



Crestone Peak Resources

Sec 17 T2N-R65W

Melbon Ranch Pad

MELBON RANCH 4F-17H-M265

Wellbore #1

Plan: Plan #2 17May18 kjs

Standard Planning Report - Geographic

17 May, 2018



Crestone Peak Resources

Well Name:

MELBON RANCH 4F-17H-M265

Project Name:

Sec 17 T2N-R65W

Pad Name:

Melbon Ranch Pad

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
350.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	Start Build 2.00
601.90	5.04	302.41	601.57	5.93	-9.34	-8.92	11.07	Hold 5.04 Inc, 302.41 Az
6566.68	5.04	302.41	6543.31	286.67	-451.55	-431.24	534.87	KOP 8/100
7745.06	90.00	90.40	7312.00	317.61	262.89	283.66	1257.97	LP 90 Inc, 90.4 Az
11145.06	90.00	90.40	7312.00	293.87	3662.81	3674.28	4657.97	Start 2/100 Turn
11223.46	90.00	88.83	7312.00	294.39	3741.20	3752.53	4736.36	Hold 88.83 Az
12117.57	90.00	88.83	7312.00	312.62	4635.12	4645.65	5630.47	TD at 12117.57

Geodetic Datum:

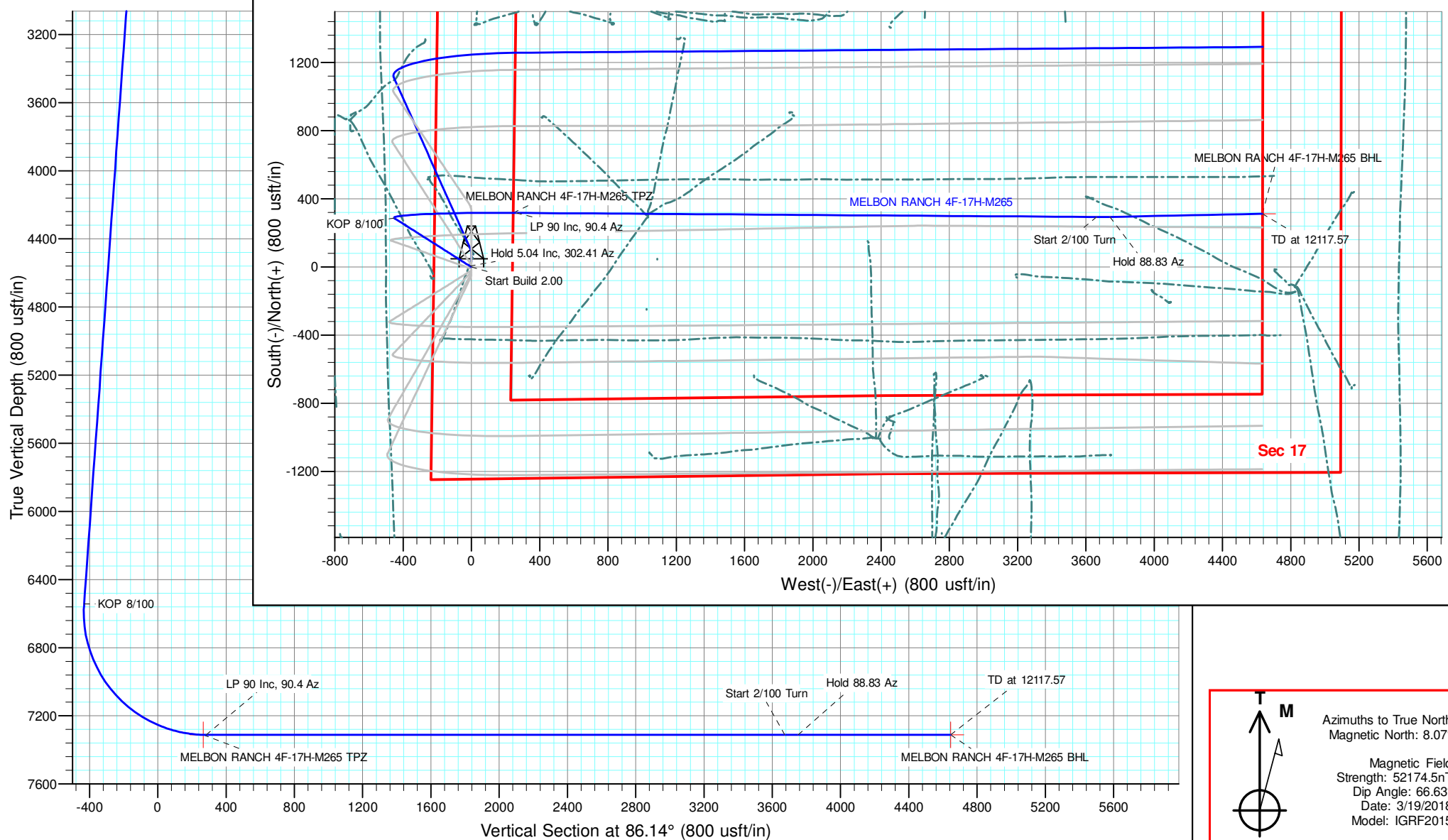
North American Datum 1983
US State Plane 1983, Colorado Northern Zone

Elevation:

Ground Elevation: 4956.00
KB Elevation: WELL @ 4979.00usft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
MELBON RANCH 4F-17H-M265 BHL	12.00	312.62	4635.12	1293312.36	3229249.52	40.135627	-104.680058	Point
MELBON RANCH 4F-17H-M265 TPZ	12.00	317.77	245.16	1293277.74	3224859.69	40.135642	-104.695696	Point
- plan misses target center by 0.23usft at 7727.33usft MD (7311.78 TVD, 317.72 N, 245.17 E)								



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4F-17H-M265
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 4979.00usft (Original Well Elev)
Project:	Sec 17 T2N-R65W	MD Reference:	WELL @ 4979.00usft (Original Well Elev)
Site:	Melbon Ranch Pad	North Reference:	True
Well:	MELBON RANCH 4F-17H-M265	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 17May18 kjs		

Project	Sec 17 T2N-R65W, Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	Melbon Ranch Pad				
Site Position:		Northing:	1,292,987.77 usft	Latitude:	40.134852
From:	Map	Easting:	3,224,617.42 usft	Longitude:	-104.696635
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.52 °

Well	MELBON RANCH 4F-17H-M265					
Well Position	+N/-S	0.00 usft	Northing:	1,292,957.76 usft	Latitude:	40.134770
	+E/-W	0.00 usft	Easting:	3,224,617.42 usft	Longitude:	-104.696636
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	4,956.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/19/2018	8.07	66.63	52,174.49256335

Design	Plan #2 17May18 kjs			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	86.14

Plan Survey Tool Program	Date	5/17/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	12,117.57 Plan #2 17May18 kjs (Wellbore #	MWD	
			OWSG MWD - Standard	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
350.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00	
601.90	5.04	302.41	601.57	5.93	-9.34	2.00	2.00	0.00	302.41	
6,566.68	5.04	302.41	6,543.31	286.67	-451.55	0.00	0.00	0.00	0.00	
7,745.06	90.00	90.40	7,312.00	317.61	262.89	8.00	7.21	12.56	147.89	
11,145.06	90.00	90.40	7,312.00	293.87	3,662.81	0.00	0.00	0.00	0.00	
11,223.46	90.00	88.83	7,312.00	294.39	3,741.20	2.00	0.00	-2.00	-90.00	
12,117.57	90.00	88.83	7,312.00	312.62	4,635.12	0.00	0.00	0.00	0.00	MELBON RANCH 4F-

