



Crestone Peak Resources

Sec 19 T2N-R68W

Regnier Farms Pad

REGNIER FARMS 1F-19H-B268

Wellbore #1

Design #1 22Mar18 kjs

Anticollision Summary Report

06 April, 2018

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well REGNIER FARMS 1F-19H-B268
Project:	Sec 19 T2N-R68W	TVD Reference:	WELL @ 4989.00usft (Original Well Elev)
Reference Site:	Regnier Farms Pad	MD Reference:	WELL @ 4989.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	REGNIER FARMS 1F-19H-B268	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.14 Single User Db
Reference Design:	Design #1 22Mar18 kjs	Offset TVD Reference:	Offset Datum

Reference	Design #1 22Mar18 kjs		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 9,999.98 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	4/3/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	22,996.52	Design #1 22Mar18 kjs (Wellbore #1)	MWD	OWSG MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Existing Wells (Regnier Farms)						
A C N O 2 - KAUFFMAN - No Surveys	16,364.20	4,907.00	3,170.36	3,056.85	27.929	CC
A C N O 2 - KAUFFMAN - No Surveys	16,400.00	4,907.00	3,170.57	3,056.79	27.868	ES
A C N O 2 - KAUFFMAN - No Surveys	16,700.00	4,907.00	3,188.10	3,072.66	27.616	SF
ANDERSON TRUST C UNIT 2 - CPR - Gyro	19,323.36	7,466.35	2,624.58	2,387.94	11.091	CC, ES
ANDERSON TRUST C UNIT 2 - CPR - Gyro	19,500.00	7,463.35	2,630.51	2,391.93	11.025	SF
ANSELM 1 - PETERSON - No Surveys	21,376.10	4,970.00	3,313.12	3,124.90	17.603	CC
ANSELM 1 - PETERSON - No Surveys	21,400.00	4,970.00	3,313.20	3,124.60	17.567	ES
ANSELM 1 - PETERSON - No Surveys	21,900.00	4,970.00	3,339.38	3,145.59	17.232	SF
ARMSTEAD GAS UNIT 4-31 - EXTRACTION - Gyro	22,805.02	7,500.00	2,080.38	1,784.34	7.027	CC, ES, SF
ARMSTEAD GU 5-31 - NOBLE ENERGY - No Surveys	19,284.12	7,479.00	2,083.04	1,859.70	9.327	CC
ARMSTEAD GU 5-31 - NOBLE ENERGY - No Surveys	19,300.00	7,479.00	2,083.10	1,859.40	9.312	ES
ARMSTEAD GU 5-31 - NOBLE ENERGY - No Surveys	19,500.00	7,479.00	2,094.19	1,867.00	9.218	SF
BALLANTINE 3-30 - KMG - Gyro	13,628.11	7,536.47	2,350.43	2,211.97	16.976	CC, ES
BALLANTINE 3-30 - KMG - Gyro	13,961.95	7,533.60	2,374.02	2,231.90	16.704	SF
BECKY 1 - KAUFFMAN - No Surveys	22,996.52	5,010.00	3,394.12	3,201.90	17.658	CC, ES, SF
BROWN C UNIT 2 - CPR - Gyro	22,996.52	7,647.29	2,486.43	2,231.18	9.741	CC, ES, SF
BRYANT 10-30 - KMG - MWD	16,200.00	7,774.72	577.72	394.28	3.149	SF
BRYANT 10-30 - KMG - MWD	16,223.82	7,774.80	577.22	393.99	3.150	CC, ES
BRYANT 16-30 - KMG - MWD	17,488.18	7,575.33	780.22	575.12	3.804	CC, ES, SF
BRYANT 20-30 - KMG - MWD	16,757.29	7,609.09	142.60	-53.90	0.726	Level 2, CC, ES, SF
BRYANT 23-30 - KMG - MWD	16,959.41	7,683.50	1,024.76	824.54	5.118	CC, ES, SF
BRYANT 24-30 - KMG - MWD	15,377.02	7,591.93	155.00	-16.44	0.904	Level 3, CC
BRYANT 24-30 - KMG - MWD	15,400.00	7,591.88	156.69	-17.16	0.901	Level 3, ES, SF
BRYANT 33-29 - KMG - MWD	16,606.06	7,776.83	1,532.26	1,335.34	7.781	CC, ES
BRYANT 33-29 - KMG - MWD	16,700.00	7,775.72	1,535.14	1,336.53	7.729	SF
BRYANT 34-30 - KMG - No Surveys	17,648.94	4,906.00	2,642.01	2,545.61	27.406	CC
BRYANT 34-30 - KMG - No Surveys	17,700.00	4,906.00	2,642.51	2,545.54	27.253	ES
BRYANT 34-30 - KMG - No Surveys	18,100.00	4,906.00	2,680.24	2,579.89	26.709	SF
BRYANT 36-30 - KMG - No Surveys	18,041.83	7,669.86	1,294.94	1,078.84	5.992	CC
BRYANT 36-30 - KMG - No Surveys	18,100.00	7,668.81	1,296.25	1,078.65	5.957	ES
BRYANT 36-30 - KMG - No Surveys	18,200.00	7,667.03	1,304.56	1,085.21	5.947	SF
BRYANT 8-30 - KMG - MWD	14,669.11	7,774.08	472.16	306.02	2.842	CC
BRYANT 8-30 - KMG - MWD	14,700.00	7,774.23	473.17	305.24	2.818	ES, SF
BRYANT FEDERAL 37-30 - KMG - MWD	18,087.38	7,494.08	161.24	-54.00	0.749	Level 2, CC, ES, SF
BULTHAUP 1-6 - KMG - Gyro	22,996.52	7,578.40	1,367.01	1,210.62	8.741	CC, ES, SF
BULTHAUP 17-6 - KMG - MWD	22,996.52	7,645.73	1,751.75	1,676.02	23.131	CC, ES, SF
BULTHAUP 21-6 - KMG - MWD	22,996.52	7,637.03	2,214.88	2,012.69	10.955	CC, ES, SF

