



Crestone Peak Resources

Sec 17 T2N-R65W

Melbon Ranch Pad

MELBON RANCH 4K-17H-M265

Wellbore #1

Plan: Plan #2 22May18 kjs

Standard Planning Report - Geographic

22 May, 2018



Crestone Peak Resources

Well Name:

MELBON RANCH 4K-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
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	Start Build 2.00
743.84	10.88	205.26	740.58	-46.54	-21.96	-10.24	51.47	Hold 10.88 Inc, 205.26 Az
6540.64	10.88	205.26	6433.24	-1035.76	-488.80	-227.87	1145.31	KOP 8/100
7722.73	90.00	90.30	7195.00	-1172.19	224.42	497.31	1985.92	LP 90 Inc, 90.3 Az
10722.73	90.00	90.30	7195.00	-1187.90	3224.38	3414.58	4985.92	Start 2/100 Turn
10846.69	90.00	87.82	7195.00	-1185.87	3348.31	3534.45	5109.88	Hold 87.82 Az
12132.58	90.00	87.82	7195.00	-1136.98	4633.27	4770.73	6395.77	TD at 12132.58

Geodetic Datum:

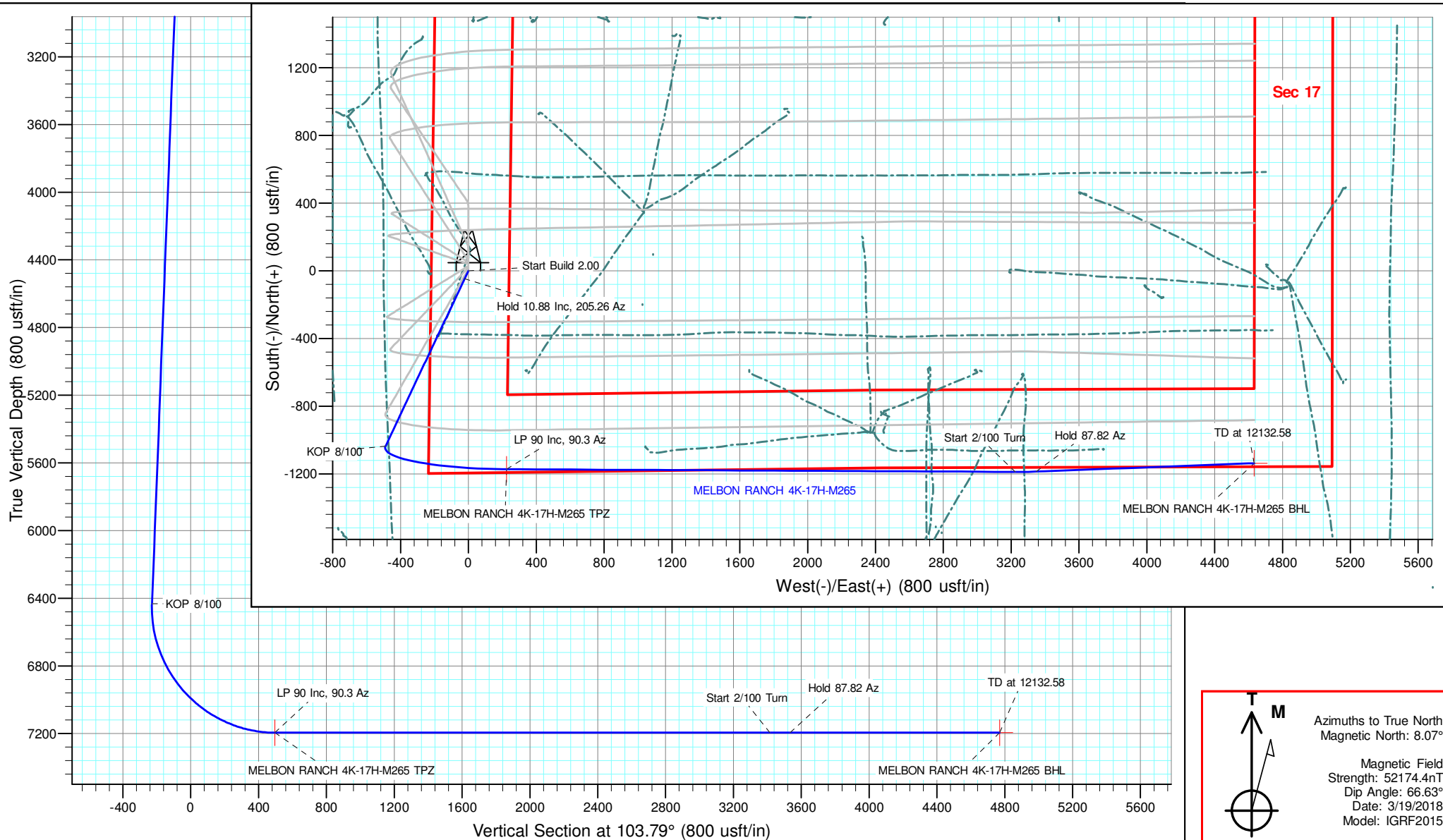
North American Datum 1983
US State Plane 1983, Colorado Northern Zone

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 4K-17H-M265 BHL	7195.00	-1136.98	4633.27	1291812.80	3229260.80	40.131510	-104.680068	Point
MELBON RANCH 4K-17H-M265 TPZ	7195.00	-1172.19	224.42	1291737.64	3224852.45	40.131415	-104.695835	Point



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4K-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 4K-17H-M265	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 22May18 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 4K-17H-M265					
Well Position	+N/-S	0.00 usft	Northing:	1,292,907.75 usft	Latitude:	40.134632
	+E/-W	0.00 usft	Easting:	3,224,617.42 usft	Longitude:	-104.696638
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	52,174.42081424

Design	Plan #2 22May18 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	103.79

Plan Survey Tool Program	Date	5/22/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	12,132.58 Plan #2 22May18 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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
743.84	10.88	205.26	740.58	-46.54	-21.96	2.00	2.00	0.00	205.26	
6,540.64	10.88	205.26	6,433.24	-1,035.76	-488.80	0.00	0.00	0.00	0.00	
7,722.73	90.00	90.30	7,195.00	-1,172.19	224.42	8.00	6.69	-9.73	-114.57	MELBON RANCH 4K
10,722.73	90.00	90.30	7,195.00	-1,187.90	3,224.38	0.00	0.00	0.00	0.00	
10,846.69	90.00	87.82	7,195.00	-1,185.87	3,348.31	2.00	0.00	-2.00	-90.00	
12,132.58	90.00	87.82	7,195.00	-1,136.98	4,633.27	0.00	0.00	0.00	0.00	MELBON RANCH 4K