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4F-17H-M265
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 4979.00usft (Original Well Elev)
Project:	Sec 17 T2N-R65W	MD Reference:	WELL @ 4979.00usft (Original Well Elev)
Site:	Melbon Ranch Pad	North Reference:	True
Well:	MELBON RANCH 4F-17H-M265	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 17May18 kjs		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	1,292,957.76	3,224,617.42	40.134770	-104.696636
100.00	0.00	0.00	100.00	0.00	0.00	1,292,957.76	3,224,617.42	40.134770	-104.696636
200.00	0.00	0.00	200.00	0.00	0.00	1,292,957.76	3,224,617.42	40.134770	-104.696636
300.00	0.00	0.00	300.00	0.00	0.00	1,292,957.76	3,224,617.42	40.134770	-104.696636
350.00	0.00	0.00	350.00	0.00	0.00	1,292,957.76	3,224,617.42	40.134770	-104.696636
Start Build 2.00									
400.00	1.00	302.41	400.00	0.23	-0.37	1,292,957.99	3,224,617.05	40.134770	-104.696638
500.00	3.00	302.41	499.93	2.10	-3.31	1,292,959.83	3,224,614.09	40.134776	-104.696648
600.00	5.00	302.41	599.68	5.84	-9.20	1,292,963.52	3,224,608.17	40.134786	-104.696669
601.90	5.04	302.41	601.57	5.93	-9.34	1,292,963.61	3,224,608.03	40.134786	-104.696670
Hold 5.04 Inc, 302.41 Az									
700.00	5.04	302.41	699.30	10.55	-16.62	1,292,968.16	3,224,600.71	40.134799	-104.696696
800.00	5.04	302.41	798.91	15.26	-24.03	1,292,972.80	3,224,593.25	40.134812	-104.696722
900.00	5.04	302.41	898.52	19.96	-31.44	1,292,977.44	3,224,585.80	40.134825	-104.696749
1,000.00	5.04	302.41	998.14	24.67	-38.86	1,292,982.08	3,224,578.34	40.134838	-104.696775
1,100.00	5.04	302.41	1,097.75	29.38	-46.27	1,292,986.72	3,224,570.89	40.134850	-104.696802
1,200.00	5.04	302.41	1,197.36	34.08	-53.68	1,292,991.36	3,224,563.43	40.134863	-104.696828
1,300.00	5.04	302.41	1,296.98	38.79	-61.10	1,292,995.99	3,224,555.97	40.134876	-104.696855
1,400.00	5.04	302.41	1,396.59	43.50	-68.51	1,293,000.63	3,224,548.52	40.134889	-104.696881
1,500.00	5.04	302.41	1,496.21	48.20	-75.93	1,293,005.27	3,224,541.06	40.134902	-104.696908
1,600.00	5.04	302.41	1,595.82	52.91	-83.34	1,293,009.91	3,224,533.61	40.134915	-104.696935
1,700.00	5.04	302.41	1,695.43	57.62	-90.75	1,293,014.55	3,224,526.15	40.134928	-104.696961
1,800.00	5.04	302.41	1,795.05	62.32	-98.17	1,293,019.19	3,224,518.69	40.134941	-104.696988
1,900.00	5.04	302.41	1,894.66	67.03	-105.58	1,293,023.83	3,224,511.24	40.134954	-104.697014
2,000.00	5.04	302.41	1,994.27	71.74	-112.99	1,293,028.47	3,224,503.78	40.134967	-104.697041
2,100.00	5.04	302.41	2,093.89	76.44	-120.41	1,293,033.11	3,224,496.33	40.134980	-104.697067
2,200.00	5.04	302.41	2,193.50	81.15	-127.82	1,293,037.75	3,224,488.87	40.134993	-104.697094
2,300.00	5.04	302.41	2,293.12	85.86	-135.24	1,293,042.39	3,224,481.41	40.135005	-104.697120
2,400.00	5.04	302.41	2,392.73	90.56	-142.65	1,293,047.03	3,224,473.96	40.135018	-104.697147
2,500.00	5.04	302.41	2,492.34	95.27	-150.06	1,293,051.67	3,224,466.50	40.135031	-104.697173
2,600.00	5.04	302.41	2,591.96	99.98	-157.48	1,293,056.31	3,224,459.05	40.135044	-104.697200
2,700.00	5.04	302.41	2,691.57	104.68	-164.89	1,293,060.94	3,224,451.59	40.135057	-104.697226
2,800.00	5.04	302.41	2,791.18	109.39	-172.30	1,293,065.58	3,224,444.13	40.135070	-104.697253
2,900.00	5.04	302.41	2,890.80	114.10	-179.72	1,293,070.22	3,224,436.68	40.135083	-104.697279
3,000.00	5.04	302.41	2,990.41	118.80	-187.13	1,293,074.86	3,224,429.22	40.135096	-104.697306
3,100.00	5.04	302.41	3,090.02	123.51	-194.55	1,293,079.50	3,224,421.77	40.135109	-104.697332
3,200.00	5.04	302.41	3,189.64	128.22	-201.96	1,293,084.14	3,224,414.31	40.135122	-104.697359
3,300.00	5.04	302.41	3,289.25	132.92	-209.37	1,293,088.78	3,224,406.85	40.135135	-104.697385
3,400.00	5.04	302.41	3,388.87	137.63	-216.79	1,293,093.42	3,224,399.40	40.135148	-104.697412
3,500.00	5.04	302.41	3,488.48	142.34	-224.20	1,293,098.06	3,224,391.94	40.135161	-104.697438
3,600.00	5.04	302.41	3,588.09	147.04	-231.61	1,293,102.70	3,224,384.49	40.135173	-104.697465
3,700.00	5.04	302.41	3,687.71	151.75	-239.03	1,293,107.34	3,224,377.03	40.135186	-104.697491
3,800.00	5.04	302.41	3,787.32	156.46	-246.44	1,293,111.98	3,224,369.57	40.135199	-104.697518
3,900.00	5.04	302.41	3,886.93	161.16	-253.85	1,293,116.62	3,224,362.12	40.135212	-104.697544
4,000.00	5.04	302.41	3,986.55	165.87	-261.27	1,293,121.26	3,224,354.66	40.135225	-104.697571
4,100.00	5.04	302.41	4,086.16	170.58	-268.68	1,293,125.89	3,224,347.21	40.135238	-104.697597
4,200.00	5.04	302.41	4,185.78	175.28	-276.10	1,293,130.53	3,224,339.75	40.135251	-104.697624
4,300.00	5.04	302.41	4,285.39	179.99	-283.51	1,293,135.17	3,224,332.29	40.135264	-104.697650
4,400.00	5.04	302.41	4,385.00	184.70	-290.92	1,293,139.81	3,224,324.84	40.135277	-104.697677
4,500.00	5.04	302.41	4,484.62	189.40	-298.34	1,293,144.45	3,224,317.38	40.135290	-104.697703
4,600.00	5.04	302.41	4,584.23	194.11	-305.75	1,293,149.09	3,224,309.93	40.135303	-104.697730
4,700.00	5.04	302.41	4,683.84	198.82	-313.16	1,293,153.73	3,224,302.47	40.135316	-104.697756
4,800.00	5.04	302.41	4,783.46	203.52	-320.58	1,293,158.37	3,224,295.01	40.135328	-104.697783
4,900.00	5.04	302.41	4,883.07	208.23	-327.99	1,293,163.01	3,224,287.56	40.135341	-104.697810

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4F-17H-M265
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 4979.00usft (Original Well Elev)
Project:	Sec 17 T2N-R65W	MD Reference:	WELL @ 4979.00usft (Original Well Elev)
Site:	Melbon Ranch Pad	North Reference:	True
Well:	MELBON RANCH 4F-17H-M265	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 17May18 kjs		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,000.00	5.04	302.41	4,982.68	212.93	-335.41	1,293,167.65	3,224,280.10	40.135354	-104.697836
5,100.00	5.04	302.41	5,082.30	217.64	-342.82	1,293,172.29	3,224,272.65	40.135367	-104.697863
5,200.00	5.04	302.41	5,181.91	222.35	-350.23	1,293,176.93	3,224,265.19	40.135380	-104.697889
5,300.00	5.04	302.41	5,281.53	227.05	-357.65	1,293,181.57	3,224,257.73	40.135393	-104.697916
5,400.00	5.04	302.41	5,381.14	231.76	-365.06	1,293,186.21	3,224,250.28	40.135406	-104.697942
5,500.00	5.04	302.41	5,480.75	236.47	-372.47	1,293,190.84	3,224,242.82	40.135419	-104.697969
5,600.00	5.04	302.41	5,580.37	241.17	-379.89	1,293,195.48	3,224,235.37	40.135432	-104.697995
5,700.00	5.04	302.41	5,679.98	245.88	-387.30	1,293,200.12	3,224,227.91	40.135445	-104.698022
5,800.00	5.04	302.41	5,779.59	250.59	-394.71	1,293,204.76	3,224,220.45	40.135458	-104.698048
5,900.00	5.04	302.41	5,879.21	255.29	-402.13	1,293,209.40	3,224,213.00	40.135471	-104.698075
6,000.00	5.04	302.41	5,978.82	260.00	-409.54	1,293,214.04	3,224,205.54	40.135484	-104.698101
6,100.00	5.04	302.41	6,078.44	264.71	-416.96	1,293,218.68	3,224,198.09	40.135496	-104.698128
6,200.00	5.04	302.41	6,178.05	269.41	-424.37	1,293,223.32	3,224,190.63	40.135509	-104.698154
6,300.00	5.04	302.41	6,277.66	274.12	-431.78	1,293,227.96	3,224,183.17	40.135522	-104.698181
6,400.00	5.04	302.41	6,377.28	278.83	-439.20	1,293,232.60	3,224,175.72	40.135535	-104.698207
6,500.00	5.04	302.41	6,476.89	283.53	-446.61	1,293,237.24	3,224,168.26	40.135548	-104.698234
6,566.68	5.04	302.41	6,543.31	286.67	-451.55	1,293,240.33	3,224,163.29	40.135557	-104.698251
KOP 8/100									
6,600.00	3.12	329.43	6,576.55	288.24	-453.25	1,293,241.88	3,224,161.58	40.135561	-104.698258
6,700.00	6.93	67.79	6,676.27	292.87	-449.04	1,293,246.55	3,224,165.75	40.135574	-104.698242
6,800.00	14.64	80.09	6,774.44	297.33	-430.98	1,293,251.17	3,224,183.76	40.135586	-104.698178
6,900.00	22.55	83.94	6,869.15	301.54	-399.42	1,293,255.67	3,224,215.29	40.135598	-104.698065
7,000.00	30.50	85.85	6,958.56	305.40	-354.97	1,293,259.94	3,224,259.70	40.135608	-104.697906
7,100.00	38.47	87.03	7,040.92	308.86	-298.50	1,293,263.90	3,224,316.13	40.135618	-104.697704
7,200.00	46.45	87.85	7,114.63	311.83	-231.11	1,293,267.49	3,224,383.50	40.135626	-104.697463
7,300.00	54.44	88.49	7,178.26	314.27	-154.11	1,293,270.62	3,224,460.47	40.135632	-104.697188
7,400.00	62.43	89.00	7,230.56	316.12	-68.99	1,293,273.24	3,224,545.57	40.135638	-104.696883
7,500.00	70.42	89.45	7,270.53	317.35	22.58	1,293,275.30	3,224,637.12	40.135641	-104.696556
7,600.00	78.41	89.85	7,297.38	317.93	118.82	1,293,276.75	3,224,733.35	40.135643	-104.696211
7,700.00	86.40	90.23	7,310.58	317.85	217.86	1,293,277.58	3,224,832.39	40.135642	-104.695857
7,727.33	88.58	90.33	7,311.78	317.72	245.17	1,293,277.69	3,224,859.70	40.135642	-104.695760
MELBON RANCH 4F-17H-M265 TPZ									
7,745.06	90.00	90.40	7,312.00	317.61	262.89	1,293,277.73	3,224,877.42	40.135642	-104.695696
LP 90 Inc, 90.4 Az									
7,800.00	90.00	90.40	7,312.00	317.22	317.83	1,293,277.85	3,224,932.36	40.135641	-104.695500
7,900.00	90.00	90.40	7,312.00	316.52	417.83	1,293,278.06	3,225,032.36	40.135639	-104.695142
8,000.00	90.00	90.40	7,312.00	315.83	517.82	1,293,278.26	3,225,132.36	40.135637	-104.694784
8,100.00	90.00	90.40	7,312.00	315.13	617.82	1,293,278.47	3,225,232.36	40.135635	-104.694427
8,200.00	90.00	90.40	7,312.00	314.43	717.82	1,293,278.68	3,225,332.36	40.135633	-104.694069
8,300.00	90.00	90.40	7,312.00	313.73	817.82	1,293,278.89	3,225,432.36	40.135631	-104.693711
8,400.00	90.00	90.40	7,312.00	313.03	917.81	1,293,279.10	3,225,532.36	40.135629	-104.693354
8,500.00	90.00	90.40	7,312.00	312.34	1,017.81	1,293,279.30	3,225,632.36	40.135627	-104.692996
8,600.00	90.00	90.40	7,312.00	311.64	1,117.81	1,293,279.51	3,225,732.36	40.135625	-104.692638
8,700.00	90.00	90.40	7,312.00	310.94	1,217.81	1,293,279.72	3,225,832.36	40.135623	-104.692281
8,800.00	90.00	90.40	7,312.00	310.24	1,317.80	1,293,279.93	3,225,932.36	40.135621	-104.691923
8,900.00	90.00	90.40	7,312.00	309.54	1,417.80	1,293,280.14	3,226,032.36	40.135619	-104.691566
9,000.00	90.00	90.40	7,312.00	308.84	1,517.80	1,293,280.34	3,226,132.36	40.135617	-104.691208
9,100.00	90.00	90.40	7,312.00	308.15	1,617.80	1,293,280.55	3,226,232.36	40.135616	-104.690850
9,200.00	90.00	90.40	7,312.00	307.45	1,717.79	1,293,280.76	3,226,332.36	40.135614	-104.690493
9,300.00	90.00	90.40	7,312.00	306.75	1,817.79	1,293,280.97	3,226,432.36	40.135612	-104.690135
9,400.00	90.00	90.40	7,312.00	306.05	1,917.79	1,293,281.17	3,226,532.36	40.135610	-104.689777
9,500.00	90.00	90.40	7,312.00	305.35	2,017.79	1,293,281.38	3,226,632.36	40.135608	-104.689420
9,600.00	90.00	90.40	7,312.00	304.66	2,117.78	1,293,281.59	3,226,732.36	40.135606	-104.689062
9,700.00	90.00	90.40	7,312.00	303.96	2,217.78	1,293,281.80	3,226,832.36	40.135604	-104.688704