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

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well REGNIER FARMS 1F-19H-B268
Project:	Sec 19 T2N-R68W	TVD Reference:	WELL @ 4989.00usft (Original Well Elev)
Reference Site:	Regnier Farms Pad	MD Reference:	WELL @ 4989.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	REGNIER FARMS 1F-19H-B268	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.14 Single User Db
Reference Design:	Design #1 22Mar18 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 (Regnier Farms)						
BULTHAUP 27-6 - KMG - MWD	22,996.52	7,645.83	519.73	414.31	4.930	CC, ES, SF
CARLA PETERSON 1 - KAUFFMAN - No Surveys	22,996.52	5,010.00	2,871.61	2,730.43	20.339	CC, ES, SF
CHAMPLIN 86 `N` 1 - KMG - Gyro	17,505.73	7,520.72	2,245.20	2,040.79	10.984	CC, ES
CHAMPLIN 86 `N` 1 - KMG - Gyro	17,700.00	7,506.36	2,253.54	2,047.29	10.926	SF
CINQUE 1 - FOUNDATION ENERGY - No oSurveys	20,123.32	4,907.00	2,662.66	2,542.15	22.095	CC, ES
CINQUE 1 - FOUNDATION ENERGY - No oSurveys	20,500.00	4,907.00	2,689.17	2,565.28	21.707	SF
CINQUE 2 - FOUNDATION ENERGY - No Surveys	18,777.58	4,911.00	2,631.55	2,525.85	24.896	CC
CINQUE 2 - FOUNDATION ENERGY - No Surveys	18,800.00	4,911.00	2,631.65	2,525.70	24.839	ES
CINQUE 2 - FOUNDATION ENERGY - No Surveys	19,200.00	4,911.00	2,665.24	2,555.93	24.381	SF
CINQUE 3 - FOUNDATION ENERGY - No Surveys	20,052.90	4,905.00	3,303.31	3,136.44	19.795	CC
CINQUE 3 - FOUNDATION ENERGY - No Surveys	20,100.00	4,905.00	3,303.65	3,136.04	19.710	ES
CINQUE 3 - FOUNDATION ENERGY - No Surveys	20,600.00	4,905.00	3,348.31	3,174.86	19.303	SF
CINQUE 4 - FOUNDATION ENERGY - No Surveys	18,630.39	4,975.00	3,178.56	3,030.96	21.535	CC
CINQUE 4 - FOUNDATION ENERGY - No Surveys	18,700.00	4,975.00	3,179.32	3,030.65	21.385	ES
CINQUE 4 - FOUNDATION ENERGY - No Surveys	19,200.00	4,975.00	3,229.20	3,074.73	20.905	SF
CINQUE 6-31 - FOUNDATION ENERGY - No Surveys	21,418.04	4,973.00	2,681.02	2,539.80	18.985	CC, ES
CINQUE 6-31 - FOUNDATION ENERGY - No Surveys	21,700.00	4,973.00	2,694.19	2,550.26	18.718	SF
CINQUE 7-31 - EXTRACTION - No surveys	19,777.80	7,480.00	227.92	-4.23	0.982	Level 3, CC, ES, SF
CINQUE 8-31 - EXTRACTION - No Surveys	22,800.00	7,493.00	770.74	486.12	2.708	SF
CINQUE 8-31 - EXTRACTION - No Surveys	22,833.72	7,493.00	770.00	486.10	2.712	CC, ES
CINQUE 9-31 - EXTRACTION - Gyro	21,734.75	7,492.01	192.09	-87.83	0.686	Level 1, CC, ES, SF
FILE FED 3I-32H-K268 - CPR - MWD	21,691.56	8,114.07	1,264.72	981.62	4.467	CC
