



Crestone Peak Resources

Sec 17 T2N-R65W

Melbon Ranch Pad

MELBON RANCH 4G-17H-M265

Wellbore #1

Plan: Plan #2 17May18 kjs

Standard Planning Report - Geographic

17 May, 2018



Crestone Peak Resources

Well Name:

MELBON RANCH 4G-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
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	Start Build 2.00
1911.34	6.23	289.34	1910.73	5.60	-15.95	-15.63	16.90	Hold 6.23 Inc, 289.34 Az
6330.26	6.23	289.34	6303.57	164.32	-468.20	-458.97	496.20	KOP 8/100
7528.18	90.00	88.92	7092.00	207.77	243.59	254.12	1219.92	LP 90 Inc, 88.92 Az
9878.18	90.00	88.92	7092.00	252.10	2593.17	2602.81	3569.92	Start 2/100 Turn
9946.66	90.00	90.29	7092.00	252.58	2661.64	2671.21	3638.39	Hold 90.29 Az
11920.13	90.00	90.29	7092.00	242.64	4635.09	4641.43	5610.87	TD at 11920.13

Geodetic Datum:

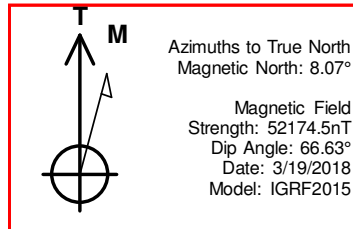
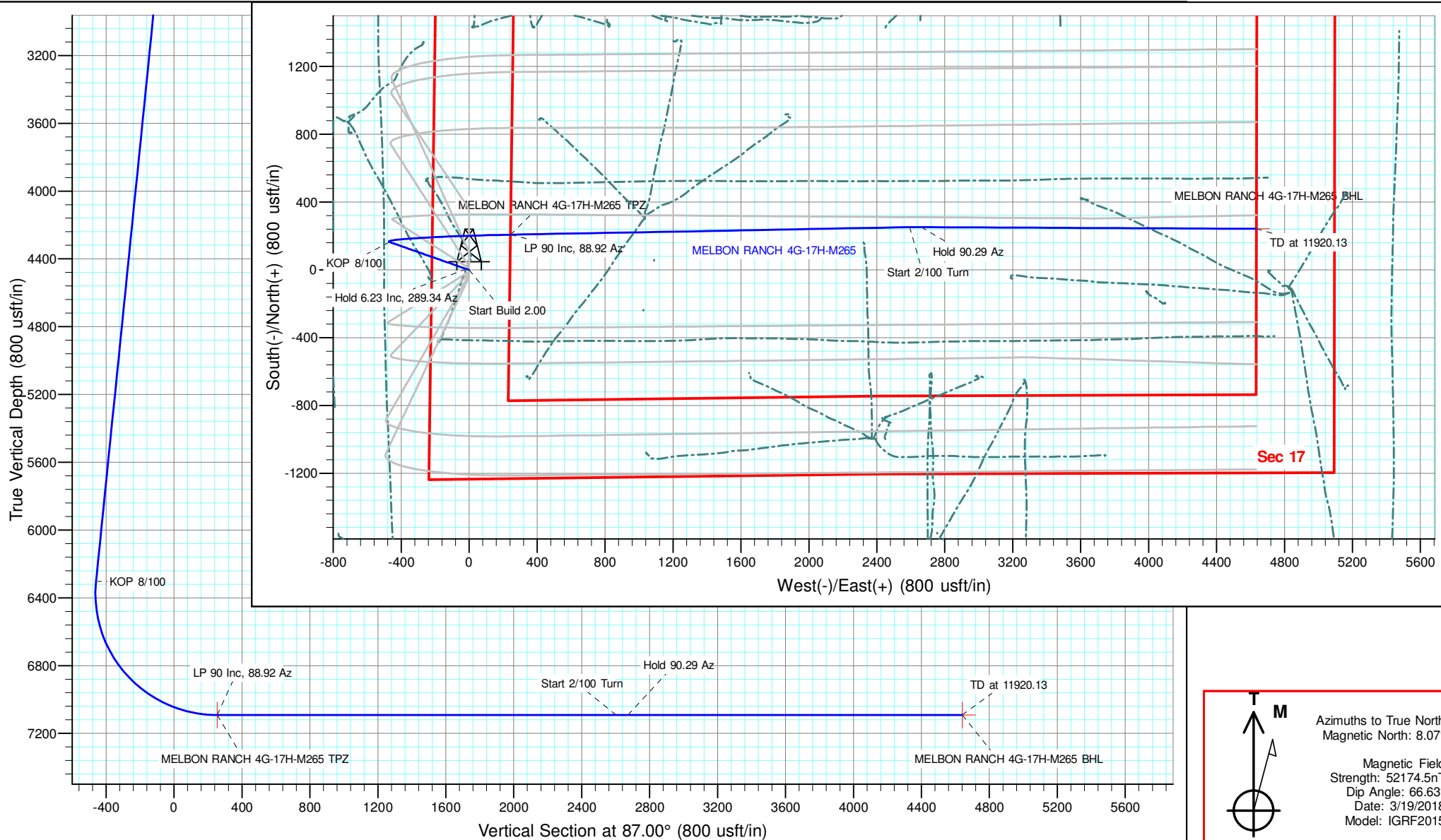
North American Datum 1983
US State Plane 1983, Colorado Northern Zone

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 4G-17H-M265 BPH	92.00	242.64	4635.09	1293232.38	3229250.12	40.135407	-104.680059	Point
MELBON RANCH 4G-17H-M265 TPZ	92.00	207.77	243.59	1293157.73	3224859.12	40.135313	-104.695765	Point



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4G-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 4G-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 4G-17H-M265					
Well Position	+N/-S	0.00 usft	Northing:	1,292,947.76 usft	Latitude:	40.134742
	+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	52,174.47821355

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	87.00

Plan Survey Tool Program	Date	5/17/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	11,919.55 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	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,911.34	6.23	289.34	1,910.73	5.60	-15.95	2.00	2.00	0.00	289.34	
6,330.26	6.23	289.34	6,303.57	164.32	-468.20	0.00	0.00	0.00	0.00	
7,528.18	90.00	88.92	7,092.00	207.77	243.59	8.00	6.99	13.32	159.47	MELBON RANCH 4G
9,878.18	90.00	88.92	7,092.00	252.10	2,593.17	0.00	0.00	0.00	0.00	
9,946.66	90.00	90.29	7,092.00	252.58	2,661.64	2.00	0.00	2.00	90.00	
11,920.13	90.00	90.29	7,092.00	242.64	4,635.09	0.00	0.00	0.00	0.00	MELBON RANCH 4G

