



Crestone Peak Resources

Sec 17 T2N-R65W

Melbon Ranch Pad

MELBON RANCH 4E-17H-M265

Wellbore #1

Plan: Plan #2 17May18 kjs

Standard Planning Report - Geographic

17 May, 2018



Crestone Peak Resources

Well Name:

MELBON RANCH 4E-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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	Start Build 2.00
718.88	8.38	327.38	717.39	25.75	-16.48	-11.55	30.57	Hold 8.38 Inc, 327.38 Az
6387.57	8.38	327.38	6325.59	721.35	-461.74	-323.67	856.47	KOP 8/100
7568.72	90.00	89.90	7092.00	817.76	252.09	395.83	1596.72	LP 90 Inc, 89.9 Az
9068.72	90.00	89.90	7092.00	820.38	1752.09	1871.56	3096.72	Start 2/100 Turn
9095.74	90.00	89.36	7092.00	820.55	1779.10	1898.16	3123.73	Hold 89.36 Az
11952.69	90.00	89.36	7092.00	852.47	4635.87	4713.60	5980.68	TD at 11952.69

Geodetic Datum:

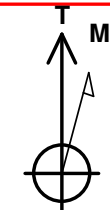
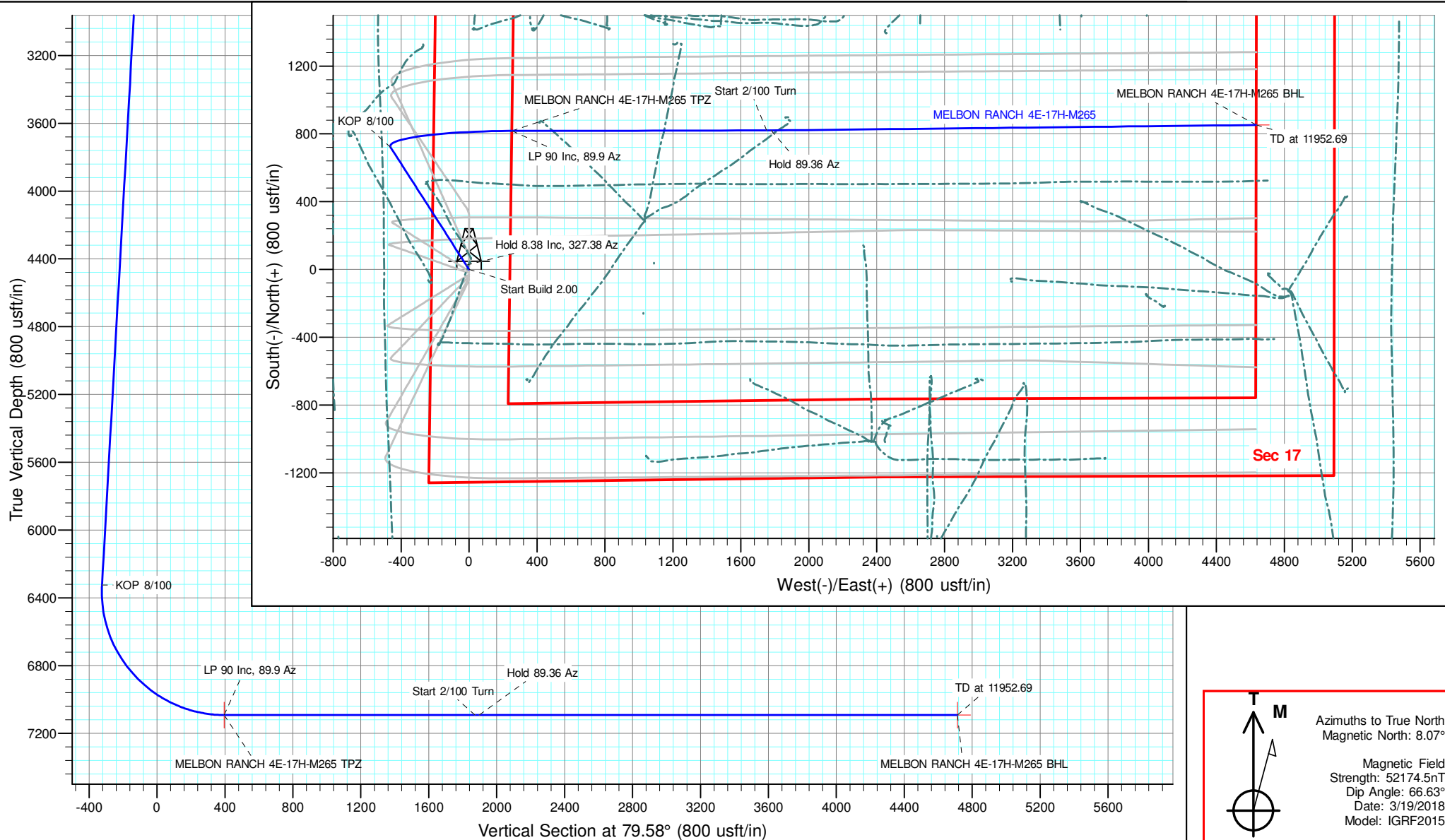
North American Datum 1983
US State Plane 1983, Colorado Northern Zone

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 4E-17H-M265 BHL	7092.00	852.47	4635.87	1293862.20	3229245.38	40.137136	-104.680055	Point
MELBON RANCH 4E-17H-M265 TPZ	7092.00	817.76	252.09	1293787.77	3224862.09	40.137042	-104.695734	Point



Azimuths to True North
Magnetic North: 8.07°

Magnetic Field
Strength: 52174.5nT
Dip Angle: 66.63°
Date: 3/19/2018
Model: IGRF2015

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4E-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 4E-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:	-104.696636
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.52 °

Well	MELBON RANCH 4E-17H-M265					
Well Position	+N/-S	0.00 usft	Northing:	1,292,967.76 usft	Latitude:	40.134797
	+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	52,174.50691314

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	79.58

Plan Survey Tool Program	Date	5/17/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	11,952.69 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	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
718.88	8.38	327.38	717.39	25.75	-16.48	2.00	2.00	0.00	327.38	
6,387.57	8.38	327.38	6,325.59	721.35	-461.74	0.00	0.00	0.00	0.00	
7,568.73	90.00	89.90	7,092.00	817.76	252.09	8.00	6.91	10.37	122.25	MELBON RANCH 4E
9,068.73	90.00	89.90	7,092.00	820.38	1,752.09	0.00	0.00	0.00	0.00	
9,095.74	90.00	89.36	7,092.00	820.55	1,779.10	2.00	0.00	-2.00	-90.00	
11,952.69	90.00	89.36	7,092.00	852.47	4,635.87	0.00	0.00	0.00	0.00	MELBON RANCH 4E