FILE FED 3I-32H-K268 - CPR - MWD	21,700.00	8,109.06	1,264.75	981.50	4.465	ES
FILE FED 3I-32H-K268 - CPR - MWD	21,800.00	8,047.65	1,268.72	984.02	4.456	SF
FILE FED 3J-32H-K268 - CPR - MWD	21,640.72	7,932.08	1,393.32	1,114.27	4.993	CC, ES
FILE FED 3J-32H-K268 - CPR - MWD	21,700.00	7,897.47	1,394.54	1,114.86	4.986	SF
FILE FED 3K-32H-K268 - CPR - MWD	13,020.18	16,138.09	1,653.07	1,393.18	6.361	CC
FILE FED 3K-32H-K268 - CPR - MWD	13,100.00	16,081.00	1,653.65	1,393.10	6.347	ES
FILE FED 3K-32H-K268 - CPR - MWD	13,200.00	16,017.55	1,656.16	1,394.63	6.333	SF
FILE FED 3L-32H-K268 - CPR - MWD	10,625.69	18,515.00	2,093.50	1,831.82	8.000	CC
FILE FED 3L-32H-K268 - CPR - MWD	10,700.00	18,515.00	2,094.81	1,831.54	7.957	ES
FILE FED 3L-32H-K268 - CPR - MWD	21,800.00	7,536.00	2,143.31	1,863.71	7.666	SF
FILE FED 3M-32H-K268 - CPR - MWD	21,662.07	8,111.46	2,219.17	1,937.25	7.872	CC
FILE FED 3M-32H-K268 - CPR - MWD	21,700.00	8,089.00	2,219.56	1,937.06	7.857	ES
FILE FED 3M-32H-K268 - CPR - MWD	21,900.00	7,938.96	2,233.09	1,947.74	7.826	SF
FILE FED 3N-32H-K268 - CPR - MWD	21,607.89	8,013.79	2,308.20	2,027.44	8.221	CC, ES
FILE FED 3N-32H-K268 - CPR - MWD	21,900.00	7,680.00	2,319.81	2,035.56	8.161	SF
GLADYS-SAWDEY 1 - KMG - Gyro	14,478.12	7,574.85	2,798.05	2,646.00	18.403	CC
GLADYS-SAWDEY 1 - KMG - Gyro	14,500.00	7,573.74	2,798.13	2,645.87	18.377	ES
GLADYS-SAWDEY 1 - KMG - Gyro	14,800.00	7,559.30	2,816.46	2,661.88	18.220	SF
HANKINS 1 - KAUFFMAN - No Surveys	12,302.40	4,920.00	2,667.42	2,614.30	50.215	CC, ES
HANKINS 1 - KAUFFMAN - No Surveys	13,100.00	4,920.00	2,784.11	2,724.29	46.543	SF
HSR-BRYANT 9-30A - KMG - Gyro	16,159.25	7,473.30	790.16	609.84	4.382	CC
HSR-BRYANT 9-30A - KMG - Gyro	16,200.00	7,472.78	791.21	609.45	4.353	ES, SF
JACK HEIN UNIT 1 - HS RESOURCES - No Surveys	21,538.02	5,085.00	2,482.63	2,349.36	18.629	CC, ES
JACK HEIN UNIT 1 - HS RESOURCES - No Surveys	21,800.00	5,085.00	2,499.32	2,364.32	18.513	SF
JOHN LAMAR 1 - KAUFFMAN - No Surveys	13,439.35	4,930.00	2,606.51	2,544.90	42.306	CC, ES
JOHN LAMAR 1 - KAUFFMAN - No Surveys	14,100.00	4,930.00	2,689.61	2,622.54	40.105	SF
JOHNSON 32-30 - KAUFFMAN - No Surveys	15,047.07	4,895.00	2,657.79	2,584.86	36.444	CC, ES
JOHNSON 32-30 - KAUFFMAN - No Surveys	15,400.00	4,895.00	2,681.12	2,606.36	35.863	SF
JOHNSON 7-30A - KMG - Gyro	15,000.00	7,504.75	710.56	549.76	4.419	SF
JOHNSON 7-30A - KMG - Gyro	15,012.22	7,504.53	710.45	549.73	4.420	CC, ES
KENYON 34-19 - CPR - MWD	12,259.83	7,682.77	754.85	637.94	6.456	CC, ES