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4G-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 4G-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	1,292,947.76	3,224,617.42	40.134742	-104.696637	
100.00	0.00	0.00	100.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
200.00	0.00	0.00	200.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
300.00	0.00	0.00	300.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
400.00	0.00	0.00	400.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
500.00	0.00	0.00	500.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
600.00	0.00	0.00	600.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
700.00	0.00	0.00	700.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
800.00	0.00	0.00	800.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
900.00	0.00	0.00	900.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	1,292,947.76	3,224,617.42	40.134742	-104.696637	
Start Build 2.00										
1,700.00	2.00	289.34	1,699.98	0.58	-1.65	1,292,948.32	3,224,615.77	40.134744	-104.696643	
1,800.00	4.00	289.34	1,799.84	2.31	-6.58	1,292,950.01	3,224,610.82	40.134749	-104.696660	
1,900.00	6.00	289.34	1,899.45	5.20	-14.81	1,292,952.82	3,224,602.57	40.134757	-104.696690	
1,911.34	6.23	289.34	1,910.73	5.60	-15.95	1,292,953.21	3,224,601.42	40.134758	-104.696694	
Hold 6.23 Inc, 289.34 Az										
2,000.00	6.23	289.34	1,998.86	8.78	-25.02	1,292,956.32	3,224,592.32	40.134766	-104.696726	
2,100.00	6.23	289.34	2,098.27	12.37	-35.26	1,292,959.81	3,224,582.06	40.134776	-104.696763	
2,200.00	6.23	289.34	2,197.68	15.97	-45.49	1,292,963.31	3,224,571.79	40.134786	-104.696799	
2,300.00	6.23	289.34	2,297.09	19.56	-55.73	1,292,966.81	3,224,561.52	40.134796	-104.696836	
2,400.00	6.23	289.34	2,396.50	23.15	-65.96	1,292,970.31	3,224,551.26	40.134806	-104.696873	
2,500.00	6.23	289.34	2,495.91	26.74	-76.19	1,292,973.81	3,224,540.99	40.134816	-104.696909	
2,600.00	6.23	289.34	2,595.32	30.33	-86.43	1,292,977.31	3,224,530.72	40.134826	-104.696946	
2,700.00	6.23	289.34	2,694.73	33.93	-96.66	1,292,980.81	3,224,520.46	40.134835	-104.696982	
2,800.00	6.23	289.34	2,794.14	37.52	-106.90	1,292,984.31	3,224,510.19	40.134845	-104.697019	
2,900.00	6.23	289.34	2,893.55	41.11	-117.13	1,292,987.81	3,224,499.92	40.134855	-104.697056	
3,000.00	6.23	289.34	2,992.96	44.70	-127.37	1,292,991.31	3,224,489.66	40.134865	-104.697092	
3,100.00	6.23	289.34	3,092.37	48.29	-137.60	1,292,994.80	3,224,479.39	40.134875	-104.697129	
3,200.00	6.23	289.34	3,191.78	51.88	-147.84	1,292,998.30	3,224,469.12	40.134885	-104.697165	
3,300.00	6.23	289.34	3,291.19	55.48	-158.07	1,293,001.80	3,224,458.86	40.134895	-104.697202	
3,400.00	6.23	289.34	3,390.60	59.07	-168.30	1,293,005.30	3,224,448.59	40.134904	-104.697239	
3,500.00	6.23	289.34	3,490.01	62.66	-178.54	1,293,008.80	3,224,438.32	40.134914	-104.697275	
3,600.00	6.23	289.34	3,589.42	66.25	-188.77	1,293,012.30	3,224,428.06	40.134924	-104.697312	
3,700.00	6.23	289.34	3,688.83	69.84	-199.01	1,293,015.80	3,224,417.79	40.134934	-104.697349	
3,800.00	6.23	289.34	3,788.24	73.44	-209.24	1,293,019.30	3,224,407.52	40.134944	-104.697385	
3,900.00	6.23	289.34	3,887.65	77.03	-219.48	1,293,022.80	3,224,397.26	40.134954	-104.697422	
4,000.00	6.23	289.34	3,987.06	80.62	-229.71	1,293,026.30	3,224,386.99	40.134964	-104.697458	
4,100.00	6.23	289.34	4,086.48	84.21	-239.95	1,293,029.80	3,224,376.72	40.134974	-104.697495	
4,200.00	6.23	289.34	4,185.89	87.80	-250.18	1,293,033.29	3,224,366.46	40.134983	-104.697532	
4,300.00	6.23	289.34	4,285.30	91.40	-260.42	1,293,036.79	3,224,356.19	40.134993	-104.697568	
4,400.00	6.23	289.34	4,384.71	94.99	-270.65	1,293,040.29	3,224,345.92	40.135003	-104.697605	
4,500.00	6.23	289.34	4,484.12	98.58	-280.88	1,293,043.79	3,224,335.66	40.135013	-104.697641	
4,600.00	6.23	289.34	4,583.53	102.17	-291.12	1,293,047.29	3,224,325.39	40.135023	-104.697678	
4,700.00	6.23	289.34	4,682.94	105.76	-301.35	1,293,050.79	3,224,315.12	40.135033	-104.697715	
4,800.00	6.23	289.34	4,782.35	109.36	-311.59	1,293,054.29	3,224,304.86	40.135043	-104.697751	
4,900.00	6.23	289.34	4,881.76	112.95	-321.82	1,293,057.79	3,224,294.59	40.135052	-104.697788	
5,000.00	6.23	289.34	4,981.17	116.54	-332.06	1,293,061.29	3,224,284.32	40.135062	-104.697824	

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4G-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 4G-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	
5,100.00	6.23	289.34	5,080.58	120.13	-342.29	1,293,064.79	3,224,274.06	40.135072	-104.697861	
5,200.00	6.23	289.34	5,179.99	123.72	-352.53	1,293,068.28	3,224,263.79	40.135082	-104.697898	
5,300.00	6.23	289.34	5,279.40	127.31	-362.76	1,293,071.78	3,224,253.52	40.135092	-104.697934	
5,400.00	6.23	289.34	5,378.81	130.91	-372.99	1,293,075.28	3,224,243.26	40.135102	-104.697971	
5,500.00	6.23	289.34	5,478.22	134.50	-383.23	1,293,078.78	3,224,232.99	40.135112	-104.698007	
5,600.00	6.23	289.34	5,577.63	138.09	-393.46	1,293,082.28	3,224,222.72	40.135121	-104.698044	
5,700.00	6.23	289.34	5,677.04	141.68	-403.70	1,293,085.78	3,224,212.46	40.135131	-104.698081	
5,800.00	6.23	289.34	5,776.45	145.27	-413.93	1,293,089.28	3,224,202.19	40.135141	-104.698117	
5,900.00	6.23	289.34	5,875.86	148.87	-424.17	1,293,092.78	3,224,191.92	40.135151	-104.698154	
6,000.00	6.23	289.34	5,975.27	152.46	-434.40	1,293,096.28	3,224,181.66	40.135161	-104.698190	
6,100.00	6.23	289.34	6,074.68	156.05	-444.64	1,293,099.78	3,224,171.39	40.135171	-104.698227	
6,200.00	6.23	289.34	6,174.09	159.64	-454.87	1,293,103.28	3,224,161.12	40.135181	-104.698264	
6,300.00	6.23	289.34	6,273.50	163.23	-465.11	1,293,106.77	3,224,150.86	40.135190	-104.698300	
6,330.26	6.23	289.34	6,303.57	164.32	-468.20	1,293,107.83	3,224,147.75	40.135193	-104.698311	
KOP 8/100										
6,400.00	2.19	352.26	6,373.14	166.90	-471.95	1,293,110.38	3,224,143.98	40.135200	-104.698325	
6,500.00	8.04	73.29	6,472.77	170.81	-465.50	1,293,114.35	3,224,150.39	40.135211	-104.698302	
6,600.00	15.89	81.23	6,570.53	174.92	-445.23	1,293,118.64	3,224,170.62	40.135222	-104.698229	
6,700.00	23.84	83.98	6,664.51	179.13	-411.55	1,293,123.16	3,224,204.27	40.135234	-104.698109	
6,800.00	31.81	85.40	6,752.87	183.37	-365.11	1,293,127.82	3,224,250.67	40.135246	-104.697943	
6,900.00	39.80	86.30	6,833.91	187.56	-306.80	1,293,132.53	3,224,308.93	40.135257	-104.697734	
7,000.00	47.78	86.94	6,906.04	191.61	-237.78	1,293,137.21	3,224,377.92	40.135268	-104.697487	
7,100.00	55.77	87.44	6,967.86	195.44	-159.37	1,293,141.75	3,224,456.28	40.135279	-104.697207	
7,200.00	63.77	87.84	7,018.17	198.98	-73.12	1,293,146.07	3,224,542.51	40.135289	-104.696898	
7,300.00	71.76	88.20	7,055.98	202.17	19.32	1,293,150.09	3,224,634.91	40.135297	-104.696568	
7,400.00	79.75	88.52	7,080.57	204.93	116.12	1,293,153.73	3,224,731.68	40.135305	-104.696221	
7,500.00	87.75	88.83	7,091.45	207.22	215.42	1,293,156.92	3,224,830.96	40.135311	-104.695866	
7,528.18	90.00	88.92	7,092.00	207.77	243.59	1,293,157.73	3,224,859.12	40.135313	-104.695766	
LP 90 Inc, 88.92 Az - MELBON RANCH 4G-17H-M265 TPZ										
7,600.00	90.00	88.92	7,092.00	209.12	315.40	1,293,159.73	3,224,930.91	40.135316	-104.695509	
7,700.00	90.00	88.92	7,092.00	211.01	415.38	1,293,162.53	3,225,030.87	40.135322	-104.695151	
7,800.00	90.00	88.92	7,092.00	212.90	515.36	1,293,165.32	3,225,130.83	40.135327	-104.694794	
7,900.00	90.00	88.92	7,092.00	214.78	615.34	1,293,168.11	3,225,230.79	40.135332	-104.694436	
8,000.00	90.00	88.92	7,092.00	216.67	715.33	1,293,170.90	3,225,330.76	40.135337	-104.694078	
8,100.00	90.00	88.92	7,092.00	218.56	815.31	1,293,173.69	3,225,430.72	40.135342	-104.693721	
8,200.00	90.00	88.92	7,092.00	220.44	915.29	1,293,176.49	3,225,530.68	40.135347	-104.693363	
8,300.00	90.00	88.92	7,092.00	222.33	1,015.27	1,293,179.28	3,225,630.64	40.135353	-104.693006	
8,400.00	90.00	88.92	7,092.00	224.22	1,115.25	1,293,182.07	3,225,730.60	40.135358	-104.692648	
8,500.00	90.00	88.92	7,092.00	226.10	1,215.24	1,293,184.86	3,225,830.56	40.135363	-104.692290	
8,600.00	90.00	88.92	7,092.00	227.99	1,315.22	1,293,187.66	3,225,930.52	40.135368	-104.691933	
8,700.00	90.00	88.92	7,092.00	229.88	1,415.20	1,293,190.45	3,226,030.48	40.135373	-104.691575	
8,800.00	90.00	88.92	7,092.00	231.76	1,515.18	1,293,193.24	3,226,130.44	40.135378	-104.691218	
8,900.00	90.00	88.92	7,092.00	233.65	1,615.17	1,293,196.03	3,226,230.40	40.135384	-104.690860	
9,000.00	90.00	88.92	7,092.00	235.54	1,715.15	1,293,198.82	3,226,330.37	40.135389	-104.690502	
9,100.00	90.00	88.92	7,092.00	237.42	1,815.13	1,293,201.62	3,226,430.33	40.135394	-104.690145	
9,200.00	90.00	88.92	7,092.00	239.31	1,915.11	1,293,204.41	3,226,530.29	40.135399	-104.689787	
9,300.00	90.00	88.92	7,092.00	241.19	2,015.09	1,293,207.20	3,226,630.25	40.135404	-104.689430	
9,400.00	90.00	88.92	7,092.00	243.08	2,115.08	1,293,209.99	3,226,730.21	40.135409	-104.689072	
9,500.00	90.00	88.92	7,092.00	244.97	2,215.06	1,293,212.79	3,226,830.17	40.135415	-104.688714	
9,600.00	90.00	88.92	7,092.00	246.85	2,315.04	1,293,215.58	3,226,930.13	40.135420	-104.688357	
9,700.00	90.00	88.92	7,092.00	248.74	2,415.02	1,293,218.37	3,227,030.09	40.135425	-104.687999	
9,800.00	90.00	88.92	7,092.00	250.63	2,515.01	1,293,221.16	3,227,130.05	40.135430	-104.687642	
9,878.18	90.00	88.92	7,092.00	252.10	2,593.17	1,293,223.34	3,227,208.21	40.135434	-104.687362	
Start 2/100 Turn										

