.00	7,950.00	7,700.00	7,446.72	183.75	42.48	11.28	-1,881.82	363.45	6,523.89	6,435.95	87.94	74.188		
15,100.00	7,950.00	7,700.00	7,446.72	186.39	42.48	11.28	-1,881.82	363.45	6,623.58	6,535.61	87.98	75.289		
15,200.00	7,950.00	7,700.00	7,446.72	189.03	42.48	11.28	-1,881.82	363.45	6,723.29	6,635.27	88.01	76.388		
15,300.00	7,950.00	7,700.00	7,446.72	191.68	42.48	11.28	-1,881.82	363.45	6,823.00	6,734.94	88.05	77.486		
15,400.00	7,950.00	7,700.00	7,446.72	194.33	42.48	11.28	-1,881.82	363.45	6,922.72	6,834.62	88.09	78.583		
15,500.00	7,950.00	7,700.00	7,446.72	196.97	42.48	11.28	-1,881.82	363.45	7,022.45	6,934.31	88.14	79.678		
15,600.00	7,950.00	7,700.00	7,446.72	199.62	42.48	11.28	-1,881.82	363.45	7,122.18	7,034.01	88.18	80.772		
15,700.00	7,950.00	7,700.00	7,446.72	202.27	42.48	11.28	-1,881.82	363.45	7,221.93	7,133.71	88.22	81.865		
15,800.00	7,950.00	7,700.00	7,446.72	204.93	42.48	11.28	-1,881.82	363.45	7,321.68	7,233.42	88.26	82.956		
15,900.00	7,950.00	7,690.72	7,437.80	207.58	42.43	11.35	-1,879.38	362.72	7,421.35	7,333.11	88.25	84.095		
16,000.00	7,950.00	7,690.23	7,437.33	210.23	42.42	11.36	-1,879.25	362.69	7,521.11	7,432.82	88.29	85.187		
16,100.00	7,950.00	7,689.74	7,436.86	212.89	42.42	11.36	-1,879.12	362.65	7,620.87	7,532.54	88.33	86.277		
16,200.00	7,950.00	7,689.27	7,436.40	215.54	42.42	11.37	-1,879.00	362.62	7,720.64	7,632.27	88.37	87.366		
16,300.00	7,950.00	7,679.74	7,427.23	218.20	42.36	11.43	-1,876.49	362.05	7,820.49	7,732.12	88.36	88.505		
16,400.00	7,950.00	7,679.74	7,427.23	220.85	42.36	11.43	-1,876.49	362.05	7,920.26	7,831.85	88.41	89.588		
16,500.00	7,950.00	7,679.74	7,427.23	223.51	42.36	11.43	-1,876.49	362.05	8,020.03	7,931.58	88.45	90.670		
16,600.00	7,950.00	7,679.74	7,427.23	226.17	42.36	11.43	-1,876.49	362.05	8,119.81	8,031.32	88.50	91.751		
16,700.00	7,950.00	7,679.74	7,427.23	228.83	42.36	11.43	-1,876.49	362.05	8,219.60	8,131.06	88.55	92.830		
16,800.00	7,950.00	7,679.74	7,427.23	231.49	42.36	11.43	-1,876.49	362.05	8,319.39	8,230.80	88.59	93.907		
16,900.00	7,950.00	7,679.74	7,427.23	234.15	42.36	11.43	-1,876.49	362.05	8,419.19	8,330.55	88.64	94.982		
17,000.00	7,950.00	7,679.74	7,427.23	236.81	42.36	11.43	-1,876.49	362.05	8,518.99	8,430.30	88.69	96.056		
17,100.00	7,950.00	7,679.74	7,427.23	239.47	42.36	11.43	-1,876.49	362.05	8,618.80	8,530.06	88.74	97.129		
17,200.00	7,950.00	7,679.74	7,427.23	242.14	42.36	11.43	-1,876.49	362.05	8,718.61	8,629.82	88.78	98.199		
17,300.00	7,950.00	7,679.74	7,427.23	244.80	42.36	11.43	-1,876.49	362.05	8,818.42	8,729.59	88.83	99.268		
17,400.00	7,950.00	7,679.74	7,427.23	247.46	42.36	11.43	-1,876.49	362.05	8,918.24	8,829.36	88.88	100.336		
17,500.00	7,950.00	7,679.74	7,427.23	250.13	42.36	11.43	-1,876.49	362.05	9,018.06	8,929.13	88.93	101.401		
17,600.00	7,950.00	7,679.74	7,427.23	252.79	42.36	11.43	-1,876.49	362.05	9,117.89	9,028.91	88.99	102.465		
17,700.00	7,950.00	7,679.74	7,427.23	255.46	42.36	11.43	-1,876.49	362.05	9,217.72	9,128.68	89.04	103.527		
17,800.00	7,950.00	7,679.74	7,427.23	258.13	42.36	11.43	-1,876.49	362.05	9,317.56	9,228.47	89.09	104.587		
17,900.00	7,950.00	7,679.74	7,427.23	260.79	42.36	11.43	-1,876.49	362.05	9,417.39	9,328.25	89.14	105.646		
18,000.00	7,950.00	7,679.74	7,427.23	263.46	42.36	11.43	-1,876.49	362.05	9,517.23	9,428.04	89.19	106.702		
18,100.00	7,950.00	7,679.74	7,427.23	266.13	42.36	11.43	-1,876.49	362.05	9,617.08	9,527.83	89.25	107.757		
18,200.00	7,950.00	7,679.74	7,427.23	268.80	42.36	11.43	-1,876.49	362.05	9,716.93	9,627.63	89.30	108.810		
18,300.00	7,950.00	7,679.74	7,427.23	271.47	42.36	11.43	-1,876.49	362.05	9,816.78	9,727.42	89.36	109.861		
18,400.00	7,950.00	7,679.74	7,427.23	274.14	42.36	11.43	-1,876.49	362.05	9,916.63	9,827.22	89.41	110.911		
18,481.45	7,950.00	7,679.74	7,427.23	276.31	42.36	11.43	-1,876.49	362.05	9,997.96	9,908.51	89.46	111.764		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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	0.10	-0.10	0.00	0.00	179.79	-75.04	0.28	75.04				
100.00	100.00	100.10	99.90	0.13	0.13	179.79	-75.04	0.28	75.04	74.77	0.27	278.754	
200.00	200.00	200.10	199.90	0.49	0.49	179.79	-75.04	0.28	75.04	74.06	0.99	76.098	
250.00	250.00	249.90	249.90	0.67	0.67	179.79	-75.04	0.28	75.04	73.70	1.34	55.840 CC	
300.00	300.00	298.64	298.64	0.84	0.84	24.77	-75.45	0.34	75.07	73.38	1.68	44.613	
400.00	399.93	396.11	396.05	1.19	1.17	25.47	-78.72	0.85	75.26	72.91	2.35	31.994	
500.00	499.68	493.56	493.27	1.54	1.52	26.86	-85.27	1.87	75.69	72.65	3.04	24.892 ES	
600.00	599.13	590.99	590.19	1.92	1.88	28.91	-95.07	3.39	76.42	72.68	3.74	20.426	
700.00	698.15	688.38	686.67	2.32	2.27	31.58	-108.12	5.41	77.55	73.10	4.46	17.398	
800.00	796.63	785.72	782.61	2.75	2.68	34.78	-124.40	7.93	79.20	74.00	5.20	15.238	
900.00	894.44	883.01	877.87	3.21	3.12	38.43	-143.87	10.95	81.49	75.51	5.97	13.638	
1,000.00	991.46	980.23	972.35	3.71	3.60	42.39	-166.52	14.46	84.56	77.75	6.81	12.420	
1,085.22	1,073.44	1,063.02	1,052.15	4.17	4.04	45.93	-188.29	17.83	87.88	80.31	7.58	11.601	
1,100.00	1,087.59	1,077.38	1,065.92	4.25	4.12	46.54	-192.29	18.45	88.56	80.84	7.71	11.480	
1,200.00	1,183.37	1,174.42	1,158.46	4.81	4.67	49.78	-221.16	22.92	94.98	86.29	8.68	10.938	
1,300.00	1,279.15	1,272.23	1,250.76	5.39	5.27	51.60	-253.15	27.88	104.19	94.50	9.69	10.755	
1,400.00	1,374.93	1,371.72	1,344.41	5.98	5.90	52.95	-286.32	33.02	114.03	103.28	10.74	10.613	
1,500.00	1,470.71	1,471.20	1,438.06	6.57	6.54	54.08	-319.48	38.16	123.91	112.09	11.82	10.482	
1,600.00	1,566.49	1,570.68	1,531.71	7.16	7.19	55.05	-352.65	43.30	133.84	120.93	12.91	10.364	
1,700.00	1,662.27	1,670.16	1,625.36	7.76	7.84	55.88	-385.81	48.44	143.81	129.79	14.02	10.257	
1,800.00	1,758.05	1,769.65	1,719.01	8.36	8.50	56.60	-418.98	53.58	153.80	138.66	15.14	10.161	
1,900.00	1,853.83	1,869.13	1,812.66	8.96	9.16	57.23	-452.14	58.72	163.81	147.54	16.26	10.074	
2,000.00	1,949.61	1,968.61	1,906.31	9.57	9.82	57.80	-485.31	63.85	173.83	156.44	17.39	9.995	
2,100.00	2,045.39	2,068.09	1,999.96	10.17	10.48	58.30	-518.47	68.99	183.88	165.35	18.53	9.924	