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4F-17H-M265
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 4979.00usft (Original Well Elev)
Project:	Sec 17 T2N-R65W	MD Reference:	WELL @ 4979.00usft (Original Well Elev)
Site:	Melbon Ranch Pad	North Reference:	True
Well:	MELBON RANCH 4F-17H-M265	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 17May18 kjs		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,800.00	90.00	90.40	7,312.00	303.26	2,317.78	1,293,282.01	3,226,932.36	40.135602	-104.688347
9,900.00	90.00	90.40	7,312.00	302.56	2,417.78	1,293,282.21	3,227,032.36	40.135600	-104.687989
10,000.00	90.00	90.40	7,312.00	301.86	2,517.77	1,293,282.42	3,227,132.36	40.135598	-104.687631
10,100.00	90.00	90.40	7,312.00	301.17	2,617.77	1,293,282.63	3,227,232.36	40.135596	-104.687274
10,200.00	90.00	90.40	7,312.00	300.47	2,717.77	1,293,282.84	3,227,332.36	40.135594	-104.686916
10,300.00	90.00	90.40	7,312.00	299.77	2,817.77	1,293,283.04	3,227,432.36	40.135592	-104.686558
10,400.00	90.00	90.40	7,312.00	299.07	2,917.76	1,293,283.25	3,227,532.36	40.135590	-104.686201
10,500.00	90.00	90.40	7,312.00	298.37	3,017.76	1,293,283.46	3,227,632.36	40.135588	-104.685843
10,600.00	90.00	90.40	7,312.00	297.67	3,117.76	1,293,283.67	3,227,732.36	40.135586	-104.685486
10,700.00	90.00	90.40	7,312.00	296.98	3,217.76	1,293,283.88	3,227,832.36	40.135584	-104.685128
10,800.00	90.00	90.40	7,312.00	296.28	3,317.76	1,293,284.08	3,227,932.36	40.135583	-104.684770
10,900.00	90.00	90.40	7,312.00	295.58	3,417.75	1,293,284.29	3,228,032.36	40.135581	-104.684413
11,000.00	90.00	90.40	7,312.00	294.88	3,517.75	1,293,284.50	3,228,132.36	40.135579	-104.684055
11,100.00	90.00	90.40	7,312.00	294.18	3,617.75	1,293,284.71	3,228,232.36	40.135577	-104.683697
11,145.06	90.00	90.40	7,312.00	293.87	3,662.81	1,293,284.80	3,228,277.41	40.135576	-104.683536
Start 2/100 Turn									
11,200.00	90.00	89.30	7,312.00	294.01	3,717.75	1,293,285.44	3,228,332.35	40.135576	-104.683340
11,223.46	90.00	88.83	7,312.00	294.39	3,741.20	1,293,286.04	3,228,355.80	40.135577	-104.683256
Hold 88.83 Az									
11,300.00	90.00	88.83	7,312.00	295.95	3,817.73	1,293,288.29	3,228,432.31	40.135581	-104.682982
11,400.00	90.00	88.83	7,312.00	297.99	3,917.71	1,293,291.23	3,228,532.27	40.135587	-104.682624
11,500.00	90.00	88.83	7,312.00	300.03	4,017.69	1,293,294.18	3,228,632.22	40.135593	-104.682267
11,600.00	90.00	88.83	7,312.00	302.07	4,117.66	1,293,297.12	3,228,732.18	40.135598	-104.681909
11,700.00	90.00	88.83	7,312.00	304.11	4,217.64	1,293,300.07	3,228,832.14	40.135604	-104.681552
11,800.00	90.00	88.83	7,312.00	306.15	4,317.62	1,293,303.01	3,228,932.09	40.135609	-104.681194
11,900.00	90.00	88.83	7,312.00	308.18	4,417.60	1,293,305.95	3,229,032.05	40.135615	-104.680837
12,000.00	90.00	88.83	7,312.00	310.22	4,517.58	1,293,308.90	3,229,132.01	40.135620	-104.680479
12,100.00	90.00	88.83	7,312.00	312.26	4,617.56	1,293,311.84	3,229,231.96	40.135626	-104.680121
12,117.57	90.00	88.83	7,312.00	312.62	4,635.12	1,293,312.36	3,229,249.52	40.135627	-104.680059
TD at 12117.57 - MELBON RANCH 4F-17H-M265 BHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
MELBON RANCH 4F-17	0.00	0.52	7,312.00	317.77	245.16	1,293,277.74	3,224,859.69	40.135642	-104.695696
- hit/miss target									
- Shape									
- plan misses target center by 0.23usft at 7727.33usft MD (7311.78 TVD, 317.72 N, 245.17 E)									
- Point									
MELBON RANCH 4F-17	0.00	0.53	7,312.00	312.62	4,635.12	1,293,312.36	3,229,249.52	40.135627	-104.680058
- plan hits target center									
- Point									



Planning Report - Geographic

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4F-17H-M265
Company:	Crestone Peak Resources	TVD Reference:	WELL @ 4979.00usft (Original Well Elev)
Project:	Sec 17 T2N-R65W	MD Reference:	WELL @ 4979.00usft (Original Well Elev)
Site:	Melbon Ranch Pad	North Reference:	True
Well:	MELBON RANCH 4F-17H-M265	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 17May18 kjs		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
350.00	350.00	0.00	0.00	Start Build 2.00
601.90	601.57	5.93	-9.34	Hold 5.04 Inc, 302.41 Az
6,566.68	6,543.31	286.67	-451.55	KOP 8/100
7,745.06	7,312.00	317.61	262.89	LP 90 Inc, 90.4 Az
11,145.06	7,312.00	293.87	3,662.81	Start 2/100 Turn
11,223.46	7,312.00	294.39	3,741.20	Hold 88.83 Az
12,117.57	7,312.00	312.62	4,635.12	TD at 12117.57



Crestone Peak Resources

Sec 17 T2N-R65W

Melbon Ranch Pad

MELBON RANCH 4F-17H-M265

Wellbore #1

Plan #2 17May18 kjs

Anticollision Summary Report

17 May, 2018

Anticollision Summary Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well MELBON RANCH 4F-17H-M265
Project:	Sec 17 T2N-R65W	TVD Reference:	WELL @ 4979.00usft (Original Well Elev)
Reference Site:	Melbon Ranch Pad	MD Reference:	WELL @ 4979.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	MELBON RANCH 4F-17H-M265	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2 17May18 kjs	Offset TVD Reference:	Offset Datum