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4G-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 4G-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	
9,900.00	90.00	89.36	7,092.00	252.43	2,614.99	1,293,223.87	3,227,230.02	40.135435	-104.687284	
9,946.66	90.00	90.29	7,092.00	252.58	2,661.64	1,293,224.44	3,227,276.67	40.135435	-104.687117	
Hold 90.29 Az										
10,000.00	90.00	90.29	7,092.00	252.31	2,714.99	1,293,224.65	3,227,330.01	40.135435	-104.686926	
10,100.00	90.00	90.29	7,092.00	251.80	2,814.99	1,293,225.06	3,227,430.01	40.135433	-104.686569	
10,200.00	90.00	90.29	7,092.00	251.30	2,914.98	1,293,225.46	3,227,530.01	40.135432	-104.686211	
10,300.00	90.00	90.29	7,092.00	250.80	3,014.98	1,293,225.86	3,227,630.01	40.135430	-104.685853	
10,400.00	90.00	90.29	7,092.00	250.29	3,114.98	1,293,226.26	3,227,730.01	40.135429	-104.685496	
10,500.00	90.00	90.29	7,092.00	249.79	3,214.98	1,293,226.66	3,227,830.01	40.135427	-104.685138	
10,600.00	90.00	90.29	7,092.00	249.28	3,314.98	1,293,227.07	3,227,930.01	40.135426	-104.684780	
10,700.00	90.00	90.29	7,092.00	248.78	3,414.98	1,293,227.47	3,228,030.01	40.135425	-104.684423	
10,800.00	90.00	90.29	7,092.00	248.28	3,514.98	1,293,227.87	3,228,130.01	40.135423	-104.684065	
10,900.00	90.00	90.29	7,092.00	247.77	3,614.98	1,293,228.27	3,228,230.01	40.135422	-104.683708	
11,000.00	90.00	90.29	7,092.00	247.27	3,714.97	1,293,228.68	3,228,330.00	40.135420	-104.683350	
11,100.00	90.00	90.29	7,092.00	246.77	3,814.97	1,293,229.08	3,228,430.00	40.135419	-104.682992	
11,200.00	90.00	90.29	7,092.00	246.26	3,914.97	1,293,229.48	3,228,530.00	40.135418	-104.682635	
11,300.00	90.00	90.29	7,092.00	245.76	4,014.97	1,293,229.88	3,228,630.00	40.135416	-104.682277	
11,400.00	90.00	90.29	7,092.00	245.26	4,114.97	1,293,230.29	3,228,730.00	40.135415	-104.681919	
11,500.00	90.00	90.29	7,092.00	244.75	4,214.97	1,293,230.69	3,228,830.00	40.135413	-104.681562	
11,600.00	90.00	90.29	7,092.00	244.25	4,314.97	1,293,231.09	3,228,930.00	40.135412	-104.681204	
11,700.00	90.00	90.29	7,092.00	243.75	4,414.97	1,293,231.49	3,229,030.00	40.135410	-104.680846	
11,800.00	90.00	90.29	7,092.00	243.24	4,514.96	1,293,231.90	3,229,130.00	40.135409	-104.680489	
11,900.00	90.00	90.29	7,092.00	242.74	4,614.96	1,293,232.30	3,229,230.00	40.135408	-104.680131	
11,920.13	90.00	90.29	7,092.00	242.64	4,635.09	1,293,232.38	3,229,250.12	40.135407	-104.680059	
TD at 11920.13 - MELBON RANCH 4G-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 4G-17H-M265 - hit/miss target - Shape - Point	0.00	0.52	7,092.00	207.77	243.59	1,293,157.73	3,224,859.12	40.135313	-104.695766	
MELBON RANCH 4G-17H-M265 - hit/miss target - Shape - Point	0.00	0.53	7,092.00	242.64	4,635.09	1,293,232.38	3,229,250.12	40.135407	-104.680059	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
1,600.00	1,600.00	0.00	0.00	Start Build 2.00	
1,911.34	1,910.73	5.60	-15.95	Hold 6.23 Inc, 289.34 Az	
6,330.26	6,303.57	164.32	-468.20	KOP 8/100	
7,528.18	7,092.00	207.77	243.59	LP 90 Inc, 88.92 Az	
9,878.18	7,092.00	252.10	2,593.17	Start 2/100 Turn	
9,946.66	7,092.00	252.58	2,661.64	Hold 90.29 Az	
11,920.13	7,092.00	242.64	4,635.09	TD at 11920.13	



Crestone Peak Resources

Sec 17 T2N-R65W

Melbon Ranch Pad

MELBON RANCH 4G-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 4G-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 4G-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	11,919.55	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	11,920.13	6,604.00	3,669.46	3,511.49	23.227	CC, ES, SF
ADAMSON 14N-28HZ - KMG - MWD	11,920.13	6,510.00	3,971.18	3,826.02	27.357	CC, ES, SF
ADAMSON 28N-28HZ - KMG - MWD	11,920.13	6,699.00	4,642.19	4,502.19	33.158	CC, ES, SF
ADAMSON 35C-28HZ - KMG - MWD	11,920.13	6,697.00	3,777.88	3,626.84	25.013	CC, ES, SF
ADAMSON 36N-28HZ - KMG - MWD	11,920.13	6,510.00	4,126.77	3,984.01	28.907	CC, ES, SF
ADAMSON 37C-28HZ - KMG - MWD	11,920.13	6,699.00	4,331.14	4,189.16	30.505	CC, ES, SF
ADAMSON 37C-28HZX - KMG - MWD	11,920.13	6,699.00	4,331.14	4,189.16	30.505	CC, ES, SF
BYDALEK 28C-20HZ - KMG - MWD	9,312.24	12,039.00	2,007.58	1,906.94	19.948	CC, ES
BYDALEK 28C-20HZ - KMG - MWD	10,400.00	12,039.00	2,273.10	2,149.20	18.346	SF
BYDALEK 28N-20HZ - KMG - MWD	9,389.07	11,830.00	1,993.21	1,889.11	19.148	CC
BYDALEK 28N-20HZ - KMG - MWD	9,400.00	11,830.00	1,993.24	1,889.04	19.130	ES
BYDALEK 28N-20HZ - KMG - MWD	10,400.00	11,830.00	2,224.47	2,099.87	17.852	SF
BYDALEK 29C-20HZ - KMG - MWD	8,216.18	11,880.00	1,998.88	1,932.19	29.972	CC, ES
BYDALEK 29C-20HZ - KMG - MWD	9,600.00	11,880.00	2,431.15	2,318.65	21.609	SF
BYDALEK 29N-20HZ - KMG - MWD	8,099.42	11,671.00	1,983.97	1,919.71	30.875	CC
BYDALEK 29N-20HZ - KMG - MWD	8,100.00	11,671.00	1,983.97	1,919.70	30.870	ES
BYDALEK 29N-20HZ - KMG - MWD	9,500.00	11,671.00	2,428.53	2,317.46	21.865	SF
BYDALEK 30C-20HZ - KMG - MWD	7,359.54	11,950.00	1,943.43	1,885.27	33.413	CC
BYDALEK 30C-20HZ - KMG - MWD	7,400.00	11,950.00	1,943.97	1,884.85	32.880	ES
BYDALEK 30C-20HZ - KMG - MWD	8,800.00	11,950.00	2,445.19	2,338.34	22.885	SF
BYDALEK 3N-20HZ - KMG - MWD	8,813.59	11,597.00	2,152.94	2,069.78	25.886	CC, ES
BYDALEK 3N-20HZ - KMG - MWD	10,200.00	11,597.00	2,554.91	2,434.77	21.266	SF
BYDALEK 4N-20HZ - KMG - MWD	7,560.52	11,755.00	1,982.75	1,925.50	34.631	CC
BYDALEK 4N-20HZ - KMG - MWD	7,600.00	11,755.00	1,983.16	1,925.11	34.163	ES
BYDALEK 4N-20HZ - KMG - MWD	9,100.00	11,755.00	2,510.49	2,401.35	23.002	SF
CAMPBELL JF 17-13D - GW O&G - MWD	9,763.82	7,300.58	1,165.40	1,053.85	10.447	CC
CAMPBELL JF 17-13D - GW O&G - MWD	9,800.00	7,300.61	1,165.96	1,053.13	10.334	ES
CAMPBELL JF 17-13D - GW O&G - MWD	10,000.00	7,300.74	1,191.14	1,072.67	10.054	SF
CAMPBELL JF 17-41D - GW O&G - MWD	11,920.13	7,218.69	2,545.31	2,377.84	15.198	CC, ES, SF
CAMPBELL JF 17-6D - GW O&G - No Survey	707.81	658.81	4,382.88	4,379.40	1,261.262	CC
CAMPBELL JF 17-6D - GW O&G - No Survey	800.00	730.00	4,382.93	4,379.00	1,115.057	ES
CAMPBELL JF 17-6D - GW O&G - No Survey	11,900.00	730.00	6,798.55	6,735.83	108.402	SF
CAMPBELL JF 17-6D-1 - GW O&G - MWD	10,117.22	7,084.49	2,485.37	2,370.17	21.574	CC
CAMPBELL JF 17-6D-1 - GW O&G - MWD	10,200.00	7,084.51	2,486.75	2,369.38	21.187	ES
CAMPBELL JF 17-6D-1 - GW O&G - MWD	10,900.00	7,084.74	2,605.73	2,474.36	19.835	SF
CAMPBELL JF 17-7D - GW O&G - MWD	11,046.57	6,984.00	2,498.52	2,362.37	18.352	CC
CAMPBELL JF 17-7D - GW O&G - MWD	11,100.00	6,984.00	2,499.09	2,361.48	18.161	ES