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4K-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 4K-17H-M265	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 22May18 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	1,292,907.75	3,224,617.42	40.134633	-104.696638	
100.00	0.00	0.00	100.00	0.00	0.00	1,292,907.75	3,224,617.42	40.134633	-104.696638	
200.00	0.00	0.00	200.00	0.00	0.00	1,292,907.75	3,224,617.42	40.134633	-104.696638	
Start Build 2.00										
300.00	2.00	205.26	299.98	-1.58	-0.74	1,292,906.17	3,224,616.69	40.134628	-104.69664	
400.00	4.00	205.26	399.84	-6.31	-2.98	1,292,901.41	3,224,614.50	40.134615	-104.696649	
500.00	6.00	205.26	499.45	-14.19	-6.70	1,292,893.50	3,224,610.85	40.134594	-104.696662	
600.00	8.00	205.26	598.70	-25.21	-11.90	1,292,882.43	3,224,605.75	40.134563	-104.696681	
700.00	10.00	205.26	697.47	-39.36	-18.57	1,292,868.23	3,224,599.20	40.134524	-104.696704	
743.84	10.88	205.26	740.58	-46.54	-21.96	1,292,861.01	3,224,595.88	40.134505	-104.696717	
Hold 10.88 Inc, 205.26 Az										
800.00	10.88	205.26	795.73	-56.13	-26.49	1,292,851.39	3,224,591.44	40.134478	-104.696733	
900.00	10.88	205.26	893.93	-73.19	-34.54	1,292,834.25	3,224,583.55	40.134432	-104.696762	
1,000.00	10.88	205.26	992.14	-90.26	-42.59	1,292,817.11	3,224,575.65	40.134385	-104.696790	
1,100.00	10.88	205.26	1,090.34	-107.32	-50.65	1,292,799.98	3,224,567.75	40.134338	-104.696819	
1,200.00	10.88	205.26	1,188.54	-124.39	-58.70	1,292,782.84	3,224,559.85	40.134291	-104.696848	
1,300.00	10.88	205.26	1,286.75	-141.45	-66.75	1,292,765.70	3,224,551.95	40.134244	-104.696877	
1,400.00	10.88	205.26	1,384.95	-158.52	-74.81	1,292,748.56	3,224,544.05	40.134197	-104.696906	
1,500.00	10.88	205.26	1,483.16	-175.58	-82.86	1,292,731.43	3,224,536.16	40.134151	-104.696934	
1,600.00	10.88	205.26	1,581.36	-192.65	-90.91	1,292,714.29	3,224,528.26	40.134104	-104.696963	
1,700.00	10.88	205.26	1,679.56	-209.71	-98.97	1,292,697.15	3,224,520.36	40.134057	-104.696992	
1,800.00	10.88	205.26	1,777.77	-226.78	-107.02	1,292,680.02	3,224,512.46	40.134010	-104.697021	
1,900.00	10.88	205.26	1,875.97	-243.84	-115.07	1,292,662.88	3,224,504.56	40.133963	-104.697050	
2,000.00	10.88	205.26	1,974.17	-260.91	-123.13	1,292,645.74	3,224,496.66	40.133916	-104.697078	
2,100.00	10.88	205.26	2,072.38	-277.97	-131.18	1,292,628.60	3,224,488.77	40.133869	-104.697107	
2,200.00	10.88	205.26	2,170.58	-295.04	-139.23	1,292,611.47	3,224,480.87	40.133823	-104.697136	
2,300.00	10.88	205.26	2,268.78	-312.10	-147.29	1,292,594.33	3,224,472.97	40.133776	-104.697165	
2,400.00	10.88	205.26	2,366.99	-329.17	-155.34	1,292,577.19	3,224,465.07	40.133729	-104.697194	
2,500.00	10.88	205.26	2,465.19	-346.23	-163.39	1,292,560.06	3,224,457.17	40.133682	-104.697222	
2,600.00	10.88	205.26	2,563.39	-363.29	-171.45	1,292,542.92	3,224,449.27	40.133635	-104.697251	
2,700.00	10.88	205.26	2,661.60	-380.36	-179.50	1,292,525.78	3,224,441.38	40.133588	-104.697280	
2,800.00	10.88	205.26	2,759.80	-397.42	-187.55	1,292,508.64	3,224,433.48	40.133542	-104.697309	
2,900.00	10.88	205.26	2,858.00	-414.49	-195.61	1,292,491.51	3,224,425.58	40.133495	-104.697338	
3,000.00	10.88	205.26	2,956.21	-431.55	-203.66	1,292,474.37	3,224,417.68	40.133448	-104.697366	
3,100.00	10.88	205.26	3,054.41	-448.62	-211.71	1,292,457.23	3,224,409.78	40.133401	-104.697395	
3,200.00	10.88	205.26	3,152.62	-465.68	-219.77	1,292,440.10	3,224,401.88	40.133354	-104.697424	
3,300.00	10.88	205.26	3,250.82	-482.75	-227.82	1,292,422.96	3,224,393.99	40.133307	-104.697453	
3,400.00	10.88	205.26	3,349.02	-499.81	-235.87	1,292,405.82	3,224,386.09	40.133260	-104.697482	
3,500.00	10.88	205.26	3,447.23	-516.88	-243.93	1,292,388.68	3,224,378.19	40.133214	-104.697510	
3,600.00	10.88	205.26	3,545.43	-533.94	-251.98	1,292,371.55	3,224,370.29	40.133167	-104.697539	
3,700.00	10.88	205.26	3,643.63	-551.01	-260.03	1,292,354.41	3,224,362.39	40.133120	-104.697568	
3,800.00	10.88	205.26	3,741.84	-568.07	-268.09	1,292,337.27	3,224,354.49	40.133073	-104.697597	
3,900.00	10.88	205.26	3,840.04	-585.14	-276.14	1,292,320.14	3,224,346.59	40.133026	-104.697626	
4,000.00	10.88	205.26	3,938.24	-602.20	-284.19	1,292,303.00	3,224,338.70	40.132979	-104.697654	
4,100.00	10.88	205.26	4,036.45	-619.27	-292.25	1,292,285.86	3,224,330.80	40.132933	-104.697683	
4,200.00	10.88	205.26	4,134.65	-636.33	-300.30	1,292,268.72	3,224,322.90	40.132886	-104.697712	
4,300.00	10.88	205.26	4,232.85	-653.40	-308.35	1,292,251.59	3,224,315.00	40.132839	-104.697741	
4,400.00	10.88	205.26	4,331.06	-670.46	-316.41	1,292,234.45	3,224,307.10	40.132792	-104.697770	
4,500.00	10.88	205.26	4,429.26	-687.53	-324.46	1,292,217.31	3,224,299.20	40.132745	-104.697798	
4,600.00	10.88	205.26	4,527.46	-704.59	-332.51	1,292,200.18	3,224,291.31	40.132698	-104.697827	
4,700.00	10.88	205.26	4,625.67	-721.66	-340.57	1,292,183.04	3,224,283.41	40.132651	-104.697856	
4,800.00	10.88	205.26	4,723.87	-738.72	-348.62	1,292,165.90	3,224,275.51	40.132605	-104.697885	
4,900.00	10.88	205.26	4,822.08	-755.79	-356.67	1,292,148.76	3,224,267.61	40.132558	-104.697914	
5,000.00	10.88	205.26	4,920.28	-772.85	-364.73	1,292,131.63	3,224,259.71	40.132511	-104.697942	

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4K-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 4K-17H-M265	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 22May18 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	10.88	205.26	5,018.48	-789.92	-372.78	1,292,114.49	3,224,251.81	40.132464	-104.697971	
5,200.00	10.88	205.26	5,116.69	-806.98	-380.83	1,292,097.35	3,224,243.92	40.132417	-104.698000	
5,300.00	10.88	205.26	5,214.89	-824.05	-388.89	1,292,080.22	3,224,236.02	40.132370	-104.698029	
5,400.00	10.88	205.26	5,313.09	-841.11	-396.94	1,292,063.08	3,224,228.12	40.132324	-104.698058	
5,500.00	10.88	205.26	5,411.30	-858.18	-404.99	1,292,045.94	3,224,220.22	40.132277	-104.698086	
5,600.00	10.88	205.26	5,509.50	-875.24	-413.05	1,292,028.80	3,224,212.32	40.132230	-104.698115	
5,700.00	10.88	205.26	5,607.70	-892.31	-421.10	1,292,011.67	3,224,204.42	40.132183	-104.698144	
5,800.00	10.88	205.26	5,705.91	-909.37	-429.15	1,291,994.53	3,224,196.53	40.132136	-104.698173	
5,900.00	10.88	205.26	5,804.11	-926.44	-437.21	1,291,977.39	3,224,188.63	40.132089	-104.698202	
6,000.00	10.88	205.26	5,902.31	-943.50	-445.26	1,291,960.26	3,224,180.73	40.132042	-104.698230	
6,100.00	10.88	205.26	6,000.52	-960.57	-453.31	1,291,943.12	3,224,172.83	40.131996	-104.698259	
6,200.00	10.88	205.26	6,098.72	-977.63	-461.37	1,291,925.98	3,224,164.93	40.131949	-104.698288	
6,300.00	10.88	205.26	6,196.92	-994.70	-469.42	1,291,908.84	3,224,157.03	40.131902	-104.698317	
6,400.00	10.88	205.26	6,295.13	-1,011.76	-477.47	1,291,891.71	3,224,149.14	40.131855	-104.698346	
6,500.00	10.88	205.26	6,393.33	-1,028.83	-485.53	1,291,874.57	3,224,141.24	40.131808	-104.698374	
6,540.64	10.88	205.26	6,433.24	-1,035.76	-488.80	1,291,867.61	3,224,138.03	40.131789	-104.698386	
KOP 8/100										
6,600.00	9.88	179.24	6,491.66	-1,045.93	-491.12	1,291,857.42	3,224,135.80	40.131761	-104.698394	
6,700.00	12.80	140.35	6,589.84	-1,063.07	-483.93	1,291,840.35	3,224,143.15	40.131714	-104.698369	
6,800.00	18.89	120.90	6,686.06	-1,079.94	-462.93	1,291,823.67	3,224,164.29	40.131668	-104.698294	
6,900.00	26.01	111.22	6,778.45	-1,096.21	-428.54	1,291,807.70	3,224,198.83	40.131623	-104.698171	
7,000.00	33.51	105.55	6,865.22	-1,111.57	-381.44	1,291,792.77	3,224,246.07	40.131581	-104.698002	
7,100.00	41.18	101.79	6,944.67	-1,125.72	-322.52	1,291,779.15	3,224,305.11	40.131542	-104.697792	
7,200.00	48.94	99.03	7,015.26	-1,138.38	-252.95	1,291,767.12	3,224,374.79	40.131507	-104.697543	
7,300.00	56.75	96.86	7,075.62	-1,149.31	-174.08	1,291,756.91	3,224,453.76	40.131477	-104.697261	
7,400.00	64.59	95.05	7,124.57	-1,158.29	-87.43	1,291,748.72	3,224,540.49	40.131453	-104.696951	
7,500.00	72.45	93.46	7,161.15	-1,165.15	5.29	1,291,742.70	3,224,633.27	40.131434	-104.696619	
7,600.00	80.33	92.00	7,184.67	-1,169.75	102.30	1,291,738.97	3,224,730.31	40.131421	-104.696272	
7,700.00	88.21	90.61	7,194.64	-1,172.01	201.69	1,291,737.61	3,224,829.72	40.131415	-104.695917	
7,722.73	90.00	90.30	7,195.00	-1,172.19	224.42	1,291,737.64	3,224,852.45	40.131415	-104.695835	
LP 90 Inc, 90.3 Az - MELBON RANCH 4K-17H-M265 TPZ										
7,800.00	90.00	90.30	7,195.00	-1,172.60	301.69	1,291,737.93	3,224,929.72	40.131414	-104.695559	
7,900.00	90.00	90.30	7,195.00	-1,173.12	401.68	1,291,738.32	3,225,029.72	40.131412	-104.695201	
8,000.00	90.00	90.30	7,195.00	-1,173.65	501.68	1,291,738.70	3,225,129.72	40.131411	-104.694844	
8,100.00	90.00	90.30	7,195.00	-1,174.17	601.68	1,291,739.08	3,225,229.72	40.131409	-104.694486	
8,200.00	90.00	90.30	7,195.00	-1,174.69	701.68	1,291,739.46	3,225,329.72	40.131408	-104.694129	
8,300.00	90.00	90.30	7,195.00	-1,175.22	801.68	1,291,739.85	3,225,429.71	40.131406	-104.693771	
8,400.00	90.00	90.30	7,195.00	-1,175.74	901.68	1,291,740.23	3,225,529.71	40.131405	-104.693413	
8,500.00	90.00	90.30	7,195.00	-1,176.26	1,001.68	1,291,740.61	3,225,629.71	40.131403	-104.693056	
8,600.00	90.00	90.30	7,195.00	-1,176.79	1,101.67	1,291,740.99	3,225,729.71	40.131402	-104.692698	
8,700.00	90.00	90.30	7,195.00	-1,177.31	1,201.67	1,291,741.38	3,225,829.71	40.131401	-104.692340	
8,800.00	90.00	90.30	7,195.00	-1,177.84	1,301.67	1,291,741.76	3,225,929.71	40.131399	-104.691983	
8,900.00	90.00	90.30	7,195.00	-1,178.36	1,401.67	1,291,742.14	3,226,029.71	40.131398	-104.691625	
9,000.00	90.00	90.30	7,195.00	-1,178.88	1,501.67	1,291,742.52	3,226,129.71	40.131396	-104.691268	
9,100.00	90.00	90.30	7,195.00	-1,179.41	1,601.67	1,291,742.91	3,226,229.71	40.131395	-104.690910	
9,200.00	90.00	90.30	7,195.00	-1,179.93	1,701.67	1,291,743.29	3,226,329.71	40.131393	-104.690552	
9,300.00	90.00	90.30	7,195.00	-1,180.45	1,801.67	1,291,743.67	3,226,429.71	40.131392	-104.690195	
9,400.00	90.00	90.30	7,195.00	-1,180.98	1,901.66	1,291,744.05	3,226,529.71	40.131390	-104.689837	
9,500.00	90.00	90.30	7,195.00	-1,181.50	2,001.66	1,291,744.43	3,226,629.71	40.131389	-104.689479	
9,600.00	90.00	90.30	7,195.00	-1,182.02	2,101.66	1,291,744.82	3,226,729.71	40.131387	-104.689122	
9,700.00	90.00	90.30	7,195.00	-1,182.55	2,201.66	1,291,745.20	3,226,829.70	40.131386	-104.688764	
9,800.00	90.00	90.30	7,195.00	-1,183.07	2,301.66	1,291,745.58	3,226,929.70	40.131385	-104.688406	
9,900.00	90.00	90.30	7,195.00	-1,183.59	2,401.66	1,291,745.96	3,227,029.70	40.131383	-104.688049	
10,000.00	90.00	90.30	7,195.00	-1,184.12	2,501.66	1,291,746.35	3,227,129.70	40.131382	-104.687691	