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

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Reference Design:	Design #1 22Mar18 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 (Regnier Farms)						
KENYON 34-19 - CPR - MWD	12,300.00	7,682.53	755.92	638.58	6.442	SF
KENYON 4-8-19 - CPR - MWD	12,760.69	7,822.22	1,151.15	1,021.65	8.889	CC
KENYON 4-8-19 - CPR - MWD	12,800.00	7,822.16	1,151.82	1,021.55	8.842	ES
KENYON 4-8-19 - CPR - MWD	12,900.00	7,822.02	1,159.54	1,027.81	8.802	SF
KENYON 8-4-19 - CPR - MWD	10,236.40	7,931.84	1,095.34	1,000.74	11.578	CC, ES
KENYON 8-4-19 - CPR - MWD	10,300.00	7,932.38	1,097.19	1,001.92	11.517	SF
KENYON 8-6-19 - CPR - MWD	11,516.76	7,606.00	1,129.08	1,025.21	10.871	CC, ES
KENYON 8-6-19 - CPR - MWD	11,700.00	7,606.00	1,143.85	1,037.20	10.725	SF
KENYON 8-8-19 - CPR - MWD	12,732.66	7,685.00	1,138.72	1,010.60	8.888	CC, ES
KENYON 8-8-19 - CPR - MWD	12,900.00	7,685.00	1,150.95	1,018.91	8.717	SF
KOCH 41-6 - KAUFFMAN - No Surveys	22,996.52	5,037.00	2,807.53	2,677.84	21.648	CC, ES, SF
NELSON 1-A - TEXAS TEA - No Surveys	20,043.74	5,011.00	3,133.50	2,965.60	18.663	CC
NELSON 1-A - TEXAS TEA - No Surveys	20,100.00	5,011.00	3,134.01	2,965.57	18.607	ES
NELSON 1-A - TEXAS TEA - No Surveys	20,300.00	5,011.00	3,143.96	2,974.03	18.502	SF
NELSON 2 - TEXAS TEA - No Surveys	21,728.96	4,918.00	3,141.03	2,958.77	17.233	CC, ES
NELSON 2 - TEXAS TEA - No Surveys	22,100.00	4,918.00	3,176.43	2,989.36	16.981	SF
NELSON 5 - TEXAS TEA - No Surveys	22,220.41	5,035.00	3,077.36	2,885.74	16.059	CC
NELSON 5 - TEXAS TEA - No Surveys	22,300.00	5,035.00	3,078.39	2,885.05	15.922	ES
NELSON 5 - TEXAS TEA - No Surveys	22,800.00	5,035.00	3,131.47	2,930.09	15.550	SF
NELSON-E UNIT 1 - CPR - Gyro	22,007.62	7,520.88	2,191.69	1,908.61	7.742	CC
NELSON-E UNIT 1 - CPR - Gyro	22,068.65	7,520.48	2,193.19	1,908.32	7.699	ES
NELSON-E UNIT 1 - CPR - Gyro	22,300.00	7,518.98	2,216.63	1,926.81	7.648	SF
NOAA FEDERAL 11-32 - CPR - Gyro	18,978.14	7,412.75	1,910.83	1,680.57	8.299	CC
NOAA FEDERAL 11-32 - CPR - Gyro	19,000.00	7,412.84	1,910.95	1,680.44	8.290	ES
NOAA FEDERAL 11-32 - CPR - Gyro	19,100.00	7,413.25	1,914.71	1,683.37	8.277	SF
RASMUSSEN 19-11 - CPR - Gyro	10,831.94	7,556.67	2,011.47	1,919.92	21.972	CC, ES
RASMUSSEN 19-11 - CPR - Gyro	11,200.00	7,546.71	2,044.84	1,949.46	21.438	SF
RASMUSSEN 19-14 - CPR - Gyro	12,421.63	7,594.99	1,991.72	1,873.68	16.873	CC, ES
RASMUSSEN 19-14 - CPR - Gyro	12,700.00	7,597.08	2,011.08	1,890.10	16.624	SF
RASMUSSEN 4-6-19 - CPR - MWD	11,408.91	7,780.83	1,616.75	1,512.60	15.524	CC, ES
RASMUSSEN 4-6-19 - CPR - MWD	11,700.00	7,779.31	1,642.75	1,534.86	15.226	SF
RASMUSSEN FEDERAL 35-29 - KMG - MWD	18,257.77	7,525.33	2,700.23	2,481.05	12.319	CC
RASMUSSEN FEDERAL 35-29 - KMG - MWD	18,300.00	7,525.74	2,700.57	2,480.86	12.292	ES
RASMUSSEN FEDERAL 35-29 - KMG - MWD	18,500.00	7,527.65	2,711.08	2,489.56	12.239	SF
RAY NELSON 0-4-32 - CPR - MWD	20,661.08	7,570.33	1,253.34	990.63	4.771	CC, ES
RAY NELSON 0-4-32 - CPR - MWD	20,700.00	7,570.48	1,253.95	991.09	4.770	SF
RAY NELSON 12-32 - CPR - Gyro	20,127.76	7,445.55	1,833.75	1,582.88	7.310	CC, ES
RAY NELSON 12-32 - CPR - Gyro	20,200.00	7,445.55	1,835.17	1,583.61	7.295	SF
RAY NELSON 13-32 - CPR - MWD	21,418.80	7,667.60	1,636.36	1,354.72	5.810	CC, ES
RAY NELSON 13-32 - CPR - MWD	21,500.00	7,666.27	1,638.37	1,355.91	5.800	SF
RAY NELSON 14-32 - CPR - MWD	22,723.61	7,572.78	1,722.52	1,425.66	5.803	CC
RAY NELSON 14-32 - CPR - MWD	22,800.00	7,572.66	1,724.21	1,424.84	5.759	ES
RAY NELSON 14-32 - CPR - MWD	22,900.00	7,572.49	1,731.53	1,429.66	5.736	SF
RAY NELSON 24-32 - CPR - MWD	22,600.71	7,706.16	3,067.73	2,774.67	10.468	CC
RAY NELSON 24-32 - CPR - MWD	22,700.00	7,704.66	3,069.34	2,773.44	10.373	ES
RAY NELSON 24-32 - CPR - MWD	22,996.52	7,700.27	3,093.16	2,790.47	10.219	SF
RAY NELSON 2-4-32 - CPR - MWD	20,846.85	7,577.71	2,582.97	2,315.83	9.669	CC
RAY NELSON 2-4-32 - CPR - MWD	20,900.00	7,576.92	2,583.51	2,315.61	9.644	ES
RAY NELSON 2-4-32 - CPR - MWD	21,100.00	7,573.92	2,595.34	2,325.45	9.616	SF
REGNIER 4-4-19 - CPR - MWD	10,135.65	7,566.68	1,338.57	1,256.82	16.375	CC, ES
REGNIER 4-4-19 - CPR - MWD	10,200.00	7,566.52	1,340.11	1,257.94	16.309	SF
REGNIER FARMS 31-19 - CPR - Gyro	0.00	15.16	790.46			
REGNIER FARMS 31-19 - CPR - Gyro	8,500.00	7,526.15	1,159.23	1,101.19	19.972	SF