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 4G-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 4G-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	11,700.00	6,953.46	2,582.32	2,432.14	17.195	SF
CAMPBELL JF 17-8D - GW O&G - MWD	11,751.12	7,094.88	1,860.14	1,700.99	11.688	CC
CAMPBELL JF 17-8D - GW O&G - MWD	11,800.00	7,096.25	1,860.78	1,700.38	11.601	ES
CAMPBELL JF 17-8D - GW O&G - MWD	11,920.13	7,099.60	1,867.80	1,704.90	11.466	SF
CAMPBELL JF 17-9D - GW O&G - MWD	10,378.82	7,107.64	1,840.71	1,719.84	15.229	CC
CAMPBELL JF 17-9D - GW O&G - MWD	10,400.00	7,107.12	1,840.83	1,719.35	15.153	ES
CAMPBELL JF 17-9D - GW O&G - MWD	10,800.00	7,097.48	1,888.25	1,757.61	14.453	SF
COOK 28N-16HZ - KMG - MWD	11,920.13	8,984.00	3,246.06	3,178.27	47.887	CC, ES, SF
CROWDER 1-18 - KMG - No Survey	6,575.24	6,529.60	3,431.64	3,395.61	95.236	CC
CROWDER 1-18 - KMG - No Survey	6,600.00	6,553.53	3,431.72	3,395.58	94.968	ES
CROWDER 1-18 - KMG - No Survey	9,700.00	7,075.00	4,783.11	4,712.56	67.799	SF
CROWDER 15C-18HZ - KMG - MWD	6,743.73	10,842.77	1,434.38	1,351.10	17.224	CC, ES
CROWDER 15C-18HZ - KMG - MWD	6,900.00	10,840.25	1,459.62	1,372.66	16.785	SF
CROWDER 15N-18HZ - KMG - MWD	6,612.10	10,852.77	2,127.94	2,039.30	24.006	CC, ES
CROWDER 15N-18HZ - KMG - MWD	6,700.00	10,837.84	2,135.12	2,045.37	23.789	SF
CROWDER 16C-19HZ - KMG - MWD	6,946.71	10,405.14	722.50	653.48	10.467	CC, ES
CROWDER 16C-19HZ - KMG - MWD	7,100.00	10,401.58	754.33	676.67	9.714	SF
CROWDER 16N-19HZ - KMG - MWD	6,796.33	10,299.57	907.02	829.84	11.751	CC
CROWDER 16N-19HZ - KMG - MWD	6,800.00	10,299.26	907.04	829.70	11.728	ES
CROWDER 16N-19HZ - KMG - MWD	6,900.00	10,290.89	920.29	839.17	11.344	SF
CROWDER 36N-18HZ - KMG - MWD	6,637.32	10,673.00	1,705.43	1,617.89	19.483	CC, ES
CROWDER 36N-18HZ - KMG - MWD	6,800.00	10,663.67	1,731.32	1,641.22	19.216	SF
CROWDER 38N-19HZ - KMG - MWD	7,002.14	10,277.20	395.86	328.94	5.916	CC, ES
CROWDER 38N-19HZ - KMG - MWD	7,100.00	10,275.36	414.18	336.78	5.351	SF
DECHANT 13-9 - KMG - No Survey	11,920.13	7,025.00	4,397.84	4,254.36	30.651	CC, ES, SF
DECHANT 14-9 - KMG - MWD	11,920.13	7,280.65	5,037.37	4,886.44	33.376	CC, ES, SF
DECHANT 23-9 - KMG - MWD	11,920.13	7,561.57	5,947.58	5,794.99	38.978	CC, ES, SF
DECHANT 31-19 - KMG - Gyro	6,400.00	6,383.90	2,711.52	2,665.58	59.023	CC, ES
DECHANT 31-19 - KMG - Gyro	6,700.00	6,700.15	2,762.33	2,714.50	57.754	SF
DECHANT 32-19 - KMG - Gyro	6,310.19	6,226.49	3,913.12	3,867.78	86.294	CC, ES
DECHANT 32-19 - KMG - Gyro	9,300.00	6,700.00	5,588.92	5,520.49	81.675	SF
DECHANT 35-9 - KMG - MWD	11,920.13	7,165.53	4,287.08	4,136.19	28.412	CC, ES, SF
DECHANT 36-9 - KMG - MWD	11,920.13	7,471.04	4,912.60	4,763.84	33.024	CC, ES, SF
DECHANT 38-8 - KMG - MWD	11,920.13	7,142.25	3,882.22	3,717.97	23.636	CC, ES, SF
DECHANT 41-19 - KMG - Gyro	5,581.45	5,574.67	1,781.85	1,741.68	44.366	CC
DECHANT 41-19 - KMG - Gyro	6,300.00	6,288.57	1,786.36	1,740.83	39.241	ES
DECHANT 41-19 - KMG - Gyro	6,900.00	6,871.62	1,827.88	1,778.81	37.244	SF
DECHANT 42-19 - KMG - No Survey	1,600.00	1,598.00	3,518.68	3,510.31	420.142	CC
DECHANT 42-19 - KMG - No Survey	1,700.00	1,697.98	3,518.91	3,510.01	395.073	ES
DECHANT 42-19 - KMG - No Survey	10,100.00	7,090.00	5,110.00	5,033.91	67.160	SF
DECHANT 9-19A - KMG - No Survey	1,600.00	1,593.00	4,442.93	4,434.57	531.070	CC
DECHANT 9-19A - KMG - No Survey	1,700.00	1,692.98	4,443.25	4,434.35	499.352	ES
DECHANT 9-19A - KMG - No Survey	11,100.00	7,085.00	6,464.85	6,371.04	68.914	SF
DECHANT X 08-15 - KMG - Gyro	10,304.66	7,039.20	4,424.00	4,307.28	37.904	CC
DECHANT X 08-15 - KMG - Gyro	10,400.00	7,036.48	4,425.02	4,305.78	37.111	ES
DECHANT X 08-15 - KMG - Gyro	11,920.13	7,001.20	4,709.61	4,557.23	30.907	SF
DECHANT X 08-24D - KMG - MWD	9,904.93	7,249.18	5,135.18	5,027.76	47.807	CC
DECHANT X 08-24D - KMG - MWD	10,000.00	7,249.32	5,137.23	5,027.41	46.780	ES
DECHANT X 08-24D - KMG - MWD	11,920.13	7,252.58	5,545.11	5,394.29	36.765	SF
DECHANT X 19-3 - KMG - Gyro	6,400.00	6,383.98	3,574.70	3,528.99	78.198	CC, ES
DECHANT X 19-3 - KMG - Gyro	6,700.00	6,628.71	3,632.24	3,584.86	76.654	SF
DOM RED X 20-02D - KMG - Gyro	8,563.55	7,009.29	3,040.60	2,967.20	41.425	CC
DOM RED X 20-02D - KMG - Gyro	8,600.00	7,008.93	3,040.82	2,966.61	40.974	ES