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4K-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 4K-17H-M265	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 22May18 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
10,100.00	90.00	90.30	7,195.00	-1,184.64	2,601.65	1,291,746.73	3,227,229.70	40.131380	-104.687334
10,200.00	90.00	90.30	7,195.00	-1,185.17	2,701.65	1,291,747.11	3,227,329.70	40.131379	-104.686976
10,300.00	90.00	90.30	7,195.00	-1,185.69	2,801.65	1,291,747.49	3,227,429.70	40.131377	-104.686618
10,400.00	90.00	90.30	7,195.00	-1,186.21	2,901.65	1,291,747.88	3,227,529.70	40.131376	-104.686261
10,500.00	90.00	90.30	7,195.00	-1,186.74	3,001.65	1,291,748.26	3,227,629.70	40.131374	-104.685903
10,600.00	90.00	90.30	7,195.00	-1,187.26	3,101.65	1,291,748.64	3,227,729.70	40.131373	-104.685545
10,700.00	90.00	90.30	7,195.00	-1,187.78	3,201.65	1,291,749.02	3,227,829.70	40.131371	-104.685188
10,722.73	90.00	90.30	7,195.00	-1,187.90	3,224.38	1,291,749.11	3,227,852.43	40.131371	-104.685107
Start 2/100 Turn									
10,800.00	90.00	88.75	7,195.00	-1,187.27	3,301.64	1,291,750.45	3,227,929.68	40.131373	-104.684830
10,846.69	90.00	87.82	7,195.00	-1,185.87	3,348.31	1,291,752.26	3,227,976.34	40.131377	-104.684663
Hold 87.82 Az									
10,900.00	90.00	87.82	7,195.00	-1,183.84	3,401.58	1,291,754.77	3,228,029.59	40.131382	-104.684473
11,000.00	90.00	87.82	7,195.00	-1,180.04	3,501.51	1,291,759.48	3,228,129.48	40.131392	-104.684115
11,100.00	90.00	87.82	7,195.00	-1,176.24	3,601.44	1,291,764.19	3,228,229.37	40.131403	-104.683758
11,200.00	90.00	87.82	7,195.00	-1,172.44	3,701.36	1,291,768.90	3,228,329.26	40.131413	-104.683401
11,300.00	90.00	87.82	7,195.00	-1,168.63	3,801.29	1,291,773.60	3,228,429.14	40.131424	-104.683043
11,400.00	90.00	87.82	7,195.00	-1,164.83	3,901.22	1,291,778.31	3,228,529.03	40.131434	-104.682686
11,500.00	90.00	87.82	7,195.00	-1,161.03	4,001.15	1,291,783.02	3,228,628.92	40.131444	-104.682328
11,600.00	90.00	87.82	7,195.00	-1,157.23	4,101.07	1,291,787.73	3,228,728.81	40.131455	-104.681971
11,700.00	90.00	87.82	7,195.00	-1,153.42	4,201.00	1,291,792.43	3,228,828.70	40.131465	-104.681614
11,800.00	90.00	87.82	7,195.00	-1,149.62	4,300.93	1,291,797.14	3,228,928.59	40.131476	-104.681256
11,900.00	90.00	87.82	7,195.00	-1,145.82	4,400.86	1,291,801.85	3,229,028.48	40.131486	-104.680899
12,000.00	90.00	87.82	7,195.00	-1,142.02	4,500.79	1,291,806.56	3,229,128.37	40.131496	-104.680542
12,100.00	90.00	87.82	7,195.00	-1,138.21	4,600.71	1,291,811.27	3,229,228.26	40.131507	-104.680184
12,132.58	90.00	87.82	7,195.00	-1,136.98	4,633.27	1,291,812.80	3,229,260.80	40.131510	-104.680068
TD at 12132.58 - MELBON RANCH 4K-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 4K-17 - hit/miss target - Shape - Point	0.00	0.52	7,195.00	-1,172.19	224.42	1,291,737.64	3,224,852.45	40.131415	-104.695835
MELBON RANCH 4K-17 - plan hits target center - Point	0.00	0.53	7,195.00	-1,136.98	4,633.27	1,291,812.80	3,229,260.80	40.131510	-104.680068

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
200.00	200.00	0.00	0.00	Start Build 2.00	
743.84	740.58	-46.54	-21.96	Hold 10.88 Inc, 205.26 Az	
6,540.64	6,433.24	-1,035.76	-488.80	KOP 8/100	
7,722.73	7,195.00	-1,172.19	224.42	LP 90 Inc, 90.3 Az	
10,722.73	7,195.00	-1,187.90	3,224.38	Start 2/100 Turn	
10,846.69	7,195.00	-1,185.87	3,348.31	Hold 87.82 Az	
12,132.58	7,195.00	-1,136.98	4,633.27	TD at 12132.58	



Crestone Peak Resources

Sec 17 T2N-R65W

Melbon Ranch Pad

MELBON RANCH 4K-17H-M265

Wellbore #1

Plan #2 22May18 kjs

Anticollision Summary Report

22 May, 2018

Anticollision Summary Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well MELBON RANCH 4K-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 4K-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 22May18 kjs	Offset TVD Reference:	Offset Datum