2,200.00	2,141.17	2,167.58	2,093.61	10.78	11.15	58.75	-551.64	74.13	193.93	174.26	19.67	9.860	
2,300.00	2,236.95	2,267.06	2,187.26	11.39	11.82	59.15	-584.80	79.27	203.99	183.18	20.81	9.801	
2,400.00	2,332.73	2,366.54	2,280.91	11.99	12.49	59.52	-617.97	84.41	214.07	192.11	21.96	9.747	
2,500.00	2,428.51	2,466.02	2,374.57	12.60	13.16	59.85	-651.13	89.55	224.15	201.04	23.11	9.698	
2,600.00	2,524.30	2,565.51	2,468.22	13.21	13.83	60.15	-684.30	94.69	234.24	209.97	24.27	9.653	
2,700.00	2,620.08	2,664.99	2,561.87	13.82	14.50	60.43	-717.46	99.83	244.34	218.91	25.42	9.611	
2,800.00	2,715.86	2,764.47	2,655.52	14.43	15.17	60.69	-750.63	104.97	254.44	227.86	26.58	9.573	
2,900.00	2,811.64	2,863.95	2,749.17	15.04	15.84	60.93	-783.79	110.11	264.54	236.80	27.74	9.537	
3,000.00	2,907.42	2,963.44	2,842.82	15.66	16.52	61.15	-816.96	115.25	274.65	245.75	28.90	9.504	
3,100.00	3,003.20	3,062.92	2,936.47	16.27	17.19	61.35	-850.12	120.38	284.76	254.70	30.06	9.473	
3,200.00	3,098.98	3,162.40	3,030.12	16.88	17.86	61.54	-883.29	125.52	294.88	263.65	31.22	9.444	
3,300.00	3,194.76	3,261.88	3,123.77	17.49	18.54	61.72	-916.45	130.66	305.00	272.61	32.39	9.417	
3,400.00	3,290.54	3,361.36	3,217.42	18.10	19.21	61.89	-949.62	135.80	315.12	281.57	33.55	9.392	
3,500.00	3,386.32	3,460.85	3,311.07	18.72	19.89	62.04	-982.78	140.94	325.24	290.53	34.72	9.368	
3,600.00	3,482.10	3,560.33	3,404.72	19.33	20.56	62.19	-1,015.95	146.08	335.37	299.49	35.89	9.346	
3,700.00	3,577.88	3,659.81	3,498.37	19.94	21.24	62.33	-1,049.11	151.22	345.50	308.45	37.05	9.325	
3,800.00	3,673.66	3,759.29	3,592.02	20.55	21.91	62.46	-1,082.28	156.36	355.63	317.41	38.22	9.305	
3,900.00	3,769.44	3,858.78	3,685.67	21.17	22.59	62.58	-1,115.44	161.50	365.76	326.37	39.39	9.286	
4,000.00	3,865.22	3,958.26	3,779.32	21.78	23.26	62.70	-1,148.60	166.64	375.90	335.34	40.56	9.268	
4,100.00	3,961.00	4,057.74	3,872.97	22.39	23.94	62.81	-1,181.77	171.77	386.03	344.31	41.73	9.251	
4,200.00	4,056.78	4,157.22	3,966.62	23.01	24.62	62.91	-1,214.93	176.91	396.17	353.27	42.90	9.235	
4,300.00	4,152.56	4,256.71	4,060.28	23.62	25.29	63.01	-1,248.10	182.05	406.31	362.24	44.07	9.220	
4,400.00	4,248.34	4,356.19	4,153.93	24.23	25.97	63.11	-1,281.26	187.19	416.45	371.21	45.24	9.206	
4,500.00	4,344.12	4,455.67	4,247.58	24.85	26.65	63.20	-1,314.43	192.33	426.59	380.18	46.41	9.192	
4,600.00	4,439.90	4,555.15	4,341.23	25.46	27.32	63.28	-1,347.59	197.47	436.73	389.15	47.58	9.179	
4,700.00	4,535.68	4,654.64	4,434.88	26.08	28.00	63.36	-1,380.76	202.61	446.87	398.12	48.75	9.166	
4,800.00	4,631.46	4,754.12	4,528.53	26.69	28.68	63.44	-1,413.92	207.75	457.01	407.09	49.92	9.154	
4,900.00	4,727.24	4,853.60	4,622.18	27.30	29.35	63.52	-1,447.09	212.89	467.16	416.06	51.09	9.143	

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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		
5,000.00	4,823.02	4,953.08	4,715.83	27.92	30.03	63.59	-1,480.25	218.03	477.30	425.03	52.27	9.132		
5,100.00	4,918.80	5,052.57	4,809.48	28.53	30.71	63.66	-1,513.42	223.17	487.45	434.01	53.44	9.121		
5,200.00	5,014.58	5,152.05	4,903.13	29.15	31.38	63.72	-1,546.58	228.30	497.59	442.98	54.61	9.111		
5,300.00	5,110.36	5,251.53	4,996.78	29.76	32.06	63.79	-1,579.75	233.44	507.74	451.95	55.79	9.102		
5,400.00	5,206.14	5,351.01	5,090.43	30.37	32.74	63.85	-1,612.91	238.58	517.89	460.93	56.96	9.092		
5,500.00	5,301.92	5,450.49	5,184.08	30.99	33.42	63.91	-1,646.08	243.72	528.03	469.90	58.13	9.083		
5,600.00	5,397.70	5,549.98	5,277.73	31.60	34.09	63.96	-1,679.24	248.86	538.18	478.88	59.31	9.075		
5,700.00	5,493.48	5,649.46	5,371.38	32.22	34.77	64.02	-1,712.41	254.00	548.33	487.85	60.48	9.066		
5,800.00	5,589.26	5,748.94	5,465.03	32.83	35.45	64.07	-1,745.57	259.14	558.48	496.83	61.65	9.058		
5,900.00	5,685.04	5,848.42	5,558.68	33.45	36.13	64.12	-1,778.74	264.28	568.63	505.80	62.83	9.051		
6,000.00	5,780.82	5,947.91	5,652.33	34.06	36.80	64.17	-1,811.90	269.42	578.78	514.78	64.00	9.043		
6,100.00	5,876.60	6,047.39	5,745.99	34.67	37.48	64.22	-1,845.07	274.56	588.93	523.75	65.18	9.036		
6,200.00	5,972.38	6,146.87	5,839.64	35.29	38.16	64.26	-1,878.23	279.70	599.08	532.73	66.35	9.029		
6,300.00	6,068.16	6,246.35	5,933.29	35.90	38.84	64.30	-1,911.40	284.83	609.23	541.71	67.52	9.022		
6,400.00	6,163.94	6,345.84	6,026.94	36.52	39.51	64.35	-1,944.56	289.97	619.38	550.68	68.70	9.016		
6,500.00	6,259.72	6,445.32	6,120.59	37.13	40.19	64.39	-1,977.73	295.11	629.53	559.66	69.87	9.010		
6,600.00	6,355.50	6,544.80	6,214.24	37.75	40.87	64.43	-2,010.89	300.25	639.69	568.64	71.05	9.004		
6,700.00	6,451.28	6,644.28	6,307.89	38.36	41.55	64.47	-2,044.06	305.39	649.84	577.62	72.22	8.998		
6,800.00	6,547.06	6,743.77	6,401.54	38.98	42.23	64.50	-2,077.22	310.53	659.99	586.59	73.40	8.992		
6,900.00	6,642.84	6,843.25	6,495.19	39.59	42.90	64.54	-2,110.39	315.67	670.15	595.57	74.57	8.986		
7,000.00	6,738.62	6,942.73	6,588.84	40.21	43.58	64.57	-2,143.55	320.81	680.30	604.55	75.75	8.981		
7,100.00	6,834.40	7,042.21	6,682.49	40.82	44.26	64.61	-2,176.72	325.95	690.45	613.53	76.92	8.976		
7,200.00	6,930.18	7,141.70	6,776.14	41.43	44.94	64.64	-2,209.88	331.09	700.61	622.51	78.10	8.971		
7,300.00	7,025.96	7,241.18	6,869.79	42.05	45.61	64.67	-2,243.05	336.23	710.76	631.49	79.27	8.966		
7,400.00	7,121.74	7,340.66	6,963.44	42.66	46.29	64.71	-2,276.21	341.36	720.91	640.46	80.45	8.961		
7,500.00	7,217.52	7,440.14	7,057.09	43.28	46.97	64.74	-2,309.37	346.50	731.07	649.44	81.62	8.956		
7,600.00	7,313.30	7,539.62	7,150.74	43.89	47.65	64.76	-2,342.54	351.64	741.22	658.42	82.80	8.952		
7,617.92	7,330.46	7,557.45	7,167.53	44.00	47.77	64.77	-2,348.48	352.56	743.04	660.03	83.01	8.951		
7,650.00	7,361.28	7,589.41	7,197.61	44.20	47.99	64.79	-2,359.14	354.21	745.71	662.36	83.36	8.946		
7,700.00	7,409.49	7,639.23	7,244.51	44.47	48.33	64.81	-2,375.75	356.79	747.54	663.77	83.77	8.924		
7,750.00	7,457.61	7,688.74	7,291.12	44.71	48.67	64.83	-2,392.25	359.35	749.37	665.18	84.18	8.886		
7,800.00	7,505.28	7,737.54	7,337.06	44.91	49.00	64.85	-2,408.52	361.87	751.20	666.59	84.59	8.833		
