



Crestone Peak Resources

Sec 19 T2N-R68W

Regnier Farms Pad

REGNIER FARMS 1H-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 1H-19H-B268
Project:	Sec 19 T2N-R68W	TVD Reference:	WELL @ 4988.00usft (Original Well Elev)
Reference Site:	Regnier Farms Pad	MD Reference:	WELL @ 4988.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	REGNIER FARMS 1H-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	4/5/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	22,891.17	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	16,092.67	4,907.00	3,390.38	3,266.57	27.385	CC
A C N O 2 - KAUFFMAN - No Surveys	16,100.00	4,907.00	3,390.39	3,266.50	27.367	ES
A C N O 2 - KAUFFMAN - No Surveys	16,600.00	4,907.00	3,428.13	3,299.89	26.732	SF
ANDERSON TRUST C UNIT 2 - CPR - Gyro	19,054.00	7,347.82	2,170.16	1,936.71	9.296	CC
ANDERSON TRUST C UNIT 2 - CPR - Gyro	19,100.00	7,347.26	2,170.65	1,936.24	9.260	ES
ANDERSON TRUST C UNIT 2 - CPR - Gyro	19,300.00	7,344.85	2,184.06	1,946.59	9.197	SF
ANSELM 1 - PETERSON - No Surveys	21,430.30	4,970.00	3,422.07	3,220.48	16.975	CC
ANSELM 1 - PETERSON - No Surveys	21,500.00	4,970.00	3,422.78	3,220.42	16.914	ES
ANSELM 1 - PETERSON - No Surveys	21,800.00	4,970.00	3,441.98	3,237.18	16.806	SF
ARMSTEAD GAS UNIT 4-31 - EXTRACTION - Gyro	22,463.69	7,370.47	2,460.13	2,166.46	8.377	CC
ARMSTEAD GAS UNIT 4-31 - EXTRACTION - Gyro	22,500.00	7,369.98	2,460.40	2,166.25	8.364	ES
ARMSTEAD GAS UNIT 4-31 - EXTRACTION - Gyro	22,600.00	7,368.62	2,463.90	2,168.73	8.347	SF
ARMSTEAD GU 5-31 - NOBLE ENERGY - No Surveys	19,337.98	7,345.00	2,528.30	2,302.27	11.186	CC
ARMSTEAD GU 5-31 - NOBLE ENERGY - No Surveys	19,400.00	7,345.00	2,529.06	2,302.22	11.149	ES
ARMSTEAD GU 5-31 - NOBLE ENERGY - No Surveys	19,500.00	7,345.00	2,533.49	2,305.61	11.118	SF
BALLANTINE 3-30 - KMG - Gyro	13,537.78	7,353.62	2,632.10	2,495.14	19.217	CC
BALLANTINE 3-30 - KMG - Gyro	13,600.00	7,353.46	2,632.84	2,495.03	19.106	ES
BALLANTINE 3-30 - KMG - Gyro	13,900.00	7,352.71	2,656.91	2,515.91	18.843	SF
BECKY 1 - KAUFFMAN - No Surveys	22,891.17	5,010.00	3,562.40	3,351.20	16.868	CC, ES, SF
BROWN C UNIT 2 - CPR - Gyro	22,891.17	7,503.85	2,157.78	1,923.76	9.221	CC, ES, SF
BRYANT 10-30 - KMG - MWD	16,081.15	7,630.94	1,085.96	902.73	5.927	CC, ES
BRYANT 10-30 - KMG - MWD	16,100.00	7,631.10	1,086.12	902.78	5.924	SF
BRYANT 16-30 - KMG - MWD	17,347.16	7,435.29	204.88	0.19	1.001	Level 3, CC, ES, SF
BRYANT 20-30 - KMG - MWD	16,688.40	7,487.36	428.32	230.33	2.163	CC, ES, SF
BRYANT 23-30 - KMG - MWD	16,811.65	7,513.20	1,606.00	1,405.99	8.030	CC, ES, SF