Reference	Plan #2 22May18 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	5/22/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	12,132.58	Plan #2 22May18 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
Existing Wells (Melbon Ranch)						
ADAMSON 13N-28HZ - KMG - MWD	12,132.58	6,699.00	2,341.06	2,192.36	15.744	CC, ES, SF
ADAMSON 14N-28HZ - KMG - MWD	12,132.58	6,605.00	2,808.69	2,684.19	22.560	CC, ES, SF
ADAMSON 28N-28HZ - KMG - MWD	12,132.58	6,794.00	3,687.10	3,577.08	33.513	CC, ES, SF
ADAMSON 35C-28HZ - KMG - MWD	12,132.58	6,792.00	2,516.45	2,380.86	18.558	CC, ES, SF
ADAMSON 36N-28HZ - KMG - MWD	12,132.58	6,605.00	3,025.35	2,906.34	25.419	CC, ES, SF
ADAMSON 37C-28HZ - KMG - MWD	12,132.58	6,794.00	3,281.07	3,165.35	28.354	CC, ES, SF
ADAMSON 37C-28HZX - KMG - MWD	12,132.58	6,794.00	3,281.07	3,165.35	28.354	CC, ES, SF
BYDALEK 28C-20HZ - KMG - MWD	9,566.41	12,039.00	546.46	447.24	5.507	CC, ES
BYDALEK 28C-20HZ - KMG - MWD	9,800.00	12,039.00	594.29	485.84	5.480	SF
BYDALEK 28N-20HZ - KMG - MWD	9,600.00	11,830.00	534.90	428.44	5.025	SF
BYDALEK 28N-20HZ - KMG - MWD	9,643.20	11,830.00	533.15	427.54	5.048	CC, ES
BYDALEK 29C-20HZ - KMG - MWD	8,470.47	11,880.00	563.18	496.60	8.459	CC
BYDALEK 29C-20HZ - KMG - MWD	8,500.00	11,880.00	563.95	496.14	8.316	ES
BYDALEK 29C-20HZ - KMG - MWD	8,800.00	11,880.00	652.50	556.93	6.827	SF
BYDALEK 29N-20HZ - KMG - MWD	8,353.71	11,671.00	554.66	487.10	8.210	CC
BYDALEK 29N-20HZ - KMG - MWD	8,400.00	11,671.00	556.59	486.76	7.971	ES
BYDALEK 29N-20HZ - KMG - MWD	8,700.00	11,671.00	653.88	556.36	6.705	SF
BYDALEK 30C-20HZ - KMG - MWD	7,605.90	11,950.00	536.74	476.82	8.958	CC, ES
BYDALEK 30C-20HZ - KMG - MWD	7,900.00	11,950.00	627.31	537.52	6.987	SF
BYDALEK 3N-20HZ - KMG - MWD	9,071.70	11,597.00	698.96	614.14	8.241	CC, ES
BYDALEK 3N-20HZ - KMG - MWD	9,400.00	11,597.00	772.22	670.45	7.588	SF
BYDALEK 4N-20HZ - KMG - MWD	7,814.48	11,755.00	558.87	499.42	9.401	CC, ES
BYDALEK 4N-20HZ - KMG - MWD	8,200.00	11,755.00	678.94	583.52	7.116	SF
CAMPBELL JF 17-13D - GW O&G - MWD	9,941.64	7,406.11	2,639.26	2,527.92	23.704	CC
CAMPBELL JF 17-13D - GW O&G - MWD	10,000.00	7,406.06	2,639.91	2,527.03	23.388	ES
CAMPBELL JF 17-13D - GW O&G - MWD	10,900.00	7,405.33	2,803.16	2,672.14	21.395	SF
CAMPBELL JF 17-41D - GW O&G - MWD	12,132.58	7,311.06	3,950.99	3,779.78	23.076	CC, ES, SF
CAMPBELL JF 17-6D - GW O&G - No Survey	200.00	151.00	4,406.48	4,405.72	5,783.244	CC, ES
CAMPBELL JF 17-6D - GW O&G - No Survey	12,132.58	730.00	7,490.53	7,414.91	99.063	SF
CAMPBELL JF 17-6D-1 - GW O&G - MWD	10,322.74	7,149.44	3,964.45	3,848.60	34.222	CC
CAMPBELL JF 17-6D-1 - GW O&G - MWD	10,400.00	7,149.53	3,965.20	3,847.56	33.708	ES
CAMPBELL JF 17-6D-1 - GW O&G - MWD	12,000.00	7,152.35	4,255.85	4,110.00	29.179	SF
CAMPBELL JF 17-7D - GW O&G - MWD	11,422.83	7,012.57	3,955.04	3,814.55	28.151	CC
CAMPBELL JF 17-7D - GW O&G - MWD	11,500.00	7,010.50	3,955.79	3,813.55	27.810	ES
CAMPBELL JF 17-7D - GW O&G - MWD	12,132.58	6,992.56	4,018.18	3,863.36	25.953	SF
CAMPBELL JF 17-8D - GW O&G - MWD	12,102.58	7,223.48	3,285.64	3,122.55	20.146	CC
CAMPBELL JF 17-8D - GW O&G - MWD	12,132.58	7,224.52	3,285.78	3,122.05	20.069	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 4K-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 4K-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 22May18 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 17-9D - GW O&G - MWD	10,581.93	7,200.91	3,318.26	3,196.65	27.285	CC
CAMPBELL JF 17-9D - GW O&G - MWD	10,700.00	7,198.35	3,320.36	3,195.97	26.692	ES
CAMPBELL JF 17-9D - GW O&G - MWD	11,800.00	7,173.07	3,493.13	3,349.11	24.255	SF
COOK 28N-16HZ - KMG - MWD	12,132.58	7,567.00	3,240.27	3,177.77	51.843	CC, ES, SF
CROWDER 1-18 - KMG - No Survey	200.00	183.00	3,742.25	3,741.42	4,541.628	CC, ES
CROWDER 1-18 - KMG - No Survey	11,500.00	7,178.00	6,931.34	6,840.03	75.916	SF
CROWDER 15C-18HZ - KMG - MWD	6,872.50	11,583.00	1,491.57	1,391.98	14.977	CC, ES
CROWDER 15C-18HZ - KMG - MWD	7,000.00	11,583.00	1,507.03	1,404.37	14.679	SF
CROWDER 15N-18HZ - KMG - MWD	6,758.95	11,538.00	2,124.97	2,015.37	19.389	CC, ES
CROWDER 15N-18HZ - KMG - MWD	6,900.00	11,538.00	2,142.79	2,031.12	19.188	SF
CROWDER 16C-19HZ - KMG - MWD	7,089.51	11,427.00	730.74	648.25	8.859	CC
CROWDER 16C-19HZ - KMG - MWD	7,100.00	11,427.00	730.88	647.66	8.782	ES
CROWDER 16C-19HZ - KMG - MWD	7,300.00	11,427.00	784.04	688.94	8.245	SF
CROWDER 16N-19HZ - KMG - MWD	6,950.71	11,672.01	853.51	747.75	8.070	CC, ES
CROWDER 16N-19HZ - KMG - MWD	7,100.00	11,701.97	881.17	767.96	7.784	SF
CROWDER 36N-18HZ - KMG - MWD	6,764.71	11,426.00	1,755.74	1,648.36	16.350	CC, ES
CROWDER 36N-18HZ - KMG - MWD	6,900.00	11,426.00	1,772.77	1,663.18	16.177	SF
CROWDER 38N-19HZ - KMG - MWD	7,185.90	11,654.53	298.02	208.34	3.323	CC
CROWDER 38N-19HZ - KMG - MWD	7,200.00	11,656.65	298.48	205.72	3.218	ES
CROWDER 38N-19HZ - KMG - MWD	7,300.00	11,670.87	326.99	217.28	2.981	SF
DECHANT 13-9 - KMG - No Survey	12,132.58	7,128.00	5,791.10	5,643.53	39.242	CC, ES, SF
DECHANT 14-9 - KMG - MWD	12,132.58	7,386.25	6,321.85	6,158.72	38.752	CC, ES, SF
DECHANT 23-9 - KMG - MWD	210.01	164.09	7,093.46	7,092.39	6,654.938	CC
DECHANT 23-9 - KMG - MWD	12,132.58	7,642.99	7,206.43	7,040.13	43.335	ES, SF
DECHANT 31-19 - KMG - Gyro	6,627.10	6,489.40	2,037.28	1,986.49	40.115	CC, ES
DECHANT 31-19 - KMG - Gyro	6,900.00	6,754.21	2,088.12	2,035.05	39.351	SF
DECHANT 32-19 - KMG - Gyro	6,694.51	6,436.52	2,843.43	2,795.75	59.641	CC
DECHANT 32-19 - KMG - Gyro	6,700.00	6,440.41	2,843.44	2,795.73	59.595	ES
DECHANT 32-19 - KMG - Gyro	7,200.00	6,775.65	2,964.56	2,913.28	57.818	SF
DECHANT 35-9 - KMG - MWD	12,132.58	7,308.03	5,606.44	5,445.58	34.853	CC, ES, SF
DECHANT 36-9 - KMG - MWD	12,132.58	7,550.78	6,094.53	5,927.20	36.421	CC, ES, SF
DECHANT 38-8 - KMG - MWD	12,132.58	7,199.88	5,301.42	5,135.96	32.040	CC, ES, SF
DECHANT 41-19 - KMG - Gyro	6,820.12	6,701.13	547.75	499.29	11.302	CC, ES
DECHANT 41-19 - KMG - Gyro	6,900.00	6,773.54	551.17	502.01	11.211	SF
DECHANT 42-19 - KMG - No Survey	7,145.25	6,975.80	2,312.58	2,273.86	59.726	CC, ES
DECHANT 42-19 - KMG - No Survey	8,700.00	7,193.00	2,937.18	2,878.73	50.249	SF
DECHANT 9-19A - KMG - No Survey	7,234.29	7,030.18	3,239.89	3,200.71	82.696	CC, ES
DECHANT 9-19A - KMG - No Survey	9,800.00	7,188.00	4,356.26	4,279.69	56.892	SF
DECHANT X 08-15 - KMG - Gyro	255.63	297.10	5,585.72	5,584.12	3,477.990	CC, ES
DECHANT X 08-15 - KMG - Gyro	12,132.58	7,146.91	6,064.02	5,910.61	39.530	SF
DECHANT X 08-24D - KMG - MWD	100.00	45.17	5,625.23	5,625.02	10,000.000	CC
DECHANT X 08-24D - KMG - MWD	200.00	139.26	5,625.34	5,624.60	7,579.229	ES
DECHANT X 08-24D - KMG - MWD	12,132.58	7,378.14	6,879.68	6,727.83	45.305	SF
DECHANT X 19-3 - KMG - Gyro	6,625.93	6,500.00	3,016.28	2,965.26	59.126	CC, ES
DECHANT X 19-3 - KMG - Gyro	6,900.00	6,700.00	3,068.46	3,015.48	57.916	SF
DOM RED X 20-02D - KMG - Gyro	8,842.05	7,128.86	1,595.99	1,519.80	20.946	CC