7,850.00	7,552.12	7,785.45	7,384.52	45.08	49.80	64.87	-2,424.01	364.34	753.03	668.00	85.00	8.725		
7,900.00	7,597.78	7,833.36	7,432.00	45.23	50.13	64.89	-2,439.26	366.81	754.86	669.41	85.41	8.764		
7,950.00	7,641.91	7,879.27	7,479.47	45.34	51.58	64.91	-2,524.62	369.28	756.69	670.82	85.82	8.791		
8,000.00	7,684.18	7,925.18	7,526.94	45.43	51.91	64.93	-2,537.41	371.75	758.52	672.23	86.23	8.737		
8,050.00	7,724.27	7,971.09	7,574.41	45.50	52.08	64.95	-2,543.49	374.22	760.35	673.64	86.64	8.640		
8,100.00	7,761.87	8,016.99	7,621.88	45.54	52.14	64.97	-2,549.54	376.69	762.18	675.05	87.05	8.550		
8,150.00	7,796.69	8,062.89	7,669.35	45.57	52.15	64.99	-2,546.20	379.16	763.72	676.46	87.46	8.497		
8,200.00	7,828.47	8,108.79	7,716.82	45.58	52.12	65.01	-2,545.02	381.63	765.29	677.87	87.87	8.497 SF		
8,250.00	7,856.97	8,154.69	7,764.29	45.57	52.06	65.03	-2,542.83	384.10	766.81	679.28	88.28	8.554		
8,300.00	7,881.97	8,199.59	7,811.76	45.54	51.98	65.05	-2,539.88	386.57	768.34	680.69	88.69	8.664		
8,322.19	7,891.90	8,211.52	7,823.69	45.52	51.94	65.07	-2,538.37	389.04	769.87	682.10	89.10	8.727		
8,350.00	7,903.28	8,223.45	7,835.07	45.50	51.88	65.09	-2,536.32	391.51	771.40	683.51	89.51	8.816		
8,400.00	7,920.74	8,240.91	7,852.53	45.44	51.78	65.11	-2,532.25	393.98	772.93	684.92	89.92	8.993		
8,450.00	7,934.22	8,254.39	7,866.01	45.38	51.66	65.13	-2,527.76	396.45	774.46	686.33	90.33	9.176		
8,500.00	7,943.60	8,263.87	7,875.49	45.30	51.54	65.15	-2,522.89	398.92	775.99	687.74	90.74	9.350		
8,550.00	7,948.83	8,268.10	7,880.72	45.22	51.41	65.17	-2,517.68	401.39	777.52	689.15	91.15	9.503		
8,587.24	7,950.00	8,269.32	7,881.94	45.15	51.31	65.19	-2,513.61	403.86	779.05	690.56	91.56	9.600		
8,600.00	7,950.00	8,269.32	7,881.94	45.13	51.28	65.21	-2,512.21	406.33	780.58	691.97	91.97	9.631		
8,700.00	7,950.00	8,269.32	7,881.94	44.96	51.04	65.23	-2,502.17	408.80	782.11	693.38	92.38	9.854		
8,800.00	7,950.00	8,269.32	7,881.94	44.81	50.84	65.25	-2,493.56	411.27	783.64	694.79	92.79	10.095		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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		
8,900.00	7,950.00	7,976.77	7,555.89	44.69	50.67	-52.00	-2,486.45	411.91	783.16	707.81	75.35	10.394		
9,000.00	7,950.00	7,950.00	7,532.63	44.58	50.48	-49.92	-2,478.11	401.63	844.34	766.20	78.14	10.805		
9,100.00	7,950.00	7,950.00	7,532.63	44.50	50.48	-49.92	-2,478.11	401.63	911.67	830.31	81.36	11.205		
9,200.00	7,950.00	7,925.24	7,510.73	44.48	50.31	-48.02	-2,470.27	393.15	983.83	900.37	83.47	11.787		
9,300.00	7,950.00	7,900.00	7,488.07	44.63	50.13	-46.10	-2,462.17	385.55	1,060.40	975.19	85.22	12.444		
9,400.00	7,950.00	7,900.00	7,488.07	45.49	50.13	-46.10	-2,462.17	385.55	1,139.95	1,052.72	87.23	13.068		
9,500.00	7,950.00	7,900.00	7,488.07	47.12	50.13	-46.10	-2,462.17	385.55	1,222.50	1,133.59	88.91	13.750		
9,600.00	7,950.00	7,882.78	7,472.43	48.99	50.01	-44.81	-2,456.59	380.98	1,307.14	1,217.16	89.98	14.527		
9,700.00	7,950.00	7,874.95	7,465.28	50.96	49.95	-44.23	-2,454.04	379.06	1,393.75	1,302.71	91.04	15.310		
9,800.00	7,950.00	7,867.91	7,458.83	53.01	49.90	-43.72	-2,451.74	377.43	1,481.92	1,389.99	91.94	16.119		
9,900.00	7,950.00	7,850.00	7,442.34	55.12	49.78	-42.41	-2,445.87	373.66	1,571.57	1,479.05	92.52	16.986		
10,000.00	7,950.00	7,850.00	7,442.34	57.28	49.78	-42.41	-2,445.87	373.66	1,662.07	1,568.79	93.28	17.818		
10,100.00	7,950.00	7,850.00	7,442.34	59.48	49.78	-42.41	-2,445.87	373.66	1,753.60	1,659.66	93.94	18.668		
10,200.00	7,950.00	7,850.00	7,442.34	61.71	49.78	-42.41	-2,445.87	373.66	1,846.01	1,751.51	94.50	19.534		
10,300.00	7,950.00	7,850.00	7,442.34	63.99	49.78	-42.41	-2,445.87	373.66	1,939.18	1,844.18	94.99	20.414		
10,400.00	7,950.00	7,850.00	7,442.34	66.29	49.78	-42.41	-2,445.87	373.66	2,032.99	1,937.56	95.43	21.304		
10,500.00	7,950.00	7,850.00	7,442.34	68.62	49.78	-42.41	-2,445.87	373.66	2,127.37	2,031.56	95.81	22.205		
10,600.00	7,950.00	7,829.84	7,423.65	70.97	49.63	-40.97	-2,439.22	370.07	2,221.81	2,125.91	95.90	23.169		
10,700.00	7,950.00	7,826.58	7,420.61	73.34	49.61	-40.74	-2,438.15	369.55	2,316.96	2,220.80	96.16	24.094		
10,800.00	7,950.00	7,823.54	7,417.78	75.74	49.59	-40.53	-2,437.14	369.09	2,412.48	2,316.08	96.40	25.025		
10,900.00	7,950.00	7,820.70	7,415.13	78.15	49.57	-40.33	-2,436.20	368.67	2,508.34	2,411.72	96.62	25.961		
11,000.00	7,950.00	7,800.00	7,395.79	80.58	49.43	-38.90	-2,429.33	366.04	2,604.83	2,508.23	96.60	26.964		
11,100.00	7,950.00	7,800.00	7,395.79	83.03	49.43	-38.90	-2,429.33	366.04	2,701.16	2,604.35	96.81	27.900		
11,200.00	7,950.00	7,800.00	7,395.79	85.49	49.43	-38.90	-2,429.33	366.04	2,797.75	2,700.74	97.01	28.841		
11,300.00	7,950.00	7,800.00	7,395.79	87.96	49.43	-38.90	-2,429.33	366.04	2,894.57	2,797.39	97.18	29.786		
11,400.00	7,950.00	7,800.00	7,395.79	90.45	49.43	-38.90	-2,429.33	366.04	2,991.60	2,894.26	97.34	30.733		
11,500.00	7,950.00	7,800.00	7,395.79	92.95	49.43	-38.90	-2,429.33	366.04	3,088.82	2,991.33	97.49	31.684		
11,600.00	7,950.00	7,800.00	7,395.79	95.45	49.43	-38.90	-2,429.33	366.04	3,186.21	3,088.58	97.63	32.637		
11,700.00	7,950.00	7,800.00	7,395.79	97.97	49.43	-38.90	-2,429.33	366.04	3,283.75	3,186.00	97.75	33.592		
11,800.00	7,950.00	7,800.00	7,395.79	100.49	49.43	-38.90	-2,429.33	366.04	3,381.44	3,283.57	97.87	34.550		
11,900.00	7,950.00	7,800.00	7,395.79	103.03	49.43	-38.90	-2,429.33	366.04	3,479.27	3,381.28	97.98	35.509		
12,000.00	7,950.00	7,800.00	7,395.79	105.57	49.43	-38.90	-2,429.33	366.04	3,577.21	3,479.12	98.09	36.469		
12,100.00	7,950.00	7,800.00	7,395.79	108.11	49.43	-38.90	-2,429.33	366.04	3,675.26	3,577.08	98.19	37.431		
12,200.00	7,950.00	7,800.00	7,395.79	110.67	49.43	-38.90	-2,429.33	366.04	3,773.42	3,675.14	98.28	38.395		
12,300.00	7,950.00	7,800.00	7,395.79	113.23	49.43	-38.90	-2,429.33	366.04	3,871.67	3,773.30	98.37	39.359		
12,400.00	7,950.00	7,800.00	7,395.79	115.79	49.43	-38.90	-2,429.33	366.04	3,970.00	3,871.55	98.45	40.324		