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

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well REGNIER FARMS 1F-19H-B268
Project:	Sec 19 T2N-R68W	TVD Reference:	WELL @ 4989.00usft (Original Well Elev)
Reference Site:	Regnier Farms Pad	MD Reference:	WELL @ 4989.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	REGNIER FARMS 1F-19H-B268	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.14 Single User Db
Reference Design:	Design #1 22Mar18 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 (Regnier Farms)						
REGNIER FARMS 32-19 - CPR - Gyro	9,384.53	7,516.53	842.17	772.92	12.161	CC, ES
REGNIER FARMS 32-19 - CPR - Gyro	9,400.00	7,516.54	842.31	772.95	12.144	SF
REGNIER FARMS 33-19 - CPR - Gyro	10,703.09	7,527.56	937.44	848.18	10.503	CC, ES
REGNIER FARMS 33-19 - CPR - Gyro	10,800.00	7,527.63	942.43	852.55	10.485	SF
REGNIER FARMS 42-19 - CPR - Gyro	9,363.97	7,512.81	443.93	374.94	6.435	CC, ES
REGNIER FARMS 42-19 - CPR - Gyro	9,400.00	7,512.92	445.39	375.57	6.379	SF
REGNIER FARMS 43-19 - CPR - MWD	10,849.92	7,760.31	580.43	485.97	6.145	CC
REGNIER FARMS 43-19 - CPR - MWD	10,900.00	7,760.14	582.58	483.07	5.854	ES
REGNIER FARMS 43-19 - CPR - MWD	11,100.00	7,759.44	632.01	511.26	5.234	SF
REGNIER FARMS B 2 - CPR - Gyro	11,805.78	7,537.93	77.84	-29.58	0.725	Level 2, CC, ES, SF
REGNIER FARMS-B UNIT 1 - CPR - Gyro	8,432.45	7,513.65	123.70	65.84	2.138	CC, ES, SF
ROSS 21-19 - CPR - Gyro	0.00	0.00	1,441.48			
ROSS 21-19 - CPR - Gyro	300.00	288.30	1,442.21	1,440.51	850.269	ES
ROSS 21-19 - CPR - Gyro	8,700.00	7,562.01	2,166.51	2,107.03	36.420	SF
ROSS 22-19 - CPR - Gyro	9,555.76	7,496.80	2,202.58	2,130.97	30.759	CC
ROSS 22-19 - CPR - Gyro	9,600.00	7,496.85	2,203.02	2,130.90	30.546	ES
ROSS 22-19 - CPR - Gyro	10,100.00	7,500.00	2,268.82	2,191.69	29.414	SF
ROSS 2-4-19 - CPR - MWD	10,159.35	7,680.64	2,608.77	2,525.24	31.231	CC
ROSS 2-4-19 - CPR - MWD	10,200.00	7,679.79	2,609.09	2,525.08	31.059	ES
ROSS 2-4-19 - CPR - MWD	10,800.00	7,666.99	2,686.25	2,596.44	29.913	SF
ROSS 4-2-19 - CPR - MWD	8,927.36	7,868.03	1,473.90	1,405.97	21.698	CC, ES
ROSS 4-2-19 - CPR - MWD	9,400.00	7,866.89	1,547.82	1,472.64	20.589	SF
SAWDEY 21-30 - KMG - MWD	14,346.22	7,695.13	1,336.91	1,185.38	8.823	CC, ES
SAWDEY 21-30 - KMG - MWD	14,400.00	7,694.75	1,337.99	1,186.26	8.818	SF
SAWDEY 22-30 - KMG - MWD	15,690.96	7,663.92	2,593.54	2,415.01	14.528	CC
SAWDEY 22-30 - KMG - MWD	15,700.00	7,663.59	2,593.55	2,414.93	14.520	ES
SAWDEY 22-30 - KMG - MWD	15,900.00	7,656.32	2,601.94	2,421.72	14.438	SF
SAWDEY 31-30 - KMG - MWD	14,587.03	7,712.44	3,903.16	3,747.43	25.064	CC
SAWDEY 31-30 - KMG - MWD	14,600.00	7,712.30	3,903.18	3,747.29	25.038	ES
SAWDEY 31-30 - KMG - MWD	15,300.00	7,704.28	3,967.73	3,804.92	24.371	SF
SAWDEY 32-30 - KMG - MWD	16,024.92	7,805.63	3,757.79	3,568.15	19.816	CC
SAWDEY 32-30 - KMG - MWD	16,100.00	7,806.20	3,758.54	3,567.74	19.700	ES
SAWDEY 32-30 - KMG - MWD	16,700.00	7,810.69	3,817.94	3,620.24	19.312	SF
SAWDEY 5-30 - KMG - MWD	15,346.45	7,630.61	3,401.87	3,231.17	19.929	CC
SAWDEY 5-30 - KMG - MWD	15,400.00	7,628.45	3,402.29	3,230.89	19.850	ES
SAWDEY 5-30 - KMG - MWD	15,800.00	7,611.70	3,431.93	3,256.37	19.549	SF
SAWDEY 6-30 - KMG - MWD	15,085.68	7,609.87	1,874.44	1,710.74	11.450	CC
SAWDEY 6-30 - KMG - MWD	15,100.00	7,609.82	1,874.49	1,710.71	11.445	ES
SAWDEY 6-30 - KMG - MWD	15,200.00	7,609.44	1,877.92	1,713.76	11.439	SF
SAWDEY UNIT 2 - KMG - Gyro	13,890.10	7,536.44	439.67	296.77	3.077	CC, ES, SF
SHAW 12-29A - KMG - Gyro	14,624.86	7,458.09	2,037.80	1,883.74	13.227	CC
SHAW 12-29A - KMG - Gyro	14,700.00	7,457.25	2,039.18	1,883.27	13.079	ES
SHAW 12-29A - KMG - Gyro	15,000.00	7,453.84	2,072.04	1,910.48	12.826	SF
TEGELER 11-30 - KMG - Gyro	16,331.64	7,514.27	1,823.74	1,640.37	9.945	CC, ES
TEGELER 11-30 - KMG - Gyro	16,400.00	7,514.40	1,825.02	1,641.26	9.931	SF
WILLIAMS 13-20 - KMG - MWD	12,151.56	7,819.61	1,855.16	1,731.23	14.970	CC
WILLIAMS 13-20 - KMG - MWD	12,200.00	7,818.94	1,855.79	1,730.55	14.818	ES
WILLIAMS 13-20 - KMG - MWD	12,600.00	7,813.37	1,908.58	1,774.94	14.282	SF
WILLIAMS 18-16 - CPR - Gyro	6,843.12	6,752.75	832.43	783.47	17.003	CC
WILLIAMS 18-16 - CPR - Gyro	6,850.00	6,759.83	832.46	783.45	16.986	ES
WILLIAMS 18-16 - CPR - Gyro	6,950.00	6,858.58	840.18	790.46	16.896	SF
WILLIAMS 24-18 - CPR - Gyro	0.00	0.00	1,621.66			
WILLIAMS 24-18 - CPR - Gyro	7,300.00	7,271.50	2,193.36	2,141.77	42.513	SF