DOM RED X 20-02D - KMG - Gyro	8,900.00	7,128.38	1,597.05	1,519.30	20.542	ES
DOM RED X 20-02D - KMG - Gyro	9,400.00	7,124.13	1,690.70	1,601.51	18.956	SF
DOM RED X 20-3 - NOBLE - Gyro	9,171.75	7,152.80	555.27	471.35	6.616	CC
DOM RED X 20-3 - NOBLE - Gyro	9,200.00	7,153.10	555.99	471.08	6.548	ES
DOM RED X 20-3 - NOBLE - Gyro	9,300.00	7,154.17	569.89	482.40	6.514	SF
DOM RED X20-2D - KMG - No Survey	8,289.91	7,158.00	1,678.63	1,626.28	32.065	CC
DOM RED X20-2D - KMG - No Survey	8,300.00	7,158.00	1,678.66	1,626.09	31.930	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 4K-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 4K-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 22May18 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 X20-2D - KMG - No Survey	9,100.00	7,158.00	1,863.88	1,794.59	26.901	SF
EWERTZ 3-18 - KMG - No Survey	200.00	223.00	4,843.02	4,842.12	5,407.911	CC, ES
EWERTZ 3-18 - KMG - No Survey	11,900.00	7,218.00	9,011.73	8,932.83	114.221	SF
FOUR WAY 1 - KMG - No Survey	12,132.58	7,112.00	4,210.86	4,075.82	31.181	CC, ES, SF
FOUR WAY 12-16 - KMG - Gyro	12,132.58	7,023.00	3,295.22	3,139.39	21.146	CC, ES, SF
HAYMAKER 29N-9HZ - KMG - MWD	12,132.58	6,537.00	5,594.63	5,436.47	35.373	CC, ES, SF
HAYMAKER 4C-9HZ - KMG - MWD	12,132.58	6,697.00	5,609.55	5,451.71	35.540	CC, ES, SF
HAYMAKER 4N-9HZ - KMG - MWD	12,132.58	6,442.00	5,476.09	5,320.02	35.088	CC, ES, SF
HSR-WARNER 6-18 - KMG - No Survey	200.00	211.00	3,875.98	3,875.11	4,433.759	CC
HSR-WARNER 6-18 - KMG - No Survey	400.00	410.84	3,876.61	3,874.68	2,013.827	ES
HSR-WARNER 6-18 - KMG - No Survey	6,800.00	6,697.06	4,187.95	4,145.40	98.425	SF
HUDCO 16-18 - KMG - Gyro	5,317.69	5,215.51	593.13	550.47	13.903	CC
HUDCO 16-18 - KMG - Gyro	5,400.00	5,292.42	593.66	550.31	13.694	ES
HUDCO 16-18 - KMG - Gyro	6,500.00	6,373.82	655.94	604.08	12.648	SF
HUDCO 24-18 - KMG - MWD	223.59	244.87	1,173.94	1,172.76	1,000.476	CC, ES
HUDCO 24-18 - KMG - MWD	6,800.00	6,801.20	2,576.21	2,522.61	48.063	SF
HUDCO 39-18 - KMG - MWD	3,817.17	4,001.34	744.49	713.57	24.079	CC
HUDCO 39-18 - KMG - MWD	4,247.90	4,439.56	745.21	710.54	21.497	ES
HUDCO 39-18 - KMG - MWD	5,100.00	5,204.93	794.28	753.01	19.243	SF
HUDCO 40-18 - KMG - MWD	260.41	288.44	1,157.67	1,156.21	795.336	CC
HUDCO 40-18 - KMG - MWD	300.00	324.00	1,157.90	1,156.18	673.679	ES
HUDCO 40-18 - KMG - MWD	8,700.00	7,201.00	2,956.23	2,887.48	43.005	SF
HUDCO 9-18 - KMG - Gyro	246.54	265.22	1,097.91	1,096.50	776.038	CC
HUDCO 9-18 - KMG - Gyro	300.00	318.33	1,098.14	1,096.36	615.299	ES
HUDCO 9-18 - KMG - Gyro	6,900.00	6,778.03	2,061.75	2,011.18	40.768	SF
LUCERO X 20-04 - KMG - Gyro	7,772.22	7,165.53	580.39	524.53	10.389	CC, ES
LUCERO X 20-04 - KMG - Gyro	7,900.00	7,162.31	594.69	536.60	10.238	SF
MARKHAM 13-8 - KMG - MWD	2,388.86	3,290.00	5,071.85	5,050.85	241.511	CC
MARKHAM 13-8 - KMG - MWD	2,400.00	3,290.00	5,071.86	5,050.81	241.004	ES
MARKHAM 13-8 - KMG - MWD	12,132.58	7,256.34	7,170.71	7,039.38	54.600	SF
MARKHAM 34-8 - KMG - MWD	4,449.26	5,353.00	4,999.30	4,960.52	128.904	CC
MARKHAM 34-8 - KMG - MWD	4,500.00	5,375.73	4,999.46	4,960.39	127.959	ES
MARKHAM 34-8 - KMG - MWD	11,900.00	7,348.27	6,950.74	6,823.47	54.617	SF
MARKHAM 35-8 - KMG - MWD	2,265.08	3,221.29	5,101.55	5,079.58	232.231	CC
MARKHAM 35-8 - KMG - MWD	2,500.00	3,423.00	5,101.74	5,077.94	214.329	ES
MARKHAM 35-8 - KMG - MWD	12,132.58	7,409.00	6,353.93	6,218.08	46.774	SF
MEGUIRE 28C-16HZ - KMG - MWD	12,132.58	10,160.00	2,774.81	2,687.29	31.706	CC, ES, SF
MEGUIRE 29C-16HZ - KMG - MWD	12,132.58	10,380.01	1,618.43	1,528.61	18.019	CC, ES, SF
MEGUIRE 29N-16HZ - KMG - MWD	12,132.58	10,156.00	1,904.00	1,814.18	21.198	CC, ES, SF
MEGUIRE 30N-16HZ - KMG - MWD	12,132.58	10,145.90	811.40	722.59	9.136	CC, ES, SF
MEGUIRE 3N-16HZ - KMG - No Survey	12,132.58	7,125.00	3,676.83	3,574.86	36.058	CC, ES, SF
MEGUIRE 4N-16HZ - KMG - MWD	12,132.58	10,178.50	1,358.54	1,269.19	15.204	CC, ES, SF
MEGUIRE X 21-04 - KMG - Gyro	12,132.58	7,147.09	1,263.89	1,162.05	12.410	CC, ES, SF
MEGUIRE X 21-06 - KMG - No Survey	12,132.58	7,117.00	3,247.81	3,149.05	32.889	CC, ES, SF
MEGUIRE X 21-5J1 - KMG - No Survey	12,132.58	7,122.00	2,441.41	2,306.57	18.107	CC, ES, SF
MELBON 12C-8HZ - KMG - MWD	0.00	0.00	1,645.36			
MELBON 12C-8HZ - KMG - MWD	200.00	189.25	1,645.81	1,644.69	1,472.925	ES
MELBON 12C-8HZ - KMG - MWD	9,300.00	6,824.00	3,048.43	2,972.11	39.939	SF
MELBON 12N-8HZ - KMG - MWD	203.91	199.11	1,636.43	1,635.27	1,415.489	CC, ES
MELBON 12N-8HZ - KMG - MWD	9,100.00	6,653.00	3,149.01	3,077.59	44.092	SF
MELBON 19C-8HZ - KMG - MWD	208.83	200.44	1,822.85	1,821.67	1,551.673	CC, ES
MELBON 19C-8HZ - KMG - MWD	9,900.00	6,793.00	2,995.43	2,905.06	33.148	SF
MELBON 19N-E8HZ - KMG - MWD	205.82	195.57	1,838.22	1,837.06	1,588.600	CC, 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 4K-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 4K-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 22May18 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 19N-E8HZ - KMG - MWD	10,100.00	6,665.00	2,966.59	2,870.61	30.911	SF
MELBON 19N-W8HZ - KMG - MWD	224.70	229.86	1,653.43	1,652.08	1,225.892	CC, ES
MELBON 19N-W8HZ - KMG - MWD	9,600.00	6,739.00	3,026.15	2,943.03	36.407	SF
MELBON 23C-8HZ - KMG - MWD	204.04	191.64	1,854.54	1,853.41	1,639.591	CC, ES
MELBON 23C-8HZ - KMG - MWD	10,500.00	6,827.00	2,904.82	2,791.76	25.693	SF
MELBON 23N-8HZ - KMG - MWD	173.56	158.56	1,870.76	1,869.86	2,078.815	CC
MELBON 23N-8HZ - KMG - MWD	200.00	184.07	1,870.77	1,869.68	1,725.887	ES
MELBON 23N-8HZ - KMG - MWD	10,600.00	6,730.00	2,937.95	2,822.06	25.350	SF
MELBON RANCH 1 - V O&G - No Survey	200.00	166.00	1,093.70	1,092.91	1,378.012	CC, ES
MELBON RANCH 1 - V O&G - No Survey	8,900.00	7,161.00	1,314.47	1,251.55	20.890	SF
MELBON RANCH 13-17 - CPR - MWD	225.41	205.18	1,092.56	1,091.42	958.505	CC
MELBON RANCH 13-17 - CPR - MWD	300.00	283.94	1,093.06	1,091.38	652.289	ES
MELBON RANCH 13-17 - CPR - MWD	8,700.00	7,256.56	2,246.03	2,175.01	31.624	SF
MELBON RANCH 14-17 - CPR - MWD	7,838.25	7,320.71	585.11	524.45	9.645	CC, ES
MELBON RANCH 14-17 - CPR - MWD	7,900.00	7,320.66	588.36	526.46	9.504	SF
MELBON RANCH 17-14 - V O&G - No Survey	8,519.53	7,161.00	980.35	923.29	17.182	CC, ES
MELBON RANCH 17-14 - V O&G - No Survey	8,700.00	7,161.00	996.82	937.40	16.776	SF
MELBON RANCH 23-17 - CPR - MWD	100.00	67.29	1,097.96	1,097.72	4,514.516	CC
MELBON RANCH 23-17 - CPR - MWD	200.00	165.94	1,098.61	1,097.71	1,211.858	ES
MELBON RANCH 23-17 - CPR - MWD	10,000.00	7,213.22	2,233.33	2,128.79	21.365	SF
MELBON RANCH 24-17 - CPR - MWD	9,146.11	7,222.47	604.15	517.29	6.956	CC, ES, SF
MELBON RANCH 2-4-17 - CPR - MWD	217.07	194.75	1,099.90	1,098.82	1,025.125	CC, ES
MELBON RANCH 2-4-17 - CPR - MWD	9,800.00	7,299.00	2,791.45	2,697.16	29.604	SF
MELBON RANCH 2-8-17 - CPR - MWD	8,541.92	7,327.05	134.87	55.31	1.695	CC, ES, SF
MELBON RANCH 33-17 - CPR - MWD	10,679.61	7,414.71	1,183.08	1,046.15	8.640	CC
MELBON RANCH 33-17 - CPR - MWD	10,700.00	7,414.93	1,183.26	1,045.97	8.619	ES