12,500.00	7,950.00	7,800.00	7,395.79	118.36	49.43	-38.90	-2,429.33	366.04	4,068.42	3,969.89	98.53	41.290		
12,600.00	7,950.00	7,800.00	7,395.79	120.94	49.43	-38.90	-2,429.33	366.04	4,166.92	4,068.31	98.61	42.257		
12,700.00	7,950.00	7,800.00	7,395.79	123.52	49.43	-38.90	-2,429.33	366.04	4,265.48	4,166.80	98.68	43.224		
12,800.00	7,950.00	7,800.00	7,395.79	126.11	49.43	-38.90	-2,429.33	366.04	4,364.11	4,265.35	98.75	44.192		
12,900.00	7,950.00	7,800.00	7,395.79	128.70	49.43	-38.90	-2,429.33	366.04	4,462.80	4,363.98	98.82	45.160		
13,000.00	7,950.00	7,800.00	7,395.79	131.29	49.43	-38.90	-2,429.33	366.04	4,561.55	4,462.66	98.89	46.128		
13,100.00	7,950.00	7,785.64	7,382.32	133.89	49.33	-37.93	-2,424.55	364.65	4,660.15	4,561.33	98.81	47.161		
13,200.00	7,950.00	7,784.73	7,381.46	136.49	49.32	-37.87	-2,424.25	364.58	4,758.97	4,660.10	98.87	48.135		
13,300.00	7,950.00	7,783.86	7,380.65	139.09	49.31	-37.81	-2,423.96	364.51	4,857.84	4,758.92	98.92	49.109		
13,400.00	7,950.00	7,783.02	7,379.86	141.70	49.31	-37.75	-2,423.68	364.44	4,956.76	4,857.79	98.97	50.083		
13,500.00	7,950.00	7,782.21	7,379.09	144.31	49.30	-37.70	-2,423.41	364.38	5,055.71	4,956.69	99.02	51.057		
13,600.00	7,950.00	7,766.97	7,364.76	146.93	49.20	-36.70	-2,418.33	363.39	5,154.91	5,055.98	98.93	52.106		
13,700.00	7,950.00	7,766.97	7,364.76	149.54	49.20	-36.70	-2,418.33	363.39	5,253.92	5,154.94	98.99	53.077		
13,800.00	7,950.00	7,766.97	7,364.76	152.16	49.20	-36.70	-2,418.33	363.39	5,352.97	5,253.93	99.04	54.048		
13,900.00	7,950.00	7,766.97	7,364.76	154.78	49.20	-36.70	-2,418.33	363.39	5,452.06	5,352.96	99.10	55.018		
14,000.00	7,950.00	7,766.97	7,364.76	157.41	49.20	-36.70	-2,418.33	363.39	5,551.17	5,452.02	99.15	55.988		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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		
14,100.00	7,950.00	7,766.97	7,364.76	160.03	49.20	-36.70	-2,418.33	363.39	5,650.32	5,551.12	99.20	56.958		
14,200.00	7,950.00	7,766.97	7,364.76	162.66	49.20	-36.70	-2,418.33	363.39	5,749.50	5,650.24	99.25	57.927		
14,300.00	7,950.00	7,766.97	7,364.76	165.29	49.20	-36.70	-2,418.33	363.39	5,848.70	5,749.40	99.30	58.896		
14,400.00	7,950.00	7,766.97	7,364.76	167.92	49.20	-36.70	-2,418.33	363.39	5,947.93	5,848.58	99.36	59.865		
14,500.00	7,950.00	7,766.97	7,364.76	170.55	49.20	-36.70	-2,418.33	363.39	6,047.19	5,947.78	99.41	60.833		
14,600.00	7,950.00	7,766.97	7,364.76	173.19	49.20	-36.70	-2,418.33	363.39	6,146.47	6,047.01	99.46	61.801		
14,700.00	7,950.00	7,766.97	7,364.76	175.83	49.20	-36.70	-2,418.33	363.39	6,245.77	6,146.27	99.51	62.768		
14,800.00	7,950.00	7,766.97	7,364.76	178.46	49.20	-36.70	-2,418.33	363.39	6,345.10	6,245.54	99.56	63.735		
14,900.00	7,950.00	7,766.97	7,364.76	181.10	49.20	-36.70	-2,418.33	363.39	6,444.45	6,344.84	99.60	64.700		
15,000.00	7,950.00	7,766.97	7,364.76	183.75	49.20	-36.70	-2,418.33	363.39	6,543.81	6,444.16	99.65	65.666		
15,100.00	7,950.00	7,766.97	7,364.76	186.39	49.20	-36.70	-2,418.33	363.39	6,643.20	6,543.50	99.70	66.631		
15,200.00	7,950.00	7,766.97	7,364.76	189.03	49.20	-36.70	-2,418.33	363.39	6,742.60	6,642.85	99.75	67.595		
15,300.00	7,950.00	7,766.97	7,364.76	191.68	49.20	-36.70	-2,418.33	363.39	6,842.02	6,742.22	99.80	68.558		
15,400.00	7,950.00	7,766.97	7,364.76	194.33	49.20	-36.70	-2,418.33	363.39	6,941.46	6,841.61	99.85	69.520		
15,500.00	7,950.00	7,766.97	7,364.76	196.97	49.20	-36.70	-2,418.33	363.39	7,040.91	6,941.02	99.90	70.482		
15,600.00	7,950.00	7,766.97	7,364.76	199.62	49.20	-36.70	-2,418.33	363.39	7,140.38	7,040.44	99.94	71.443		
15,700.00	7,950.00	7,766.97	7,364.76	202.27	49.20	-36.70	-2,418.33	363.39	7,239.87	7,139.87	99.99	72.404		
15,800.00	7,950.00	7,766.97	7,364.76	204.93	49.20	-36.70	-2,418.33	363.39	7,339.37	7,239.32	100.04	73.363		
15,900.00	7,950.00	7,766.97	7,364.76	207.58	49.20	-36.70	-2,418.33	363.39	7,438.88	7,338.79	100.09	74.322		
16,000.00	7,950.00	7,766.97	7,364.76	210.23	49.20	-36.70	-2,418.33	363.39	7,538.40	7,438.26	100.14	75.279		
16,100.00	7,950.00	7,766.97	7,364.76	212.89	49.20	-36.70	-2,418.33	363.39	7,637.94	7,537.75	100.19	76.236		
16,200.00	7,950.00	7,766.97	7,364.76	215.54	49.20	-36.70	-2,418.33	363.39	7,737.48	7,637.25	100.24	77.192		
16,300.00	7,950.00	7,772.28	7,369.76	218.20	49.23	-37.04	-2,420.10	363.66	7,837.04	7,736.71	100.34	78.108		
16,400.00	7,950.00	7,767.15	7,364.93	220.85	49.20	-36.71	-2,418.39	363.40	7,936.62	7,836.28	100.34	79.099		
16,500.00	7,950.00	7,762.03	7,360.11	223.51	49.16	-36.38	-2,416.68	363.13	8,036.20	7,935.86	100.34	80.091		
16,600.00	7,950.00	7,756.90	7,355.28	226.17	49.13	-36.05	-2,414.97	362.87	8,135.78	8,035.44	100.34	81.081		
16,700.00	7,950.00	7,751.77	7,350.45	228.83	49.09	-35.72	-2,413.26	362.60	8,235.38	8,135.03	100.34	82.072		
16,800.00	7,950.00	7,746.64	7,345.63	231.49	49.06	-35.39	-2,411.55	362.34	8,334.98	8,234.63	100.35	83.063		
16,900.00	7,950.00	7,741.51	7,340.80	234.15	49.02	-35.07	-2,409.84	362.07	8,434.58	8,334.24	100.35	84.053		
17,000.00	7,950.00	7,736.39	7,335.97	236.81	48.99	-34.75	-2,408.14	361.81	8,534.20	8,433.85	100.35	85.043		
17,100.00	7,950.00	7,731.26	7,331.14	239.47	48.95	-34.43	-2,406.43	361.54	8,633.82	8,533.46	100.36	86.033		
17,200.00	7,950.00	7,726.13	7,326.32	242.14	48.92	-34.12	-2,404.72	361.28	8,733.44	8,633.08	100.36	87.022		
17,300.00	7,950.00	7,721.00	7,321.49	244.80	48.88	-33.81	-2,403.01	361.01	8,833.07	8,732.71	100.36	88.011		
17,400.00	7,950.00	7,715.88	7,316.66	247.46	48.85	-33.50	-2,401.30	360.75	8,932.71	8,832.34	100.37	89.000		
17,500.00	7,950.00	7,710.75	7,311.84	250.13	48.82	-33.19	-2,399.59	360.48	9,032.35	8,931.97	100.37	89.988		
17,600.00	7,950.00	7,705.62	7,307.01	252.79	48.78	-32.88	-2,397.88	360.22	9,131.99	9,031.61	100.38	90.976		
17,700.00	7,950.00	7,700.49	7,302.18	255.46	48.75	-32.58	-2,396.17	359.95	9,231.64	9,131.26	100.38	91.964		
17,800.00	7,950.00	7,704.64	7,297.35	258.13	48.77	-32.28	-2,394.46	359.69	9,331.30	9,230.85	100.45	92.893		
17,900.00	7,950.00	7,690.24	7,292.53	260.79	48.68	-31.98	-2,392.75	359.42	9,430.96	9,330.56	100.40	93.938		