BRYANT 24-30 - KMG - MWD	15,317.00	7,461.69	269.25	96.13	1.555	CC, ES, SF
BRYANT 33-29 - KMG - MWD	16,685.23	7,642.19	972.97	773.40	4.875	CC
BRYANT 33-29 - KMG - MWD	16,700.00	7,642.09	973.08	773.32	4.871	ES, SF
BRYANT 34-30 - KMG - No Surveys	17,606.30	4,906.00	2,707.91	2,593.67	23.705	CC, ES
BRYANT 34-30 - KMG - No Surveys	17,900.00	4,906.00	2,723.79	2,607.61	23.445	SF
BRYANT 36-30 - KMG - No Surveys	18,045.91	7,527.89	1,827.60	1,609.35	8.374	CC, ES
BRYANT 36-30 - KMG - No Surveys	18,200.00	7,526.43	1,834.08	1,614.12	8.338	SF
BRYANT 8-30 - KMG - MWD	14,645.50	7,636.92	122.19	-46.00	0.726	Level 2, CC, ES, SF
BRYANT FEDERAL 37-30 - KMG - MWD	17,999.44	7,365.48	373.52	158.00	1.733	CC, ES, SF
BULTHAUP 1-6 - KMG - Gyro	22,891.17	7,432.69	1,233.92	1,152.30	15.117	CC, ES, SF
BULTHAUP 17-6 - KMG - MWD	22,891.17	7,485.36	1,844.52	1,714.97	14.238	CC, ES, SF
BULTHAUP 21-6 - KMG - MWD	22,891.17	7,484.84	2,490.94	2,259.41	10.759	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 1H-19H-B268
Project:	Sec 19 T2N-R68W	TVD Reference:	WELL @ 4988.00usft (Original Well Elev)
Reference Site:	Regnier Farms Pad	MD Reference:	WELL @ 4988.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	REGNIER FARMS 1H-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	22,891.17	7,507.67	736.43	499.37	3.106	CC, ES, SF
CARLA PETERSON 1 - KAUFFMAN - No Surveys	22,891.17	5,010.00	2,908.04	2,744.68	17.801	CC, ES, SF
CHAMPLIN 86 'N' 1 - KMG - Gyro	17,274.42	7,375.90	1,670.18	1,468.05	8.263	CC
CHAMPLIN 86 'N' 1 - KMG - Gyro	17,300.00	7,374.71	1,670.37	1,467.69	8.241	ES
CHAMPLIN 86 'N' 1 - KMG - Gyro	17,400.00	7,370.13	1,674.88	1,470.37	8.190	SF
CINQUE 1 - FOUNDATION ENERGY - No oSurveys	20,080.66	4,907.00	2,670.39	2,533.67	19.532	CC
CINQUE 1 - FOUNDATION ENERGY - No oSurveys	20,100.00	4,907.00	2,670.46	2,533.58	19.510	ES
CINQUE 1 - FOUNDATION ENERGY - No oSurveys	20,300.00	4,907.00	2,679.38	2,541.23	19.394	SF
CINQUE 2 - FOUNDATION ENERGY - No Surveys	18,730.88	4,911.00	2,660.95	2,538.31	21.696	CC, ES
CINQUE 2 - FOUNDATION ENERGY - No Surveys	19,000.00	4,911.00	2,674.53	2,550.17	21.506	SF
CINQUE 3 - FOUNDATION ENERGY - No Surveys	20,104.22	4,905.00	3,467.03	3,285.23	19.071	CC, ES
CINQUE 3 - FOUNDATION ENERGY - No Surveys	20,500.00	4,905.00	3,489.54	3,304.26	18.834	SF
CINQUE 4 - FOUNDATION ENERGY - No Surveys	18,677.70	4,975.00	3,409.03	3,245.20	20.808	CC
CINQUE 4 - FOUNDATION ENERGY - No Surveys	18,700.00	4,975.00	3,409.10	3,245.01	20.776	ES