MELBON RANCH 33-17 - CPR - MWD	10,800.00	7,416.00	1,188.15	1,049.61	8.576	SF
MELBON RANCH 34-17 - CPR - MWD	10,509.80	7,226.52	598.32	477.97	4.972	CC, ES, SF
MELBON RANCH 3A-17H - CPR - MWD	0.00	0.00	100.34			
MELBON RANCH 3A-17H - CPR - MWD	200.00	190.33	101.02	99.93	92.789	ES
MELBON RANCH 3A-17H - CPR - MWD	12,132.58	11,825.64	785.37	520.18	2.962	SF
MELBON RANCH 3B-17H - CPR - MWD	216.63	209.32	126.48	125.30	107.028	CC, ES
MELBON RANCH 3B-17H - CPR - MWD	12,132.58	11,857.00	1,719.09	1,454.70	6.502	SF
MELBON RANCH 43-17 43-17 - CPR - Gyro	12,132.58	7,108.79	1,175.57	1,015.28	7.334	CC, ES, SF
MELBON RANCH 4-6-17 - CPR - MWD	9,804.40	7,292.24	1,384.43	1,283.30	13.689	CC, ES
MELBON RANCH 4-6-17 - CPR - MWD	10,000.00	7,292.27	1,398.18	1,293.88	13.404	SF
MELBON RANCH 4-8-17 - CPR - Gyro	9,954.23	7,143.54	350.49	247.02	3.387	CC, ES, SF
MELBON RANCH 6-4-17 - CPR - MWD	11,188.24	7,315.12	1,630.21	1,486.98	11.382	CC
MELBON RANCH 6-4-17 - CPR - MWD	11,200.00	7,315.43	1,630.25	1,486.86	11.369	ES
MELBON RANCH 6-4-17 - CPR - MWD	11,300.00	7,318.10	1,634.04	1,489.43	11.300	SF
Melbon Ranch 6-8-17 - CPR - MWD	11,251.38	7,337.22	117.97	-28.79	0.804	Level 2, CC, ES, SF
MELBON RANCH 8-4-17 - CPR - MWD	12,132.58	7,153.40	1,719.14	1,562.55	10.979	CC, ES, SF
MELBON RANCH 8-6-17 - CPR - MWD	12,132.58	7,189.79	723.88	596.27	5.673	CC, ES, SF
MELBON RANCH 8-8-17 - CPR - MWD	12,132.58	7,492.36	953.27	810.70	6.686	CC, ES, SF
MELBON RANCH E UNIT 1 - CPR - Gyro	11,534.05	7,135.94	1,063.97	920.03	7.392	CC, ES
MELBON RANCH E UNIT 1 - CPR - Gyro	11,600.00	7,136.43	1,066.01	921.36	7.370	SF
MEQUIRE 21-3P - KMG - No Survey	12,132.58	7,112.00	2,341.22	2,263.70	30.203	CC, ES, SF
MUSE 1 - KMG - Gyro	0.00	0.00	2,918.89			
MUSE 1 - KMG - Gyro	200.00	168.35	2,919.32	2,918.41	3,197.175	ES
MUSE 1 - KMG - Gyro	9,800.00	7,162.11	5,222.25	5,143.78	66.552	SF
MUSE 2 - KMG - No Survey	3,516.54	3,478.47	1,410.23	1,388.16	63.898	CC
MUSE 2 - KMG - No Survey	3,800.00	3,756.84	1,411.24	1,387.31	58.963	ES
MUSE 2 - KMG - No Survey	6,700.00	6,604.84	1,544.75	1,502.71	36.743	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 4K-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 4K-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 22May18 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	9,496.56	7,158.00	3,307.11	3,227.24	41.407	CC
PALMER 11-20 - KMG - No Survey	9,600.00	7,158.00	3,308.73	3,226.07	40.031	ES
PALMER 11-20 - KMG - No Survey	11,100.00	7,158.00	3,687.48	3,572.67	32.117	SF
PALMER X 20-05 - KMG - Gyro	8,054.55	7,146.10	1,832.69	1,772.60	30.498	CC
PALMER X 20-05 - KMG - Gyro	8,100.00	7,146.15	1,833.25	1,772.30	30.076	ES
PALMER X 20-05 - KMG - Gyro	9,000.00	7,147.37	2,062.19	1,983.26	26.127	SF
PALMER X 20-06 - KMG - Gyro	9,283.36	7,135.82	1,943.83	1,857.18	22.432	CC
PALMER X 20-06 - KMG - Gyro	9,300.00	7,135.85	1,943.90	1,856.78	22.313	ES
PALMER X 20-06 - KMG - Gyro	10,000.00	7,136.84	2,071.73	1,968.49	20.068	SF
PALMER X 20-20 - KMG - Gyro	8,733.46	7,167.67	2,524.01	2,450.11	34.151	CC
PALMER X 20-20 - KMG - Gyro	8,800.00	7,167.83	2,524.89	2,449.32	33.412	ES
PALMER X 20-20 - KMG - Gyro	10,000.00	7,170.77	2,823.96	2,722.72	27.893	SF
POTTS X 18-10 - KMG - Gyro	1,575.77	1,585.45	2,315.52	2,303.69	195.612	CC
POTTS X 18-10 - KMG - Gyro	1,900.00	1,896.08	2,316.54	2,302.06	159.977	ES
POTTS X 18-10 - KMG - Gyro	6,700.00	6,580.37	2,605.56	2,552.43	49.047	SF
POTTS X 18-15 - KMG - Gyro	6,531.48	6,403.63	1,756.29	1,703.99	33.579	CC
POTTS X 18-15 - KMG - Gyro	6,600.00	6,473.61	1,756.54	1,703.65	33.212	ES
POTTS X 18-15 - KMG - Gyro	6,700.00	6,576.59	1,768.88	1,715.19	32.947	SF
RUSSIAN FIDDLER 15N-18HZ - KMG - MWD	6,809.27	12,426.03	1,771.32	1,649.07	14.490	CC, ES
RUSSIAN FIDDLER 15N-18HZ - KMG - MWD	6,900.00	12,414.08	1,779.30	1,655.61	14.385	SF
RUSSIAN FIDDLER 36C-18HZ - KMG - MWD	6,798.70	12,618.36	2,348.23	2,224.72	19.014	CC
RUSSIAN FIDDLER 36C-18HZ - KMG - MWD	6,800.00	12,618.10	2,348.23	2,224.71	19.011	ES
RUSSIAN FIDDLER 36C-18HZ - KMG - MWD	6,900.00	12,596.22	2,357.45	2,232.80	18.913	SF
RUSSIAN FIDDLER 36N-18HZ - KMG - MWD	6,753.37	12,128.00	2,607.94	2,490.84	22.271	CC, ES
RUSSIAN FIDDLER 36N-18HZ - KMG - MWD	6,900.00	12,128.00	2,626.86	2,508.19	22.136	SF
RUSSIAN FIDDLER 36N-18HZX - KMG - MWD	6,766.28	12,399.02	2,632.31	2,508.89	21.329	CC, ES
RUSSIAN FIDDLER 36N-18HZX - KMG - MWD	6,900.00	12,379.09	2,648.02	2,523.56	21.276	SF
RUSSIAN FIDDLER 37C-18HZ - KMG - MWD	6,899.59	12,658.88	1,290.88	1,169.47	10.632	CC
RUSSIAN FIDDLER 37C-18HZ - KMG - MWD	6,900.00	12,658.81	1,290.88	1,169.45	10.631	ES
RUSSIAN FIDDLER 37C-18HZ - KMG - MWD	7,000.00	12,643.34	1,301.63	1,177.46	10.482	SF
RUSSIAN FIDDLER 37N-18HZ - KMG - MWD	6,838.75	12,399.86	1,470.83	1,349.41	12.113	CC, ES
RUSSIAN FIDDLER 37N-18HZ - KMG - MWD	6,900.00	12,391.46	1,474.69	1,351.98	12.018	SF
SANDLIN-WELD COUNTY 1 - KMG - No Survey	11,770.50	7,132.00	3,988.11	3,850.04	28.886	CC
SANDLIN-WELD COUNTY 1 - KMG - No Survey	11,900.00	7,132.00	3,990.21	3,849.22	28.301	ES
SANDLIN-WELD COUNTY 1 - KMG - No Survey	12,132.58	7,132.00	4,004.51	3,858.60	27.444	SF
SANDLIN-WELD-COUNTY UNIT 2 - KMG - Gyro	146.84	102.85	3,123.11	3,122.60	6,157.998	CC
SANDLIN-WELD-COUNTY UNIT 2 - KMG - Gyro	200.00	154.52	3,123.12	3,122.24	3,542.432	ES
SANDLIN-WELD-COUNTY UNIT 2 - KMG - Gyro	11,100.00	7,118.54	4,542.22	4,426.33	39.194	SF
SARCHET 1 - KMG - No Survey	11,100.07	7,134.00	1,691.40	1,570.93	14.040	CC
SARCHET 1 - KMG - No Survey	11,200.00	7,134.00	1,694.35	1,570.69	13.702	ES
SARCHET 1 - KMG - No Survey	11,500.00	7,134.00	1,738.04	1,607.07	13.271	SF
SARCHET 15N-20HZ - KMG - MWD	10,775.91	7,540.00	43.07	-12.89	0.770	Level 2, CC, ES, SF
SARCHET 16N-20HZ - KMG - No Survey	12,132.58	7,138.00	528.07	385.24	3.697	CC, ES, SF
SARCHET 20-1 - KMG - Gyro	11,861.50	7,123.49	499.75	347.25	3.277	CC
SARCHET 20-1 - KMG - Gyro	11,900.00	7,122.68	501.23	347.05	3.251	ES, SF
SARCHET 20-2 - NOBLE - No Survey	10,610.16	7,137.00	670.25	562.06	6.195	CC, ES
SARCHET 20-2 - NOBLE - No Survey	10,700.00	7,137.00	676.24	565.35	6.098	SF
SARCHET 36G-20HZ - KMG - Proposed	10,196.99	7,148.00	394.04	296.51	4.040	CC
SARCHET 36G-20HZ - KMG - Proposed	10,200.00	7,148.00	394.05	296.39	4.035	ES, SF
SARCHET 36N-20HZ - KMG - MWD	10,197.96	7,495.71	76.55	31.84	1.712	CC
SARCHET 36N-20HZ - KMG - MWD	10,200.00	7,495.72	76.58	31.66	1.705	ES, SF
SARCHET 37C-20HZ - KMG - Proposed	10,256.19	7,147.00	326.33	227.28	3.295	CC, ES
SARCHET 37C-20HZ - KMG - Proposed	10,300.00	7,147.00	329.26	228.64	3.272	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 4K-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 4K-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 22May18 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	10,290.26	7,147.00	360.68	260.76	3.610	CC
SARCHET 37N-20HZ - KMG - Proposed	10,300.00	7,147.00	360.81	260.44	3.595	ES, SF
SARCHET 38C-20HZ - KMG - Proposed	12,132.58	7,129.00	544.09	403.21	3.862	CC, ES, SF