18,000.00	7,950.00	7,685.11	7,287.70	263.46	48.64	-31.69	-2,391.04	359.16	9,530.62	9,430.22	100.40	94.924		
18,100.00	7,950.00	7,679.98	7,282.87	266.13	48.61	-31.40	-2,389.33	358.89	9,630.29	9,529.88	100.41	95.910		
18,200.00	7,950.00	7,674.85	7,278.05	268.80	48.57	-31.11	-2,387.62	358.63	9,729.96	9,629.54	100.42	96.895		
18,300.00	7,950.00	7,669.73	7,273.22	271.47	48.54	-30.82	-2,385.91	358.36	9,829.64	9,729.21	100.43	97.880		
18,400.00	7,950.00	7,664.60	7,268.39	274.14	48.50	-30.53	-2,384.20	358.10	9,929.32	9,828.88	100.43	98.864		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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	0.10	-0.10	0.00	0.00	179.87	-124.94	0.28	124.94					
100.00	100.00	100.10	99.90	0.13	0.13	179.87	-124.94	0.28	124.94	124.67	0.27	464.110		
200.00	200.00	200.10	199.90	0.49	0.49	179.87	-124.94	0.28	124.94	123.96	0.99	126.698		
250.00	250.00	249.90	249.90	0.67	0.67	179.87	-124.94	0.28	124.94	123.60	1.34	92.971 CC		
300.00	300.00	297.83	297.83	0.84	0.84	24.82	-125.34	0.33	124.96	123.28	1.68	74.389		
400.00	399.93	393.68	393.62	1.19	1.16	25.28	-128.52	0.74	125.11	122.77	2.34	53.372		
500.00	499.68	489.51	489.23	1.54	1.50	26.19	-134.87	1.55	125.44	122.42	3.03	41.448		
600.00	599.13	585.31	584.54	1.92	1.86	27.54	-144.39	2.77	126.01	122.28	3.72	33.868 ES		
700.00	698.15	681.07	679.45	2.32	2.24	29.32	-157.05	4.40	126.87	122.44	4.43	28.657		
800.00	796.63	776.79	773.82	2.75	2.64	31.50	-172.85	6.42	128.12	122.97	5.15	24.868		
900.00	894.44	872.44	867.55	3.21	3.08	34.04	-191.75	8.85	129.87	123.96	5.90	21.998		
1,000.00	991.46	968.03	960.53	3.71	3.54	36.90	-213.73	11.67	132.24	125.54	6.70	19.749		
1,085.22	1,073.44	1,049.42	1,039.08	4.17	3.97	39.55	-234.86	14.38	134.84	127.42	7.41	18.191		
1,100.00	1,087.59	1,063.53	1,052.64	4.25	4.04	40.03	-238.75	14.88	135.38	127.84	7.54	17.957		
1,200.00	1,183.37	1,158.96	1,143.78	4.81	4.58	42.79	-266.78	18.47	141.00	132.56	8.44	16.710		
1,300.00	1,279.15	1,254.13	1,233.70	5.39	5.16	44.76	-297.71	22.44	149.86	140.49	9.37	16.002		
1,400.00	1,374.93	1,348.86	1,322.11	5.98	5.78	45.96	-331.43	26.76	161.75	151.45	10.31	15.696		
1,500.00	1,470.71	1,444.08	1,409.84	6.57	6.44	46.48	-368.14	31.47	176.46	165.20	11.26	15.672		
1,600.00	1,566.49	1,542.86	1,500.47	7.16	7.15	46.80	-407.10	36.47	192.01	179.73	12.28	15.634		
1,700.00	1,662.27	1,641.63	1,591.11	7.76	7.87	47.07	-446.05	41.46	207.57	194.25	13.32	15.588		
1,800.00	1,758.05	1,740.41	1,681.74	8.36	8.60	47.31	-485.01	46.46	223.13	208.77	14.36	15.539		
1,900.00	1,853.83	1,839.19	1,772.38	8.96	9.33	47.51	-523.96	51.45	238.69	223.28	15.41	15.490		
2,000.00	1,949.61	1,937.97	1,863.01	9.57	10.07	47.69	-562.92	56.45	254.25	237.79	16.47	15.441		
2,100.00	2,045.39	2,036.75	1,953.65	10.17	10.81	47.85	-601.87	61.44	269.82	252.30	17.53	15.394		
2,200.00	2,141.17	2,135.52	2,044.28	10.78	11.56	47.99	-640.83	66.44	285.39	266.80	18.59	15.349		
2,300.00	2,236.95	2,234.30	2,134.91	11.39	12.31	48.11	-679.78	71.44	300.96	281.30	19.66	15.307		
2,400.00	2,332.73	2,333.08	2,225.55	11.99	13.06	48.23	-718.74	76.43	316.54	295.80	20.73	15.266		
2,500.00	2,428.51	2,431.86	2,316.18	12.60	13.81	48.33	-757.69	81.43	332.11	310.30	21.81	15.228		
2,600.00	2,524.30	2,530.64	2,406.82	13.21	14.56	48.42	-796.65	86.42	347.68	324.80	22.89	15.192		
2,700.00	2,620.08	2,629.42	2,497.45	13.82	15.31	48.51	-835.60	91.42	363.26	339.30	23.96	15.158		
2,800.00	2,715.86	2,728.19	2,588.09	14.43	16.06	48.59	-874.56	96.41	378.84	353.79	25.04	15.126		
2,900.00	2,811.64	2,826.97	2,678.72	15.04	16.82	48.66	-913.52	101.41	394.41	368.29	26.13	15.096		
3,000.00	2,907.42	2,925.75	2,769.36	15.66	17.57	48.73	-952.47	106.41	409.99	382.78	27.21	15.068		
3,100.00	3,003.20	3,024.53	2,859.99	16.27	18.33	48.79	-991.43	111.40	425.57	397.27	28.29	15.041		
3,200.00	3,098.98	3,123.31	2,950.63	16.88	19.09	48.85	-1,030.38	116.40	441.15	411.77	29.38	15.015		
3,300.00	3,194.76	3,222.08	3,041.26	17.49	19.84	48.90	-1,069.34	121.39	456.73	426.26	30.47	14.991		
3,400.00	3,290.54	3,320.86	3,131.90	18.10	20.60	48.95	-1,108.29	126.39	472.30	440.75	31.55	14.969		
3,500.00	3,386.32	3,419.64	3,222.53	18.72	21.36	49.00	-1,147.25	131.38	487.88	455.24	32.64	14.947		
3,600.00	3,482.10	3,518.42	3,313.17	19.33	22.12	49.04	-1,186.20	136.38	503.46	469.74	33.73	14.927		
3,700.00	3,577.88	3,617.20	3,403.80	19.94	22.88	49.08	-1,225.16	141.38	519.04	484.23	34.82	14.907		
3,800.00	3,673.66	3,715.98	3,494.44	20.55	23.64	49.12	-1,264.11	146.37	534.62	498.72	35.91	14.889		
3,900.00	3,769.44	3,814.75	3,585.07	21.17	24.39	49.16	-1,303.07	151.37	550.20	513.21	37.00	14.871		
4,000.00	3,865.22	3,913.53	3,675.71	21.78	25.15	49.19	-1,342.02	156.36	565.79	527.70	38.09	14.855		
4,100.00	3,961.00	4,012.31	3,768.34	22.39	25.91	49.23	-1,380.98	161.36	581.37	542.19	39.18	14.839		
4,200.00	4,056.78	4,111.09	3,856.97	23.01	26.67	49.26	-1,419.93	166.35	596.95	556.68	40.27	14.823		
4,300.00	4,152.56	4,209.87	3,947.61	23.62	27.43	49.29	-1,458.89	171.35	612.53	571.17	41.36	14.809		
4,400.00	4,248.34	4,308.64	4,038.24	24.23	28.19	49.32	-1,497.85	176.35	628.11	585.66	42.45	14.795		
4,500.00	4,344.12	4,407.42	4,128.88	24.85	28.95	49.34	-1,536.80	181.34	643.69	600.14	43.55	14.781		
4,600.00	4,439.90	4,506.20	4,219.51	25.46	29.71	49.37	-1,575.76	186.34	659.27	614.63	44.64	14.769		
4,700.00	4,535.68	4,604.98	4,310.15	26.08	30.48	49.39	-1,614.71	191.33	674.86	629.12	45.73	14.756		
4,800.00	4,631.46	4,703.76	4,400.78	26.69	31.24	49.42	-1,653.67	196.33	690.44	643.61	46.83	14.745		
4,900.00	4,727.24	4,802.54	4,491.42	27.30	32.00	49.44	-1,692.62	201.32	706.02	658.10	47.92	14.733		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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		
5,000.00	4,823.02	4,901.31	4,582.05	27.92	32.76	49.46	-1,731.58	206.32	721.60	672.59	49.01	14.722		
5,100.00	4,918.80	5,000.09	4,672.69	28.53	33.52	49.48	-1,770.53	211.31	737.18	687.08	50.11	14.712		
5,200.00	5,014.58	5,101.13	4,763.32	29.15	34.30	49.50	-1,809.49	216.31	752.77	701.55	51.21	14.698		