CINQUE 4 - FOUNDATION ENERGY - No Surveys	19,100.00	4,975.00	3,435.09	3,267.49	20.497	SF
CINQUE 6-31 - FOUNDATION ENERGY - No Surveys	21,387.28	4,973.00	2,680.02	2,523.22	17.092	CC
CINQUE 6-31 - FOUNDATION ENERGY - No Surveys	21,400.00	4,973.00	2,680.05	2,523.14	17.080	ES
CINQUE 6-31 - FOUNDATION ENERGY - No Surveys	21,600.00	4,973.00	2,688.45	2,530.24	16.993	SF
CINQUE 7-31 - EXTRACTION - No surveys	19,702.36	7,346.00	643.52	411.06	2.768	CC, ES, SF
CINQUE 8-31 - EXTRACTION - No Surveys	22,642.76	7,359.00	1,160.92	876.52	4.082	CC, ES, SF
CINQUE 9-31 - EXTRACTION - Gyro	21,641.22	7,354.85	480.95	201.90	1.724	CC, ES, SF
FILE FED 3I-32H-K268 - CPR - MWD	21,606.08	8,084.23	990.48	710.46	3.537	CC
FILE FED 3I-32H-K268 - CPR - MWD	21,900.00	7,775.00	994.31	706.99	3.461	ES
FILE FED 3I-32H-K268 - CPR - MWD	22,000.00	7,728.00	998.59	709.91	3.459	SF
FILE FED 3J-32H-K268 - CPR - MWD	21,481.33	7,950.92	1,092.51	812.87	3.907	CC
FILE FED 3J-32H-K268 - CPR - MWD	21,500.00	7,940.04	1,092.58	812.62	3.903	ES
FILE FED 3J-32H-K268 - CPR - MWD	21,600.00	7,872.00	1,094.95	813.61	3.892	SF
FILE FED 3K-32H-K268 - CPR - MWD	10,753.51	18,297.72	1,323.52	1,063.69	5.094	CC
FILE FED 3K-32H-K268 - CPR - MWD	10,800.00	18,262.00	1,323.67	1,063.45	5.087	ES
FILE FED 3K-32H-K268 - CPR - MWD	10,900.00	18,176.31	1,324.83	1,064.18	5.083	SF
FILE FED 3L-32H-K268 - CPR - MWD	10,506.22	18,515.00	1,730.98	1,470.33	6.641	CC
FILE FED 3L-32H-K268 - CPR - MWD	10,600.00	18,515.00	1,733.52	1,470.28	6.585	ES
FILE FED 3L-32H-K268 - CPR - MWD	21,700.00	7,514.75	1,843.30	1,562.84	6.572	SF
FILE FED 3M-32H-K268 - CPR - MWD	19,723.76	9,898.46	1,931.22	1,664.88	7.251	CC
FILE FED 3M-32H-K268 - CPR - MWD	22,000.00	7,594.50	1,943.65	1,655.65	6.749	ES
FILE FED 3M-32H-K268 - CPR - MWD	22,300.00	7,387.00	1,957.56	1,665.15	6.695	SF
FILE FED 3N-32H-K268 - CPR - MWD	10,827.87	18,522.89	1,995.70	1,733.88	7.622	CC
FILE FED 3N-32H-K268 - CPR - MWD	10,900.00	18,479.79	1,996.22	1,733.68	7.603	ES
FILE FED 3N-32H-K268 - CPR - MWD	22,100.00	7,448.83	2,040.25	1,752.00	7.078	SF
GLADYS-SAWDEY 1 - KMG - Gyro	14,118.35	7,393.50	3,110.70	2,963.40	21.119	CC
GLADYS-SAWDEY 1 - KMG - Gyro	14,200.00	7,390.26	3,111.77	2,963.35	20.966	ES
GLADYS-SAWDEY 1 - KMG - Gyro	14,600.00	7,374.34	3,147.72	2,994.97	20.607	SF
HANKINS 1 - KAUFFMAN - No Surveys	12,225.43	4,920.00	2,479.24	2,428.28	48.643	CC, ES
HANKINS 1 - KAUFFMAN - No Surveys	13,000.00	4,920.00	2,597.43	2,539.97	45.209	SF
HSR-BRYANT 9-30A - KMG - Gyro	16,163.66	7,339.24	281.77	99.09	1.542	CC, ES, SF