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4E-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 4E-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	1,292,967.76	3,224,617.42	40.134797	-104.696636
100.00	0.00	0.00	100.00	0.00	0.00	1,292,967.76	3,224,617.42	40.134797	-104.696636
200.00	0.00	0.00	200.00	0.00	0.00	1,292,967.76	3,224,617.42	40.134797	-104.696636
300.00	0.00	0.00	300.00	0.00	0.00	1,292,967.76	3,224,617.42	40.134797	-104.696636
Start Build 2.00									
400.00	2.00	327.38	399.98	1.47	-0.94	1,292,969.22	3,224,616.47	40.134801	-104.696639
500.00	4.00	327.38	499.84	5.88	-3.76	1,292,973.60	3,224,613.61	40.134813	-104.696650
600.00	6.00	327.38	599.45	13.22	-8.46	1,292,980.90	3,224,608.84	40.134834	-104.696666
700.00	8.00	327.38	698.70	23.48	-15.03	1,292,991.10	3,224,602.18	40.134862	-104.696690
718.88	8.38	327.38	717.39	25.75	-16.48	1,292,993.36	3,224,600.71	40.134868	-104.696695
Hold 8.38 Inc, 327.38 Az									
800.00	8.38	327.38	797.64	35.70	-22.85	1,293,003.25	3,224,594.25	40.134895	-104.696718
900.00	8.38	327.38	896.58	47.97	-30.71	1,293,015.45	3,224,586.28	40.134929	-104.696746
1,000.00	8.38	327.38	995.51	60.24	-38.56	1,293,027.65	3,224,578.32	40.134963	-104.696774
1,100.00	8.38	327.38	1,094.44	72.51	-46.42	1,293,039.85	3,224,570.35	40.134996	-104.696802
1,200.00	8.38	327.38	1,193.38	84.78	-54.27	1,293,052.05	3,224,562.39	40.135030	-104.696830
1,300.00	8.38	327.38	1,292.31	97.05	-62.13	1,293,064.25	3,224,554.42	40.135064	-104.696858
1,400.00	8.38	327.38	1,391.24	109.33	-69.98	1,293,076.45	3,224,546.45	40.135097	-104.696886
1,500.00	8.38	327.38	1,490.17	121.60	-77.84	1,293,088.65	3,224,538.49	40.135131	-104.696914
1,600.00	8.38	327.38	1,589.11	133.87	-85.69	1,293,100.85	3,224,530.52	40.135165	-104.696943
1,700.00	8.38	327.38	1,688.04	146.14	-93.54	1,293,113.05	3,224,522.56	40.135198	-104.696971
1,800.00	8.38	327.38	1,786.97	158.41	-101.40	1,293,125.24	3,224,514.59	40.135232	-104.696999
1,900.00	8.38	327.38	1,885.91	170.68	-109.25	1,293,137.44	3,224,506.63	40.135266	-104.697027
2,000.00	8.38	327.38	1,984.84	182.95	-117.11	1,293,149.64	3,224,498.66	40.135299	-104.697055
2,100.00	8.38	327.38	2,083.77	195.22	-124.96	1,293,161.84	3,224,490.70	40.135333	-104.697083
2,200.00	8.38	327.38	2,182.70	207.49	-132.82	1,293,174.04	3,224,482.73	40.135367	-104.697111
2,300.00	8.38	327.38	2,281.64	219.76	-140.67	1,293,186.24	3,224,474.76	40.135401	-104.697139
2,400.00	8.38	327.38	2,380.57	232.04	-148.53	1,293,198.44	3,224,466.80	40.135434	-104.697167
2,500.00	8.38	327.38	2,479.50	244.31	-156.38	1,293,210.64	3,224,458.83	40.135468	-104.697195
2,600.00	8.38	327.38	2,578.44	256.58	-164.24	1,293,222.84	3,224,450.87	40.135502	-104.697224
2,700.00	8.38	327.38	2,677.37	268.85	-172.09	1,293,235.04	3,224,442.90	40.135535	-104.697252
2,800.00	8.38	327.38	2,776.30	281.12	-179.95	1,293,247.24	3,224,434.94	40.135569	-104.697280
2,900.00	8.38	327.38	2,875.24	293.39	-187.80	1,293,259.44	3,224,426.97	40.135603	-104.697308
3,000.00	8.38	327.38	2,974.17	305.66	-195.66	1,293,271.64	3,224,419.00	40.135636	-104.697336
3,100.00	8.38	327.38	3,073.10	317.93	-203.51	1,293,283.84	3,224,411.04	40.135670	-104.697364
3,200.00	8.38	327.38	3,172.03	330.20	-211.37	1,293,296.03	3,224,403.07	40.135704	-104.697392
3,300.00	8.38	327.38	3,270.97	342.47	-219.22	1,293,308.23	3,224,395.11	40.135737	-104.697420
3,400.00	8.38	327.38	3,369.90	354.74	-227.08	1,293,320.43	3,224,387.14	40.135771	-104.697448
3,500.00	8.38	327.38	3,468.83	367.02	-234.93	1,293,332.63	3,224,379.18	40.135805	-104.697476
3,600.00	8.38	327.38	3,567.77	379.29	-242.78	1,293,344.83	3,224,371.21	40.135838	-104.697504
3,700.00	8.38	327.38	3,666.70	391.56	-250.64	1,293,357.03	3,224,363.25	40.135872	-104.697533
3,800.00	8.38	327.38	3,765.63	403.83	-258.49	1,293,369.23	3,224,355.28	40.135906	-104.697561
3,900.00	8.38	327.38	3,864.56	416.10	-266.35	1,293,381.43	3,224,347.31	40.135939	-104.697589
4,000.00	8.38	327.38	3,963.50	428.37	-274.20	1,293,393.63	3,224,339.35	40.135973	-104.697617
4,100.00	8.38	327.38	4,062.43	440.64	-282.06	1,293,405.83	3,224,331.38	40.136007	-104.697645
4,200.00	8.38	327.38	4,161.36	452.91	-289.91	1,293,418.03	3,224,323.42	40.136041	-104.697673
4,300.00	8.38	327.38	4,260.30	465.18	-297.77	1,293,430.23	3,224,315.45	40.136074	-104.697701
4,400.00	8.38	327.38	4,359.23	477.45	-305.62	1,293,442.43	3,224,307.49	40.136108	-104.697729
4,500.00	8.38	327.38	4,458.16	489.72	-313.48	1,293,454.62	3,224,299.52	40.136142	-104.697757
4,600.00	8.38	327.38	4,557.10	502.00	-321.33	1,293,466.82	3,224,291.56	40.136175	-104.697785
4,700.00	8.38	327.38	4,656.03	514.27	-329.19	1,293,479.02	3,224,283.59	40.136209	-104.697813
4,800.00	8.38	327.38	4,754.96	526.54	-337.04	1,293,491.22	3,224,275.62	40.136243	-104.697842
4,900.00	8.38	327.38	4,853.89	538.81	-344.90	1,293,503.42	3,224,267.66	40.136276	-104.697870
5,000.00	8.38	327.38	4,952.83	551.08	-352.75	1,293,515.62	3,224,259.69	40.136310	-104.697898

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4E-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 4E-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	8.38	327.38	5,051.76	563.35	-360.61	1,293,527.82	3,224,251.73	40.136344	-104.697926	
5,200.00	8.38	327.38	5,150.69	575.62	-368.46	1,293,540.02	3,224,243.76	40.136377	-104.697954	
5,300.00	8.38	327.38	5,249.63	587.89	-376.32	1,293,552.22	3,224,235.80	40.136411	-104.697982	
5,400.00	8.38	327.38	5,348.56	600.16	-384.17	1,293,564.42	3,224,227.83	40.136445	-104.698010	
5,500.00	8.38	327.38	5,447.49	612.43	-392.02	1,293,576.62	3,224,219.87	40.136478	-104.698038	
5,600.00	8.38	327.38	5,546.42	624.70	-399.88	1,293,588.82	3,224,211.90	40.136512	-104.698066	
5,700.00	8.38	327.38	5,645.36	636.98	-407.73	1,293,601.02	3,224,203.93	40.136546	-104.698094	
5,800.00	8.38	327.38	5,744.29	649.25	-415.59	1,293,613.21	3,224,195.97	40.136579	-104.698123	
5,900.00	8.38	327.38	5,843.22	661.52	-423.44	1,293,625.41	3,224,188.00	40.136613	-104.698151	
6,000.00	8.38	327.38	5,942.16	673.79	-431.30	1,293,637.61	3,224,180.04	40.136647	-104.698179	
6,100.00	8.38	327.38	6,041.09	686.06	-439.15	1,293,649.81	3,224,172.07	40.136681	-104.698207	
6,200.00	8.38	327.38	6,140.02	698.33	-447.01	1,293,662.01	3,224,164.11	40.136714	-104.698235	
6,300.00	8.38	327.38	6,238.96	710.60	-454.86	1,293,674.21	3,224,156.14	40.136748	-104.698263	
6,387.57	8.38	327.38	6,325.59	721.35	-461.74	1,293,684.89	3,224,149.17	40.136777	-104.698288	
KOP 8/100										
6,400.00	7.89	333.52	6,337.90	722.87	-462.61	1,293,686.41	3,224,148.28	40.136782	-104.698291	
6,500.00	8.38	32.48	6,437.05	735.19	-461.76	1,293,698.73	3,224,149.03	40.136815	-104.698288	
6,600.00	14.34	60.84	6,535.12	747.39	-447.00	1,293,711.07	3,224,163.67	40.136849	-104.698235	
6,700.00	21.64	71.66	6,630.19	759.24	-418.64	1,293,723.18	3,224,191.92	40.136881	-104.698133	
6,800.00	29.30	77.11	6,720.42	770.52	-377.22	1,293,734.83	3,224,233.23	40.136912	-104.697985	
6,900.00	37.09	80.45	6,804.04	781.00	-323.55	1,293,745.79	3,224,286.81	40.136941	-104.697793	
7,000.00	44.94	82.75	6,879.44	790.47	-258.67	1,293,755.86	3,224,351.60	40.136967	-104.697561	
7,100.00	52.84	84.50	6,945.14	798.76	-183.85	1,293,764.82	3,224,426.34	40.136990	-104.697294	
7,200.00	60.75	85.91	6,999.87	805.70	-100.54	1,293,772.52	3,224,509.59	40.137009	-104.696996	
7,300.00	68.67	87.12	7,042.55	811.16	-10.36	1,293,778.79	3,224,599.71	40.137024	-104.696673	
7,400.00	76.61	88.21	7,072.37	815.03	84.92	1,293,783.53	3,224,694.96	40.137035	-104.696332	
7,500.00	84.54	89.22	7,088.73	817.23	183.47	1,293,786.62	3,224,793.48	40.137041	-104.695980	
7,568.73	90.00	89.90	7,092.00	817.76	252.09	1,293,787.77	3,224,862.09	40.137042	-104.695734	
LP 90 Inc, 89.9 Az - MELBON RANCH 4E-17H-M265 TPZ										
7,600.00	90.00	89.90	7,092.00	817.81	283.36	1,293,788.11	3,224,893.37	40.137042	-104.695623	
7,700.00	90.00	89.90	7,092.00	817.99	383.36	1,293,789.19	3,224,993.36	40.137043	-104.695265	
7,800.00	90.00	89.90	7,092.00	818.16	483.36	1,293,790.27	3,225,093.35	40.137043	-104.694907	
7,900.00	90.00	89.90	7,092.00	818.34	583.36	1,293,791.35	3,225,193.35	40.137044	-104.694550	
8,000.00	90.00	89.90	7,092.00	818.51	683.36	1,293,792.43	3,225,293.34	40.137044	-104.694192	
8,100.00	90.00	89.90	7,092.00	818.69	783.36	1,293,793.51	3,225,393.34	40.137045	-104.693834	
8,200.00	90.00	89.90	7,092.00	818.86	883.36	1,293,794.59	3,225,493.33	40.137045	-104.693477	
8,300.00	90.00	89.90	7,092.00	819.03	983.36	1,293,795.67	3,225,593.32	40.137046	-104.693119	
8,400.00	90.00	89.90	7,092.00	819.21	1,083.36	1,293,796.75	3,225,693.32	40.137046	-104.692761	
8,500.00	90.00	89.90	7,092.00	819.38	1,183.36	1,293,797.83	3,225,793.31	40.137046	-104.692404	
8,600.00	90.00	89.90	7,092.00	819.56	1,283.36	1,293,798.91	3,225,893.31	40.137047	-104.692046	
8,700.00	90.00	89.90	7,092.00	819.73	1,383.36	1,293,799.99	3,225,993.30	40.137047	-104.691688	
8,800.00	90.00	89.90	7,092.00	819.91	1,483.36	1,293,801.07	3,226,093.30	40.137048	-104.691331	
8,900.00	90.00	89.90	7,092.00	820.08	1,583.36	1,293,802.15	3,226,193.29	40.137048	-104.690973	
9,000.00	90.00	89.90	7,092.00	820.26	1,683.36	1,293,803.23	3,226,293.28	40.137049	-104.690615	
9,068.73	90.00	89.90	7,092.00	820.38	1,752.09	1,293,803.98	3,226,362.00	40.137049	-104.690369	
Start 2/100 Turn										
9,095.74	90.00	89.36	7,092.00	820.55	1,779.10	1,293,804.40	3,226,389.01	40.137050	-104.690273	
Hold 89.36 Az										
9,100.00	90.00	89.36	7,092.00	820.60	1,783.36	1,293,804.48	3,226,393.28	40.137050	-104.690258	
9,200.00	90.00	89.36	7,092.00	821.72	1,883.35	1,293,806.50	3,226,493.25	40.137053	-104.689900	
9,300.00	90.00	89.36	7,092.00	822.83	1,983.35	1,293,808.53	3,226,593.23	40.137056	-104.689542	
9,400.00	90.00	89.36	7,092.00	823.95	2,083.34	1,293,810.55	3,226,693.21	40.137059	-104.689185	
9,500.00	90.00	89.36	7,092.00	825.07	2,183.34	1,293,812.57	3,226,793.19	40.137062	-104.688827	
9,600.00	90.00	89.36	7,092.00	826.19	2,283.33	1,293,814.60	3,226,893.17	40.137065	-104.688469	