5,300.00	5,110.36	5,202.35	4,853.96	29.76	35.08	49.52	-1,848.44	221.31	768.35	716.03	52.32	14.685		
5,400.00	5,206.14	5,303.57	4,944.59	30.37	35.86	49.54	-1,887.40	226.30	783.93	730.50	53.43	14.672		
5,500.00	5,301.92	5,395.20	5,035.23	30.99	36.56	49.55	-1,926.35	231.30	799.51	745.03	54.49	14.674		
5,600.00	5,397.70	5,506.02	5,125.86	31.60	37.42	49.57	-1,965.31	236.29	815.10	759.45	55.65	14.647		
5,700.00	5,493.48	5,607.24	5,216.50	32.22	38.20	49.59	-2,004.26	241.29	830.68	773.92	56.76	14.636		
5,800.00	5,589.26	5,708.46	5,307.13	32.83	38.98	49.60	-2,043.22	246.28	846.26	788.39	57.87	14.624		
5,900.00	5,685.04	5,809.68	5,397.77	33.45	39.76	49.62	-2,082.18	251.28	861.84	802.87	58.98	14.614		
6,000.00	5,780.82	5,889.10	5,488.40	34.06	40.37	49.63	-2,121.13	256.28	877.43	817.47	59.96	14.633		
6,100.00	5,876.60	5,987.87	5,579.03	34.67	41.13	49.64	-2,160.09	261.27	893.01	831.95	61.06	14.626		
6,200.00	5,972.38	6,086.65	5,669.67	35.29	41.90	49.66	-2,199.04	266.27	908.59	846.44	62.15	14.619		
6,300.00	6,068.16	6,185.43	5,760.30	35.90	42.66	49.67	-2,238.00	271.26	924.18	860.93	63.25	14.612		
6,400.00	6,163.94	6,284.21	5,850.94	36.52	43.42	49.68	-2,276.95	276.26	939.76	875.41	64.34	14.605		
6,500.00	6,259.72	6,382.99	5,941.57	37.13	44.18	49.70	-2,315.91	281.25	955.34	889.90	65.44	14.599		
6,600.00	6,355.50	6,481.76	6,032.21	37.75	44.94	49.71	-2,354.86	286.25	970.92	904.39	66.54	14.592		
6,700.00	6,451.28	6,580.54	6,122.84	38.36	45.71	49.72	-2,393.82	291.25	986.51	918.88	67.63	14.586		
6,800.00	6,547.06	6,679.32	6,213.48	38.98	46.47	49.73	-2,432.77	296.24	1,002.09	933.36	68.73	14.580		
6,900.00	6,642.84	6,778.10	6,304.11	39.59	47.23	49.74	-2,471.73	301.24	1,017.67	947.85	69.83	14.575		
7,000.00	6,738.62	6,876.88	6,394.75	40.21	47.99	49.75	-2,510.68	306.23	1,033.26	962.34	70.92	14.569		
7,100.00	6,834.40	6,975.66	6,485.38	40.82	48.76	49.76	-2,549.64	311.23	1,048.84	976.82	72.02	14.564		
7,200.00	6,930.18	7,074.43	6,576.02	41.43	49.52	49.77	-2,588.59	316.22	1,064.42	991.31	73.12	14.558		
7,300.00	7,025.96	7,173.21	6,666.65	42.05	50.28	49.78	-2,627.55	321.22	1,080.01	1,005.80	74.21	14.553		
7,400.00	7,121.74	7,271.99	6,757.29	42.66	51.04	49.79	-2,666.51	326.22	1,095.59	1,020.28	75.31	14.548		
7,500.00	7,217.52	7,370.77	6,847.92	43.28	51.80	49.80	-2,705.46	331.21	1,111.17	1,034.77	76.41	14.543		
7,600.00	7,313.30	7,469.55	6,938.56	43.89	52.57	49.81	-2,744.42	336.21	1,126.76	1,049.25	77.50	14.538		
7,617.92	7,330.46	7,487.25	6,954.80	44.00	52.70	49.81	-2,751.40	337.10	1,129.55	1,051.85	77.70	14.537		
7,650.00	7,361.28	7,518.98	6,983.92	44.20	52.95	39.70	-2,763.91	338.71	1,134.16	1,056.14	78.02	14.537 SF		
7,700.00	7,409.49	7,568.46	7,029.31	44.47	53.33	21.90	-2,783.42	341.21	1,139.78	1,061.39	78.39	14.540		
7,750.00	7,457.61	7,617.62	7,074.42	44.71	53.71	4.63	-2,802.81	343.70	1,143.49	1,064.89	78.60	14.548		
7,800.00	7,505.28	7,666.09	7,118.89	44.91	54.08	-9.60	-2,821.93	346.15	1,145.35	1,066.70	78.65	14.562		
7,850.00	7,552.12	7,713.50	7,162.40	45.08	54.45	-20.48	-2,840.62	348.55	1,145.47	1,066.92	78.55	14.583		
7,900.00	7,597.78	7,759.50	7,204.60	45.23	54.81	-28.80	-2,858.76	350.87	1,144.00	1,065.70	78.30	14.611		
7,950.00	7,641.91	7,803.72	7,245.18	45.34	55.15	-35.38	-2,876.21	353.11	1,141.13	1,063.24	77.90	14.649		
8,000.00	7,684.18	7,845.85	7,283.83	45.43	55.47	-40.81	-2,892.82	355.24	1,137.11	1,059.75	77.36	14.698		
8,050.00	7,724.27	7,885.54	7,320.26	45.50	55.78	-45.45	-2,908.47	357.25	1,132.21	1,055.50	76.70	14.761		
8,100.00	7,761.87	7,922.51	7,354.18	45.54	56.06	-49.51	-2,923.05	359.12	1,126.71	1,050.77	75.94	14.838		
8,150.00	7,796.69	7,956.47	7,385.34	45.57	56.33	-53.12	-2,936.44	360.83	1,120.94	1,045.86	75.08	14.930		
8,200.00	7,828.47	7,987.16	7,413.50	45.58	56.56	-56.33	-2,948.55	362.39	1,115.23	1,041.06	74.17	15.036		
8,250.00	7,856.97	8,014.35	7,438.45	45.57	56.77	-59.14	-2,959.27	363.76	1,109.90	1,036.66	73.24	15.154		
8,300.00	7,881.97	8,041.38	7,463.24	45.54	56.98	-61.72	-2,969.93	365.25	1,105.24	1,032.88	72.37	15.273		
8,350.00	7,903.28	8,065.26	7,485.08	45.50	57.17	-63.93	-2,979.33	367.44	1,101.49	1,029.94	71.55	15.394		
8,400.00	7,920.74	8,079.79	7,498.32	45.44	57.28	-65.43	-2,985.03	369.26	1,099.02	1,028.21	70.81	15.521		
8,450.00	7,934.22	8,087.25	7,505.10	45.38	57.34	-66.30	-2,987.95	370.34	1,098.07	1,027.86	70.21	15.641		
8,454.19	7,935.16	8,087.61	7,505.42	45.37	57.34	-66.34	-2,988.09	370.39	1,098.06	1,027.90	70.17	15.650		
8,500.00	7,943.60	8,089.32	7,506.98	45.30	57.36	-66.59	-2,988.76	370.66	1,098.76	1,028.96	69.80	15.741		
8,550.00	7,948.83	8,087.24	7,505.09	45.22	57.34	-66.39	-2,987.95	370.34	1,101.11	1,031.49	69.62	15.816		
8,587.24	7,950.00	8,083.54	7,501.73	45.15	57.31	-65.95	-2,986.50	369.79	1,103.92	1,034.28	69.64	15.852		
8,600.00	7,950.00	8,082.03	7,500.36	45.13	57.30	-65.87	-2,985.91	369.58	1,105.10	1,035.42	69.68	15.861		
8,700.00	7,950.00	8,071.84	7,491.08	44.96	57.22	-65.35	-2,981.91	368.22	1,119.29	1,048.76	70.52	15.871		
8,800.00	7,950.00	8,063.91	7,483.85	44.81	57.16	-64.94	-2,978.80	367.29	1,141.99	1,069.76	72.23	15.811		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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 15-T4S-R65W - PROSPER FARMS 4-65 14-13 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		
8,900.00	7,950.00	8,050.00	7,471.13	44.69	57.05	-64.22	-2,973.32	365.93	1,172.79	1,098.30	74.48	15.746		
9,000.00	7,950.00	8,050.00	7,471.13	44.58	57.05	-64.22	-2,973.32	365.93	1,210.95	1,133.71	77.25	15.676		
9,100.00	7,950.00	8,050.00	7,471.13	44.50	57.05	-64.22	-2,973.32	365.93	1,255.94	1,175.77	80.18	15.665		
9,200.00	7,950.00	8,044.42	7,466.02	44.48	57.01	-63.93	-2,971.13	365.47	1,307.02	1,223.97	83.05	15.739		
9,300.00	7,950.00	8,041.29	7,463.15	44.63	56.98	-63.76	-2,969.89	365.24	1,363.51	1,277.68	85.83	15.886		
9,400.00	7,950.00	8,038.58	7,460.67	45.49	56.96	-63.62	-2,968.82	365.06	1,424.78	1,336.34	88.44	16.110		
9,500.00	7,950.00	8,036.21	7,458.50	47.12	56.94	-63.50	-2,967.89	364.90	1,490.23	1,399.38	90.85	16.404		