JACK HEIN UNIT 1 - HS RESOURCES - No Surveys	21,400.86	5,085.00	2,294.33	2,169.48	18.377	CC, ES
JACK HEIN UNIT 1 - HS RESOURCES - No Surveys	21,600.00	5,085.00	2,302.95	2,176.48	18.209	SF
JOHN LAMAR 1 - KAUFFMAN - No Surveys	13,374.95	4,930.00	2,428.33	2,368.90	40.863	CC
JOHN LAMAR 1 - KAUFFMAN - No Surveys	13,400.00	4,930.00	2,428.46	2,368.79	40.704	ES
JOHN LAMAR 1 - KAUFFMAN - No Surveys	13,900.00	4,930.00	2,484.44	2,420.86	39.074	SF
JOHNSON 32-30 - KAUFFMAN - No Surveys	14,912.90	4,895.00	2,639.63	2,559.20	32.817	CC, ES
JOHNSON 32-30 - KAUFFMAN - No Surveys	15,300.00	4,895.00	2,667.87	2,584.96	32.180	SF
JOHNSON 7-30A - KMG - Gyro	14,865.04	7,370.28	1,092.00	931.96	6.823	CC, ES

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

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Well Error:	0.00 usft	Output errors are at	2.00 sigma
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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)						
JOHNSON 7-30A - KMG - Gyro	14,900.00	7,369.76	1,092.55	932.26	6.816	SF
KENYON 34-19 - CPR - MWD	12,225.34	7,546.28	1,062.35	945.84	9.118	CC, ES
KENYON 34-19 - CPR - MWD	12,300.00	7,545.24	1,064.97	947.94	9.100	SF
KENYON 4-8-19 - CPR - MWD	12,736.41	7,665.34	1,442.34	1,312.95	11.147	CC, ES
KENYON 4-8-19 - CPR - MWD	12,900.00	7,664.26	1,451.59	1,320.12	11.041	SF
KENYON 8-4-19 - CPR - MWD	10,144.82	7,789.51	729.21	635.39	7.773	CC, ES
KENYON 8-4-19 - CPR - MWD	10,200.00	7,790.26	731.29	636.70	7.731	SF
KENYON 8-6-19 - CPR - MWD	11,423.20	7,511.00	793.09	690.41	7.724	CC, ES
KENYON 8-6-19 - CPR - MWD	11,500.00	7,511.00	796.80	692.33	7.627	SF
KENYON 8-8-19 - CPR - MWD	12,641.00	7,591.00	840.31	713.87	6.646	CC
KENYON 8-8-19 - CPR - MWD	12,700.00	7,579.38	842.27	713.64	6.548	ES
KENYON 8-8-19 - CPR - MWD	12,800.00	7,579.04	855.11	723.88	6.516	SF
KOCH 41-6 - KAUFFMAN - No Surveys	22,891.17	5,037.00	2,637.39	2,518.28	22.142	CC, ES, SF
NELSON 1-A - TEXAS TEA - No Surveys	19,819.11	5,011.00	2,790.72	2,633.42	17.742	CC, ES
NELSON 1-A - TEXAS TEA - No Surveys	20,200.00	5,011.00	2,816.59	2,655.04	17.435	SF
NELSON 2 - TEXAS TEA - No Surveys	21,629.64	4,918.00	2,870.20	2,694.61	16.346	CC
NELSON 2 - TEXAS TEA - No Surveys	21,700.00	4,918.00	2,871.06	2,694.50	16.262	ES
NELSON 2 - TEXAS TEA - No Surveys	22,000.00	4,918.00	2,893.99	2,714.41	16.115	SF
NELSON 5 - TEXAS TEA - No Surveys	22,338.13	5,035.00	2,773.88	2,587.16	14.856	CC
NELSON 5 - TEXAS TEA - No Surveys	22,400.00	5,035.00	2,774.57	2,586.99	14.791	ES
NELSON 5 - TEXAS TEA - No Surveys	22,700.00	5,035.00	2,797.38	2,606.80	14.678	SF