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well MELBON RANCH 4E-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 4E-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
9,700.00	90.00	89.36	7,092.00	827.30	2,383.32	1,293,816.62	3,226,993.15	40.137068	-104.688112
9,800.00	90.00	89.36	7,092.00	828.42	2,483.32	1,293,818.64	3,227,093.13	40.137071	-104.687754
9,900.00	90.00	89.36	7,092.00	829.54	2,583.31	1,293,820.67	3,227,193.11	40.137074	-104.687396
10,000.00	90.00	89.36	7,092.00	830.65	2,683.30	1,293,822.69	3,227,293.09	40.137077	-104.687039
10,100.00	90.00	89.36	7,092.00	831.77	2,783.30	1,293,824.71	3,227,393.07	40.137080	-104.686681
10,200.00	90.00	89.36	7,092.00	832.89	2,883.29	1,293,826.74	3,227,493.05	40.137083	-104.686324
10,300.00	90.00	89.36	7,092.00	834.01	2,983.29	1,293,828.76	3,227,593.03	40.137086	-104.685966
10,400.00	90.00	89.36	7,092.00	835.12	3,083.28	1,293,830.78	3,227,693.01	40.137089	-104.685608
10,500.00	90.00	89.36	7,092.00	836.24	3,183.27	1,293,832.81	3,227,792.99	40.137092	-104.685251
10,600.00	90.00	89.36	7,092.00	837.36	3,283.27	1,293,834.83	3,227,892.97	40.137095	-104.684893
10,700.00	90.00	89.36	7,092.00	838.48	3,383.26	1,293,836.85	3,227,992.95	40.137098	-104.684535
10,800.00	90.00	89.36	7,092.00	839.59	3,483.25	1,293,838.88	3,228,092.93	40.137101	-104.684178
10,900.00	90.00	89.36	7,092.00	840.71	3,583.25	1,293,840.90	3,228,192.91	40.137104	-104.683820
11,000.00	90.00	89.36	7,092.00	841.83	3,683.24	1,293,842.92	3,228,292.89	40.137107	-104.683462
11,100.00	90.00	89.36	7,092.00	842.95	3,783.24	1,293,844.95	3,228,392.87	40.137110	-104.683105
11,200.00	90.00	89.36	7,092.00	844.06	3,883.23	1,293,846.97	3,228,492.85	40.137113	-104.682747
11,300.00	90.00	89.36	7,092.00	845.18	3,983.22	1,293,848.99	3,228,592.83	40.137117	-104.682389
11,400.00	90.00	89.36	7,092.00	846.30	4,083.22	1,293,851.02	3,228,692.80	40.137120	-104.682032
11,500.00	90.00	89.36	7,092.00	847.42	4,183.21	1,293,853.04	3,228,792.78	40.137123	-104.681674
11,600.00	90.00	89.36	7,092.00	848.53	4,283.20	1,293,855.06	3,228,892.76	40.137126	-104.681317
11,700.00	90.00	89.36	7,092.00	849.65	4,383.20	1,293,857.09	3,228,992.74	40.137129	-104.680959
11,800.00	90.00	89.36	7,092.00	850.77	4,483.19	1,293,859.11	3,229,092.72	40.137132	-104.680601
11,900.00	90.00	89.36	7,092.00	851.89	4,583.19	1,293,861.13	3,229,192.70	40.137135	-104.680244
11,952.69	90.00	89.36	7,092.00	852.47	4,635.87	1,293,862.20	3,229,245.38	40.137136	-104.680055
TD at 11952.69 - MELBON RANCH 4E-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 4E-17 - hit/miss target - Shape - Point	0.00	0.52	7,092.00	817.76	252.09	1,293,787.77	3,224,862.09	40.137042	-104.695734
MELBON RANCH 4E-17 - plan hits target center - Point	0.00	0.53	7,092.00	852.47	4,635.87	1,293,862.20	3,229,245.38	40.137136	-104.680055

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
718.88	717.39	25.75	-16.48	Hold 8.38 Inc, 327.38 Az
6,387.57	6,325.59	721.35	-461.74	KOP 8/100
7,568.73	7,092.00	817.76	252.09	LP 90 Inc, 89.9 Az
9,068.73	7,092.00	820.38	1,752.09	Start 2/100 Turn
9,095.74	7,092.00	820.55	1,779.10	Hold 89.36 Az
11,952.69	7,092.00	852.47	4,635.87	TD at 11952.69