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 4G-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 4G-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)						
DOM RED X 20-02D - KMG - Gyro	10,100.00	6,994.21	3,402.69	3,300.50	33.298	SF
DOM RED X 20-3 - NOBLE - Gyro	8,916.28	7,081.81	2,011.30	1,929.31	24.530	CC
DOM RED X 20-3 - NOBLE - Gyro	9,000.00	7,082.74	2,013.04	1,929.12	23.988	ES
DOM RED X 20-3 - NOBLE - Gyro	9,600.00	7,089.47	2,124.32	2,029.34	22.366	SF
DOM RED X20-2D - KMG - No Survey	1,600.00	1,563.00	2,997.69	2,989.38	360.645	CC, ES
DOM RED X20-2D - KMG - No Survey	10,000.00	7,055.00	3,692.24	3,607.95	43.804	SF
EWERTZ 3-18 - KMG - No Survey	6,436.85	6,432.95	4,375.30	4,340.49	125.691	CC, ES
EWERTZ 3-18 - KMG - No Survey	9,700.00	7,115.00	6,572.08	6,513.41	112.028	SF
FOUR WAY 1 - KMG - No Survey	11,920.13	7,009.00	3,062.76	2,952.00	27.653	CC, ES, SF
FOUR WAY 12-16 - KMG - Gyro	11,920.13	6,964.05	1,990.39	1,850.73	14.252	CC, ES, SF
HAYMAKER 29N-9HZ - KMG - MWD	11,920.13	6,569.00	4,258.42	4,108.22	28.351	CC, ES, SF
HAYMAKER 4C-9HZ - KMG - MWD	11,920.13	6,697.00	4,237.09	4,084.88	27.837	CC, ES, SF
HAYMAKER 4N-9HZ - KMG - MWD	11,920.13	6,457.71	4,095.14	3,943.82	27.061	CC, ES, SF
HSR-WARNER 6-18 - KMG - No Survey	6,420.50	6,404.63	3,364.77	3,330.40	97.889	CC, ES
HSR-WARNER 6-18 - KMG - No Survey	6,800.00	6,763.87	3,448.36	3,412.29	95.597	SF
HUDCO 16-18 - KMG - Gyro	6,400.00	6,377.28	922.16	875.97	19.963	CC, ES
HUDCO 16-18 - KMG - Gyro	6,500.00	6,484.35	927.62	880.76	19.795	SF
HUDCO 24-18 - KMG - MWD	267.85	284.87	1,143.03	1,141.55	774.061	CC
HUDCO 24-18 - KMG - MWD	600.00	613.27	1,143.79	1,139.96	298.256	ES
HUDCO 24-18 - KMG - MWD	6,600.00	6,685.14	1,455.29	1,407.58	30.506	SF
HUDCO 39-18 - KMG - MWD	4,228.87	4,338.01	31.95	-4.98	0.865	Level 2, CC, ES, SF
HUDCO 40-18 - KMG - MWD	3,046.15	3,015.00	1,116.07	1,093.39	49.211	CC
HUDCO 40-18 - KMG - MWD	3,100.00	3,049.33	1,116.35	1,093.34	48.531	ES
HUDCO 40-18 - KMG - MWD	7,300.00	7,119.21	1,178.33	1,124.82	22.019	SF
HUDCO 9-18 - KMG - Gyro	6,483.89	6,466.56	771.96	725.56	16.634	CC
HUDCO 9-18 - KMG - Gyro	6,500.00	6,481.97	772.02	725.52	16.600	ES
HUDCO 9-18 - KMG - Gyro	6,700.00	6,675.97	783.01	735.41	16.448	SF
LUCERO X 20-04 - KMG - Gyro	1,609.23	1,571.28	1,856.82	1,845.92	170.363	CC, ES
LUCERO X 20-04 - KMG - Gyro	8,500.00	7,060.48	2,230.00	2,161.85	32.718	SF
MARKHAM 13-8 - KMG - MWD	7,643.79	7,154.63	4,311.05	4,254.54	76.295	CC
MARKHAM 13-8 - KMG - MWD	7,700.00	7,154.49	4,311.41	4,254.07	75.184	ES
MARKHAM 13-8 - KMG - MWD	10,700.00	7,146.98	5,299.69	5,187.31	47.156	SF
MARKHAM 34-8 - KMG - MWD	7,301.77	7,191.14	3,903.37	3,848.31	70.896	CC, ES
MARKHAM 34-8 - KMG - MWD	10,100.00	7,228.71	4,836.52	4,732.26	46.388	SF
MARKHAM 35-8 - KMG - MWD	8,419.74	7,327.39	3,857.64	3,783.70	52.177	CC
MARKHAM 35-8 - KMG - MWD	8,500.00	7,325.78	3,858.47	3,782.85	51.022	ES
MARKHAM 35-8 - KMG - MWD	10,700.00	7,286.30	4,497.10	4,380.55	38.584	SF
MEGUIRE 28C-16HZ - KMG - MWD	11,920.13	11,659.31	2,818.57	2,709.52	25.846	CC, ES, SF
MEGUIRE 29C-16HZ - KMG - MWD	11,920.13	11,756.86	1,654.37	1,546.21	15.296	CC, ES, SF
MEGUIRE 29N-16HZ - KMG - MWD	11,920.13	11,538.14	1,906.68	1,798.17	17.570	CC, ES, SF
MEGUIRE 30N-16HZ - KMG - MWD	11,920.13	11,560.60	810.28	701.42	7.443	CC, ES, SF
MEGUIRE 3N-16HZ - KMG - No Survey	11,920.13	7,022.00	4,757.83	4,631.32	37.608	CC, ES, SF
MEGUIRE 4N-16HZ - KMG - MWD	11,920.13	11,633.89	1,365.90	1,256.37	12.471	CC, ES, SF
MEGUIRE X 21-04 - KMG - Gyro	11,920.13	7,000.00	2,388.60	2,240.81	16.162	CC, ES, SF
MEGUIRE X 21-06 - KMG - No Survey	11,920.13	7,014.00	4,313.87	4,187.55	34.152	CC, ES, SF
MEGUIRE X 21-5JI - KMG - No Survey	11,920.13	7,019.00	3,789.50	3,645.58	26.331	CC, ES, SF
MELBON 12C-8HZ - KMG - MWD	7,675.38	6,866.00	1,263.16	1,208.28	23.018	CC
MELBON 12C-8HZ - KMG - MWD	7,700.00	6,866.00	1,263.40	1,208.16	22.869	ES
MELBON 12C-8HZ - KMG - MWD	8,100.00	6,845.11	1,331.97	1,270.64	21.716	SF
MELBON 12N-8HZ - KMG - MWD	7,136.10	6,671.01	1,312.44	1,263.35	26.739	CC, ES
MELBON 12N-8HZ - KMG - MWD	7,800.00	6,710.54	1,404.53	1,348.75	25.177	SF
MELBON 19C-8HZ - KMG - MWD	8,463.37	6,836.00	1,279.56	1,209.78	18.336	CC
MELBON 19C-8HZ - KMG - MWD	8,500.00	6,836.00	1,280.08	1,209.49	18.132	ES