SARCHET X 20-8 - KMG - Gyro	11,973.46	7,110.65	2,107.89	1,952.51	13.567	CC
SARCHET X 20-8 - KMG - Gyro	12,000.00	7,110.57	2,108.05	1,951.82	13.493	ES
SARCHET X 20-8 - KMG - Gyro	12,132.58	7,110.13	2,113.88	1,953.68	13.195	SF
SEATON 2-18 - KMG - No Survey	200.00	198.00	4,092.45	4,091.60	4,809.915	CC, ES
SEATON 2-18 - KMG - No Survey	11,600.00	7,193.00	7,708.15	7,623.12	90.645	SF
SEATON 7-18 - KMG - No Survey	200.00	215.00	2,727.87	2,726.99	3,095.898	CC, ES
SEATON 7-18 - KMG - No Survey	6,800.00	6,701.06	3,321.04	3,280.00	80.930	SF
SEATON 8-18 - KMG - Gyro	0.00	0.00	2,092.33			
SEATON 8-18 - KMG - Gyro	9,100.00	7,200.00	4,062.49	3,992.42	57.972	SF
SUNFLOWER 24N-17HZ - KMG - MWD	11,208.49	12,650.00	2,728.22	2,590.90	19.868	CC
SUNFLOWER 24N-17HZ - KMG - MWD	11,300.00	12,650.00	2,729.76	2,589.48	19.459	ES
SUNFLOWER 24N-17HZ - KMG - MWD	12,132.58	12,650.00	2,880.47	2,710.62	16.958	SF
SUNFLOWER 25G-17HZ - KMG - MWD	10,140.74	12,664.00	2,697.59	2,582.62	23.463	CC
SUNFLOWER 25G-17HZ - KMG - MWD	10,200.00	12,664.00	2,698.24	2,581.04	23.022	ES
SUNFLOWER 25G-17HZ - KMG - MWD	11,600.00	12,664.00	3,035.66	2,867.63	18.066	SF
SUNFLOWER 40C-17HZ - KMG - MWD	12,132.58	12,840.00	2,703.13	2,536.48	16.220	CC, ES, SF
SUNFLOWER 40N-17HZ - KMG - MWD	12,132.58	12,495.00	2,875.10	2,705.35	16.937	CC, ES, SF
SUNFLOWER 7C-17HZ - KMG - MWD	100.00	0.00	7,903.22	7,903.09	10,000.000	CC, ES
SUNFLOWER 7C-17HZ - KMG - MWD	12,132.58	1,800.00	9,860.08	9,743.38	84.497	SF
SUNFLOWER 7N-17HZ - KMG - MWD	11,082.01	12,615.00	2,654.42	2,522.63	20.141	CC
SUNFLOWER 7N-17HZ - KMG - MWD	11,200.00	12,615.00	2,657.04	2,521.49	19.601	ES
SUNFLOWER 7N-17HZ - KMG - MWD	12,132.58	12,615.00	2,854.76	2,685.64	16.880	SF
SUNFLOWER 8N-17HZ - KMG - MWD	11,593.22	12,665.00	2,719.32	2,572.25	18.490	CC
SUNFLOWER 8N-17HZ - KMG - MWD	11,700.00	12,665.00	2,721.42	2,571.46	18.148	ES
SUNFLOWER 8N-17HZ - KMG - MWD	12,132.58	12,665.00	2,772.29	2,608.38	16.913	SF
THOMASON 1 - PETERSON - No Survey	12,132.58	7,116.00	2,247.74	2,165.83	27.442	CC, ES, SF
THOMASON 14-16 - KMG - MWD	12,132.58	7,334.42	2,657.75	2,579.72	34.062	CC, ES, SF
THOMASON 16-5 - KMG - Gyro	12,132.58	7,092.26	3,782.14	3,625.68	24.174	CC, ES, SF
THOMASON 21-16 - KMG - MWD	12,132.58	7,160.16	4,849.87	4,707.57	34.081	CC, ES, SF
THOMASON 23-16 - KMG - MWD	12,132.58	7,264.63	3,290.94	3,197.64	35.274	CC, ES, SF
THOMASON 25-16 - KMG - No Survey	12,132.58	945.00	6,908.74	6,853.18	124.347	CC, ES, SF
THOMASON 25-16R - KMG - MWD	12,132.58	7,280.51	4,062.86	3,938.36	32.635	CC, ES, SF
THOMASON 34N-9HZ - KMG - MWD	12,132.58	11,537.00	5,481.12	5,222.56	21.198	CC, ES, SF
THOMASON 36-16 - KMG - MWD	12,132.58	7,452.67	3,055.31	2,980.53	40.859	CC, ES, SF
THOMASON 6-16 - KMG - MWD	12,132.58	7,212.71	4,041.13	3,902.30	29.109	CC, ES, SF
THOMASON X 16-11 - KMG - No Survey	12,132.58	7,109.00	3,123.53	3,016.42	29.162	CC, ES, SF
THOMASON X 16-12 - KMG - Gyro	12,132.58	7,059.36	2,177.97	2,031.59	14.879	CC, ES, SF
THOMASON X 16-4 - KMG - No Survey	12,132.58	7,112.00	4,709.13	4,562.87	32.198	CC, ES, SF
THOMASON X16-13 - KMG - Gyro	12,132.58	7,111.81	1,294.04	1,183.55	11.712	CC, ES, SF
THOMSEN 1C-18HZ - KMG - MWD	6,627.82	14,563.00	4,727.18	4,654.06	64.657	CC, ES
THOMSEN 1C-18HZ - KMG - MWD	10,600.00	14,563.00	6,727.28	6,574.55	44.046	SF
THOMSEN 1N-18HZ - KMG - Proposed	6,521.17	13,958.15	5,136.29	5,056.56	64.418	CC, ES
THOMSEN 1N-18HZ - KMG - Proposed	10,900.00	13,958.15	7,476.19	7,321.55	48.347	SF
THOMSEN 2N-18HZ - KMG - MWD	6,600.00	13,966.00	4,307.87	4,245.92	69.538	CC, ES
THOMSEN 2N-18HZ - KMG - MWD	10,600.00	13,966.00	6,173.03	6,023.69	41.337	SF
THOMSEN 36C-18HZ - KMG - MWD	6,768.59	14,786.00	2,789.54	2,625.10	16.964	CC, ES
THOMSEN 36C-18HZ - KMG - MWD	6,900.00	14,786.00	2,804.51	2,638.30	16.874	SF
THOMSEN 36N-18HZ - KMG - MWD	6,759.89	14,693.00	2,379.26	2,214.72	14.460	CC, ES
THOMSEN 36N-18HZ - KMG - MWD	6,900.00	14,693.00	2,396.82	2,230.39	14.401	SF
THOMSEN 3N-18HZ - KMG - MWD	6,469.47	14,148.00	4,604.73	4,554.91	92.428	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 4K-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 4K-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 22May18 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)						
THOMSEN 3N-18HZ - KMG - MWD	6,500.00	14,148.00	4,604.83	4,554.83	92.106	ES
THOMSEN 3N-18HZ - KMG - MWD	11,600.00	14,148.00	6,747.04	6,585.32	41.721	SF
THOMSEN 4N-18HZ - KMG - MWD	6,634.55	14,792.00	4,047.97	3,992.81	73.391	CC, ES
THOMSEN 4N-18HZ - KMG - MWD	11,400.00	14,792.00	5,832.28	5,671.35	36.241	SF
UPRR 38 PAN AM X 1 - KMG - Gyro	6,745.56	6,595.25	1,408.73	1,360.51	29.211	CC, ES
UPRR 38 PAN AM X 1 - KMG - Gyro	7,000.00	6,829.26	1,439.41	1,389.12	28.623	SF
WALTERS 21-18 - KMG - MWD	0.00	0.00	3,120.88			
WALTERS 21-18 - KMG - MWD	6,800.00	6,787.76	4,437.35	4,379.08	76.144	SF
WALTERS 25-18 - KMG - MWD	745.14	1,045.97	3,100.06	3,092.92	433.859	CC
WALTERS 25-18 - KMG - MWD	1,700.00	1,999.95	3,110.57	3,092.82	175.264	ES
WALTERS 25-18 - KMG - MWD	6,800.00	6,912.50	3,394.77	3,329.21	51.785	SF
WALTERS 28-18 - KMG - MWD	0.00	0.00	3,129.33			
WALTERS 28-18 - KMG - MWD	100.00	87.11	3,129.52	3,129.24	10,000.000	ES
WALTERS 28-18 - KMG - MWD	11,800.00	7,436.79	8,628.02	8,526.54	85.021	SF
WARNER 12-18 - KMG - MWD	0.00	17.09	3,417.08			
WARNER 12-18 - KMG - MWD	6,800.00	7,211.29	4,686.70	4,617.41	67.631	SF
WARNER 14-18 - KMG - No Survey	6,600.00	6,524.66	2,836.49	2,794.66	67.802	CC, ES
WARNER 14-18 - KMG - No Survey	6,800.00	6,719.06	2,867.98	2,824.97	66.677	SF
WARNER 18-18 - KMG - MWD	141.72	160.69	3,419.70	3,419.08	5,525.045	CC
WARNER 18-18 - KMG - MWD	200.00	212.00	3,419.85	3,418.84	3,399.790	ES
WARNER 18-18 - KMG - MWD	6,900.00	7,105.69	5,281.78	5,225.24	93.414	SF
WARNER 22-18 - KMG - MWD	0.00	19.96	3,418.40			
WARNER 22-18 - KMG - MWD	200.00	212.00	3,418.54	3,417.52	3,362.830	ES
WARNER 22-18 - KMG - MWD	6,800.00	6,712.74	4,448.27	4,389.64	75.876	SF
WARNER 23-18 - KMG - MWD	5,123.20	5,078.77	2,639.34	2,592.56	56.416	CC
WARNER 23-18 - KMG - MWD	5,200.00	5,124.07	2,639.86	2,592.50	55.746	ES
WARNER 23-18 - KMG - MWD	6,700.00	6,701.40	2,684.11	2,623.95	44.612	SF
WARNER 31-18 - KMG - MWD	100.00	119.00	3,418.92	3,418.59	10,000.000	CC
WARNER 31-18 - KMG - MWD	200.00	200.94	3,419.17	3,418.19	3,499.316	ES
WARNER 31-18 - KMG - MWD	6,900.00	4,367.93	5,960.24	5,913.20	126.697	SF
WARNER 32-18 - KMG - MWD	0.00	19.08	3,417.94			
WARNER 32-18 - KMG - MWD	100.00	114.51	3,418.03	3,417.71	10,000.000	ES
WARNER 32-18 - KMG - MWD	6,700.00	5,767.14	5,244.60	5,183.68	86.085	SF
WARNER 33-18 - KMG - MWD	1,149.29	771.00	3,172.10	3,165.31	466.797	CC
WARNER 33-18 - KMG - MWD	1,200.00	795.52	3,172.30	3,165.19	446.042	ES
WARNER 33-18 - KMG - MWD	7,000.00	7,475.85	5,118.40	5,055.81	81.769	SF
WARNER 35-18 - KMG - MWD	1,351.01	960.00	3,172.27	3,163.78	373.746	CC
WARNER 35-18 - KMG - MWD	1,400.00	990.99	3,172.34	3,163.51	359.499	ES
WARNER 35-18 - KMG - MWD	6,900.00	6,872.22	3,526.44	3,470.67	63.234	SF