NELSON-E UNIT 1 - CPR - Gyro	22,121.03	7,386.84	1,881.84	1,594.20	6.542	CC, ES
NELSON-E UNIT 1 - CPR - Gyro	22,300.00	7,385.44	1,890.33	1,599.85	6.508	SF
NOAA FEDERAL 11-32 - CPR - Gyro	18,755.76	7,274.91	1,433.88	1,205.94	6.291	CC
NOAA FEDERAL 11-32 - CPR - Gyro	18,800.00	7,275.46	1,434.56	1,205.66	6.267	ES
NOAA FEDERAL 11-32 - CPR - Gyro	18,900.00	7,276.69	1,441.11	1,210.74	6.256	SF
RASMUSSEN 19-11 - CPR - Gyro	10,837.56	7,426.05	2,361.77	2,269.97	25.728	CC, ES
RASMUSSEN 19-11 - CPR - Gyro	11,300.00	7,413.33	2,406.58	2,310.69	25.098	SF
RASMUSSEN 19-14 - CPR - Gyro	12,421.51	7,469.46	2,296.42	2,178.32	19.445	CC, ES
RASMUSSEN 19-14 - CPR - Gyro	12,700.00	7,471.33	2,313.24	2,192.55	19.166	SF
RASMUSSEN 4-6-19 - CPR - MWD	11,400.19	7,644.61	1,950.31	1,846.03	18.702	CC, ES
RASMUSSEN 4-6-19 - CPR - MWD	11,700.00	7,640.51	1,973.22	1,865.55	18.327	SF
RASMUSSEN FEDERAL 35-29 - KMG - MWD	17,982.67	7,407.66	2,170.52	1,954.08	10.028	CC
RASMUSSEN FEDERAL 35-29 - KMG - MWD	18,000.00	7,407.81	2,170.59	1,953.81	10.013	ES
RASMUSSEN FEDERAL 35-29 - KMG - MWD	18,200.00	7,409.50	2,181.38	1,961.48	9.920	SF
RAY NELSON 0-4-32 - CPR - MWD	20,481.20	7,445.07	893.90	632.81	3.424	CC
RAY NELSON 0-4-32 - CPR - MWD	20,500.00	7,444.99	894.10	632.62	3.419	ES, SF
RAY NELSON 12-32 - CPR - Gyro	19,908.85	7,305.86	1,438.30	1,190.00	5.793	CC, ES
RAY NELSON 12-32 - CPR - Gyro	20,000.00	7,306.12	1,441.19	1,191.15	5.764	SF
RAY NELSON 13-32 - CPR - MWD	21,212.67	7,541.98	1,330.49	1,051.72	4.773	CC, ES
RAY NELSON 13-32 - CPR - MWD	21,300.00	7,540.88	1,333.36	1,052.67	4.750	SF
RAY NELSON 14-32 - CPR - MWD	22,823.15	7,440.40	1,328.28	1,026.35	4.399	CC, ES
RAY NELSON 14-32 - CPR - MWD	22,891.17	7,440.39	1,330.02	1,026.91	4.388	SF
RAY NELSON 24-32 - CPR - MWD	22,859.36	7,589.05	2,682.74	2,381.24	8.898	CC
RAY NELSON 24-32 - CPR - MWD	22,891.17	7,588.09	2,682.93	2,380.73	8.878	ES, SF
RAY NELSON 2-4-32 - CPR - MWD	20,576.88	7,449.71	2,232.67	1,969.36	8.479	CC
RAY NELSON 2-4-32 - CPR - MWD	20,600.00	7,449.30	2,232.79	1,968.95	8.463	ES
RAY NELSON 2-4-32 - CPR - MWD	20,800.00	7,445.72	2,243.79	1,976.36	8.390	SF
REGNIER 4-4-19 - CPR - MWD	10,118.38	7,433.01	1,707.58	1,626.02	20.938	CC, ES
REGNIER 4-4-19 - CPR - MWD	10,300.00	7,432.57	1,717.21	1,634.75	20.826	SF
REGNIER FARMS 31-19 - CPR - Gyro	0.00	15.17	800.46			
REGNIER FARMS 31-19 - CPR - Gyro	8,500.00	7,383.33	1,579.10	1,521.21	27.277	SF
REGNIER FARMS 32-19 - CPR - Gyro	9,352.54	7,384.58	1,234.23	1,165.20	17.880	CC, ES

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 1H-19H-B268