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 4G-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 4G-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 19C-8HZ - KMG - MWD	8,800.00	6,836.00	1,323.10	1,246.82	17.345	SF
MELBON 19N-E8HZ - KMG - MWD	8,792.11	6,726.84	1,311.82	1,235.26	17.135	CC
MELBON 19N-E8HZ - KMG - MWD	8,800.00	6,726.91	1,311.85	1,235.11	17.095	ES
MELBON 19N-E8HZ - KMG - MWD	9,100.00	6,729.57	1,347.46	1,264.95	16.331	SF
MELBON 19N-W8HZ - KMG - MWD	8,122.15	6,782.00	1,308.32	1,246.27	21.084	CC, ES
MELBON 19N-W8HZ - KMG - MWD	8,500.00	6,782.00	1,361.79	1,292.93	19.775	SF
MELBON 23C-8HZ - KMG - MWD	9,388.09	6,851.19	1,296.14	1,199.54	13.417	CC
MELBON 23C-8HZ - KMG - MWD	9,400.00	6,852.27	1,296.19	1,199.28	13.375	ES
MELBON 23C-8HZ - KMG - MWD	9,700.00	6,885.17	1,332.20	1,229.17	12.931	SF
MELBON 23N-8HZ - KMG - MWD	9,519.14	6,772.00	1,349.93	1,250.90	13.631	CC, ES
MELBON 23N-8HZ - KMG - MWD	9,800.00	6,793.73	1,378.33	1,273.50	13.148	SF
MELBON RANCH 1 - V O&G - No Survey	8,370.52	7,058.00	165.25	107.87	2.880	CC, ES, SF
MELBON RANCH 13-17 - CPR - MWD	7,714.12	7,148.42	676.66	617.15	11.370	CC, ES
MELBON RANCH 13-17 - CPR - MWD	7,800.00	7,148.07	682.09	621.64	11.284	SF
MELBON RANCH 14-17 - CPR - MWD	2,593.14	2,711.79	830.91	809.26	38.373	CC
MELBON RANCH 14-17 - CPR - MWD	7,611.73	7,203.00	836.06	777.07	14.171	ES
MELBON RANCH 14-17 - CPR - MWD	7,700.00	7,203.00	840.71	781.19	14.125	SF
MELBON RANCH 17-14 - V O&G - No Survey	8,302.05	7,058.00	458.49	402.61	8.205	CC, ES, SF
MELBON RANCH 23-17 - CPR - MWD	9,162.72	7,172.00	675.25	582.67	7.294	CC
MELBON RANCH 23-17 - CPR - MWD	9,200.00	7,172.00	676.28	582.57	7.217	ES
MELBON RANCH 23-17 - CPR - MWD	9,300.00	7,164.84	689.02	593.23	7.193	SF
MELBON RANCH 24-17 - CPR - MWD	8,920.63	7,131.16	850.45	764.98	9.951	CC, ES
MELBON RANCH 24-17 - CPR - MWD	9,100.00	7,129.42	869.15	780.32	9.785	SF
MELBON RANCH 2-4-17 - CPR - MWD	250.66	223.68	1,086.51	1,085.21	836.454	CC
MELBON RANCH 2-4-17 - CPR - MWD	8,527.84	7,208.51	1,125.82	1,051.59	15.166	ES
MELBON RANCH 2-4-17 - CPR - MWD	8,800.00	7,204.00	1,158.23	1,077.88	14.415	SF
MELBON RANCH 2-8-17 - CPR - MWD	8,304.82	7,246.05	1,305.52	1,227.52	16.736	CC, ES
MELBON RANCH 2-8-17 - CPR - MWD	8,600.00	7,242.85	1,338.47	1,255.70	16.170	SF
MELBON RANCH 33-17 - CPR - MWD	10,472.12	7,288.36	292.61	156.54	2.150	CC, ES, SF
MELBON RANCH 34-17 - CPR - MWD	10,300.13	7,110.01	878.28	758.97	7.362	CC, ES
MELBON RANCH 34-17 - CPR - MWD	10,400.00	7,113.01	883.93	763.19	7.321	SF
MELBON RANCH 3A-17H - CPR - MWD	1,640.02	1,635.72	17.28	5.88	1.516	CC, ES, SF
MELBON RANCH 3B-17H - CPR - MWD	985.19	977.20	84.33	77.68	12.666	CC
MELBON RANCH 3B-17H - CPR - MWD	11,920.13	11,902.40	306.30	46.32	1.178	Level 3, ES, SF
MELBON RANCH 43-17 43-17 - CPR - Gyro	11,920.13	7,010.09	259.84	106.12	1.690	CC, ES, SF
MELBON RANCH 4-6-17 - CPR - MWD	9,596.53	7,186.45	85.20	-15.02	0.850	Level 2, CC, ES, SF
MELBON RANCH 4-8-17 - CPR - Gyro	9,723.37	7,003.00	1,120.05	1,018.31	11.009	CC, ES
MELBON RANCH 4-8-17 - CPR - Gyro	9,900.00	7,000.00	1,133.80	1,028.70	10.788	SF
MELBON RANCH 6-4-17 - CPR - MWD	10,909.20	7,217.65	167.98	26.60	1.188	Level 3, CC, ES, SF
Melbon Ranch 6-8-17 - CPR - MWD	11,039.17	7,234.47	1,339.77	1,193.32	9.148	CC
Melbon Ranch 6-8-17 - CPR - MWD	11,100.00	7,234.83	1,341.15	1,193.32	9.072	ES
Melbon Ranch 6-8-17 - CPR - MWD	11,200.00	7,235.41	1,349.39	1,199.84	9.023	SF
MELBON RANCH 8-4-17 - CPR - MWD	11,920.13	7,075.87	577.14	497.46	7.244	CC, ES, SF
MELBON RANCH 8-6-17 - CPR - MWD	11,920.13	7,085.91	1,071.98	927.86	7.438	CC, ES, SF
MELBON RANCH 8-8-17 - CPR - MWD	11,920.13	7,372.50	2,286.07	2,126.15	14.295	CC, ES, SF
MELBON RANCH E UNIT 1 - CPR - Gyro	11,280.38	7,013.21	380.85	238.55	2.676	CC, ES
MELBON RANCH E UNIT 1 - CPR - Gyro	11,300.00	7,013.41	381.35	238.85	2.676	SF
MEQUIRE 21-3P - KMG - No Survey	11,920.13	7,009.00	3,274.09	3,152.99	27.035	CC, ES, SF
MUSE 1 - KMG - Gyro	6,466.08	6,392.08	2,558.23	2,512.15	55.527	CC, ES
MUSE 1 - KMG - Gyro	7,500.00	7,055.32	2,814.52	2,761.83	53.418	SF
MUSE 2 - KMG - No Survey	6,400.47	6,388.61	1,056.40	1,022.03	30.728	CC, ES
MUSE 2 - KMG - No Survey	6,500.00	6,487.77	1,063.28	1,028.39	30.477	SF
PALMER 11-20 - KMG - No Survey	9,175.48	7,055.00	4,768.25	4,691.96	62.502	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 4G-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 4G-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)						
PALMER 11-20 - KMG - No Survey	9,300.00	7,055.00	4,769.87	4,690.56	60.138	ES
PALMER 11-20 - KMG - No Survey	11,920.13	7,055.00	5,459.93	5,330.06	42.040	SF
PALMER X 20-05 - KMG - Gyro	939.42	900.00	3,118.12	3,112.00	509.222	CC
PALMER X 20-05 - KMG - Gyro	1,600.00	1,555.13	3,120.05	3,109.27	289.590	ES
PALMER X 20-05 - KMG - Gyro	9,800.00	7,037.57	3,839.68	3,747.32	41.573	SF
PALMER X 20-06 - KMG - Gyro	8,995.03	7,037.16	3,399.88	3,316.18	40.617	CC
PALMER X 20-06 - KMG - Gyro	9,100.00	7,037.41	3,401.50	3,315.30	39.460	ES
PALMER X 20-06 - KMG - Gyro	10,700.00	7,041.20	3,786.52	3,670.07	32.515	SF
PALMER X 20-20 - KMG - Gyro	8,431.29	7,083.97	3,967.53	3,896.74	56.046	CC
PALMER X 20-20 - KMG - Gyro	8,500.00	7,084.07	3,968.13	3,895.83	54.883	ES
PALMER X 20-20 - KMG - Gyro	10,900.00	7,087.83	4,652.71	4,535.98	39.858	SF
POTTS X 18-10 - KMG - Gyro	6,400.00	6,374.53	1,901.43	1,856.53	42.345	CC, ES
POTTS X 18-10 - KMG - Gyro	6,600.00	6,562.36	1,928.04	1,881.85	41.738	SF
POTTS X 18-15 - KMG - Gyro	6,400.00	6,349.83	1,975.33	1,929.90	43.484	CC, ES
POTTS X 18-15 - KMG - Gyro	6,600.00	6,551.72	2,007.27	1,960.54	42.958	SF
RUSSIAN FIDDLER 15N-18HZ - KMG - MWD	6,629.52	12,713.00	2,100.81	1,994.85	19.826	CC, ES
RUSSIAN FIDDLER 15N-18HZ - KMG - MWD	6,800.00	12,713.00	2,125.19	2,016.65	19.580	SF
RUSSIAN FIDDLER 36C-18HZ - KMG - MWD	6,618.66	12,872.00	2,599.96	2,486.37	22.889	CC, ES
RUSSIAN FIDDLER 36C-18HZ - KMG - MWD	6,800.00	12,872.00	2,627.19	2,511.22	22.654	SF
RUSSIAN FIDDLER 36N-18HZ - KMG - MWD	6,555.48	12,128.00	3,094.43	2,998.70	32.325	CC, ES
RUSSIAN FIDDLER 36N-18HZ - KMG - MWD	6,700.00	12,128.00	3,110.17	3,013.39	32.137	SF
RUSSIAN FIDDLER 36N-18HZ - KMG - MWD	6,580.50	12,416.00	3,000.12	2,896.37	28.916	CC, ES
RUSSIAN FIDDLER 36N-18HZ - KMG - MWD	6,700.00	12,416.00	3,011.39	2,906.62	28.742	SF
RUSSIAN FIDDLER 37C-18HZ - KMG - MWD	6,724.57	12,903.00	1,703.17	1,608.38	17.968	CC, ES
RUSSIAN FIDDLER 37C-18HZ - KMG - MWD	7,000.00	12,903.00	1,765.70	1,664.89	17.517	SF
RUSSIAN FIDDLER 37N-18HZ - KMG - MWD	6,660.84	12,711.00	1,850.53	1,750.08	18.421	CC, ES
RUSSIAN FIDDLER 37N-18HZ - KMG - MWD	6,800.00	12,711.00	1,866.91	1,763.97	18.136	SF
SANDLIN-WELD COUNTY 1 - KMG - No Survey	11,391.63	7,029.00	2,549.21	2,415.77	19.103	CC
SANDLIN-WELD COUNTY 1 - KMG - No Survey	11,500.00	7,029.00	2,551.51	2,415.16	18.713	ES
SANDLIN-WELD COUNTY 1 - KMG - No Survey	11,900.00	7,029.00	2,599.41	2,454.31	17.915	SF
SANDLIN-WELD-COUNTY UNIT 2 - KMG - Gyro	8,708.74	7,041.65	2,513.64	2,436.78	32.703	CC
SANDLIN-WELD-COUNTY UNIT 2 - KMG - Gyro	8,800.00	7,041.22	2,515.30	2,436.27	31.827	ES
SANDLIN-WELD-COUNTY UNIT 2 - KMG - Gyro	9,800.00	7,036.30	2,740.30	2,641.81	27.825	SF
SARCHET 1 - KMG - No Survey	10,966.36	7,031.00	3,153.90	3,031.68	25.805	CC
SARCHET 1 - KMG - No Survey	11,000.00	7,031.00	3,154.08	3,031.02	25.630	ES
SARCHET 1 - KMG - No Survey	11,900.00	7,031.00	3,289.19	3,148.54	23.386	SF
SARCHET 15N-20HZ - KMG - MWD	10,572.25	6,824.64	1,036.14	920.24	8.940	CC
SARCHET 15N-20HZ - KMG - MWD	10,600.00	6,825.05	1,036.51	920.17	8.909	ES
SARCHET 15N-20HZ - KMG - MWD	10,700.00	6,826.53	1,043.98	926.50	8.886	SF
SARCHET 16N-20HZ - KMG - No Survey	11,920.13	7,035.00	1,937.48	1,790.26	13.160	CC, ES, SF
SARCHET 20-1 - KMG - Gyro	11,677.78	7,040.01	1,931.48	1,778.48	12.624	CC
SARCHET 20-1 - KMG - Gyro	11,700.00	7,039.44	1,931.61	1,778.06	12.580	ES
SARCHET 20-1 - KMG - Gyro	11,900.00	7,034.16	1,944.21	1,786.53	12.330	SF
SARCHET 20-2 - NOBLE - No Survey	10,403.77	7,034.00	2,147.86	2,040.37	19.983	CC
SARCHET 20-2 - NOBLE - No Survey	10,500.00	7,034.00	2,150.01	2,040.26	19.589	ES
SARCHET 20-2 - NOBLE - No Survey	10,900.00	7,034.00	2,204.44	2,087.33	18.823	SF