Anticollision Summary Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well MELBON RANCH 4K-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 4K-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 22May18 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	80.00	79.01	80.571	CC, ES
MELBON RANCH 4C-17H-M265 - Wellbore #1 - Design	12,132.58	12,061.18	2,479.28	2,209.81	9.201	SF
MELBON RANCH 4D-17H-M265 - Wellbore #1 - Design	200.00	200.00	70.02	69.02	70.513	CC, ES
MELBON RANCH 4D-17H-M265 - Wellbore #1 - Design	12,132.58	12,194.86	2,382.14	2,112.64	8.839	SF
MELBON RANCH 4E-17H-M265 - Wellbore #1 - Plan #2	200.00	200.00	60.01	59.02	60.433	CC, ES
MELBON RANCH 4E-17H-M265 - Wellbore #1 - Plan #2	12,132.58	11,926.64	2,051.88	1,782.95	7.630	SF
MELBON RANCH 4F-17H-M265 - Wellbore #1 - Plan #2	200.00	200.00	50.01	49.02	50.363	CC, ES
MELBON RANCH 4F-17H-M265 - Wellbore #1 - Plan #2	12,132.58	12,084.69	1,503.80	1,235.61	5.607	SF
MELBON RANCH 4G-17H-M265 - Wellbore #1 - Plan #2	200.00	200.00	40.01	39.02	40.292	CC, ES
MELBON RANCH 4G-17H-M265 - Wellbore #1 - Plan #2	12,132.58	11,920.13	1,423.35	1,154.17	5.288	SF
MELBON RANCH 4H-17H-M265 - Wellbore #1 - Design	200.00	200.00	30.02	29.02	30.229	CC
MELBON RANCH 4H-17H-M265 - Wellbore #1 - Design	300.00	300.56	30.67	28.98	18.161	ES
MELBON RANCH 4H-17H-M265 - Wellbore #1 - Design	12,132.58	11,918.25	875.80	608.07	3.271	SF
MELBON RANCH 4I-17H-M265 - Wellbore #1 - Design #	200.00	200.00	19.87	18.88	20.011	CC, ES
MELBON RANCH 4I-17H-M265 - Wellbore #1 - Design #	12,132.58	12,138.81	630.78	364.28	2.367	SF
MELBON RANCH 4J-17H-M265 - Wellbore #1 - Design #	200.00	200.00	10.00	9.01	10.075	CC, ES
MELBON RANCH 4J-17H-M265 - Wellbore #1 - Design #	12,132.58	11,991.90	274.95	24.59	1.098	Level 3, SF