Reference	Plan #2 17May18 kjs		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 9,999.98 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date 5/17/2018				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	12,117.57	Plan #2 17May18 kjs (Wellbore #1)	MWD	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						
Existing Wells (Melbon Ranch)						
ADAMSON 13N-28HZ - KMG - MWD	12,117.57	6,699.00	3,786.60	3,629.50	24.104	CC, ES, SF
ADAMSON 14N-28HZ - KMG - MWD	12,117.57	6,510.00	4,080.60	3,936.91	28.399	CC, ES, SF
ADAMSON 28N-28HZ - KMG - MWD	12,117.57	6,745.88	4,733.24	4,593.71	33.921	CC, ES, SF
ADAMSON 35C-28HZ - KMG - MWD	12,117.57	6,749.98	3,881.85	3,731.71	25.856	CC, ES, SF
ADAMSON 36N-28HZ - KMG - MWD	12,117.57	6,510.00	4,232.84	4,091.40	29.927	CC, ES, SF
ADAMSON 37C-28HZ - KMG - MWD	12,117.57	6,699.00	4,425.05	4,283.97	31.367	CC, ES, SF
ADAMSON 37C-28HZX - KMG - MWD	12,117.57	6,699.00	4,425.05	4,283.97	31.367	CC, ES, SF
BYDALEK 28C-20HZ - KMG - MWD	9,561.49	12,039.00	2,066.92	1,965.22	20.322	CC
BYDALEK 28C-20HZ - KMG - MWD	9,600.00	12,039.00	2,067.28	1,965.14	20.239	ES
BYDALEK 28C-20HZ - KMG - MWD	10,600.00	12,039.00	2,313.15	2,188.68	18.584	SF
BYDALEK 28N-20HZ - KMG - MWD	9,638.28	11,830.00	2,073.35	1,968.90	19.851	CC, ES
BYDALEK 28N-20HZ - KMG - MWD	10,700.00	11,830.00	2,329.38	2,202.56	18.368	SF
BYDALEK 29C-20HZ - KMG - MWD	8,465.58	11,880.00	2,086.90	2,018.53	30.525	CC
BYDALEK 29C-20HZ - KMG - MWD	8,500.00	11,880.00	2,087.18	2,018.08	30.206	ES
BYDALEK 29C-20HZ - KMG - MWD	9,900.00	11,880.00	2,532.33	2,416.34	21.833	SF
BYDALEK 29N-20HZ - KMG - MWD	8,348.82	11,671.00	2,097.25	2,031.32	31.811	CC
BYDALEK 29N-20HZ - KMG - MWD	8,400.00	11,671.00	2,097.88	2,030.83	31.291	ES
BYDALEK 29N-20HZ - KMG - MWD	9,800.00	11,671.00	2,550.37	2,436.39	22.376	SF
BYDALEK 30C-20HZ - KMG - MWD	7,548.92	11,950.00	2,048.63	1,989.82	34.835	CC
BYDALEK 30C-20HZ - KMG - MWD	7,600.00	11,950.00	2,049.24	1,989.26	34.167	ES
BYDALEK 30C-20HZ - KMG - MWD	9,100.00	11,950.00	2,562.86	2,452.74	23.272	SF
BYDALEK 3N-20HZ - KMG - MWD	9,067.07	11,597.00	2,239.84	2,155.58	26.583	CC
BYDALEK 3N-20HZ - KMG - MWD	9,100.00	11,597.00	2,240.08	2,155.29	26.419	ES
BYDALEK 3N-20HZ - KMG - MWD	10,500.00	11,597.00	2,658.98	2,536.06	21.631	SF
BYDALEK 4N-20HZ - KMG - MWD	7,809.62	11,755.00	2,102.19	2,043.22	35.647	CC
BYDALEK 4N-20HZ - KMG - MWD	7,900.00	11,755.00	2,104.13	2,042.93	34.381	ES
BYDALEK 4N-20HZ - KMG - MWD	9,400.00	11,755.00	2,636.00	2,523.97	23.529	SF
CAMPBELL JF 17-13D - GW O&G - MWD	9,931.32	7,531.98	1,102.72	991.81	9.943	CC
CAMPBELL JF 17-13D - GW O&G - MWD	10,000.00	7,532.19	1,104.85	991.51	9.748	ES
CAMPBELL JF 17-13D - GW O&G - MWD	10,200.00	7,532.80	1,134.98	1,016.33	9.566	SF
CAMPBELL JF 17-41D - GW O&G - MWD	12,117.57	7,452.70	2,468.67	2,300.86	14.711	CC, ES, SF
CAMPBELL JF 17-6D - GW O&G - No Survey	300.00	251.00	4,377.02	4,375.72	3,376.783	CC
CAMPBELL JF 17-6D - GW O&G - No Survey	400.00	351.00	4,377.18	4,375.35	2,393.793	ES
CAMPBELL JF 17-6D - GW O&G - No Survey	12,117.57	730.00	6,980.57	6,919.42	114.148	SF
CAMPBELL JF 17-6D-1 - GW O&G - MWD	10,310.38	7,287.41	2,431.88	2,316.33	21.045	CC
CAMPBELL JF 17-6D-1 - GW O&G - MWD	10,400.00	7,287.90	2,433.53	2,315.68	20.648	ES
CAMPBELL JF 17-6D-1 - GW O&G - MWD	11,000.00	7,291.30	2,527.77	2,397.82	19.452	SF

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

Anticollision Summary Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well MELBON RANCH 4F-17H-M265
Project:	Sec 17 T2N-R65W	TVD Reference:	WELL @ 4979.00usft (Original Well Elev)
Reference Site:	Melbon Ranch Pad	MD Reference:	WELL @ 4979.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	MELBON RANCH 4F-17H-M265	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2 17May18 kjs	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						
Existing Wells (Melbon Ranch)						
CAMPBELL JF 17-7D - GW O&G - MWD	11,301.86	7,199.56	2,447.45	2,309.22	17.706	CC
CAMPBELL JF 17-7D - GW O&G - MWD	11,400.00	7,198.27	2,449.42	2,308.71	17.408	ES
CAMPBELL JF 17-7D - GW O&G - MWD	11,900.00	7,191.22	2,519.47	2,369.06	16.751	SF
CAMPBELL JF 17-8D - GW O&G - MWD	11,999.36	7,367.27	1,785.48	1,624.43	11.086	CC
CAMPBELL JF 17-8D - GW O&G - MWD	12,000.00	7,367.28	1,785.48	1,624.41	11.085	ES
CAMPBELL JF 17-8D - GW O&G - MWD	12,117.57	7,369.67	1,789.39	1,625.76	10.936	SF
CAMPBELL JF 17-9D - GW O&G - MWD	10,567.92	7,311.70	1,783.66	1,662.52	14.723	CC
CAMPBELL JF 17-9D - GW O&G - MWD	10,600.00	7,311.15	1,783.95	1,661.90	14.616	ES
CAMPBELL JF 17-9D - GW O&G - MWD	11,000.00	7,304.23	1,835.24	1,704.47	14.034	SF
COOK 28N-16HZ - KMG - MWD	12,117.57	9,033.50	3,248.17	3,183.04	49.873	CC, ES, SF
CROWDER 1-18 - KMG - No Survey	6,788.68	6,746.47	3,304.01	3,266.90	89.030	CC
CROWDER 1-18 - KMG - No Survey	6,800.00	6,757.44	3,304.03	3,266.87	88.914	ES
CROWDER 1-18 - KMG - No Survey	9,700.00	7,295.00	4,596.41	4,528.40	67.590	SF
CROWDER 15C-18HZ - KMG - MWD	6,888.85	10,722.38	1,359.81	1,274.30	15.903	CC
CROWDER 15C-18HZ - KMG - MWD	6,900.00	10,722.10	1,359.94	1,274.18	15.857	ES
CROWDER 15C-18HZ - KMG - MWD	7,000.00	10,719.79	1,372.88	1,285.04	15.629	SF
CROWDER 15N-18HZ - KMG - MWD	6,775.51	10,619.35	2,087.89	1,999.55	23.633	CC, ES
CROWDER 15N-18HZ - KMG - MWD	6,900.00	10,613.35	2,102.32	2,012.60	23.431	SF
CROWDER 16C-19HZ - KMG - MWD	7,067.22	10,282.32	593.39	519.49	8.030	CC
CROWDER 16C-19HZ - KMG - MWD	7,100.00	10,281.83	595.04	518.95	7.821	ES
CROWDER 16C-19HZ - KMG - MWD	7,200.00	10,280.44	619.86	538.39	7.608	SF
CROWDER 16N-19HZ - KMG - MWD	6,923.17	10,145.44	818.53	738.51	10.230	CC, ES
CROWDER 16N-19HZ - KMG - MWD	7,000.00	10,140.01	826.19	743.57	10.000	SF
CROWDER 36N-18HZ - KMG - MWD	6,789.06	10,546.60	1,661.28	1,572.59	18.732	CC
CROWDER 36N-18HZ - KMG - MWD	6,800.00	10,546.01	1,661.40	1,572.55	18.698	ES
CROWDER 36N-18HZ - KMG - MWD	6,900.00	10,540.65	1,673.50	1,583.32	18.558	SF
CROWDER 38N-19HZ - KMG - MWD	7,099.15	10,149.21	258.03	184.60	3.514	CC
CROWDER 38N-19HZ - KMG - MWD	7,100.00	10,149.18	258.04	184.47	3.507	ES
CROWDER 38N-19HZ - KMG - MWD	7,200.00	10,146.78	283.52	198.53	3.336	SF
DECHANT 13-9 - KMG - No Survey	12,117.57	7,245.00	4,319.86	4,176.16	30.061	CC, ES, SF
DECHANT 14-9 - KMG - MWD	12,117.57	7,503.57	4,966.59	4,815.66	32.906	CC, ES, SF
DECHANT 23-9 - KMG - MWD	12,117.57	7,770.00	5,877.71	5,725.28	38.562	CC, ES, SF
DECHANT 31-19 - KMG - Gyro	6,600.00	6,586.04	2,815.75	2,767.93	58.893	CC, ES
DECHANT 31-19 - KMG - Gyro	6,900.00	6,906.02	2,859.09	2,809.36	57.489	SF
DECHANT 32-19 - KMG - Gyro	743.06	738.64	3,982.02	3,977.15	816.191	CC
DECHANT 32-19 - KMG - Gyro	1,000.00	967.47	3,982.97	3,976.32	599.011	ES
DECHANT 32-19 - KMG - Gyro	9,500.00	6,878.58	5,656.05	5,585.87	80.592	SF
DECHANT 35-9 - KMG - MWD	12,117.57	7,393.87	4,212.41	4,061.34	27.884	CC, ES, SF
DECHANT 36-9 - KMG - MWD	12,117.57	7,666.01	4,848.21	4,700.05	32.723	CC, ES, SF
DECHANT 38-8 - KMG - MWD	12,117.57	7,424.05	3,806.19	3,641.16	23.064	CC, ES, SF
DECHANT 41-19 - KMG - Gyro	100.00	82.52	1,824.81	1,824.53	6,455.904	CC
DECHANT 41-19 - KMG - Gyro	500.00	484.43	1,825.80	1,822.72	591.827	ES
DECHANT 41-19 - KMG - Gyro	7,100.00	7,058.91	1,952.78	1,902.20	38.604	SF
DECHANT 42-19 - KMG - No Survey	300.00	298.00	3,528.49	3,527.10	2,541.636	CC
DECHANT 42-19 - KMG - No Survey	400.00	398.00	3,528.65	3,526.72	1,834.117	ES
DECHANT 42-19 - KMG - No Survey	10,400.00	7,310.00	5,222.55	5,143.79	66.311	SF
DECHANT 9-19A - KMG - No Survey	300.00	293.00	4,452.83	4,451.45	3,228.270	CC
DECHANT 9-19A - KMG - No Survey	400.00	393.00	4,453.00	4,451.09	2,325.385	ES
DECHANT 9-19A - KMG - No Survey	11,300.00	7,305.00	6,509.39	6,413.99	68.234	SF
DECHANT X 08-15 - KMG - Gyro	10,490.03	7,281.03	4,364.86	4,247.81	37.290	CC
DECHANT X 08-15 - KMG - Gyro	10,600.00	7,279.94	4,366.25	4,246.31	36.405	ES
DECHANT X 08-15 - KMG - Gyro	12,117.57	7,264.59	4,634.35	4,481.71	30.361	SF
DECHANT X 08-24D - KMG - MWD	10,014.24	7,446.23	5,071.70	4,966.06	48.010	CC