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

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well REGNIER FARMS 1F-19H-B268
Project:	Sec 19 T2N-R68W	TVD Reference:	WELL @ 4989.00usft (Original Well Elev)
Reference Site:	Regnier Farms Pad	MD Reference:	WELL @ 4989.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	REGNIER FARMS 1F-19H-B268	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.14 Single User Db
Reference Design:	Design #1 22Mar18 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 (Regnier Farms)						
WILLIAMS 34-18 - CPR - MWD	6,149.44	6,246.32	727.78	677.44	14.455	CC
WILLIAMS 34-18 - CPR - MWD	6,200.00	6,293.78	727.88	677.14	14.347	ES
WILLIAMS 34-18 - CPR - MWD	6,850.00	6,920.07	751.22	696.09	13.628	SF
WILLIAMS 35-20 - KMG - MWD	12,748.48	7,619.46	2,520.13	2,393.46	19.895	CC
WILLIAMS 35-20 - KMG - MWD	12,800.00	7,619.54	2,520.66	2,392.90	19.730	ES
WILLIAMS 35-20 - KMG - MWD	13,300.00	7,620.28	2,579.77	2,443.65	18.952	SF
WILLIAMS 4-29 - KMG - MWD	13,473.42	7,626.51	1,869.52	1,732.66	13.660	CC
WILLIAMS 4-29 - KMG - MWD	13,500.00	7,626.53	1,869.71	1,732.30	13.607	ES
WILLIAMS 4-29 - KMG - MWD	13,800.00	7,626.70	1,897.83	1,755.46	13.330	SF
WOOLLEY-BECKY 2E-7H-E168 - CPR - MWD	22,996.52	14,800.00	2,691.26	2,313.76	7.129	CC, ES, SF
WOOLLEY-BECKY 2F-7H-E168 - CPR - MWD	22,996.52	14,555.00	2,332.66	1,969.95	6.431	CC, ES, SF
WOOLLEY-BECKY 2G-7H-E168 - CPR - MWD	22,996.52	15,260.00	2,057.20	1,699.76	5.755	CC, ES, SF
WOOLLEY-BECKY 2H-7H-E168 - CPR - MWD	22,996.52	15,075.00	1,736.74	1,404.57	5.229	CC, ES, SF
Regnier Farms Pad						
REGNIER FARMS 1A-19H-B268 - Wellbore #1 - Design	116.33	117.33	50.00	49.60	126.044	CC
REGNIER FARMS 1A-19H-B268 - Wellbore #1 - Design	200.00	200.98	50.00	49.00	50.177	ES
REGNIER FARMS 1A-19H-B268 - Wellbore #1 - Design	22,996.52	22,669.98	1,323.03	779.58	2.435	SF
REGNIER FARMS 1B-19H-B268 - Wellbore #1 - Design	202.83	203.83	40.00	38.98	39.337	CC
REGNIER FARMS 1B-19H-B268 - Wellbore #1 - Design	300.00	300.00	40.36	38.65	23.596	ES
REGNIER FARMS 1B-19H-B268 - Wellbore #1 - Design	22,996.52	22,910.49	1,099.85	549.28	1.998	SF
REGNIER FARMS 1C-19H-B268 - Wellbore #1 - Design	216.33	217.33	30.00	28.89	26.939	CC
REGNIER FARMS 1C-19H-B268 - Wellbore #1 - Design	300.00	300.99	30.00	28.29	17.509	ES
REGNIER FARMS 1C-19H-B268 - Wellbore #1 - Design	22,996.52	22,783.17	895.23	349.78	1.641	SF
REGNIER FARMS 1D-19H-B268 - Wellbore #1 - Design	300.00	301.00	20.00	18.29	11.672	CC, ES
REGNIER FARMS 1D-19H-B268 - Wellbore #1 - Design	22,996.52	22,700.33	639.04	115.81	1.221	Level 3, SF
REGNIER FARMS 1E-19H-B268 - Wellbore #1 - Design	300.00	301.00	10.00	8.29	5.836	CC
REGNIER FARMS 1E-19H-B268 - Wellbore #1 - Design	22,996.52	22,817.05	315.40	-192.23	0.621	Level 1, ES, SF
REGNIER FARMS 1G-19H-B268 - Wellbore #1 - Design	200.00	200.00	10.00	9.01	10.071	CC
REGNIER FARMS 1G-19H-B268 - Wellbore #1 - Design	22,996.52	22,756.35	240.75	-82.69	0.744	Level 2, ES, SF
REGNIER FARMS 1H-19H-B268 - Wellbore #1 - Design	203.41	203.41	20.00	18.98	19.657	CC
REGNIER FARMS 1H-19H-B268 - Wellbore #1 - Design	21,800.00	21,704.46	318.15	-156.56	0.670	Level 1, SF
REGNIER FARMS 1H-19H-B268 - Wellbore #1 - Design	21,900.00	21,804.37	321.79	-157.03	0.672	Level 1, ES
REGNIER FARMS 1I-19H-B268 - Wellbore #1 - Design #	200.00	200.00	30.00	29.01	30.213	CC, ES
REGNIER FARMS 1I-19H-B268 - Wellbore #1 - Design #	21,900.00	21,767.63	661.22	168.58	1.342	Level 3, SF
REGNIER FARMS 1J-19H-B268 - Wellbore #1 - Design	200.00	200.00	40.00	39.01	40.283	CC, ES
REGNIER FARMS 1J-19H-B268 - Wellbore #1 - Design	21,900.00	22,023.98	752.39	239.08	1.466	Level 3, SF
REGNIER FARMS 1K-19H-B268 - Wellbore #1 - Design	200.00	200.00	50.00	49.01	50.354	CC, ES
REGNIER FARMS 1K-19H-B268 - Wellbore #1 - Design	21,900.00	21,939.64	1,032.87	521.78	2.021	SF