Crestone Peak Resources

Sec 17 T2N-R65W

Melbon Ranch Pad

MELBON RANCH 4E-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 4E-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 4E-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	11,952.69	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
Existing Wells (Melbon Ranch)						
ADAMSON 13N-28HZ - KMG - MWD	11,952.69	6,604.00	4,282.40	4,122.57	26.795	CC, ES, SF
ADAMSON 14N-28HZ - KMG - MWD	11,952.69	6,510.00	4,539.84	4,390.04	30.307	CC, ES, SF
ADAMSON 28N-28HZ - KMG - MWD	11,952.69	6,699.00	5,139.13	4,990.95	34.682	CC, ES, SF
ADAMSON 35C-28HZ - KMG - MWD	11,952.69	6,697.00	4,372.55	4,218.27	28.341	CC, ES, SF
ADAMSON 36N-28HZ - KMG - MWD	11,952.69	6,510.00	4,676.37	4,528.01	31.521	CC, ES, SF
ADAMSON 37C-28HZ - KMG - MWD	11,952.69	6,657.40	4,859.92	4,711.58	32.762	CC, ES, SF
ADAMSON 37C-28HZX - KMG - MWD	11,952.69	6,657.40	4,859.92	4,711.58	32.762	CC, ES, SF
BYDALEK 28C-20HZ - KMG - MWD	9,352.41	12,039.00	2,606.17	2,505.14	25.795	CC
BYDALEK 28C-20HZ - KMG - MWD	9,400.00	12,039.00	2,606.60	2,504.99	25.653	ES
BYDALEK 28C-20HZ - KMG - MWD	10,800.00	12,039.00	2,981.21	2,850.32	22.777	SF
BYDALEK 28N-20HZ - KMG - MWD	9,429.23	11,830.00	2,594.38	2,490.27	24.921	CC, ES
BYDALEK 28N-20HZ - KMG - MWD	10,800.00	11,830.00	2,934.25	2,802.71	22.307	SF
BYDALEK 29C-20HZ - KMG - MWD	8,280.83	11,880.00	2,613.58	2,545.80	38.559	CC
BYDALEK 29C-20HZ - KMG - MWD	8,300.00	11,880.00	2,613.65	2,545.51	38.355	ES
BYDALEK 29C-20HZ - KMG - MWD	10,100.00	11,880.00	3,192.19	3,071.10	26.362	SF
BYDALEK 29N-20HZ - KMG - MWD	8,164.06	11,671.00	2,603.83	2,538.75	40.012	CC
BYDALEK 29N-20HZ - KMG - MWD	8,200.00	11,671.00	2,604.08	2,538.31	39.595	ES
BYDALEK 29N-20HZ - KMG - MWD	10,100.00	11,671.00	3,252.33	3,130.84	26.770	SF
BYDALEK 30C-20HZ - KMG - MWD	7,364.04	11,950.00	2,569.59	2,511.22	44.021	CC
BYDALEK 30C-20HZ - KMG - MWD	7,400.00	11,950.00	2,569.83	2,510.80	43.535	ES
BYDALEK 30C-20HZ - KMG - MWD	9,300.00	11,950.00	3,211.83	3,097.22	28.024	SF
BYDALEK 3N-20HZ - KMG - MWD	8,880.98	11,597.00	2,760.08	2,676.25	32.926	CC
BYDALEK 3N-20HZ - KMG - MWD	8,900.00	11,597.00	2,760.15	2,676.02	32.809	ES
BYDALEK 3N-20HZ - KMG - MWD	10,700.00	11,597.00	3,318.28	3,189.64	25.795	SF
BYDALEK 4N-20HZ - KMG - MWD	7,624.78	11,755.00	2,611.29	2,552.92	44.733	CC
BYDALEK 4N-20HZ - KMG - MWD	7,700.00	11,755.00	2,612.38	2,552.46	43.598	ES
BYDALEK 4N-20HZ - KMG - MWD	9,600.00	11,755.00	3,278.07	3,161.34	28.082	SF
CAMPBELL JF 17-13D - GW O&G - MWD	9,779.68	7,302.58	566.98	455.93	5.106	CC
CAMPBELL JF 17-13D - GW O&G - MWD	9,800.00	7,302.60	567.35	455.24	5.061	ES
CAMPBELL JF 17-13D - GW O&G - MWD	9,900.00	7,302.66	579.61	463.75	5.003	SF
CAMPBELL JF 17-41D - GW O&G - MWD	11,952.69	7,226.99	1,929.29	1,764.92	11.737	CC, ES, SF
CAMPBELL JF 17-6D - GW O&G - No Survey	804.09	730.00	4,369.50	4,365.48	1,085.448	CC, ES
CAMPBELL JF 17-6D - GW O&G - No Survey	11,952.69	730.00	6,615.72	6,558.39	115.400	SF
CAMPBELL JF 17-6D-1 - GW O&G - MWD	10,182.30	7,092.40	1,884.55	1,768.44	16.231	CC
CAMPBELL JF 17-6D-1 - GW O&G - MWD	10,200.00	7,092.41	1,884.63	1,768.04	16.164	ES
CAMPBELL JF 17-6D-1 - GW O&G - MWD	10,700.00	7,092.76	1,954.36	1,827.21	15.371	SF
CAMPBELL JF 17-7D - GW O&G - MWD	11,111.70	6,985.35	1,882.89	1,745.87	13.742	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 4E-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 4E-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	11,200.00	6,984.00	1,884.95	1,745.47	13.514	ES
CAMPBELL JF 17-7D - GW O&G - MWD	11,500.00	6,984.00	1,922.50	1,776.47	13.165	SF
CAMPBELL JF 17-8D - GW O&G - MWD	11,806.25	7,114.26	1,233.02	1,073.30	7.720	CC, ES
CAMPBELL JF 17-8D - GW O&G - MWD	11,952.69	7,117.93	1,241.68	1,078.77	7.622	SF
CAMPBELL JF 17-9D - GW O&G - MWD	10,433.47	7,105.63	1,235.67	1,114.19	10.172	CC
CAMPBELL JF 17-9D - GW O&G - MWD	10,500.00	7,103.97	1,237.46	1,113.95	10.019	ES
CAMPBELL JF 17-9D - GW O&G - MWD	10,700.00	7,099.01	1,264.07	1,136.10	9.878	SF
COOK 28N-16HZ - KMG - MWD	11,952.69	9,528.68	3,240.01	3,165.59	43.537	CC, ES, SF
CROWDER 1-18 - KMG - No Survey	6,787.69	6,692.63	2,842.66	2,805.78	77.076	CC
CROWDER 1-18 - KMG - No Survey	6,800.00	6,703.42	2,842.70	2,805.77	76.981	ES
CROWDER 1-18 - KMG - No Survey	9,000.00	7,075.00	3,846.42	3,784.73	62.350	SF
CROWDER 15C-18HZ - KMG - MWD	6,779.57	10,259.41	1,439.83	1,362.34	18.580	CC
CROWDER 15C-18HZ - KMG - MWD	6,800.00	10,258.04	1,440.26	1,362.27	18.467	ES
CROWDER 15C-18HZ - KMG - MWD	6,900.00	10,251.87	1,454.83	1,374.62	18.139	SF
CROWDER 15N-18HZ - KMG - MWD	6,654.73	10,145.99	2,124.82	2,043.70	26.195	CC, ES
CROWDER 15N-18HZ - KMG - MWD	6,800.00	10,128.99	2,144.28	2,061.44	25.885	SF
CROWDER 16C-19HZ - KMG - MWD	6,979.20	9,802.16	721.16	657.02	11.244	CC
CROWDER 16C-19HZ - KMG - MWD	7,000.00	9,800.34	721.76	656.38	11.040	ES
CROWDER 16C-19HZ - KMG - MWD	7,100.00	9,792.46	741.03	670.34	10.483	SF
CROWDER 16N-19HZ - KMG - MWD	6,836.90	9,672.41	900.08	829.15	12.691	CC, ES
CROWDER 16N-19HZ - KMG - MWD	7,000.00	9,662.78	932.61	856.11	12.191	SF
CROWDER 36N-18HZ - KMG - MWD	6,672.44	10,104.00	1,706.05	1,624.46	20.910	CC, ES
CROWDER 36N-18HZ - KMG - MWD	6,800.00	10,104.00	1,722.05	1,638.37	20.579	SF
CROWDER 38N-19HZ - KMG - MWD	7,026.94	9,664.29	404.02	341.38	6.450	CC, ES
CROWDER 38N-19HZ - KMG - MWD	7,100.00	9,660.53	414.17	344.09	5.910	SF
DECHANT 13-9 - KMG - No Survey	11,952.69	7,025.00	3,785.98	3,644.86	26.829	CC, ES, SF
DECHANT 14-9 - KMG - MWD	11,952.69	7,288.02	4,493.61	4,350.25	31.344	CC, ES, SF
DECHANT 23-9 - KMG - MWD	11,952.69	7,563.46	5,414.38	5,269.73	37.430	CC, ES, SF
DECHANT 31-19 - KMG - Gyro	0.00	0.00	2,960.64			
DECHANT 31-19 - KMG - Gyro	6,800.00	6,804.43	3,229.28	3,178.14	63.144	SF
DECHANT 32-19 - KMG - Gyro	300.87	300.37	3,991.78	3,990.05	2,297.701	CC
DECHANT 32-19 - KMG - Gyro	400.00	410.44	3,992.34	3,989.86	1,608.723	ES
DECHANT 32-19 - KMG - Gyro	10,100.00	6,649.23	6,567.72	6,490.10	84.615	SF
DECHANT 35-9 - KMG - MWD	11,952.69	7,157.05	3,724.55	3,580.24	25.808	CC, ES, SF
DECHANT 36-9 - KMG - MWD	11,952.69	7,477.12	4,432.80	4,295.85	32.368	CC, ES, SF
DECHANT 38-8 - KMG - MWD	11,952.69	7,155.11	3,254.40	3,090.51	19.856	CC, ES, SF
DECHANT 41-19 - KMG - Gyro	100.00	82.51	1,834.05	1,833.77	6,489.327	CC
DECHANT 41-19 - KMG - Gyro	300.00	283.69	1,834.33	1,832.65	1,096.618	ES
DECHANT 41-19 - KMG - Gyro	7,100.00	6,985.28	2,467.37	2,416.37	48.376	SF
DECHANT 42-19 - KMG - No Survey	300.00	298.00	3,538.31	3,536.92	2,548.705	CC, ES
DECHANT 42-19 - KMG - No Survey	10,700.00	7,090.00	5,941.35	5,856.88	70.333	SF
DECHANT 9-19A - KMG - No Survey	300.00	293.00	4,462.72	4,461.34	3,235.442	CC, ES
DECHANT 9-19A - KMG - No Survey	11,700.00	7,085.00	7,307.73	7,205.67	71.604	SF
DECHANT X 08-15 - KMG - Gyro	10,401.21	7,035.04	3,819.82	3,701.44	32.270	CC
DECHANT X 08-15 - KMG - Gyro	10,500.00	7,032.53	3,821.09	3,700.05	31.568	ES
DECHANT X 08-15 - KMG - Gyro	11,952.69	7,001.80	4,122.77	3,970.98	27.162	SF