Project:	Sec 19 T2N-R68W	TVD Reference:	WELL @ 4988.00usft (Original Well Elev)
Reference Site:	Regnier Farms Pad	MD Reference:	WELL @ 4988.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	REGNIER FARMS 1H-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	9,500.00	7,384.44	1,243.01	1,173.27	17.824	SF
REGNIER FARMS 33-19 - CPR - Gyro	10,673.46	7,392.68	1,290.03	1,201.12	14.508	CC, ES
REGNIER FARMS 33-19 - CPR - Gyro	10,800.00	7,392.32	1,296.22	1,206.65	14.471	SF
REGNIER FARMS 42-19 - CPR - Gyro	9,293.61	7,376.52	51.53	-16.68	0.755	Level 2, CC
REGNIER FARMS 42-19 - CPR - Gyro	9,300.00	7,376.51	51.93	-17.34	0.750	Level 2, ES, SF
REGNIER FARMS 43-19 - CPR - MWD	10,775.48	7,628.26	230.81	138.35	2.496	CC
REGNIER FARMS 43-19 - CPR - MWD	10,800.00	7,628.18	232.11	133.91	2.364	ES
REGNIER FARMS 43-19 - CPR - MWD	10,900.00	7,627.87	262.26	139.37	2.134	SF
REGNIER FARMS B 2 - CPR - Gyro	11,746.21	7,402.30	241.89	135.45	2.273	CC, ES, SF
REGNIER FARMS-B UNIT 1 - CPR - Gyro	8,371.15	7,376.31	295.32	237.89	5.142	CC, ES, SF
ROSS 21-19 - CPR - Gyro	0.00	0.00	1,459.67			
ROSS 21-19 - CPR - Gyro	250.00	240.50	1,460.11	1,458.76	1,082.115	ES
ROSS 21-19 - CPR - Gyro	8,900.00	7,422.50	2,630.94	2,570.32	43.399	SF
ROSS 22-19 - CPR - Gyro	0.00	0.00	2,420.60			
ROSS 22-19 - CPR - Gyro	10,200.00	7,370.73	2,664.08	2,586.40	34.294	SF
ROSS 2-4-19 - CPR - MWD	10,182.26	7,568.84	2,980.12	2,895.97	35.414	CC
ROSS 2-4-19 - CPR - MWD	10,200.00	7,568.43	2,980.17	2,895.83	35.336	ES
ROSS 2-4-19 - CPR - MWD	10,900.00	7,551.10	3,065.27	2,974.80	33.880	SF
ROSS 4-2-19 - CPR - MWD	8,916.31	7,704.95	1,877.72	1,809.59	27.562	CC, ES
ROSS 4-2-19 - CPR - MWD	9,500.00	7,689.86	1,966.30	1,890.64	25.988	SF
SAWDEY 21-30 - KMG - MWD	14,135.59	7,563.53	1,643.85	1,494.51	11.007	CC, ES
SAWDEY 21-30 - KMG - MWD	14,300.00	7,562.36	1,652.05	1,501.14	10.947	SF
SAWDEY 22-30 - KMG - MWD	15,344.01	7,542.08	3,035.41	2,860.78	17.382	CC
SAWDEY 22-30 - KMG - MWD	15,400.00	7,540.07	3,035.93	2,860.48	17.304	ES
SAWDEY 22-30 - KMG - MWD	15,800.00	7,526.15	3,069.43	2,889.62	17.070	SF
SAWDEY 31-30 - KMG - MWD	14,105.69	7,594.90	4,220.33	4,071.06	28.273	CC
SAWDEY 31-30 - KMG - MWD	14,200.00	7,593.76	4,221.38	4,070.74	28.023	ES
SAWDEY 31-30 - KMG - MWD	15,100.00	7,582.64	4,335.86	4,174.78	26.918	SF
SAWDEY 32-30 - KMG - MWD	15,548.04	7,653.13	4,225.67	4,043.50	23.195	CC
SAWDEY 32-30 - KMG - MWD	15,600.00	7,653.86	4,225.99	4,042.86	23.076	ES
SAWDEY 32-30 - KMG - MWD	16,500.00	7,665.84	4,331.56	4,135.62	22.107	SF