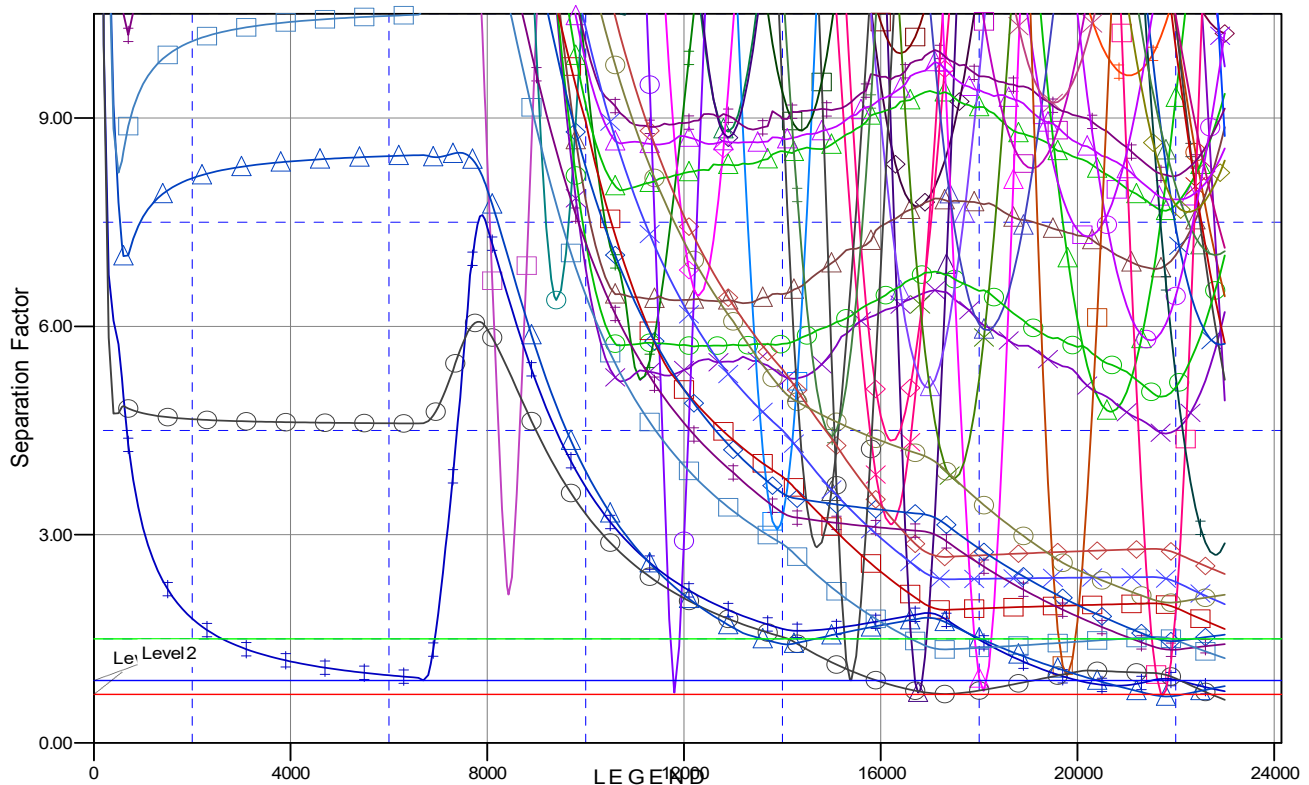
Company: Crestone Peak Resources
Project: Sec 19 T2N-R68W
Reference Site: Regnier Farms Pad
Site Error: 0.00 usft
Reference Well: REGNIER FARMS 1F-19H-B268
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1 22Mar18 kjs

Local Co-ordinate Reference: Well REGNIER FARMS 1F-19H-B268
TVD Reference: WELL @ 4989.00usft (Original Well Elev)
MD Reference: WELL @ 4989.00usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Single User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 4989.00usft (Original Well E
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: REGNIER FARMS 1F-19H-B268
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.30°