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

Anticollision Summary Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well MELBON RANCH 4F-17H-M265
Project:	Sec 17 T2N-R65W	TVD Reference:	WELL @ 4979.00usft (Original Well Elev)
Reference Site:	Melbon Ranch Pad	MD Reference:	WELL @ 4979.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	MELBON RANCH 4F-17H-M265	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2 17May18 kjs	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						
Existing Wells (Melbon Ranch)						
DECHANT X 08-24D - KMG - MWD	10,100.00	7,447.12	5,072.43	4,964.63	47.054	ES
DECHANT X 08-24D - KMG - MWD	12,117.57	7,470.15	5,466.79	5,315.95	36.242	SF
DECHANT X 19-3 - KMG - Gyro	6,600.00	6,565.18	3,666.80	3,619.24	77.098	CC, ES
DECHANT X 19-3 - KMG - Gyro	6,900.00	6,768.22	3,722.85	3,673.77	75.853	SF
DOM RED X 20-02D - KMG - Gyro	8,838.38	7,226.95	3,135.27	3,059.41	41.332	CC
DOM RED X 20-02D - KMG - Gyro	8,900.00	7,226.68	3,135.87	3,058.65	40.607	ES
DOM RED X 20-02D - KMG - Gyro	10,400.00	7,220.15	3,502.64	3,397.66	33.365	SF
DOM RED X 20-3 - NOBLE - Gyro	9,168.48	7,304.20	2,089.78	2,005.81	24.888	CC
DOM RED X 20-3 - NOBLE - Gyro	9,200.00	7,304.53	2,090.02	2,005.33	24.679	ES
DOM RED X 20-3 - NOBLE - Gyro	9,900.00	7,311.98	2,214.10	2,116.53	22.692	SF
DOM RED X20-2D - KMG - No Survey	300.00	263.00	3,007.32	3,006.00	2,268.671	CC
DOM RED X20-2D - KMG - No Survey	400.00	363.00	3,007.65	3,005.78	1,615.883	ES
DOM RED X20-2D - KMG - No Survey	10,300.00	7,275.00	3,795.48	3,708.71	43.742	SF
EWERTZ 3-18 - KMG - No Survey	6,657.44	6,656.90	4,287.02	4,251.11	119.374	CC, ES
EWERTZ 3-18 - KMG - No Survey	9,500.00	7,335.00	6,195.98	6,140.60	111.873	SF
FOUR WAY 1 - KMG - No Survey	12,117.57	7,229.00	3,004.99	2,895.60	27.471	CC, ES, SF
FOUR WAY 12-16 - KMG - Gyro	12,117.57	7,155.39	1,928.75	1,789.93	13.894	CC, ES, SF
HAYMAKER 29N-9HZ - KMG - MWD	12,117.57	6,569.00	4,220.07	4,071.35	28.376	CC, ES, SF
HAYMAKER 4C-9HZ - KMG - MWD	12,117.57	6,729.00	4,185.68	4,034.29	27.650	CC, ES, SF
HAYMAKER 4N-9HZ - KMG - MWD	12,117.57	6,506.00	4,057.34	3,907.08	27.003	CC, ES, SF
HSR-WARNER 6-18 - KMG - No Survey	6,638.47	6,625.97	3,314.01	3,278.38	93.012	CC, ES
HSR-WARNER 6-18 - KMG - No Survey	7,000.00	6,969.56	3,392.83	3,355.52	90.917	SF
HUDCO 16-18 - KMG - Gyro	6,600.00	6,593.90	1,041.29	993.32	21.709	CC, ES
HUDCO 16-18 - KMG - Gyro	6,800.00	6,779.35	1,056.70	1,007.52	21.485	SF
HUDCO 24-18 - KMG - MWD	1,266.22	1,189.83	1,088.30	1,080.02	131.409	CC
HUDCO 24-18 - KMG - MWD	1,300.00	1,212.28	1,088.48	1,080.00	128.331	ES
HUDCO 24-18 - KMG - MWD	6,800.00	6,905.58	1,363.20	1,314.37	27.917	SF
HUDCO 39-18 - KMG - MWD	3,899.27	4,002.99	76.19	41.64	2.205	CC
HUDCO 39-18 - KMG - MWD	3,900.00	4,003.70	76.19	41.64	2.205	ES, SF
HUDCO 40-18 - KMG - MWD	3,042.99	3,015.00	1,019.10	996.20	44.496	CC
HUDCO 40-18 - KMG - MWD	7,181.41	7,160.32	1,024.25	971.87	19.552	ES
HUDCO 40-18 - KMG - MWD	7,400.00	7,298.11	1,040.97	987.03	19.299	SF
HUDCO 9-18 - KMG - Gyro	6,696.36	6,684.53	654.31	606.57	13.706	CC
HUDCO 9-18 - KMG - Gyro	6,700.00	6,688.15	654.31	606.55	13.699	ES
HUDCO 9-18 - KMG - Gyro	6,800.00	6,786.67	657.46	609.10	13.595	SF
LUCERO X 20-04 - KMG - Gyro	400.00	373.58	1,871.13	1,868.78	796.948	CC, ES
LUCERO X 20-04 - KMG - Gyro	8,800.00	7,279.48	2,358.46	2,287.73	33.342	SF
MARKHAM 13-8 - KMG - MWD	7,738.81	7,402.25	4,190.53	4,134.17	74.349	CC
MARKHAM 13-8 - KMG - MWD	7,800.00	7,401.09	4,191.15	4,134.03	73.366	ES
MARKHAM 13-8 - KMG - MWD	10,900.00	7,369.52	5,254.89	5,142.76	46.863	SF
MARKHAM 34-8 - KMG - MWD	7,430.37	7,375.70	3,776.00	3,720.36	67.868	CC, ES
MARKHAM 34-8 - KMG - MWD	10,300.00	7,443.64	4,790.76	4,686.78	46.073	SF
MARKHAM 35-8 - KMG - MWD	8,514.25	7,532.03	3,752.28	3,679.83	51.792	CC
MARKHAM 35-8 - KMG - MWD	8,600.00	7,530.65	3,753.26	3,679.07	50.587	ES
MARKHAM 35-8 - KMG - MWD	10,800.00	7,496.00	4,393.47	4,278.54	38.229	SF
MEGUIRE 28C-16HZ - KMG - MWD	12,117.57	11,756.22	2,810.16	2,702.37	26.070	CC, ES, SF
MEGUIRE 29C-16HZ - KMG - MWD	12,117.57	11,837.68	1,638.56	1,531.17	15.259	CC, ES, SF
MEGUIRE 29N-16HZ - KMG - MWD	12,117.57	11,626.05	1,911.26	1,805.02	17.989	CC, ES, SF
MEGUIRE 30N-16HZ - KMG - MWD	12,117.57	11,630.11	814.87	708.28	7.645	CC, ES, SF
MEGUIRE 3N-16HZ - KMG - No Survey	12,117.57	7,242.00	4,823.96	4,697.01	38.000	CC, ES, SF
MEGUIRE 4N-16HZ - KMG - MWD	12,117.57	11,695.00	1,377.89	1,270.61	12.844	CC, ES, SF
MEGUIRE X 21-04 - KMG - Gyro	12,117.57	7,215.68	2,462.33	2,313.20	16.511	CC, ES, SF
MEGUIRE X 21-06 - KMG - No Survey	12,117.57	7,234.00	4,379.90	4,253.08	34.536	CC, ES, SF