DECHANT X 08-24D - KMG - MWD	9,933.47	7,233.00	4,537.88	4,430.65	42.319	CC
DECHANT X 08-24D - KMG - MWD	10,000.00	7,233.00	4,538.37	4,429.42	41.655	ES
DECHANT X 08-24D - KMG - MWD	11,952.69	7,239.75	4,966.85	4,816.68	33.075	SF
DECHANT X 19-3 - KMG - Gyro	2,683.58	2,686.20	3,878.75	3,858.80	194.407	CC
DECHANT X 19-3 - KMG - Gyro	3,800.00	3,781.67	3,886.51	3,857.95	136.071	ES
DECHANT X 19-3 - KMG - Gyro	6,700.00	6,600.00	3,997.66	3,947.23	79.268	SF
DOM RED X 20-02D - KMG - Gyro	304.25	258.99	3,222.00	3,220.40	2,010.864	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 4E-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 4E-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	10,600.00	6,983.65	4,154.62	4,044.90	37.866	SF
DOM RED X 20-3 - NOBLE - Gyro	100.00	34.68	2,557.84	2,557.64	10,000.000	CC
DOM RED X 20-3 - NOBLE - Gyro	9,000.00	7,095.89	2,617.13	2,533.84	31.421	ES
DOM RED X 20-3 - NOBLE - Gyro	10,000.00	7,106.92	2,816.32	2,715.14	27.833	SF
DOM RED X20-2D - KMG - No Survey	300.00	263.00	3,016.96	3,015.63	2,275.938	CC, ES
DOM RED X20-2D - KMG - No Survey	10,500.00	7,055.00	4,452.81	4,360.96	48.477	SF
EWERTZ 3-18 - KMG - No Survey	6,529.71	6,489.38	3,950.60	3,915.07	111.181	CC, ES
EWERTZ 3-18 - KMG - No Survey	8,400.00	7,115.00	5,125.48	5,076.94	105.585	SF
FOUR WAY 1 - KMG - No Survey	11,952.69	7,009.00	2,639.38	2,547.71	28.791	CC, ES, SF
FOUR WAY 12-16 - KMG - Gyro	11,952.69	6,975.88	1,483.05	1,363.38	12.392	CC, ES, SF
HAYMAKER 29N-9HZ - KMG - MWD	11,952.69	6,569.00	3,692.84	3,548.57	25.597	CC, ES, SF
HAYMAKER 4C-9HZ - KMG - MWD	11,952.69	6,729.00	3,644.97	3,496.52	24.553	CC, ES, SF
HAYMAKER 4N-9HZ - KMG - MWD	11,952.69	6,475.00	3,500.69	3,352.79	23.670	CC, ES, SF
HSR-WARNER 6-18 - KMG - No Survey	6,479.60	6,427.85	3,108.99	3,072.79	85.877	CC, ES
HSR-WARNER 6-18 - KMG - No Survey	6,800.00	6,731.42	3,175.07	3,137.09	83.600	SF
HUDCO 16-18 - KMG - Gyro	0.00	0.00	1,131.46			
HUDCO 16-18 - KMG - Gyro	6,600.00	6,561.37	1,472.00	1,422.90	29.979	SF
HUDCO 24-18 - KMG - MWD	1,499.23	1,360.00	1,031.44	1,021.68	105.630	CC
HUDCO 24-18 - KMG - MWD	6,503.55	6,550.52	1,066.78	1,019.31	22.474	ES
HUDCO 24-18 - KMG - MWD	6,600.00	6,649.86	1,072.47	1,024.30	22.265	SF
HUDCO 39-18 - KMG - MWD	3,243.92	3,313.31	198.21	168.51	6.675	CC, ES
HUDCO 39-18 - KMG - MWD	3,300.00	3,365.47	199.36	169.19	6.608	SF
HUDCO 40-18 - KMG - MWD	7,061.20	6,993.23	531.17	479.36	10.253	CC, ES
HUDCO 40-18 - KMG - MWD	7,100.00	7,017.67	532.19	480.13	10.223	SF
HUDCO 9-18 - KMG - Gyro	6,505.14	6,457.27	285.23	238.51	6.105	CC, ES, SF
LUCERO X 20-04 - KMG - Gyro	334.95	314.94	1,881.53	1,879.61	984.470	CC, ES
LUCERO X 20-04 - KMG - Gyro	9,000.00	7,058.35	2,989.13	2,913.67	39.615	SF
MARKHAM 13-8 - KMG - MWD	7,600.75	7,150.76	3,682.44	3,626.70	66.068	CC
MARKHAM 13-8 - KMG - MWD	7,700.00	7,150.52	3,683.77	3,626.61	64.446	ES
MARKHAM 13-8 - KMG - MWD	10,300.00	7,144.16	4,556.48	4,450.88	43.149	SF
MARKHAM 34-8 - KMG - MWD	7,345.57	7,188.02	3,273.40	3,217.74	58.815	CC, ES
MARKHAM 34-8 - KMG - MWD	9,700.00	7,223.57	4,101.37	4,003.72	42.003	SF
MARKHAM 35-8 - KMG - MWD	8,384.73	7,303.95	3,242.70	3,170.20	44.729	CC
MARKHAM 35-8 - KMG - MWD	8,500.00	7,301.91	3,244.75	3,169.79	43.290	ES
MARKHAM 35-8 - KMG - MWD	10,300.00	7,271.93	3,756.05	3,646.63	34.325	SF
MEGUIRE 28C-16HZ - KMG - MWD	11,952.69	12,388.99	2,812.83	2,692.74	23.424	CC, ES, SF
MEGUIRE 29C-16HZ - KMG - MWD	11,952.69	12,427.21	1,661.01	1,542.44	14.008	CC, ES, SF
MEGUIRE 29N-16HZ - KMG - MWD	11,952.69	12,168.92	1,903.00	1,784.34	16.037	CC, ES, SF
MEGUIRE 30N-16HZ - KMG - MWD	11,952.69	12,169.45	833.05	712.87	6.932	CC, ES, SF
MEGUIRE 3N-16HZ - KMG - No Survey	11,952.69	7,022.00	5,288.95	5,155.85	39.736	CC, ES, SF
MEGUIRE 4N-16HZ - KMG - MWD	11,952.69	12,220.80	1,366.86	1,247.57	11.458	CC, ES, SF
MEGUIRE X 21-04 - KMG - Gyro	11,952.69	6,976.54	2,968.91	2,815.45	19.345	CC, ES, SF
MEGUIRE X 21-06 - KMG - No Survey	11,952.69	7,014.00	4,845.28	4,711.97	36.345	CC, ES, SF
MEGUIRE X 21-5JI - KMG - No Survey	11,952.69	7,019.00	4,402.02	4,256.20	30.188	CC, ES, SF
MELBON 12C-8HZ - KMG - MWD	7,681.78	6,909.00	653.51	599.02	11.992	CC
MELBON 12C-8HZ - KMG - MWD	7,700.00	6,909.00	653.76	598.97	11.932	ES
MELBON 12C-8HZ - KMG - MWD	7,800.00	6,909.00	664.11	607.58	11.748	SF
MELBON 12N-8HZ - KMG - MWD	7,236.93	6,768.19	722.83	673.50	14.653	CC, ES
MELBON 12N-8HZ - KMG - MWD	7,300.00	6,781.00	724.49	674.99	14.637	SF
MELBON 19C-8HZ - KMG - MWD	8,474.09	6,879.00	686.70	618.30	10.040	CC
MELBON 19C-8HZ - KMG - MWD	8,500.00	6,879.00	687.19	618.12	9.949	ES
MELBON 19C-8HZ - KMG - MWD	8,600.00	6,879.00	698.15	626.83	9.789	SF
MELBON 19N-E8HZ - KMG - MWD	8,803.72	6,823.92	743.21	668.71	9.976	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 4E-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 4E-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 19N-E8HZ - KMG - MWD	8,900.00	6,825.49	749.42	672.58	9.753	SF
MELBON 19N-W8HZ - KMG - MWD	8,132.24	6,843.72	719.52	658.80	11.850	CC, ES
MELBON 19N-W8HZ - KMG - MWD	8,300.00	6,843.87	738.82	674.68	11.518	SF
MELBON 23C-8HZ - KMG - MWD	9,428.68	6,942.99	725.64	630.38	7.617	CC, ES
MELBON 23C-8HZ - KMG - MWD	9,600.00	6,981.45	744.45	644.29	7.433	SF
MELBON 23N-8HZ - KMG - MWD	9,557.11	6,857.00	798.75	703.54	8.389	CC, ES
MELBON 23N-8HZ - KMG - MWD	9,700.00	6,873.32	811.04	712.10	8.197	SF
MELBON RANCH 1 - V O&G - No Survey	8,404.00	7,058.00	780.77	723.29	13.582	CC, ES
MELBON RANCH 1 - V O&G - No Survey	8,500.00	7,058.00	786.65	727.81	13.369	SF
MELBON RANCH 13-17 - CPR - MWD	7,733.29	7,143.18	49.80	-9.82	0.835	Level 2, CC, ES, SF
MELBON RANCH 14-17 - CPR - MWD	1,930.86	2,027.81	960.09	943.82	58.989	CC
MELBON RANCH 14-17 - CPR - MWD	2,000.00	2,095.35	960.25	943.31	56.706	ES
MELBON RANCH 14-17 - CPR - MWD	8,000.00	7,203.00	1,504.16	1,441.57	24.031	SF
MELBON RANCH 17-14 - V O&G - No Survey	300.00	266.00	1,057.26	1,055.93	794.300	CC
MELBON RANCH 17-14 - V O&G - No Survey	8,340.55	7,058.00	1,075.14	1,019.02	19.157	ES
MELBON RANCH 17-14 - V O&G - No Survey	8,600.00	7,058.00	1,106.01	1,046.14	18.475	SF
MELBON RANCH 23-17 - CPR - MWD	9,181.67	7,188.83	72.50	-19.86	0.785	Level 2, CC, ES, SF
MELBON RANCH 24-17 - CPR - MWD	8,965.70	7,136.60	1,456.43	1,370.57	16.964	CC
MELBON RANCH 24-17 - CPR - MWD	9,000.00	7,136.25	1,456.83	1,370.23	16.823	ES
MELBON RANCH 24-17 - CPR - MWD	9,300.00	7,133.33	1,496.30	1,404.46	16.293	SF
MELBON RANCH 2-4-17 - CPR - MWD	8,539.54	7,196.63	512.95	439.25	6.960	CC, ES
MELBON RANCH 2-4-17 - CPR - MWD	8,600.00	7,194.99	516.50	440.84	6.827	SF
MELBON RANCH 2-8-17 - CPR - MWD	8,357.72	7,254.53	1,921.94	1,843.35	24.455	CC
MELBON RANCH 2-8-17 - CPR - MWD	8,400.00	7,254.09	1,922.40	1,843.04	24.224	ES
MELBON RANCH 2-8-17 - CPR - MWD	8,900.00	7,248.84	1,996.97	1,909.91	22.938	SF
MELBON RANCH 33-17 - CPR - MWD	10,491.96	7,274.35	898.74	763.09	6.626	CC
MELBON RANCH 33-17 - CPR - MWD	10,500.00	7,274.45	898.78	762.96	6.618	ES
MELBON RANCH 33-17 - CPR - MWD	10,600.00	7,275.75	905.21	768.05	6.600	SF