Separation Factor Plot



KENYON 4-8-19, CPR, MWD V0
REGNIER FARMS 43-19, CPR, MWD V0
WOOLLEY-BECKY 2F-7H-E168, CPR, MWD V0
CINQUE 1, FOUNDATION ENERGY, No Surveys V0
BRYANT 33-29, KMG, MWD V0
BULTHAUP 27-6, KMG, MWD V0
REGNIER FARMS 31-19, CPR, Gyro V0
ROSS 4-2-19, CPR, MWD V0
REGNIER FARMS B 2, CPR, Gyro V0
BRYANT 10-30, KMG, MWD V0
RAY NELSON 24-32, CPR, MWD V0
BROWN C UNIT 2, CPR, Gyro V0
BRYANT 20-30, KMG, MWD V0
SAWDEY 6-30, KMG, MWD V0
RASMUSSEN 46-19, CPR, MWD V0
RAY NELSON 04-32, CPR, MWD V0
SAWDEY 32-30, KMG, MWD V0
REGNIER FARMS-B UNIT 1, CPR, Gyro V0
BULTHAUP 17-6, KMG, MWD V0
REGNIER FARMS 42-19, CPR, Gyro V0
FILE FED 3K32H-K268, CPR, MWD V0
NELSON 2, TEXAS TEA, No Surveys V0
CINQUE 4, FOUNDATION ENERGY, No Surveys V0
CINQUE 3, FOUNDATION ENERGY, No Surveys V0
BRYANT 8-30, KMG, MWD V0
RAY NELSON 24-32, CPR, MWD V0
WILLIAMS 4-29, KMG, MWD V0
BALLANTINE 3-30, KMG, Gyro V0

RASMUSSEN 1941, CPR, Gyro V0
JOHN LAMAR 1, KAUFFMAN, No Surveys V0
BRYANT 23-30, KMG, MWD V0
WILLIAMS 34-18, CPR, MWD V0
CARL A PETERSON 1, KAUFFMAN, No Surveys V0
WOOLLEY-BECKY 2H-7H-E168, CPR, MWD V0
SAWDEY UNIT 2, KMG, Gyro V0
CHAMPLIN 86 N 1, KMG, Gyro V0
WILLIAMS 35-20, KMG, MWD V0
FILE FED 3L32H-K268, CPR, MWD V0
SHAW 12-29A, KMG, Gyro V0
HANKINS 1, KAUFFMAN, No Surveys V0
ROSS 21-19, CPR, Gyro V0
REGNIER 4-4-19, CPR, MWD V0
CINQUE 2, FOUNDATION ENERGY, No Surveys V0
KENYON 8-4-19, CPR, MWD V0
FILE FED 3K32H-K268, CPR, MWD V0
BRYANT 16-30, KMG, MWD V0
NOAA FEDERAL 11-32, CPR, Gyro V0
WOOLLEY-BECKY 2G-7H-E168, CPR, MWD V0
NELSON 5, TEXAS TEA, No Surveys V0
CINQUE 9-31, EXTRACTION, Gyro V0
CINQUE 6-31, FOUNDATION ENERGY, No Surveys V0
ANDERSON TRUST C UNIT 2, CPR, Gyro V0
A C N O 2, KAUFFMAN, No Surveys V0
BRYANT 36-30, KMG, No Surveys V0
CINQUE 8-31, EXTRACTION, No Surveys V0
SAWDEY 22-30, KMG, MWD V0
ANSELM 1, PETERSON, No Surveys V0

BULTHAUP 1-6, KMG, Gyro V0
NELSON 1-A, TEXAS TEA, No Surveys V0
REGNIER FARMS 33-19, CPR, Gyro V0
RASMUSSEN 1944, CPR, Gyro V0
JACK HEIN UNIT 1, HS RESOURCES, No Surveys V0
WOOLLEY-BECKY 2E-7H-E168, CPR, MWD V0
RAY NELSON 14-32, CPR, MWD V0
BRYANT 24-30, KMG, MWD V0
SAWDEY 5-30, KMG, MWD V0
KENYON 8-4-19, CPR, MWD V0
GLADYS-SAWDEY 1, KMG, Gyro V0
SAWDEY 21-30, KMG, MWD V0
SAWDEY 31-30, KMG, MWD V0
FILE FED 3N32H-K268, CPR, MWD V0
WILLIAMS 13-20, KMG, MWD V0
WILLIAMS 18-18, CPR, Gyro V0
FILE FED 3M32H-K268, CPR, MWD V0
RAY NELSON 12-32, CPR, Gyro V0
RASMUSSEN FEDERAL 35-29, KMG, MWD V0
ARMSTEAD GAS UNIT 4-31, EXTRACTION, Gyro V0
JOHNSON 7-30A, KMG, Gyro V0
RAY NELSON 13-32, CPR, MWD V0
NELSON UNIT 1, CPR, Gyro V0
CINQUE 7-31, EXTRACTION, No Surveys V0
ARMSTEAD GU 5-31, NOBLE ENERGY, No Surveys V0
REGNIER FARMS 1G-19H-B268, Wellbore #1, Design #1 22Mar18 kjs V0
REGNIER FARMS 1C-19H-B268, Wellbore #1, Design #1 22Mar18 kjs V0
REGNIER FARMS 1E-19H-B268, Wellbore #1, Design #1 22Mar18 kjs V0
REGNIER FARMS 1B-19H-B268, Wellbore #1, Design #1 22Mar18 kjs V0