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

Anticollision Summary Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well MELBON RANCH 4F-17H-M265
Project:	Sec 17 T2N-R65W	TVD Reference:	WELL @ 4979.00usft (Original Well Elev)
Reference Site:	Melbon Ranch Pad	MD Reference:	WELL @ 4979.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	MELBON RANCH 4F-17H-M265	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2 17May18 kjs	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						
Existing Wells (Melbon Ranch)						
MEGUIRE X 21-5JI - KMG - No Survey	12,117.57	7,239.00	3,866.97	3,722.80	26.822	CC, ES, SF
MELBON 12C-8HZ - KMG - MWD	7,836.91	6,930.45	1,207.52	1,154.05	22.580	CC, ES
MELBON 12C-8HZ - KMG - MWD	8,200.00	6,909.00	1,260.94	1,202.27	21.491	SF
MELBON 12N-8HZ - KMG - MWD	6,609.87	6,568.00	1,237.20	1,188.35	25.326	CC
MELBON 12N-8HZ - KMG - MWD	6,700.00	6,595.43	1,237.28	1,188.20	25.211	ES, SF
MELBON 19C-8HZ - KMG - MWD	8,631.08	6,903.40	1,247.96	1,180.56	18.517	CC, ES
MELBON 19C-8HZ - KMG - MWD	9,000.00	6,905.68	1,301.34	1,226.97	17.499	SF
MELBON 19N-E8HZ - KMG - MWD	8,959.66	6,817.39	1,308.42	1,234.78	17.767	CC
MELBON 19N-E8HZ - KMG - MWD	9,000.00	6,817.82	1,309.04	1,234.50	17.562	ES
MELBON 19N-E8HZ - KMG - MWD	9,300.00	6,821.01	1,351.95	1,271.83	16.875	SF
MELBON 19N-W8HZ - KMG - MWD	8,288.46	6,846.65	1,279.45	1,219.74	21.426	CC
MELBON 19N-W8HZ - KMG - MWD	8,300.00	6,846.64	1,279.50	1,219.57	21.350	ES
MELBON 19N-W8HZ - KMG - MWD	8,700.00	6,846.31	1,344.01	1,277.13	20.095	SF
MELBON 23C-8HZ - KMG - MWD	9,571.31	6,944.01	1,298.94	1,205.20	13.857	CC
MELBON 23C-8HZ - KMG - MWD	9,600.00	6,956.00	1,299.15	1,204.39	13.710	ES
MELBON 23C-8HZ - KMG - MWD	9,900.00	6,998.00	1,336.05	1,234.62	13.172	SF
MELBON 23N-8HZ - KMG - MWD	9,701.23	6,838.36	1,372.36	1,277.55	14.476	CC, ES
MELBON 23N-8HZ - KMG - MWD	10,000.00	6,857.00	1,403.84	1,302.91	13.909	SF
MELBON RANCH 1 - V O&G - No Survey	8,572.83	7,278.00	263.39	205.52	4.552	CC, ES, SF
MELBON RANCH 13-17 - CPR - MWD	7,894.20	7,365.33	559.87	499.58	9.286	CC
MELBON RANCH 13-17 - CPR - MWD	7,900.00	7,365.32	559.90	499.55	9.277	ES, SF
MELBON RANCH 14-17 - CPR - MWD	2,634.79	2,738.39	917.45	895.17	41.189	CC
MELBON RANCH 14-17 - CPR - MWD	3,100.00	3,211.41	921.18	894.53	34.575	ES
MELBON RANCH 14-17 - CPR - MWD	7,900.00	7,392.45	959.90	899.34	15.851	SF
MELBON RANCH 17-14 - V O&G - No Survey	8,511.97	7,278.00	558.30	501.75	9.872	CC, ES
MELBON RANCH 17-14 - V O&G - No Survey	8,600.00	7,278.00	565.20	507.40	9.778	SF
MELBON RANCH 23-17 - CPR - MWD	9,341.40	7,405.53	601.94	509.41	6.505	CC, ES
MELBON RANCH 23-17 - CPR - MWD	9,400.00	7,407.06	604.78	510.47	6.412	SF
MELBON RANCH 24-17 - CPR - MWD	9,138.03	7,345.76	933.05	846.49	10.778	CC, ES
MELBON RANCH 24-17 - CPR - MWD	9,300.00	7,344.26	947.00	857.31	10.558	SF
MELBON RANCH 2-4-17 - CPR - MWD	8,692.16	7,413.77	1,028.04	953.94	13.874	CC
MELBON RANCH 2-4-17 - CPR - MWD	8,700.00	7,413.58	1,028.07	953.77	13.838	ES
MELBON RANCH 2-4-17 - CPR - MWD	9,000.00	7,406.21	1,073.11	992.30	13.280	SF
MELBON RANCH 2-8-17 - CPR - MWD	8,535.06	7,449.37	1,403.03	1,323.79	17.707	CC, ES
MELBON RANCH 2-8-17 - CPR - MWD	8,800.00	7,447.35	1,427.82	1,344.24	17.083	SF
MELBON RANCH 33-17 - CPR - MWD	10,672.68	7,510.20	353.24	216.83	2.589	CC, ES, SF
MELBON RANCH 34-17 - CPR - MWD	10,506.06	7,326.31	938.04	817.99	7.814	CC, ES
MELBON RANCH 34-17 - CPR - MWD	10,600.00	7,329.25	942.73	821.10	7.751	SF
MELBON RANCH 3A-17H - CPR - MWD	717.45	707.43	48.33	43.52	10.054	CC
MELBON RANCH 3A-17H - CPR - MWD	800.00	789.61	48.90	43.49	9.040	ES
MELBON RANCH 3A-17H - CPR - MWD	12,117.57	11,773.39	724.85	466.15	2.802	SF
MELBON RANCH 3B-17H - CPR - MWD	832.86	823.75	68.91	63.31	12.305	CC
MELBON RANCH 3B-17H - CPR - MWD	12,117.57	11,902.01	270.79	48.66	1.219	Level 3, ES, SF
MELBON RANCH 43-17 43-17 - CPR - Gyro	12,117.57	7,235.44	337.56	181.52	2.163	CC, ES, SF
MELBON RANCH 4-6-17 - CPR - MWD	9,796.36	7,406.91	152.01	51.21	1.508	CC, ES
MELBON RANCH 4-6-17 - CPR - MWD	9,800.00	7,406.93	152.05	51.21	1.508	SF
MELBON RANCH 4-8-17 - CPR - Gyro	9,947.68	7,227.80	1,187.79	1,084.78	11.532	CC
MELBON RANCH 4-8-17 - CPR - Gyro	10,000.00	7,227.92	1,188.94	1,084.77	11.414	ES
MELBON RANCH 4-8-17 - CPR - Gyro	10,100.00	7,228.13	1,197.51	1,091.51	11.297	SF
MELBON RANCH 6-4-17 - CPR - MWD	11,112.49	7,439.80	112.07	-29.73	0.790	Level 2, CC, ES, SF
Melbon Ranch 6-8-17 - CPR - MWD	11,212.43	7,450.86	1,396.69	1,250.53	9.556	CC, ES
Melbon Ranch 6-8-17 - CPR - MWD	11,400.00	7,452.38	1,410.56	1,260.43	9.396	SF
MELBON RANCH 8-4-17 - CPR - MWD	12,117.57	7,299.62	556.49	490.00	8.370	CC, ES, SF

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

Anticollision Summary Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well MELBON RANCH 4F-17H-M265
Project:	Sec 17 T2N-R65W	TVD Reference:	WELL @ 4979.00usft (Original Well Elev)
Reference Site:	Melbon Ranch Pad	MD Reference:	WELL @ 4979.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	MELBON RANCH 4F-17H-M265	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2 17May18 kjs	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						
Existing Wells (Melbon Ranch)						
MELBON RANCH 8-6-17 - CPR - MWD	12,117.57	7,320.67	1,140.97	994.58	7.794	CC, ES, SF
MELBON RANCH 8-8-17 - CPR - MWD	12,117.57	7,629.96	2,363.45	2,202.95	14.726	CC, ES, SF
MELBON RANCH E UNIT 1 - CPR - Gyro	11,468.52	7,232.69	447.40	304.81	3.138	CC, ES
MELBON RANCH E UNIT 1 - CPR - Gyro	11,500.00	7,233.10	448.51	305.33	3.132	SF
MEQUIRE 21-3P - KMG - No Survey	12,117.57	7,229.00	3,336.88	3,214.92	27.361	CC, ES, SF
MUSE 1 - KMG - Gyro	6,680.90	6,601.16	2,441.13	2,393.68	51.446	CC
MUSE 1 - KMG - Gyro	6,700.00	6,622.96	2,441.20	2,393.62	51.302	ES
MUSE 1 - KMG - Gyro	7,200.00	7,086.87	2,507.27	2,456.89	49.762	SF
MUSE 2 - KMG - No Survey	6,611.78	6,603.31	1,097.99	1,061.87	30.396	CC, ES
MUSE 2 - KMG - No Survey	6,700.00	6,691.27	1,103.26	1,066.68	30.160	SF
PALMER 11-20 - KMG - No Survey	9,496.48	7,275.00	4,844.05	4,764.48	60.879	CC
PALMER 11-20 - KMG - No Survey	9,600.00	7,275.00	4,845.16	4,763.07	59.028	ES
PALMER 11-20 - KMG - No Survey	12,117.57	7,275.00	5,530.02	5,399.33	42.315	SF
PALMER X 20-05 - KMG - Gyro	400.00	398.20	3,131.61	3,129.17	1,286.073	CC, ES
PALMER X 20-05 - KMG - Gyro	10,100.00	7,271.90	3,945.74	3,850.43	41.399	SF
PALMER X 20-06 - KMG - Gyro	9,281.09	7,217.33	3,482.25	3,395.93	40.342	CC
PALMER X 20-06 - KMG - Gyro	9,400.00	7,217.66	3,484.28	3,395.15	39.094	ES
PALMER X 20-06 - KMG - Gyro	10,900.00	7,222.06	3,840.17	3,722.45	32.622	SF
PALMER X 20-20 - KMG - Gyro	266.98	227.99	4,049.17	4,047.80	2,957.423	CC
PALMER X 20-20 - KMG - Gyro	8,800.00	7,289.46	4,062.60	3,987.32	53.970	ES
PALMER X 20-20 - KMG - Gyro	11,100.00	7,296.65	4,701.66	4,583.39	39.753	SF
POTTS X 18-10 - KMG - Gyro	6,611.80	6,579.59	1,884.56	1,837.92	40.408	CC, ES
POTTS X 18-10 - KMG - Gyro	6,800.00	6,784.34	1,908.43	1,860.46	39.791	SF
POTTS X 18-15 - KMG - Gyro	6,600.00	6,558.10	2,061.09	2,013.68	43.470	CC, ES
POTTS X 18-15 - KMG - Gyro	6,800.00	6,759.60	2,088.26	2,039.54	42.861	SF
RUSSIAN FIDDLER 15N-18HZ - KMG - MWD	6,781.98	12,713.00	2,130.12	2,024.24	20.118	CC, ES
RUSSIAN FIDDLER 15N-18HZ - KMG - MWD	6,900.00	12,713.00	2,141.38	2,034.11	19.963	SF
RUSSIAN FIDDLER 36C-18HZ - KMG - MWD	6,782.72	12,872.00	2,615.33	2,500.65	22.806	CC, ES
RUSSIAN FIDDLER 36C-18HZ - KMG - MWD	6,900.00	12,872.00	2,626.47	2,510.49	22.646	SF
RUSSIAN FIDDLER 36N-18HZ - KMG - MWD	6,721.71	12,128.00	3,144.55	3,048.91	32.879	CC, ES
RUSSIAN FIDDLER 36N-18HZ - KMG - MWD	6,800.00	12,128.00	3,149.02	3,052.95	32.778	SF
RUSSIAN FIDDLER 36N-18HZ - KMG - MWD	6,748.14	12,416.00	3,033.22	2,929.36	29.203	CC, ES
RUSSIAN FIDDLER 36N-18HZ - KMG - MWD	6,900.00	12,416.00	3,050.82	2,945.95	29.091	SF
RUSSIAN FIDDLER 37C-18HZ - KMG - MWD	6,865.32	12,903.00	1,730.42	1,636.93	18.509	CC, ES
RUSSIAN FIDDLER 37C-18HZ - KMG - MWD	7,100.00	12,903.00	1,773.35	1,675.76	18.172	SF
RUSSIAN FIDDLER 37N-18HZ - KMG - MWD	6,805.70	12,711.00	1,883.33	1,783.71	18.906	CC, ES
RUSSIAN FIDDLER 37N-18HZ - KMG - MWD	7,000.00	12,711.00	1,913.38	1,811.16	18.718	SF
SANDLIN-WELD COUNTY 1 - KMG - No Survey	11,652.28	7,249.00	2,481.86	2,346.59	18.348	CC
SANDLIN-WELD COUNTY 1 - KMG - No Survey	11,700.00	7,249.00	2,482.31	2,345.82	18.186	ES
SANDLIN-WELD-COUNTY UNIT 2 - KMG - Gyro	12,117.57	7,249.00	2,525.09	2,379.80	17.379	SF
SANDLIN-WELD-COUNTY UNIT 2 - KMG - Gyro	8,840.34	7,263.35	2,424.25	2,348.22	31.885	CC
SANDLIN-WELD-COUNTY UNIT 2 - KMG - Gyro	8,900.00	7,262.82	2,424.98	2,347.55	31.315	ES
SANDLIN-WELD-COUNTY UNIT 2 - KMG - Gyro	9,900.00	7,254.03	2,645.71	2,548.57	27.237	SF
SARCHET 1 - KMG - No Survey	11,143.34	7,251.00	3,210.49	3,088.62	26.344	CC
SARCHET 1 - KMG - No Survey	11,200.00	7,251.00	3,210.86	3,087.55	26.038	ES
SARCHET 1 - KMG - No Survey	12,117.57	7,251.00	3,371.52	3,230.08	23.836	SF
SARCHET 15N-20HZ - KMG - MWD	10,773.91	6,877.00	1,179.17	1,068.91	10.695	CC
SARCHET 15N-20HZ - KMG - MWD	10,800.00	6,877.00	1,179.46	1,068.78	10.657	ES
SARCHET 15N-20HZ - KMG - MWD	10,900.00	6,877.00	1,185.89	1,073.91	10.590	SF
SARCHET 16N-20HZ - KMG - No Survey	12,117.57	7,255.00	2,017.32	1,869.85	13.680	CC, ES, SF
SARCHET 20-1 - KMG - Gyro	11,819.62	7,239.42	2,003.32	1,851.37	13.184	CC
SARCHET 20-1 - KMG - Gyro	11,900.00	7,237.34	2,004.93	1,850.94	13.019	ES
SARCHET 20-1 - KMG - Gyro	12,117.57	7,231.69	2,025.34	1,866.85	12.779	SF