MELBON RANCH 34-17 - CPR - MWD	10,310.50	7,104.15	1,481.67	1,362.93	12.479	CC, ES
MELBON RANCH 34-17 - CPR - MWD	10,500.00	7,109.80	1,493.72	1,371.71	12.242	SF
MELBON RANCH 3A-17H - CPR - MWD	742.12	731.36	28.05	23.03	5.588	CC, ES
MELBON RANCH 3A-17H - CPR - MWD	11,952.69	11,752.00	1,264.95	1,002.93	4.828	SF
MELBON RANCH 3B-17H - CPR - MWD	837.62	826.83	44.23	38.54	7.772	CC
MELBON RANCH 3B-17H - CPR - MWD	4,200.00	4,192.99	64.09	30.33	1.898	ES
MELBON RANCH 3B-17H - CPR - MWD	11,952.69	11,927.02	335.17	72.25	1.275	Level 3, SF
MELBON RANCH 43-17 43-17 - CPR - Gyro	11,952.69	7,006.68	880.62	721.39	5.531	CC, ES, SF
MELBON RANCH 4-6-17 - CPR - MWD	9,622.02	7,184.41	684.86	584.83	6.846	CC, ES
MELBON RANCH 4-6-17 - CPR - MWD	9,700.00	7,184.10	689.29	588.16	6.816	SF
MELBON RANCH 4-8-17 - CPR - Gyro	9,757.19	6,987.84	1,718.50	1,616.83	16.903	CC
MELBON RANCH 4-8-17 - CPR - Gyro	9,800.00	6,986.92	1,719.03	1,616.43	16.755	ES
MELBON RANCH 4-8-17 - CPR - Gyro	10,100.00	6,980.72	1,752.34	1,644.47	16.246	SF
MELBON RANCH 6-4-17 - CPR - MWD	10,936.68	7,220.51	445.43	304.29	3.156	CC, ES, SF
Melbon Ranch 6-8-17 - CPR - MWD	11,042.13	7,234.29	1,955.10	1,809.49	13.427	CC
Melbon Ranch 6-8-17 - CPR - MWD	11,100.00	7,234.64	1,955.96	1,809.00	13.310	ES
Melbon Ranch 6-8-17 - CPR - MWD	11,400.00	7,236.40	1,987.59	1,835.40	13.060	SF
MELBON RANCH 8-4-17 - CPR - MWD	11,952.69	7,090.56	680.97	562.67	5.756	CC, ES, SF
MELBON RANCH 8-6-17 - CPR - MWD	11,952.69	7,084.67	1,648.52	1,493.44	10.630	CC, ES, SF
MELBON RANCH 8-8-17 - CPR - MWD	11,952.69	7,368.23	2,903.84	2,742.20	17.965	CC, ES, SF
MELBON RANCH E UNIT 1 - CPR - Gyro	11,298.76	7,002.96	1,000.14	858.33	7.053	CC
MELBON RANCH E UNIT 1 - CPR - Gyro	11,300.00	7,002.97	1,000.14	858.31	7.052	ES
MELBON RANCH E UNIT 1 - CPR - Gyro	11,400.00	7,004.06	1,005.25	861.90	7.013	SF
MEQUIRE 21-3P - KMG - No Survey	11,952.69	7,009.00	3,786.11	3,655.28	28.939	CC, ES, SF
MUSE 1 - KMG - Gyro	6,616.74	6,501.10	2,005.42	1,958.68	42.908	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 4E-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 4E-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)						
MUSE 1 - KMG - Gyro	7,100.00	6,915.05	2,083.50	2,033.66	41.804	SF
MUSE 2 - KMG - No Survey	6,265.87	6,220.19	1,269.21	1,231.96	34.067	CC
MUSE 2 - KMG - No Survey	6,400.00	6,352.90	1,269.45	1,231.38	33.342	ES
MUSE 2 - KMG - No Survey	6,500.00	6,452.05	1,277.00	1,238.37	33.055	SF
PALMER 11-20 - KMG - No Survey	300.00	263.00	4,960.96	4,959.64	3,742.337	CC, ES
PALMER 11-20 - KMG - No Survey	11,952.69	7,055.00	6,018.54	5,887.53	45.941	SF
PALMER X 20-05 - KMG - Gyro	332.59	328.03	3,142.00	3,140.05	1,612.699	CC, ES
PALMER X 20-05 - KMG - Gyro	10,400.00	7,034.12	4,653.53	4,552.33	45.982	SF
PALMER X 20-06 - KMG - Gyro	100.00	36.10	3,777.72	3,777.52	10,000.000	CC, ES
PALMER X 20-06 - KMG - Gyro	11,100.00	7,040.77	4,500.16	4,377.49	36.684	SF
PALMER X 20-20 - KMG - Gyro	266.93	227.94	4,058.58	4,057.21	2,964.997	CC
PALMER X 20-20 - KMG - Gyro	300.00	250.50	4,058.62	4,057.06	2,592.471	ES
PALMER X 20-20 - KMG - Gyro	11,300.00	7,093.87	5,371.67	5,248.64	43.661	SF
POTTS X 18-10 - KMG - Gyro	6,432.98	6,372.00	1,804.51	1,756.63	37.692	CC, ES
POTTS X 18-10 - KMG - Gyro	6,600.00	6,529.44	1,824.34	1,775.25	37.161	SF
POTTS X 18-15 - KMG - Gyro	5,066.95	5,059.12	2,277.02	2,238.55	59.195	CC
POTTS X 18-15 - KMG - Gyro	5,200.00	5,175.67	2,277.62	2,238.17	57.741	ES
POTTS X 18-15 - KMG - Gyro	6,600.00	6,510.97	2,341.58	2,291.69	46.934	SF
RUSSIAN FIDDLER 15N-18HZ - KMG - MWD	6,624.29	12,713.00	2,455.41	2,357.75	25.142	CC, ES
RUSSIAN FIDDLER 15N-18HZ - KMG - MWD	6,800.00	12,713.00	2,477.12	2,377.43	24.849	SF
RUSSIAN FIDDLER 36C-18HZ - KMG - MWD	6,621.79	12,872.00	2,891.16	2,782.05	26.497	CC, ES
RUSSIAN FIDDLER 36C-18HZ - KMG - MWD	6,800.00	12,872.00	2,914.44	2,803.36	26.237	SF
RUSSIAN FIDDLER 36N-18HZ - KMG - MWD	6,549.78	12,128.00	3,449.23	3,357.89	37.760	CC, ES
RUSSIAN FIDDLER 36N-18HZ - KMG - MWD	6,700.00	12,128.00	3,464.23	3,372.08	37.595	SF
RUSSIAN FIDDLER 36N-18HZ - KMG - MWD	6,580.57	12,416.00	3,316.25	3,217.16	33.468	CC, ES
RUSSIAN FIDDLER 36N-18HZ - KMG - MWD	6,700.00	12,416.00	3,326.27	3,226.41	33.310	SF
RUSSIAN FIDDLER 37C-18HZ - KMG - MWD	6,711.35	12,903.00	2,127.39	2,043.48	25.356	CC, ES
RUSSIAN FIDDLER 37C-18HZ - KMG - MWD	7,100.00	12,903.00	2,221.90	2,131.57	24.599	SF
RUSSIAN FIDDLER 37N-18HZ - KMG - MWD	6,650.44	12,711.00	2,244.54	2,154.35	24.885	CC, ES
RUSSIAN FIDDLER 37N-18HZ - KMG - MWD	6,900.00	12,711.00	2,286.27	2,192.83	24.468	SF
SANDLIN-WELD COUNTY 1 - KMG - No Survey	11,457.59	7,029.00	1,927.65	1,793.39	14.357	CC
SANDLIN-WELD COUNTY 1 - KMG - No Survey	11,500.00	7,029.00	1,928.12	1,792.64	14.232	ES
SANDLIN-WELD COUNTY 1 - KMG - No Survey	11,900.00	7,029.00	1,977.77	1,833.74	13.732	SF
SANDLIN-WELD-COUNTY UNIT 2 - KMG - Gyro	8,696.29	7,043.32	1,903.52	1,827.65	25.089	CC
SANDLIN-WELD-COUNTY UNIT 2 - KMG - Gyro	8,700.00	7,043.30	1,903.52	1,827.56	25.058	ES
SANDLIN-WELD-COUNTY UNIT 2 - KMG - Gyro	9,400.00	7,039.83	2,026.61	1,935.42	22.223	SF
SARCHET 1 - KMG - No Survey	10,939.92	7,031.00	3,767.82	3,647.18	31.233	CC
SARCHET 1 - KMG - No Survey	11,000.00	7,031.00	3,768.29	3,646.18	30.860	ES
SARCHET 1 - KMG - No Survey	11,952.69	7,031.00	3,901.55	3,760.09	27.579	SF
SARCHET 15N-20HZ - KMG - MWD	10,549.62	6,749.63	1,611.76	1,493.99	13.686	CC
SARCHET 15N-20HZ - KMG - MWD	10,600.00	6,782.00	1,612.60	1,493.11	13.495	ES
SARCHET 15N-20HZ - KMG - MWD	10,800.00	6,782.00	1,627.34	1,504.87	13.288	SF
SARCHET 16N-20HZ - KMG - No Survey	11,952.69	7,035.00	2,566.40	2,418.91	17.400	CC, ES, SF
SARCHET 20-1 - KMG - Gyro	11,670.86	7,047.47	2,557.04	2,405.12	16.832	CC
SARCHET 20-1 - KMG - Gyro	11,700.00	7,046.78	2,557.20	2,404.58	16.756	ES
SARCHET 20-1 - KMG - Gyro	11,952.69	7,040.59	2,572.51	2,414.53	16.283	SF
SARCHET 20-2 - NOBLE - No Survey	10,393.71	7,034.00	2,752.78	2,646.40	25.876	CC
SARCHET 20-2 - NOBLE - No Survey	10,500.00	7,034.00	2,754.84	2,645.96	25.304	ES
SARCHET 20-2 - NOBLE - No Survey	11,200.00	7,034.00	2,868.43	2,746.89	23.599	SF
SARCHET 36G-20HZ - KMG - Proposed	9,985.13	7,045.00	2,469.83	2,373.98	25.766	CC
SARCHET 36G-20HZ - KMG - Proposed	10,000.00	7,045.00	2,469.88	2,373.68	25.674	ES
SARCHET 36G-20HZ - KMG - Proposed	10,700.00	7,045.00	2,571.21	2,462.07	23.559	SF
SARCHET 36N-20HZ - KMG - MWD	10,023.51	6,688.00	1,567.77	1,465.11	15.271	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 4E-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 4E-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 36N-20HZ - KMG - MWD	10,300.00	6,688.00	1,591.96	1,484.34	14.793	SF
SARCHET 37C-20HZ - KMG - Proposed	10,045.43	7,044.00	2,403.11	2,305.70	24.672	CC
SARCHET 37C-20HZ - KMG - Proposed	10,100.00	7,044.00	2,403.72	2,305.06	24.363	ES
SARCHET 37C-20HZ - KMG - Proposed	10,800.00	7,044.00	2,518.79	2,407.90	22.714	SF
SARCHET 37N-20HZ - KMG - Proposed	10,078.94	7,044.00	2,438.01	2,339.75	24.811	CC