SARCHET 36G-20HZ - KMG - Proposed	10,000.00	7,045.00	1,871.59	1,774.58	19.292	CC, ES
SARCHET 36G-20HZ - KMG - Proposed	10,400.00	7,045.00	1,915.81	1,811.15	18.305	SF
SARCHET 36N-20HZ - KMG - MWD	10,012.51	6,760.30	1,006.16	906.01	10.047	CC, ES
SARCHET 36N-20HZ - KMG - MWD	10,100.00	6,759.18	1,009.96	908.22	9.927	SF
SARCHET 37C-20HZ - KMG - Proposed	10,049.87	7,044.00	1,803.87	1,705.55	18.347	CC
SARCHET 37C-20HZ - KMG - Proposed	10,100.00	7,044.00	1,804.57	1,705.08	18.138	ES
SARCHET 37C-20HZ - KMG - Proposed	10,500.00	7,044.00	1,859.19	1,752.68	17.457	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 4G-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 4G-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 37N-20HZ - KMG - Proposed	10,083.93	7,044.00	1,838.23	1,739.03	18.531	CC
SARCHET 37N-20HZ - KMG - Proposed	10,100.00	7,044.00	1,838.30	1,738.72	18.460	ES
SARCHET 37N-20HZ - KMG - Proposed	10,500.00	7,044.00	1,884.72	1,777.69	17.608	SF
SARCHET 38C-20HZ - KMG - Proposed	11,920.13	7,026.00	1,948.47	1,801.35	13.244	CC, ES, SF
SARCHET X 20-8 - KMG - Gyro	11,857.12	7,009.73	3,532.22	3,374.65	22.416	CC
SARCHET X 20-8 - KMG - Gyro	11,920.13	7,009.63	3,532.79	3,373.81	22.222	ES, SF
SEATON 2-18 - KMG - No Survey	6,467.18	6,438.18	3,695.50	3,660.21	104.730	CC, ES
SEATON 2-18 - KMG - No Survey	9,600.00	7,090.00	5,412.14	5,348.19	84.631	SF
SEATON 7-18 - KMG - No Survey	6,434.29	6,422.40	2,249.04	2,214.31	64.755	CC, ES
SEATON 7-18 - KMG - No Survey	6,700.00	6,679.51	2,281.74	2,245.83	63.548	SF
SEATON 8-18 - KMG - Gyro	6,505.57	6,474.41	1,852.38	1,805.80	39.764	CC, ES
SEATON 8-18 - KMG - Gyro	7,000.00	6,903.47	1,903.32	1,854.14	38.703	SF
SUNFLOWER 24N-17HZ - KMG - MWD	10,884.40	12,650.00	1,271.10	1,138.24	9.567	CC
SUNFLOWER 24N-17HZ - KMG - MWD	10,900.00	12,650.00	1,271.20	1,137.72	9.524	ES
SUNFLOWER 24N-17HZ - KMG - MWD	11,400.00	12,650.00	1,371.70	1,211.30	8.552	SF
SUNFLOWER 25G-17HZ - KMG - MWD	9,945.80	12,664.00	1,227.83	1,113.35	10.726	CC
SUNFLOWER 25G-17HZ - KMG - MWD	10,000.00	12,664.00	1,229.69	1,111.83	10.434	ES
SUNFLOWER 25G-17HZ - KMG - MWD	10,500.00	12,664.00	1,351.71	1,202.71	9.072	SF
SUNFLOWER 40C-17HZ - KMG - MWD	11,900.00	12,840.00	1,306.24	1,141.55	7.932	SF
SUNFLOWER 40C-17HZ - KMG - MWD	11,920.13	12,840.00	1,305.11	1,140.63	7.935	CC, ES
SUNFLOWER 40N-17HZ - KMG - MWD	11,920.13	12,495.00	1,463.07	1,291.92	8.548	CC, ES, SF
SUNFLOWER 7C-17HZ - KMG - MWD	100.00	0.00	7,867.92	7,867.78	10,000.000	CC
SUNFLOWER 7C-17HZ - KMG - MWD	300.00	196.09	7,868.51	7,867.14	5,720.273	ES
SUNFLOWER 7C-17HZ - KMG - MWD	11,920.13	1,800.00	8,649.49	8,536.04	76.242	SF
SUNFLOWER 7N-17HZ - KMG - MWD	10,761.21	12,615.00	1,192.20	1,064.40	9.328	CC
SUNFLOWER 7N-17HZ - KMG - MWD	10,800.00	12,615.00	1,192.83	1,063.60	9.230	ES
SUNFLOWER 7N-17HZ - KMG - MWD	11,300.00	12,615.00	1,308.30	1,150.76	8.305	SF
SUNFLOWER 8N-17HZ - KMG - MWD	11,269.22	12,665.00	1,272.43	1,128.60	8.847	CC
SUNFLOWER 8N-17HZ - KMG - MWD	11,300.00	12,665.00	1,272.81	1,128.12	8.797	ES
SUNFLOWER 8N-17HZ - KMG - MWD	11,800.00	12,665.00	1,378.70	1,210.79	8.211	SF
THOMASON 1 - PETERSON - No Survey	11,920.13	7,013.00	2,109.12	2,051.55	36.637	CC, ES, SF
THOMASON 14-16 - KMG - MWD	11,920.13	7,259.12	2,794.82	2,705.05	31.136	CC, ES, SF
THOMASON 16-5 - KMG - Gyro	11,920.13	6,985.97	2,463.69	2,320.35	17.187	CC, ES, SF
THOMASON 21-16 - KMG - MWD	11,920.13	7,137.56	3,839.69	3,722.75	32.835	CC, ES, SF
THOMASON 23-16 - KMG - MWD	11,920.13	7,143.38	3,064.93	3,006.30	52.270	CC, ES, SF
THOMASON 25-16 - KMG - No Survey	11,920.13	945.00	6,574.57	6,532.17	155.041	CC, ES, SF
THOMASON 25-16R - KMG - MWD	11,920.13	7,186.49	3,298.62	3,215.57	39.715	CC, ES, SF
THOMASON 34N-9HZ - KMG - MWD	11,920.13	11,537.00	4,092.26	3,839.60	16.197	CC, ES, SF
THOMASON 36-16 - KMG - MWD	11,920.13	7,328.47	3,348.28	3,247.81	33.326	CC, ES, SF
THOMASON 6-16 - KMG - MWD	11,920.13	7,165.00	3,086.15	2,981.33	29.441	CC, ES, SF
THOMASON X 16-11 - KMG - No Survey	11,920.13	7,006.00	2,491.92	2,440.36	48.324	CC, ES, SF
THOMASON X 16-12 - KMG - Gyro	11,920.13	6,961.61	1,188.19	1,107.54	14.733	CC, ES, SF
THOMASON X 16-4 - KMG - No Survey	11,920.13	7,009.00	3,347.08	3,208.17	24.096	CC, ES, SF
THOMASON X16-13 - KMG - Gyro	11,920.13	7,019.78	1,287.87	1,183.46	12.334	CC, ES, SF
THOMSEN 1C-18HZ - KMG - MWD	6,764.67	14,563.00	3,549.96	3,469.01	43.853	CC
THOMSEN 1C-18HZ - KMG - MWD	6,800.00	14,563.00	3,550.52	3,468.93	43.520	ES
THOMSEN 1C-18HZ - KMG - MWD	8,900.00	14,563.00	4,649.63	4,515.49	34.662	SF
THOMSEN 1N-18HZ - KMG - Proposed	6,659.39	13,958.15	3,992.35	3,906.69	46.606	CC, ES
THOMSEN 1N-18HZ - KMG - Proposed	8,900.00	13,958.15	5,173.07	5,041.13	39.210	SF
THOMSEN 2N-18HZ - KMG - MWD	6,801.38	13,966.00	3,084.07	3,014.68	44.442	CC, ES
THOMSEN 2N-18HZ - KMG - MWD	8,900.00	13,966.00	4,090.61	3,960.46	31.431	SF
THOMSEN 36C-18HZ - KMG - MWD	6,606.74	13,680.24	2,802.17	2,663.46	20.201	CC, ES
THOMSEN 36C-18HZ - KMG - MWD	6,800.00	13,701.68	2,834.80	2,693.25	20.027	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 4G-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 4G-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		Separation Factor	Warning
Offset Well - Wellbore - Design			Between Centres (usft)	Between Ellipses (usft)		
Existing Wells (Melbon Ranch)						
THOMSEN 36N-18HZ - KMG - MWD	6,601.75	13,714.00	2,431.62	2,289.68	17.132	CC, ES
THOMSEN 36N-18HZ - KMG - MWD	6,700.00	13,714.00	2,440.31	2,296.95	17.022	SF
THOMSEN 3N-18HZ - KMG - MWD	6,934.84	14,148.00	3,326.10	3,272.53	62.094	CC
THOMSEN 3N-18HZ - KMG - MWD	7,000.00	14,148.00	3,327.25	3,272.50	60.766	ES
THOMSEN 3N-18HZ - KMG - MWD	9,800.00	14,148.00	4,600.44	4,460.30	32.828	SF
THOMSEN 4N-18HZ - KMG - MWD	7,210.53	14,792.00	2,704.52	2,651.55	51.061	CC, ES
THOMSEN 4N-18HZ - KMG - MWD	9,600.00	14,792.00	3,686.54	3,548.33	26.674	SF
UPRR 38 PAN AM X 1 - KMG - Gyro	6,333.69	6,311.39	2,545.98	2,500.24	55.664	CC
UPRR 38 PAN AM X 1 - KMG - Gyro	6,400.00	6,367.91	2,546.35	2,500.16	55.129	ES
UPRR 38 PAN AM X 1 - KMG - Gyro	6,800.00	6,723.16	2,600.03	2,551.67	53.773	SF
WALTERS 21-18 - KMG - MWD	0.00	0.00	3,087.37			
WALTERS 21-18 - KMG - MWD	6,700.00	6,765.48	3,426.19	3,374.61	66.435	SF
WALTERS 25-18 - KMG - MWD	6,412.06	6,582.44	2,536.88	2,479.62	44.301	CC, ES
WALTERS 25-18 - KMG - MWD	6,600.00	6,769.32	2,557.67	2,499.37	43.866	SF
WALTERS 28-18 - KMG - MWD	0.00	0.00	3,095.78			
WALTERS 28-18 - KMG - MWD	100.00	87.22	3,095.97	3,095.69	10,000.000	ES
WALTERS 28-18 - KMG - MWD	9,700.00	7,358.60	6,256.52	6,176.63	78.308	SF
WARNER 12-18 - KMG - MWD	0.00	17.12	3,399.08			
WARNER 12-18 - KMG - MWD	6,700.00	7,195.64	4,407.19	4,350.88	78.268	SF
WARNER 14-18 - KMG - No Survey	6,400.00	6,406.14	3,007.33	2,972.67	86.776	CC, ES
WARNER 14-18 - KMG - No Survey	6,700.00	6,697.51	3,068.43	3,032.39	85.146	SF
WARNER 18-18 - KMG - MWD	142.08	161.08	3,401.03	3,400.41	5,471.719	CC
WARNER 18-18 - KMG - MWD	200.00	212.00	3,401.17	3,400.16	3,381.222	ES
WARNER 18-18 - KMG - MWD	6,800.00	7,083.07	4,477.64	4,427.55	89.392	SF
WARNER 22-18 - KMG - MWD	0.00	19.92	3,400.06			
WARNER 22-18 - KMG - MWD	200.00	212.00	3,400.21	3,399.19	3,344.802	ES
WARNER 22-18 - KMG - MWD	6,700.00	6,680.34	3,889.96	3,840.45	78.565	SF
WARNER 23-18 - KMG - MWD	6,400.00	6,494.71	2,438.51	2,386.82	47.178	CC, ES
WARNER 23-18 - KMG - MWD	6,600.00	6,673.51	2,467.45	2,414.66	46.738	SF
WARNER 31-18 - KMG - MWD	100.00	119.00	3,400.41	3,400.09	10,000.000	CC
WARNER 31-18 - KMG - MWD	200.00	201.83	3,400.65	3,399.67	3,469.097	ES
WARNER 31-18 - KMG - MWD	6,700.00	4,855.87	5,257.11	5,213.72	121.155	SF
WARNER 32-18 - KMG - MWD	0.00	19.09	3,399.76			
WARNER 32-18 - KMG - MWD	100.00	114.55	3,399.86	3,399.54	10,000.000	ES
WARNER 32-18 - KMG - MWD	6,700.00	5,762.21	4,854.28	4,804.19	96.902	SF
WARNER 33-18 - KMG - MWD	0.00	27.81	3,212.13			
WARNER 33-18 - KMG - MWD	200.00	197.46	3,212.81	3,211.85	3,342.638	ES
WARNER 33-18 - KMG - MWD	6,700.00	7,217.93	4,925.01	4,865.33	82.519	SF
WARNER 35-18 - KMG - MWD	100.00	119.00	3,221.53	3,221.21	9,898.033	CC
WARNER 35-18 - KMG - MWD	200.00	212.00	3,221.86	3,220.85	3,174.628	ES
WARNER 35-18 - KMG - MWD	6,700.00	6,750.83	3,805.29	3,756.61	78.169	SF