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

Anticollision Summary Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well MELBON RANCH 4F-17H-M265
Project:	Sec 17 T2N-R65W	TVD Reference:	WELL @ 4979.00usft (Original Well Elev)
Reference Site:	Melbon Ranch Pad	MD Reference:	WELL @ 4979.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	MELBON RANCH 4F-17H-M265	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2 17May18 kjs	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						
Existing Wells (Melbon Ranch)						
SARCHET 20-2 - NOBLE - No Survey	10,605.48	7,254.00	2,205.25	2,097.45	20.457	CC
SARCHET 20-2 - NOBLE - No Survey	10,700.00	7,254.00	2,207.27	2,097.20	20.053	ES
SARCHET 20-2 - NOBLE - No Survey	11,200.00	7,254.00	2,284.49	2,165.36	19.177	SF
SARCHET 36G-20HZ - KMG - Proposed	10,191.83	7,265.00	1,929.76	1,832.55	19.851	CC
SARCHET 36G-20HZ - KMG - Proposed	10,200.00	7,265.00	1,929.78	1,832.37	19.810	ES
SARCHET 36G-20HZ - KMG - Proposed	10,700.00	7,265.00	1,995.55	1,888.77	18.688	SF
SARCHET 36N-20HZ - KMG - MWD	10,209.38	6,833.83	1,153.01	1,057.15	12.029	CC, ES
SARCHET 36N-20HZ - KMG - MWD	10,400.00	6,830.53	1,168.64	1,069.55	11.794	SF
SARCHET 37C-20HZ - KMG - Proposed	10,250.91	7,264.00	1,861.95	1,763.31	18.876	CC
SARCHET 37C-20HZ - KMG - Proposed	10,300.00	7,264.00	1,862.60	1,762.78	18.661	ES
SARCHET 37C-20HZ - KMG - Proposed	10,700.00	7,264.00	1,915.34	1,808.15	17.867	SF
SARCHET 37N-20HZ - KMG - Proposed	10,285.04	7,264.00	1,896.24	1,796.72	19.055	CC
SARCHET 37N-20HZ - KMG - Proposed	10,300.00	7,264.00	1,896.30	1,796.42	18.986	ES
SARCHET 37N-20HZ - KMG - Proposed	10,800.00	7,264.00	1,964.92	1,855.92	18.027	SF
SARCHET 38C-20HZ - KMG - Proposed	12,117.57	7,246.00	2,028.22	1,880.80	13.758	CC, ES, SF
SARCHET X 20-8 - KMG - Gyro	11,962.37	7,227.00	3,609.73	3,454.12	23.198	CC
SARCHET X 20-8 - KMG - Gyro	12,100.00	7,227.00	3,612.35	3,453.18	22.695	ES
SARCHET X 20-8 - KMG - Gyro	12,117.57	7,227.00	3,613.06	3,453.45	22.636	SF
SEATON 2-18 - KMG - No Survey	6,689.51	6,663.85	3,582.70	3,546.35	98.555	CC
SEATON 2-18 - KMG - No Survey	6,700.00	6,674.27	3,582.74	3,546.33	98.416	ES
SEATON 2-18 - KMG - No Survey	9,600.00	7,310.00	5,214.89	5,153.14	84.449	SF
SEATON 7-18 - KMG - No Survey	6,653.00	6,644.48	2,165.99	2,130.17	60.469	CC, ES
SEATON 7-18 - KMG - No Survey	6,900.00	6,884.15	2,196.51	2,159.55	59.422	SF
SEATON 8-18 - KMG - Gyro	6,722.79	6,695.27	1,730.11	1,682.10	36.035	CC, ES
SEATON 8-18 - KMG - Gyro	7,100.00	7,035.91	1,763.55	1,713.52	35.249	SF
SUNFLOWER 24N-17HZ - KMG - MWD	11,079.47	12,650.00	1,214.76	1,081.32	9.104	CC
SUNFLOWER 24N-17HZ - KMG - MWD	11,100.00	12,650.00	1,214.93	1,080.71	9.051	ES
SUNFLOWER 24N-17HZ - KMG - MWD	11,600.00	12,650.00	1,311.12	1,149.99	8.137	SF
SUNFLOWER 25G-17HZ - KMG - MWD	10,130.19	12,664.00	1,164.15	1,049.87	10.188	CC
SUNFLOWER 25G-17HZ - KMG - MWD	10,200.00	12,664.00	1,166.24	1,047.43	9.817	ES
SUNFLOWER 25G-17HZ - KMG - MWD	10,700.00	12,664.00	1,296.12	1,145.70	8.617	SF
SUNFLOWER 40C-17HZ - KMG - MWD	12,117.57	12,840.00	1,200.86	1,034.06	7.199	CC, ES, SF
SUNFLOWER 40N-17HZ - KMG - MWD	12,117.57	12,495.00	1,395.28	1,223.95	8.144	CC, ES, SF
SUNFLOWER 7C-17HZ - KMG - MWD	100.00	0.00	7,859.10	7,858.96	10,000.000	CC
SUNFLOWER 7C-17HZ - KMG - MWD	300.00	196.22	7,859.69	7,858.32	5,712.258	ES
SUNFLOWER 7C-17HZ - KMG - MWD	12,117.57	1,800.00	8,723.01	8,611.33	78.110	SF
SUNFLOWER 7N-17HZ - KMG - MWD	10,956.43	12,615.00	1,135.73	1,007.64	8.867	CC
SUNFLOWER 7N-17HZ - KMG - MWD	11,000.00	12,615.00	1,136.56	1,006.83	8.761	ES
SUNFLOWER 7N-17HZ - KMG - MWD	11,500.00	12,615.00	1,251.30	1,092.89	7.899	SF
SUNFLOWER 8N-17HZ - KMG - MWD	11,497.46	12,665.00	1,226.59	1,081.84	8.474	CC
SUNFLOWER 8N-17HZ - KMG - MWD	11,500.00	12,665.00	1,226.59	1,081.77	8.470	ES
SUNFLOWER 8N-17HZ - KMG - MWD	12,000.00	12,665.00	1,325.54	1,158.25	7.923	SF
THOMASON 1 - PETERSON - No Survey	12,117.57	7,233.00	2,129.39	2,069.83	35.753	CC, ES, SF
THOMASON 14-16 - KMG - MWD	12,117.57	7,484.13	2,823.34	2,732.16	30.965	CC, ES, SF
THOMASON 16-5 - KMG - Gyro	12,117.57	7,202.64	2,394.66	2,251.50	16.727	CC, ES, SF
THOMASON 21-16 - KMG - MWD	12,117.57	7,447.99	3,802.55	3,686.41	32.744	CC, ES, SF
THOMASON 23-16 - KMG - MWD	12,117.57	7,366.87	3,069.87	3,011.86	52.924	CC, ES, SF
THOMASON 25-16 - KMG - No Survey	12,117.57	945.00	6,773.51	6,732.40	164.773	CC, ES, SF
THOMASON 25-16R - KMG - MWD	12,117.57	7,409.20	3,266.72	3,185.98	40.458	CC, ES, SF
THOMASON 34N-9HZ - KMG - MWD	12,117.57	11,537.00	4,017.49	3,765.27	15.929	CC, ES, SF
THOMASON 36-16 - KMG - MWD	12,117.57	7,561.01	3,382.35	3,280.79	33.305	CC, ES, SF
THOMASON 6-16 - KMG - MWD	12,117.57	7,347.96	3,047.44	2,944.53	29.613	CC, ES, SF
THOMASON X 16-11 - KMG - No Survey	12,117.57	7,226.00	2,475.84	2,428.27	52.044	CC, ES, SF