SARCHET 37N-20HZ - KMG - Proposed	10,100.00	7,044.00	2,438.10	2,339.34	24.689	ES
SARCHET 37N-20HZ - KMG - Proposed	10,800.00	7,044.00	2,542.40	2,430.96	22.813	SF
SARCHET 38C-20HZ - KMG - Proposed	11,952.69	7,026.00	2,576.90	2,429.42	17.473	CC, ES, SF
SARCHET X 20-8 - KMG - Gyro	11,824.43	7,009.45	4,160.53	4,004.78	26.713	CC
SARCHET X 20-8 - KMG - Gyro	11,900.00	7,009.33	4,161.21	4,003.58	26.399	ES
SARCHET X 20-8 - KMG - Gyro	11,952.69	7,009.25	4,162.50	4,003.59	26.194	SF
SEATON 2-18 - KMG - No Survey	6,601.77	6,534.83	3,169.84	3,134.11	88.724	CC, ES
SEATON 2-18 - KMG - No Survey	8,800.00	7,090.00	4,391.60	4,336.02	79.009	SF
SEATON 7-18 - KMG - No Survey	6,506.17	6,458.15	1,865.08	1,829.39	52.254	CC, ES
SEATON 7-18 - KMG - No Survey	6,800.00	6,735.42	1,915.28	1,877.92	51.262	SF
SEATON 8-18 - KMG - Gyro	6,647.67	6,578.66	1,288.56	1,241.39	27.320	CC, ES
SEATON 8-18 - KMG - Gyro	6,900.00	6,804.04	1,310.19	1,261.53	26.925	SF
SUNFLOWER 24N-17HZ - KMG - MWD	10,929.62	12,650.00	662.42	530.13	5.008	CC
SUNFLOWER 24N-17HZ - KMG - MWD	11,000.00	12,650.00	666.14	528.48	4.839	ES
SUNFLOWER 24N-17HZ - KMG - MWD	11,200.00	12,650.00	715.47	559.79	4.596	SF
SUNFLOWER 25G-17HZ - KMG - MWD	9,979.62	12,664.00	637.91	524.55	5.627	CC
SUNFLOWER 25G-17HZ - KMG - MWD	10,000.00	12,664.00	638.23	522.88	5.533	ES
SUNFLOWER 25G-17HZ - KMG - MWD	10,300.00	12,664.00	713.84	568.78	4.921	SF
SUNFLOWER 40C-17HZ - KMG - MWD	11,952.69	12,840.00	699.68	539.66	4.372	CC, ES, SF
SUNFLOWER 40N-17HZ - KMG - MWD	11,952.69	12,495.00	845.47	671.61	4.863	CC, ES, SF
SUNFLOWER 7C-17HZ - KMG - MWD	2,404.90	1,800.00	7,784.46	7,770.33	550.994	CC, ES
SUNFLOWER 7C-17HZ - KMG - MWD	11,952.69	1,800.00	8,163.80	8,052.21	73.159	SF
SUNFLOWER 7N-17HZ - KMG - MWD	10,805.16	12,615.00	586.39	459.22	4.611	CC
SUNFLOWER 7N-17HZ - KMG - MWD	10,900.00	12,615.00	594.00	458.88	4.396	ES
SUNFLOWER 7N-17HZ - KMG - MWD	11,000.00	12,615.00	617.91	472.24	4.242	SF
SUNFLOWER 8N-17HZ - KMG - MWD	11,314.50	12,665.00	653.07	509.07	4.535	CC, ES
SUNFLOWER 8N-17HZ - KMG - MWD	11,500.00	12,665.00	678.91	521.56	4.315	SF
THOMASON 1 - PETERSON - No Survey	11,952.69	7,013.00	2,339.08	2,250.99	26.554	CC, ES, SF
THOMASON 14-16 - KMG - MWD	11,952.69	7,273.39	3,071.67	2,959.83	27.464	CC, ES, SF
THOMASON 16-5 - KMG - Gyro	11,952.69	6,991.85	1,926.11	1,795.83	14.784	CC, ES, SF
THOMASON 21-16 - KMG - MWD	11,952.69	7,167.64	3,487.85	3,387.39	34.719	CC, ES, SF
THOMASON 23-16 - KMG - MWD	11,952.69	7,137.57	3,169.25	3,092.71	41.407	CC, ES, SF
THOMASON 25-16 - KMG - No Survey	11,952.69	945.00	6,563.24	6,521.78	158.312	CC, ES, SF
THOMASON 25-16R - KMG - MWD	11,952.69	7,195.48	3,110.34	3,048.14	50.010	CC, ES, SF
THOMASON 34N-9HZ - KMG - MWD	11,952.69	11,537.00	3,483.94	3,235.46	14.021	CC, ES, SF
THOMASON 36-16 - KMG - MWD	11,952.69	7,321.93	3,651.58	3,533.82	31.007	CC, ES, SF
THOMASON 6-16 - KMG - MWD	11,952.69	7,176.00	2,793.14	2,711.27	34.115	CC, ES, SF
THOMASON X 16-11 - KMG - No Survey	11,952.69	7,006.00	2,434.53	2,391.15	56.123	CC, ES, SF
THOMASON X 16-12 - KMG - Gyro	11,952.69	6,965.35	1,108.73	1,045.17	17.444	CC, ES, SF
THOMASON X 16-4 - KMG - No Survey	11,952.69	7,009.00	2,761.42	2,628.15	20.720	CC, ES, SF
THOMASON X16-13 - KMG - Gyro	11,952.69	7,024.65	1,715.15	1,579.92	12.684	CC, ES, SF
THOMSEN 1C-18HZ - KMG - MWD	6,844.99	14,563.00	3,016.70	2,928.25	34.107	CC, ES
THOMSEN 1C-18HZ - KMG - MWD	8,100.00	14,563.00	3,631.78	3,508.68	29.503	SF
THOMSEN 1N-18HZ - KMG - Proposed	6,747.88	13,958.15	3,473.66	3,381.56	37.718	CC, ES
THOMSEN 1N-18HZ - KMG - Proposed	8,100.00	13,958.15	4,152.17	4,030.35	34.085	SF
THOMSEN 2N-18HZ - KMG - MWD	6,882.83	13,966.00	2,519.99	2,443.12	32.782	CC
THOMSEN 2N-18HZ - KMG - MWD	6,900.00	13,966.00	2,520.15	2,442.81	32.587	ES
THOMSEN 2N-18HZ - KMG - MWD	8,200.00	13,966.00	3,145.44	3,024.95	26.106	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 4E-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 4E-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)						
THOMSEN 36C-18HZ - KMG - MWD	6,649.03	13,031.50	2,785.35	2,654.74	21.326	CC, ES
THOMSEN 36C-18HZ - KMG - MWD	6,800.00	13,002.19	2,805.10	2,673.12	21.254	SF
THOMSEN 36N-18HZ - KMG - MWD	6,638.76	13,085.29	2,458.19	2,323.91	18.307	CC, ES
THOMSEN 36N-18HZ - KMG - MWD	6,800.00	13,077.24	2,481.37	2,345.06	18.204	SF
THOMSEN 3N-18HZ - KMG - MWD	7,024.92	14,148.00	2,718.02	2,661.32	47.935	CC, ES
THOMSEN 3N-18HZ - KMG - MWD	9,200.00	14,148.00	3,735.78	3,603.97	28.342	SF
THOMSEN 4N-18HZ - KMG - MWD	7,259.42	14,792.00	2,079.80	2,026.60	39.090	CC
THOMSEN 4N-18HZ - KMG - MWD	7,300.00	14,792.00	2,080.46	2,026.49	38.548	ES
THOMSEN 4N-18HZ - KMG - MWD	9,000.00	14,792.00	2,821.74	2,692.80	21.884	SF
UPRR 38 PAN AM X 1 - KMG - Gyro	0.00	0.00	2,628.28			
UPRR 38 PAN AM X 1 - KMG - Gyro	100.00	64.26	2,628.31	2,628.05	10,000.000	ES
UPRR 38 PAN AM X 1 - KMG - Gyro	6,900.00	6,775.32	3,194.48	3,144.36	63.741	SF
WALTERS 21-18 - KMG - MWD	6,514.15	6,563.17	2,991.37	2,941.13	59.534	CC, ES
WALTERS 21-18 - KMG - MWD	6,800.00	6,809.06	3,036.19	2,984.19	58.387	SF
WALTERS 25-18 - KMG - MWD	6,463.40	6,591.64	2,297.13	2,238.88	39.434	CC, ES
WALTERS 25-18 - KMG - MWD	6,600.00	6,725.49	2,309.55	2,250.45	39.077	SF
WALTERS 28-18 - KMG - MWD	928.95	479.81	3,077.04	3,072.43	666.722	CC, ES
WALTERS 28-18 - KMG - MWD	8,800.00	7,371.47	5,156.25	5,085.59	72.969	SF
WARNER 12-18 - KMG - MWD	1,453.20	1,066.86	3,366.45	3,357.25	365.637	CC
WARNER 12-18 - KMG - MWD	1,500.00	1,087.38	3,366.65	3,357.15	354.699	ES
WARNER 12-18 - KMG - MWD	6,700.00	7,164.49	4,372.84	4,315.92	76.825	SF
WARNER 14-18 - KMG - No Survey	6,400.00	6,370.90	3,249.57	3,211.50	85.355	CC, ES
WARNER 14-18 - KMG - No Survey	6,700.00	6,663.19	3,305.61	3,266.07	83.600	SF
WARNER 18-18 - KMG - MWD	1,044.73	618.77	3,379.13	3,373.58	609.003	CC, ES
WARNER 18-18 - KMG - MWD	6,900.00	7,118.44	4,202.56	4,149.62	79.385	SF
WARNER 22-18 - KMG - MWD	1,172.58	768.00	3,364.13	3,357.53	509.864	CC, ES
WARNER 22-18 - KMG - MWD	6,800.00	6,737.23	3,768.22	3,716.30	72.586	SF
WARNER 23-18 - KMG - MWD	6,416.25	6,480.65	2,541.81	2,487.16	46.513	CC, ES
WARNER 23-18 - KMG - MWD	6,600.00	6,639.00	2,565.29	2,509.57	46.034	SF
WARNER 31-18 - KMG - MWD	1,090.83	681.00	3,371.57	3,365.63	567.181	CC
WARNER 31-18 - KMG - MWD	1,100.00	681.00	3,371.59	3,365.61	563.936	ES
WARNER 31-18 - KMG - MWD	6,600.00	4,857.05	4,947.81	4,902.70	109.680	SF
WARNER 32-18 - KMG - MWD	1,051.19	647.27	3,375.10	3,369.37	589.352	CC
WARNER 32-18 - KMG - MWD	1,100.00	680.00	3,375.40	3,369.36	558.890	ES
WARNER 32-18 - KMG - MWD	6,800.00	5,772.78	4,785.65	4,734.13	92.891	SF
WARNER 33-18 - KMG - MWD	0.00	27.82	3,218.89			
WARNER 33-18 - KMG - MWD	200.00	197.60	3,219.57	3,218.61	3,348.003	ES
WARNER 33-18 - KMG - MWD	6,700.00	7,173.18	4,960.50	4,894.29	74.924	SF
WARNER 35-18 - KMG - MWD	100.00	119.00	3,228.37	3,228.04	9,919.282	CC
WARNER 35-18 - KMG - MWD	200.00	212.00	3,228.71	3,227.69	3,181.373	ES
WARNER 35-18 - KMG - MWD	6,800.00	6,826.78	4,098.95	4,046.04	77.465	SF