SAWDEY 5-30 - KMG - MWD	14,917.31	7,507.55	3,800.80	3,636.08	23.073	CC
SAWDEY 5-30 - KMG - MWD	15,000.00	7,504.18	3,801.70	3,635.64	22.894	ES
SAWDEY 5-30 - KMG - MWD	15,700.00	7,475.65	3,880.42	3,705.65	22.203	SF
SAWDEY 6-30 - KMG - MWD	14,813.89	7,478.44	2,255.73	2,094.54	13.994	CC, ES
SAWDEY 6-30 - KMG - MWD	15,000.00	7,478.00	2,263.40	2,100.34	13.881	SF
SAWDEY UNIT 2 - KMG - Gyro	13,817.30	7,402.03	725.21	583.24	5.108	CC, ES, SF
SHAW 12-29A - KMG - Gyro	14,768.76	7,346.68	1,684.26	1,525.94	10.639	CC
SHAW 12-29A - KMG - Gyro	14,800.00	7,346.15	1,684.55	1,525.55	10.595	ES
SHAW 12-29A - KMG - Gyro	15,000.00	7,342.72	1,700.05	1,537.74	10.474	SF
TEGELER 11-30 - KMG - Gyro	16,057.42	7,372.30	2,335.38	2,154.50	12.911	CC
TEGELER 11-30 - KMG - Gyro	16,100.00	7,372.50	2,335.76	2,154.33	12.874	ES
TEGELER 11-30 - KMG - Gyro	16,300.00	7,373.46	2,347.94	2,164.54	12.803	SF
WILLIAMS 13-20 - KMG - MWD	12,040.15	7,678.55	1,545.78	1,424.04	12.698	CC
WILLIAMS 13-20 - KMG - MWD	12,100.00	7,677.75	1,546.93	1,423.26	12.508	ES
WILLIAMS 13-20 - KMG - MWD	12,400.00	7,673.78	1,587.10	1,455.79	12.086	SF
WILLIAMS 18-16 - CPR - Gyro	6,710.57	6,572.54	827.76	776.26	16.074	CC, ES
WILLIAMS 18-16 - CPR - Gyro	6,800.00	6,663.65	833.06	780.87	15.962	SF
WILLIAMS 24-18 - CPR - Gyro	0.00	0.00	1,639.57			
WILLIAMS 24-18 - CPR - Gyro	7,350.00	7,237.21	2,644.49	2,592.40	50.771	SF
WILLIAMS 34-18 - CPR - MWD	5,526.64	5,660.30	1,026.45	979.08	21.665	CC
WILLIAMS 34-18 - CPR - MWD	5,600.00	5,719.43	1,026.98	978.98	21.395	ES
WILLIAMS 34-18 - CPR - MWD	6,708.52	6,732.76	1,118.10	1,062.32	20.043	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 1H-19H-B268
Project:	Sec 19 T2N-R68W	TVD Reference:	WELL @ 4988.00usft (Original Well Elev)
Reference Site:	Regnier Farms Pad	MD Reference:	WELL @ 4988.00usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	REGNIER FARMS 1H-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 35-20 - KMG - MWD	12,615.01	7,479.75	2,227.99	2,103.74	17.931	CC
WILLIAMS 35-20 - KMG - MWD	12,700.00	7,479.89	2,229.61	2,103.36	17.660	ES
WILLIAMS 35-20 - KMG - MWD	13,200.00	7,480.72	2,300.97	2,165.82	17.025	SF
WILLIAMS 4-29 - KMG - MWD	13,421.33	7,468.07	1,583.07	1,446.81	11.618	CC, ES
WILLIAMS 4-29 - KMG - MWD	13,700.00	7,467.15	1,607.41	1,466.13	11.377	SF
WOOLLEY-BECKY 2E-7H-E168 - CPR - MWD	22,891.17	14,800.00	3,090.38	2,705.24	8.024	CC, ES, SF
WOOLLEY-BECKY 2F-7H-E168 - CPR - MWD	22,891.17	14,555.00	2,711.90	2,336.26	7.219	CC, ES, SF
WOOLLEY-BECKY 2G-7H-E168 - CPR - MWD	22,891.17	15,260.00	2,442.34	2,069.39	6.549	CC, ES, SF