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

Anticollision Summary Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well MELBON RANCH 4F-17H-M265
Project:	Sec 17 T2N-R65W	TVD Reference:	WELL @ 4979.00usft (Original Well Elev)
Reference Site:	Melbon Ranch Pad	MD Reference:	WELL @ 4979.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	MELBON RANCH 4F-17H-M265	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2 17May18 kjs	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						
Existing Wells (Melbon Ranch)						
THOMASON X 16-12 - KMG - Gyro	12,117.57	7,186.98	1,167.37	1,093.74	15.855	CC, ES, SF
THOMASON X 16-4 - KMG - No Survey	12,117.57	7,229.00	3,271.80	3,132.90	23.555	CC, ES, SF
THOMASON X16-13 - KMG - Gyro	12,117.57	7,240.38	1,330.30	1,221.19	12.192	CC, ES, SF
THOMSEN 1C-18HZ - KMG - MWD	6,910.89	14,563.00	3,403.14	3,319.99	40.930	CC, ES
THOMSEN 1C-18HZ - KMG - MWD	8,800.00	14,563.00	4,367.13	4,238.03	33.826	SF
THOMSEN 1N-18HZ - KMG - Proposed	6,814.55	13,958.15	3,859.30	3,771.37	43.887	CC, ES
THOMSEN 1N-18HZ - KMG - Proposed	8,900.00	13,958.15	4,972.72	4,843.64	38.523	SF
THOMSEN 2N-18HZ - KMG - MWD	6,928.26	13,966.00	2,937.33	2,866.53	41.488	CC, ES
THOMSEN 2N-18HZ - KMG - MWD	8,900.00	13,966.00	3,889.99	3,763.40	30.728	SF
THOMSEN 36C-18HZ - KMG - MWD	6,778.56	13,549.47	2,761.15	2,621.88	19.826	CC, ES
THOMSEN 36C-18HZ - KMG - MWD	6,900.00	13,546.08	2,774.05	2,633.52	19.740	SF
THOMSEN 36N-18HZ - KMG - MWD	6,767.72	13,619.00	2,400.79	2,257.46	16.751	CC, ES
THOMSEN 36N-18HZ - KMG - MWD	6,900.00	13,619.00	2,416.54	2,271.75	16.690	SF
THOMSEN 3N-18HZ - KMG - MWD	7,028.14	14,148.00	3,184.53	3,130.37	58.800	CC, ES
THOMSEN 3N-18HZ - KMG - MWD	9,800.00	14,148.00	4,420.45	4,284.52	32.518	SF
THOMSEN 4N-18HZ - KMG - MWD	7,294.92	14,792.00	2,568.70	2,514.15	47.092	CC
THOMSEN 4N-18HZ - KMG - MWD	7,300.00	14,792.00	2,568.70	2,514.14	47.075	ES
THOMSEN 4N-18HZ - KMG - MWD	9,700.00	14,792.00	3,570.45	3,434.28	26.220	SF
UPRR 38 PAN AM X 1 - KMG - Gyro	0.00	0.00	2,619.49			
UPRR 38 PAN AM X 1 - KMG - Gyro	100.00	64.26	2,619.52	2,619.26	10,000.000	ES
UPRR 38 PAN AM X 1 - KMG - Gyro	7,000.00	6,927.09	2,727.08	2,677.09	54.558	SF
WALTERS 21-18 - KMG - MWD	0.00	0.00	3,079.01			
WALTERS 21-18 - KMG - MWD	800.00	542.00	3,080.10	3,075.67	695.725	ES
WALTERS 21-18 - KMG - MWD	6,900.00	6,942.09	3,341.75	3,289.06	63.421	SF
WALTERS 25-18 - KMG - MWD	6,630.01	6,804.83	2,489.41	2,430.86	42.511	CC, ES
WALTERS 25-18 - KMG - MWD	6,800.00	6,964.42	2,507.39	2,447.86	42.120	SF
WALTERS 28-18 - KMG - MWD	0.00	0.00	3,087.42			
WALTERS 28-18 - KMG - MWD	100.00	87.25	3,087.60	3,087.33	10,000.000	ES
WALTERS 28-18 - KMG - MWD	9,900.00	7,786.36	6,220.50	6,140.30	77.567	SF
WARNER 12-18 - KMG - MWD	0.00	17.13	3,394.64			
WARNER 12-18 - KMG - MWD	1,100.00	805.15	3,396.15	3,389.63	521.091	ES
WARNER 12-18 - KMG - MWD	6,900.00	7,385.13	4,405.25	4,347.93	76.846	SF
WARNER 14-18 - KMG - No Survey	6,606.80	6,616.34	3,070.17	3,033.85	84.546	CC, ES
WARNER 14-18 - KMG - No Survey	6,900.00	6,902.15	3,125.20	3,087.53	82.969	SF
WARNER 18-18 - KMG - MWD	780.80	502.00	3,396.10	3,391.99	827.212	CC
WARNER 18-18 - KMG - MWD	800.00	502.00	3,396.15	3,391.98	813.793	ES
WARNER 18-18 - KMG - MWD	7,000.00	7,233.50	4,413.97	4,362.37	85.549	SF
WARNER 22-18 - KMG - MWD	907.56	630.49	3,385.92	3,380.88	671.772	CC, ES
WARNER 22-18 - KMG - MWD	7,000.00	7,021.61	3,907.76	3,856.07	75.604	SF
WARNER 23-18 - KMG - MWD	6,606.48	6,684.13	2,469.07	2,415.75	46.301	CC, ES
WARNER 23-18 - KMG - MWD	6,800.00	6,872.00	2,495.04	2,440.61	45.838	SF
WARNER 31-18 - KMG - MWD	842.75	568.03	3,390.89	3,386.31	740.989	CC
WARNER 31-18 - KMG - MWD	900.00	593.00	3,391.09	3,386.22	696.536	ES
WARNER 31-18 - KMG - MWD	6,900.00	5,031.50	5,302.22	5,257.18	117.718	SF
WARNER 32-18 - KMG - MWD	841.94	564.90	3,393.27	3,388.68	739.495	CC
WARNER 32-18 - KMG - MWD	900.00	591.00	3,393.54	3,388.64	693.444	ES
WARNER 32-18 - KMG - MWD	6,700.00	5,772.80	4,792.77	4,742.51	95.373	SF
WARNER 33-18 - KMG - MWD	0.00	27.81	3,215.50			
WARNER 33-18 - KMG - MWD	200.00	197.53	3,216.18	3,215.22	3,345.308	ES
WARNER 33-18 - KMG - MWD	6,900.00	7,474.29	4,943.22	4,881.19	79.692	SF
WARNER 35-18 - KMG - MWD	100.00	119.00	3,224.94	3,224.61	9,908.615	CC
WARNER 35-18 - KMG - MWD	200.00	212.00	3,225.27	3,224.26	3,177.987	ES
WARNER 35-18 - KMG - MWD	6,900.00	6,985.87	3,867.48	3,816.73	76.213	SF

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

Anticollision Summary Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well MELBON RANCH 4F-17H-M265
Project:	Sec 17 T2N-R65W	TVD Reference:	WELL @ 4979.00usft (Original Well Elev)
Reference Site:	Melbon Ranch Pad	MD Reference:	WELL @ 4979.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	MELBON RANCH 4F-17H-M265	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2 17May18 kjs	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						
Melbon Ranch Pad						
MELBON RANCH 4C-17H-M265 - Wellbore #1 - Design	200.00	200.00	30.00	29.00	30.208	CC, ES
MELBON RANCH 4C-17H-M265 - Wellbore #1 - Design	12,117.57	12,075.31	989.86	722.42	3.701	SF
MELBON RANCH 4D-17H-M265 - Wellbore #1 - Design	203.33	203.33	20.01	18.99	19.677	CC
MELBON RANCH 4D-17H-M265 - Wellbore #1 - Design	300.00	299.65	20.44	18.73	11.955	ES
MELBON RANCH 4D-17H-M265 - Wellbore #1 - Design	12,117.57	12,209.02	879.73	610.14	3.263	SF
MELBON RANCH 4E-17H-M265 - Wellbore #1 - Plan #2	300.00	300.00	10.00	8.29	5.848	CC, ES
MELBON RANCH 4E-17H-M265 - Wellbore #1 - Plan #2	12,117.57	11,945.71	592.19	339.03	2.339	SF
MELBON RANCH 4G-17H-M265 - Wellbore #1 - Plan #2	300.00	300.00	10.00	8.29	5.848	CC
MELBON RANCH 4G-17H-M265 - Wellbore #1 - Plan #2	400.00	400.00	10.24	7.81	4.221	ES
MELBON RANCH 4G-17H-M265 - Wellbore #1 - Plan #2	12,117.57	11,919.85	234.09	115.83	1.980	SF
MELBON RANCH 4H-17H-M265 - Wellbore #1 - Design	200.00	200.00	19.99	19.00	20.133	CC, ES
MELBON RANCH 4H-17H-M265 - Wellbore #1 - Design	12,117.57	11,926.51	667.15	411.51	2.610	SF
MELBON RANCH 4I-17H-M265 - Wellbore #1 - Design #	300.00	300.00	30.14	28.43	17.625	CC, ES
MELBON RANCH 4I-17H-M265 - Wellbore #1 - Design #	12,117.57	12,112.71	879.38	610.88	3.275	SF
MELBON RANCH 4J-17H-M265 - Wellbore #1 - Design #	203.43	203.43	40.00	38.99	39.315	CC
MELBON RANCH 4J-17H-M265 - Wellbore #1 - Design #	300.00	299.39	40.38	38.68	23.740	ES
MELBON RANCH 4J-17H-M265 - Wellbore #1 - Design #	12,117.57	11,996.28	1,263.93	997.78	4.749	SF
MELBON RANCH 4K-17H-M265 - Wellbore #1 - Design	200.00	200.00	50.00	49.01	50.358	CC, ES
MELBON RANCH 4K-17H-M265 - Wellbore #1 - Design	12,117.57	12,108.94	1,506.31	1,237.36	5.601	SF