Anticollision Summary Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well MELBON RANCH 4E-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 4E-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	20.00	19.00	20.137	CC, ES
MELBON RANCH 4C-17H-M265 - Wellbore #1 - Design	11,952.69	12,080.48	436.81	172.28	1.651	SF
MELBON RANCH 4D-17H-M265 - Wellbore #1 - Design	203.33	203.33	10.01	8.99	9.842	CC
MELBON RANCH 4D-17H-M265 - Wellbore #1 - Design	300.00	299.82	10.44	8.73	6.105	ES
MELBON RANCH 4D-17H-M265 - Wellbore #1 - Design	11,952.69	12,214.21	396.52	170.52	1.755	SF
MELBON RANCH 4F-17H-M265 - Wellbore #1 - Plan #2	300.00	300.00	10.00	8.29	5.848	CC, ES
MELBON RANCH 4F-17H-M265 - Wellbore #1 - Plan #2	11,952.69	12,117.57	592.23	339.00	2.339	SF
MELBON RANCH 4G-17H-M265 - Wellbore #1 - Plan #2	300.00	300.00	20.00	18.29	11.697	CC, ES
MELBON RANCH 4G-17H-M265 - Wellbore #1 - Plan #2	11,952.69	11,917.92	629.83	360.50	2.339	SF
MELBON RANCH 4H-17H-M265 - Wellbore #1 - Design	200.00	200.00	29.99	29.00	30.204	CC, ES
MELBON RANCH 4H-17H-M265 - Wellbore #1 - Design	11,952.69	11,926.51	1,179.69	910.09	4.376	SF
MELBON RANCH 4I-17H-M265 - Wellbore #1 - Design #	300.00	300.00	40.14	38.43	23.474	CC, ES
MELBON RANCH 4I-17H-M265 - Wellbore #1 - Design #	11,952.69	12,096.40	1,445.83	1,180.41	5.447	SF
MELBON RANCH 4J-17H-M265 - Wellbore #1 - Design #	203.41	203.41	50.00	48.99	49.149	CC
MELBON RANCH 4J-17H-M265 - Wellbore #1 - Design #	300.00	299.25	50.38	48.68	29.627	ES
MELBON RANCH 4J-17H-M265 - Wellbore #1 - Design #	11,952.69	11,996.28	1,794.49	1,524.69	6.651	SF
MELBON RANCH 4K-17H-M265 - Wellbore #1 - Design	200.00	200.00	60.00	59.01	60.429	CC, ES
MELBON RANCH 4K-17H-M265 - Wellbore #1 - Design	11,952.69	12,108.94	2,050.94	1,781.14	7.602	SF