9,600.00	7,950.00	8,029.56	7,452.40	48.99	56.89	-63.16	-2,965.27	364.53	1,559.36	1,466.38	92.99	16.770		
9,700.00	7,950.00	8,029.56	7,452.40	50.96	56.89	-63.16	-2,965.27	364.53	1,631.66	1,536.68	94.98	17.179		
9,800.00	7,950.00	8,029.56	7,452.40	53.01	56.89	-63.16	-2,965.27	364.53	1,706.75	1,609.99	96.77	17.638		
9,900.00	7,950.00	8,027.96	7,450.93	55.12	56.88	-63.07	-2,964.64	364.45	1,784.30	1,685.94	98.35	18.142		
10,000.00	7,950.00	8,022.94	7,446.33	57.28	56.84	-62.81	-2,962.66	364.20	1,863.97	1,764.24	99.73	18.690		
10,100.00	7,950.00	8,017.93	7,441.73	59.48	56.80	-62.55	-2,960.68	363.94	1,945.50	1,844.55	100.95	19.271		
10,200.00	7,950.00	8,012.92	7,437.13	61.71	56.76	-62.29	-2,958.71	363.69	2,028.68	1,926.64	102.04	19.881		
10,300.00	7,950.00	8,007.91	7,432.53	63.99	56.72	-62.04	-2,956.73	363.44	2,113.30	2,010.29	103.01	20.516		
10,400.00	7,950.00	8,002.89	7,427.93	66.29	56.68	-61.78	-2,954.75	363.18	2,199.21	2,095.33	103.87	21.172		
10,500.00	7,950.00	8,002.12	7,423.33	68.62	56.68	-61.52	-2,952.78	362.93	2,286.25	2,181.57	104.67	21.842		
10,600.00	7,950.00	7,992.87	7,418.73	70.97	56.61	-61.26	-2,950.80	362.67	2,374.30	2,268.97	105.33	22.541		
10,700.00	7,950.00	7,987.86	7,414.14	73.34	56.57	-61.00	-2,948.82	362.42	2,463.25	2,357.30	105.95	23.250		
10,800.00	7,950.00	7,982.84	7,409.54	75.74	56.53	-60.74	-2,946.85	362.17	2,553.01	2,446.51	106.50	23.972		
10,900.00	7,950.00	7,977.83	7,404.94	78.15	56.49	-60.49	-2,944.87	361.91	2,643.49	2,536.50	106.99	24.707		
11,000.00	7,950.00	7,972.82	7,400.34	80.58	56.45	-60.23	-2,942.89	361.66	2,734.63	2,627.19	107.44	25.453		
11,100.00	7,950.00	7,967.81	7,395.74	83.03	56.41	-59.97	-2,940.92	361.41	2,826.36	2,718.52	107.84	26.208		
11,200.00	7,950.00	7,962.79	7,391.14	85.49	56.37	-59.71	-2,938.94	361.15	2,918.63	2,810.42	108.20	26.973		
11,300.00	7,950.00	7,957.78	7,386.54	87.96	56.34	-59.46	-2,936.96	360.90	3,011.38	2,902.84	108.53	27.746		
11,400.00	7,950.00	7,952.77	7,381.94	90.45	56.30	-59.20	-2,934.99	360.65	3,104.57	2,995.74	108.83	28.527		
11,500.00	7,950.00	7,947.76	7,377.34	92.95	56.26	-58.94	-2,933.01	360.39	3,198.16	3,089.07	109.10	29.314		
11,600.00	7,950.00	7,942.74	7,372.74	95.45	56.22	-58.69	-2,931.03	360.14	3,292.13	3,182.79	109.34	30.108		
11,700.00	7,950.00	7,937.73	7,368.14	97.97	56.18	-58.43	-2,929.06	359.89	3,386.43	3,276.87	109.56	30.908		
11,800.00	7,950.00	7,932.72	7,363.54	100.49	56.14	-58.18	-2,927.08	359.63	3,481.05	3,371.28	109.77	31.713		
11,900.00	7,950.00	7,927.71	7,358.94	103.03	56.10	-57.92	-2,925.10	359.38	3,575.95	3,466.00	109.95	32.523		
12,000.00	7,950.00	7,922.69	7,354.35	105.57	56.07	-57.67	-2,923.12	359.13	3,671.11	3,560.99	110.12	33.338		
12,100.00	7,950.00	7,917.68	7,349.75	108.11	56.03	-57.41	-2,921.15	358.87	3,766.52	3,656.25	110.27	34.157		
12,200.00	7,950.00	7,912.67	7,345.15	110.67	55.99	-57.16	-2,919.17	358.62	3,862.15	3,751.74	110.41	34.981		
12,300.00	7,950.00	7,907.66	7,340.55	113.23	55.95	-56.91	-2,917.19	358.37	3,957.99	3,847.46	110.54	35.808		
12,400.00	7,950.00	7,902.64	7,335.95	115.79	55.91	-56.65	-2,915.22	358.11	4,054.03	3,943.38	110.65	36.638		
12,500.00	7,950.00	7,897.63	7,331.35	118.36	55.87	-56.40	-2,913.24	357.86	4,150.25	4,039.49	110.76	37.472		
12,600.00	7,950.00	7,907.38	7,326.75	120.94	55.95	-56.15	-2,911.26	357.60	4,246.64	4,135.67	110.96	38.271		
12,700.00	7,950.00	7,887.61	7,322.15	123.52	55.79	-55.90	-2,909.29	357.35	4,343.18	4,232.24	110.94	39.149		
12,800.00	7,950.00	7,882.59	7,317.55	126.11	55.76	-55.64	-2,907.31	357.10	4,439.87	4,328.85	111.02	39.991		
12,900.00	7,950.00	7,877.58	7,312.95	128.70	55.72	-55.39	-2,905.33	356.84	4,536.70	4,425.61	111.09	40.836		
13,000.00	7,950.00	7,872.57	7,308.35	131.29	55.68	-55.14	-2,903.36	356.59	4,633.66	4,522.50	111.16	41.684		
13,100.00	7,950.00	7,867.56	7,303.75	133.89	55.64	-54.89	-2,901.38	356.34	4,730.74	4,619.52	111.22	42.534		
13,200.00	7,950.00	7,862.55	7,299.16	136.49	55.60	-54.64	-2,899.40	356.08	4,827.94	4,716.66	111.28	43.386		
13,300.00	7,950.00	7,857.53	7,294.56	139.09	55.56	-54.39	-2,897.43	355.83	4,925.24	4,813.91	111.33	44.240		
13,400.00	7,950.00	7,852.52	7,289.96	141.70	55.52	-54.15	-2,895.45	355.58	5,022.64	4,911.27	111.38	45.096		
13,500.00	7,950.00	7,847.51	7,285.36	144.31	55.48	-53.90	-2,893.47	355.32	5,120.14	5,008.72	111.42	45.955		
13,600.00	7,950.00	7,842.50	7,280.76	146.93	55.45	-53.65	-2,891.50	355.07	5,217.73	5,106.27	111.46	46.815		
13,700.00	7,950.00	7,837.48	7,276.16	149.54	55.41	-53.40	-2,889.52	354.82	5,315.40	5,203.91	111.49	47.676		
13,800.00	7,950.00	7,832.47	7,271.56	152.16	55.37	-53.16	-2,887.54	354.56	5,413.16	5,301.64	111.52	48.539		
13,900.00	7,950.00	7,827.46	7,266.96	154.78	55.33	-52.91	-2,885.57	354.31	5,510.99	5,399.44	111.55	49.404		
14,000.00	7,950.00	7,822.45	7,262.36	157.41	55.29	-52.66	-2,883.59	354.06	5,608.89	5,497.31	111.57	50.270		

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 LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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

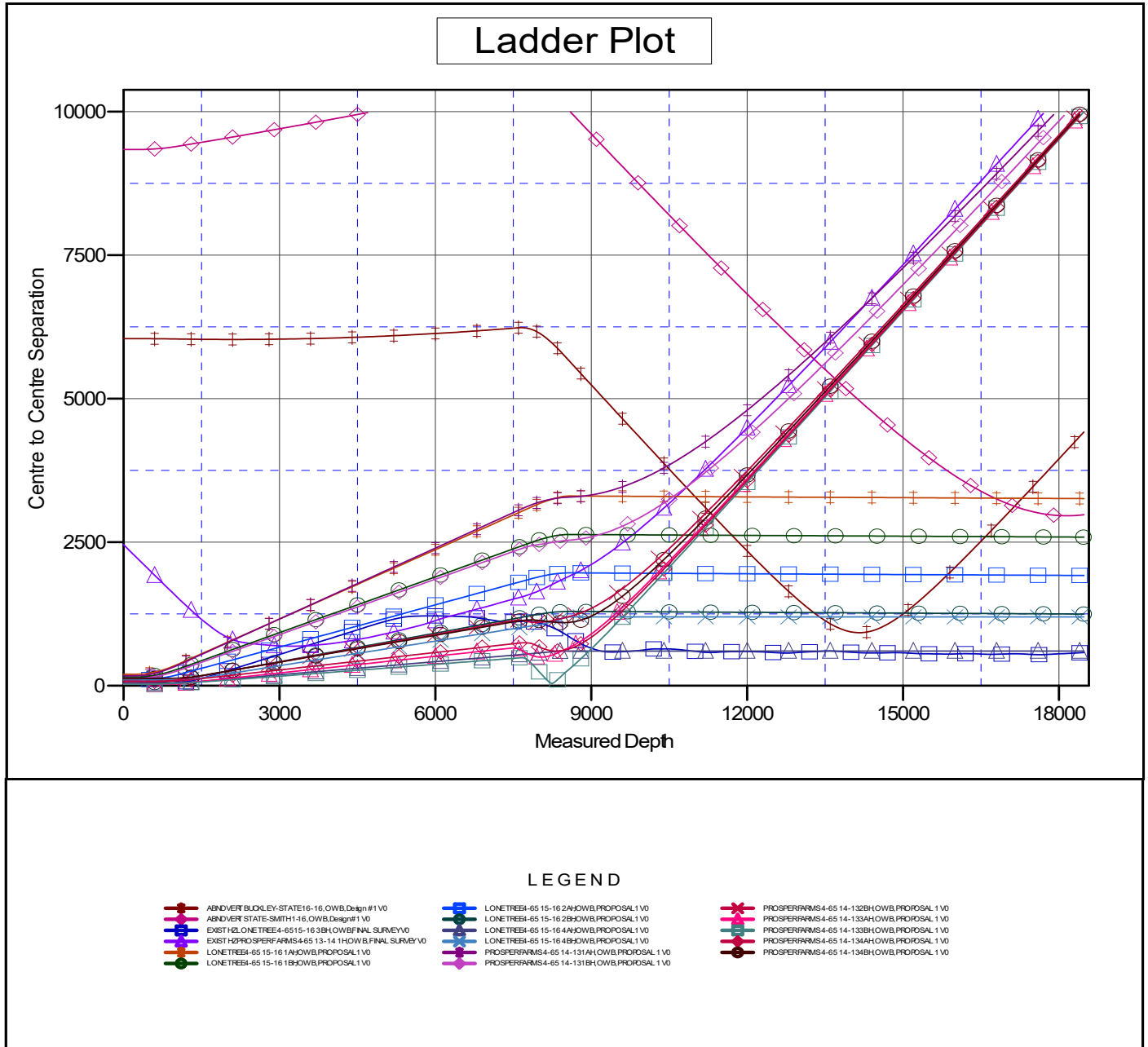
Offset Design SEC 15-T4S-R65W - PROSPER FARMS 4-65 14-13 4BH - OWB - PROPOSAL 1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD OWSG													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured 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		
14,100.00	7,950.00	7,817.43	7,257.76	160.03	55.25	-52.42	-2,881.61	353.80	5,706.86	5,595.26	111.60	51.138		
14,200.00	7,950.00	7,812.42	7,253.16	162.66	55.21	-52.17	-2,879.64	353.55	5,804.89	5,693.27	111.62	52.007		
14,300.00	7,950.00	7,807.41	7,248.56	165.29	55.18	-51.93	-2,877.66	353.30	5,902.99	5,791.35	111.63	52.878		
14,400.00	7,950.00	7,802.40	7,243.96	167.92	55.14	-51.69	-2,875.68	353.04	6,001.14	5,889.49	111.65	53.749		
14,500.00	7,950.00	7,802.62	7,239.37	170.55	55.14	-51.44	-2,873.71	352.79	6,099.35	5,987.65	111.70	54.603		
14,600.00	7,950.00	7,807.63	7,234.77	173.19	55.18	-51.20	-2,871.73	352.53	6,197.62	6,085.83	111.79	55.439		