Anticollision Summary Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well MELBON RANCH 4G-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 4G-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	40.00	39.00	40.279	CC, ES
MELBON RANCH 4C-17H-M265 - Wellbore #1 - Design	11,920.13	12,074.55	1,062.46	794.09	3.959	SF
MELBON RANCH 4D-17H-M265 - Wellbore #1 - Design	203.33	203.33	30.01	28.99	29.511	CC
MELBON RANCH 4D-17H-M265 - Wellbore #1 - Design	300.00	299.48	30.44	28.73	17.809	ES
MELBON RANCH 4D-17H-M265 - Wellbore #1 - Design	11,920.13	12,208.26	984.60	722.02	3.750	SF
MELBON RANCH 4E-17H-M265 - Wellbore #1 - Plan #2	300.00	300.00	20.00	18.29	11.697	CC, ES
MELBON RANCH 4E-17H-M265 - Wellbore #1 - Plan #2	11,920.13	11,944.69	629.79	360.48	2.339	SF
MELBON RANCH 4F-17H-M265 - Wellbore #1 - Plan #2	305.07	305.07	10.00	8.25	5.727	CC
MELBON RANCH 4F-17H-M265 - Wellbore #1 - Plan #2	400.00	399.90	10.24	7.81	4.222	ES
MELBON RANCH 4F-17H-M265 - Wellbore #1 - Plan #2	11,920.13	12,115.81	234.08	115.86	1.980	SF
MELBON RANCH 4H-17H-M265 - Wellbore #1 - Design	200.00	200.00	9.99	9.00	10.062	CC, ES
MELBON RANCH 4H-17H-M265 - Wellbore #1 - Design	11,920.13	11,926.51	549.86	280.25	2.040	SF
MELBON RANCH 4I-17H-M265 - Wellbore #1 - Design #	300.00	300.00	20.14	18.43	11.777	CC, ES
MELBON RANCH 4I-17H-M265 - Wellbore #1 - Design #	11,920.13	12,115.08	829.15	569.30	3.191	SF
MELBON RANCH 4J-17H-M265 - Wellbore #1 - Design #	203.46	203.46	30.00	28.99	29.480	CC
MELBON RANCH 4J-17H-M265 - Wellbore #1 - Design #	300.00	299.54	30.38	28.68	17.856	ES
MELBON RANCH 4J-17H-M265 - Wellbore #1 - Design #	11,920.13	11,996.28	1,164.66	894.85	4.317	SF
MELBON RANCH 4K-17H-M265 - Wellbore #1 - Design	200.00	200.00	40.00	39.01	40.288	CC, ES
MELBON RANCH 4K-17H-M265 - Wellbore #1 - Design	11,920.13	12,108.94	1,421.76	1,152.25	5.275	SF