14,700.00	7,950.00	7,787.36	7,230.17	175.83	55.02	-50.96	-2,869.75	352.28	6,295.93	6,184.24	111.69	56.371		
14,800.00	7,950.00	7,782.35	7,225.57	178.46	54.98	-50.72	-2,867.78	352.03	6,394.30	6,282.60	111.70	57.247		
14,900.00	7,950.00	7,777.33	7,220.97	181.10	54.94	-50.48	-2,865.80	351.77	6,492.70	6,381.00	111.70	58.124		
15,000.00	7,950.00	7,772.32	7,216.37	183.75	54.90	-50.24	-2,863.82	351.52	6,591.16	6,479.45	111.71	59.002		
15,100.00	7,950.00	7,767.31	7,211.77	186.39	54.87	-50.00	-2,861.85	351.27	6,689.65	6,577.94	111.72	59.881		
15,200.00	7,950.00	7,762.30	7,207.17	189.03	54.83	-49.76	-2,859.87	351.01	6,788.19	6,676.47	111.72	60.760		
15,300.00	7,950.00	7,757.28	7,202.57	191.68	54.79	-49.52	-2,857.89	350.76	6,886.76	6,775.04	111.72	61.641		
15,400.00	7,950.00	7,752.27	7,197.97	194.33	54.75	-49.28	-2,855.91	350.51	6,985.37	6,873.65	111.73	62.522		
15,500.00	7,950.00	7,747.26	7,193.37	196.97	54.71	-49.05	-2,853.94	350.25	7,084.02	6,972.29	111.73	63.404		
15,600.00	7,950.00	7,742.25	7,188.77	199.62	54.67	-48.81	-2,851.96	350.00	7,182.70	7,070.97	111.73	64.287		
15,700.00	7,950.00	7,737.23	7,184.17	202.27	54.63	-48.57	-2,849.98	349.75	7,281.41	7,169.69	111.73	65.171		
15,800.00	7,950.00	7,732.22	7,179.58	204.93	54.59	-48.34	-2,848.01	349.49	7,380.16	7,268.43	111.73	66.055		
15,900.00	7,950.00	7,727.21	7,174.98	207.58	54.56	-48.10	-2,846.03	349.24	7,478.93	7,367.21	111.73	66.940		
16,000.00	7,950.00	7,722.20	7,170.38	210.23	54.52	-47.87	-2,844.05	348.99	7,577.74	7,466.01	111.72	67.825		
16,100.00	7,950.00	7,717.18	7,165.78	212.89	54.48	-47.64	-2,842.08	348.73	7,676.57	7,564.84	111.72	68.711		
16,200.00	7,950.00	7,712.17	7,161.18	215.54	54.44	-47.40	-2,840.10	348.48	7,775.42	7,663.70	111.72	69.597		
16,300.00	7,950.00	7,707.16	7,156.58	218.20	54.40	-47.17	-2,838.12	348.23	7,874.31	7,762.59	111.72	70.484		
16,400.00	7,950.00	7,702.15	7,151.98	220.85	54.36	-46.94	-2,836.15	347.97	7,973.22	7,861.50	111.71	71.372		
16,500.00	7,950.00	7,702.87	7,147.38	223.51	54.37	-46.71	-2,834.17	347.72	8,072.15	7,960.39	111.75	72.232		
16,600.00	7,950.00	7,692.12	7,142.78	226.17	54.29	-46.48	-2,832.19	347.46	8,171.10	8,059.40	111.71	73.148		
16,700.00	7,950.00	7,687.11	7,138.18	228.83	54.25	-46.25	-2,830.22	347.21	8,270.08	8,158.38	111.70	74.037		
16,800.00	7,950.00	7,682.10	7,133.58	231.49	54.21	-46.02	-2,828.24	346.96	8,369.08	8,257.38	111.70	74.926		
16,900.00	7,950.00	7,677.08	7,128.98	234.15	54.17	-45.79	-2,826.26	346.70	8,468.10	8,356.40	111.69	75.816		
17,000.00	7,950.00	7,672.07	7,124.39	236.81	54.13	-45.57	-2,824.29	346.45	8,567.13	8,455.45	111.69	76.706		
17,100.00	7,950.00	7,667.06	7,119.79	239.47	54.09	-45.34	-2,822.31	346.20	8,666.19	8,554.51	111.68	77.596		
17,200.00	7,950.00	7,662.05	7,115.19	242.14	54.05	-45.12	-2,820.33	345.94	8,765.27	8,653.59	111.68	78.487		
17,300.00	7,950.00	7,657.03	7,110.59	244.80	54.01	-44.89	-2,818.36	345.69	8,864.36	8,752.69	111.67	79.378		
17,400.00	7,950.00	7,652.02	7,105.99	247.46	53.98	-44.67	-2,816.38	345.44	8,963.47	8,851.81	111.67	80.269		
17,500.00	7,950.00	7,647.01	7,101.39	250.13	53.94	-44.44	-2,814.40	345.18	9,062.60	8,950.94	111.66	81.160		
17,600.00	7,950.00	7,642.00	7,096.79	252.79	53.90	-44.22	-2,812.43	344.93	9,161.75	9,050.09	111.66	82.052		
17,700.00	7,950.00	7,636.99	7,092.19	255.46	53.86	-44.00	-2,810.45	344.68	9,260.91	9,149.25	111.65	82.943		
17,800.00	7,950.00	7,631.97	7,087.59	258.13	53.82	-43.78	-2,808.47	344.42	9,360.08	9,248.43	111.65	83.835		
17,900.00	7,950.00	7,626.96	7,082.99	260.79	53.78	-43.55	-2,806.50	344.17	9,459.27	9,347.63	111.64	84.728		
18,000.00	7,950.00	7,621.95	7,078.39	263.46	53.74	-43.33	-2,804.52	343.92	9,558.48	9,446.84	111.64	85.620		
18,100.00	7,950.00	7,616.94	7,073.79	266.13	53.70	-43.12	-2,802.54	343.66	9,657.69	9,546.06	111.63	86.512		
18,200.00	7,950.00	7,611.92	7,069.19	268.80	53.67	-42.90	-2,800.57	343.41	9,756.93	9,645.30	111.63	87.405		
18,300.00	7,950.00	7,606.91	7,064.60	271.47	53.63	-42.68	-2,798.59	343.15	9,856.17	9,744.54	111.62	88.297		
18,400.00	7,950.00	7,601.90	7,060.00	274.14	53.59	-42.46	-2,796.61	342.90	9,955.43	9,843.81	111.62	89.190		

Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
Project:	ARAPAHOE COUNTY	TVD Reference:	KB 25' @ 5718.40usft
Reference Site:	SEC 15-T4S-R65W	MD Reference:	KB 25' @ 5718.40usft
Site Error:	0.00 usft	North Reference:	True
Reference Well:	LONE TREE 4-65 15-16 3CH	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' @ 5718.40usft
Offset Depths are relative to Offset Datum
Central Meridian is 105.500000°W

Coordinates are relative to: LONE TREE 4-65 15-16 3CH
Coordinate System is US State Plane 1983, Colorado Central Zone
Grid Convergence at Surface is: 0.54°



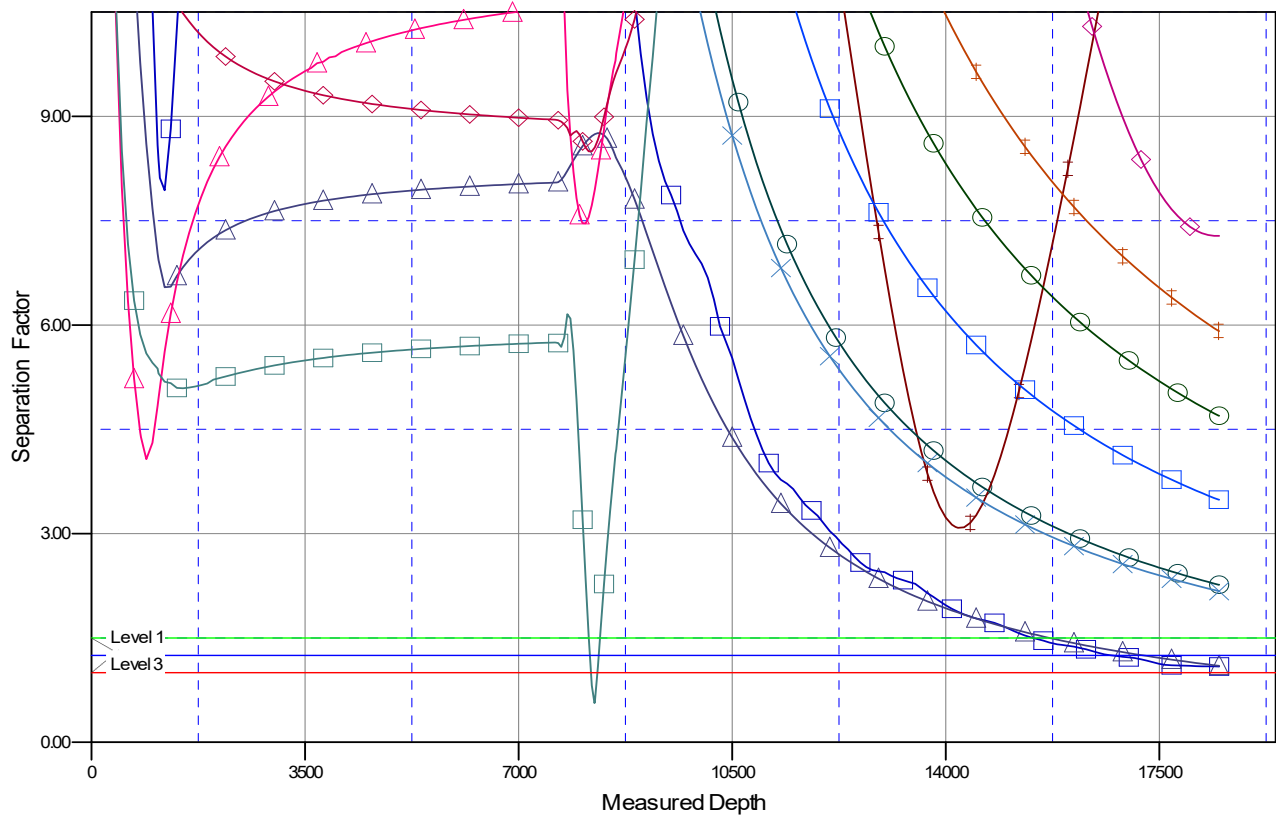
Anticollision Report

Company:	CRESTONE PEAK RESOURCES	Local Co-ordinate Reference:	Well LONE TREE 4-65 15-16 3CH
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Reference Well:	LONE TREE 4-65 15-16 3CH	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' @ 5718.40usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 105.500000°W

Coordinates are relative to: LONE TREE 4-65 15-16 3CH
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: 0.54°

Separation Factor Plot



LEGEND

ABNDVERT BUCKLEY STATE 16-16, OWB, Design #1 V0	LONE TREE 4-65 15-16 2A, OWB, PROPOSAL 1 V0	PROSPER ARMS 4-65 14-132B, OWB, PROPOSAL 1 V0
ABNDVERT STATE-SMITH 14-16, OWB, Design #1 V0	LONE TREE 4-65 15-16 2B, OWB, PROPOSAL 1 V0	PROSPER ARMS 4-65 14-133A, OWB, PROPOSAL 1 V0
EXIST H2 LONE TREE 4-65 15-16 3CH, OWB, FINAL SURVEY V0	LONE TREE 4-65 15-16 4A, OWB, PROPOSAL 1 V0	PROSPER ARMS 4-65 14-133B, OWB, PROPOSAL 1 V0
EXIST H2 PROSPER ARMS 4-65 13-14 1H, OWB, FINAL SURVEY V0	LONE TREE 4-65 15-16 4B, OWB, PROPOSAL 1 V0	PROSPER ARMS 4-65 14-134A, OWB, PROPOSAL 1 V0
LONE TREE 4-65 15-16 1A, OWB, PROPOSAL 1 V0	PROSPER ARMS 4-65 14-131A, OWB, PROPOSAL 1 V0	PROSPER ARMS 4-65 14-134B, OWB, PROPOSAL 1 V0
LONE TREE 4-65 15-16 1B, OWB, PROPOSAL 1 V0	PROSPER ARMS 4-65 14-131B, OWB, PROPOSAL 1 V0	