WOOLLEY-BECKY 2H-7H-E168 - CPR - MWD	22,891.17	15,075.00	2,094.78	1,736.75	5.851	CC, ES, SF
Regnier Farms Pad						
REGNIER FARMS 1A-19H-B268 - Wellbore #1 - Design	116.33	117.33	70.00	69.60	176.461	CC
REGNIER FARMS 1A-19H-B268 - Wellbore #1 - Design	200.00	200.00	70.01	69.01	70.355	ES
REGNIER FARMS 1A-19H-B268 - Wellbore #1 - Design	22,891.17	22,649.43	1,721.32	1,172.95	3.139	SF
REGNIER FARMS 1B-19H-B268 - Wellbore #1 - Design	207.99	208.99	60.00	58.95	56.934	CC
REGNIER FARMS 1B-19H-B268 - Wellbore #1 - Design	250.00	250.98	60.00	58.65	44.283	ES
REGNIER FARMS 1B-19H-B268 - Wellbore #1 - Design	22,891.17	22,900.23	1,520.61	971.77	2.771	SF
REGNIER FARMS 1C-19H-B268 - Wellbore #1 - Design	250.00	251.00	50.00	48.64	36.900	CC, ES
REGNIER FARMS 1C-19H-B268 - Wellbore #1 - Design	22,891.17	22,775.47	1,299.99	749.47	2.361	SF
REGNIER FARMS 1D-19H-B268 - Wellbore #1 - Design	250.00	251.00	40.00	38.64	29.519	CC, ES
REGNIER FARMS 1D-19H-B268 - Wellbore #1 - Design	22,891.17	22,691.88	1,018.59	469.89	1.856	SF
REGNIER FARMS 1E-19H-B268 - Wellbore #1 - Design	250.00	251.00	30.00	28.65	22.140	CC, ES
REGNIER FARMS 1E-19H-B268 - Wellbore #1 - Design	22,891.17	22,817.05	700.12	148.94	1.270	Level 3, SF
REGNIER FARMS 1F-19H-B268 - Wellbore #1 - Design	250.00	250.00	20.00	18.65	14.799	CC
REGNIER FARMS 1F-19H-B268 - Wellbore #1 - Design	21,700.00	21,790.00	318.00	-156.08	0.671	Level 1, ES, SF
REGNIER FARMS 1G-19H-B268 - Wellbore #1 - Design	442.73	443.26	7.95	5.22	2.915	CC
REGNIER FARMS 1G-19H-B268 - Wellbore #1 - Design	18,300.00	18,152.58	120.21	-177.53	0.404	Level 1, SF
REGNIER FARMS 1G-19H-B268 - Wellbore #1 - Design	20,600.00	20,449.71	217.31	-220.15	0.497	Level 1, ES
REGNIER FARMS 1I-19H-B268 - Wellbore #1 - Design #	201.68	201.68	10.00	9.00	9.950	CC
REGNIER FARMS 1I-19H-B268 - Wellbore #1 - Design #	22,891.17	22,843.98	326.30	-212.33	0.606	Level 1, ES, SF
REGNIER FARMS 1J-19H-B268 - Wellbore #1 - Design	200.00	200.00	20.00	19.01	20.141	CC
REGNIER FARMS 1J-19H-B268 - Wellbore #1 - Design	22,891.17	23,097.91	464.80	-65.56	0.876	Level 2, ES, SF
REGNIER FARMS 1K-19H-B268 - Wellbore #1 - Design	200.00	200.00	30.00	29.01	30.213	CC, ES
REGNIER FARMS 1K-19H-B268 - Wellbore #1 - Design	22,891.17	23,031.24	750.08	198.54	1.360	Level 3, SF

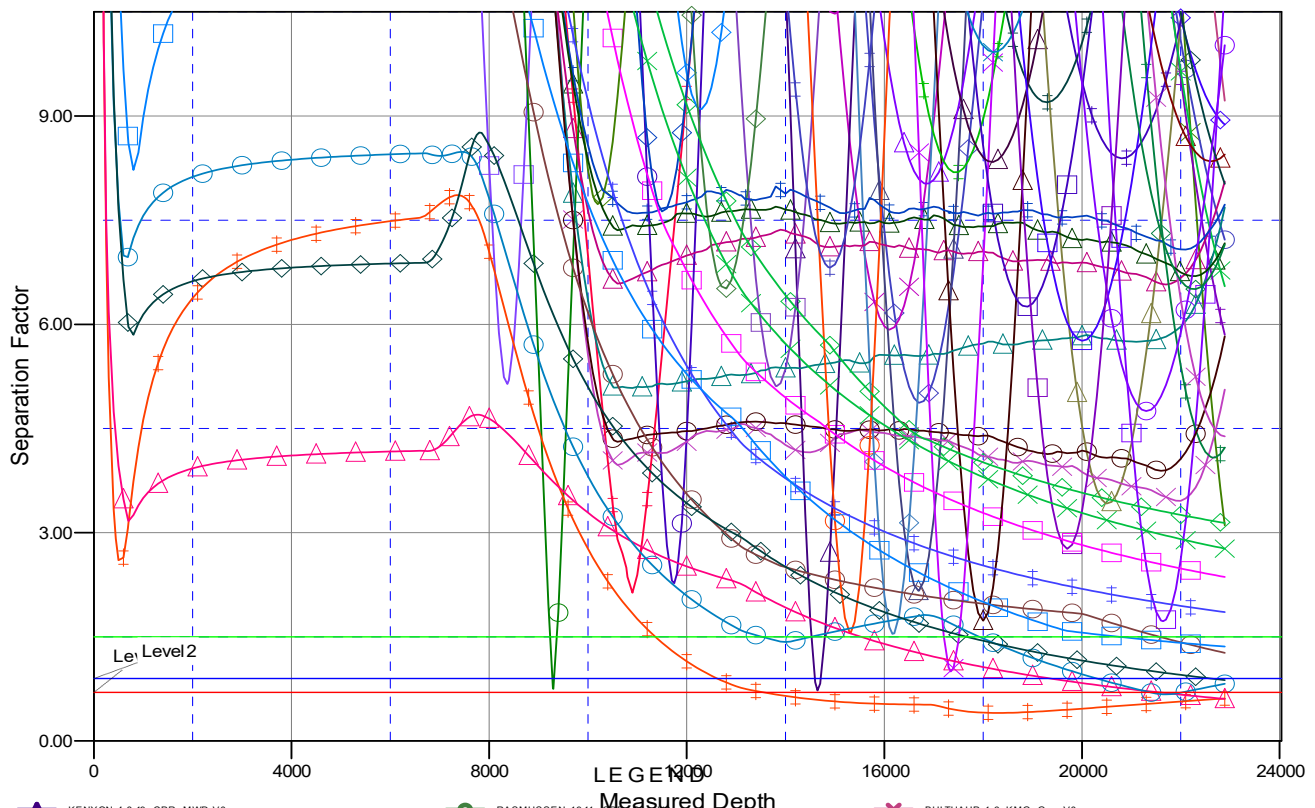
Company: Crestone Peak Resources
Project: Sec 19 T2N-R68W
Reference Site: Regnier Farms Pad
Site Error: 0.00 usft
Reference Well: REGNIER FARMS 1H-19H-B268
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: Design #1 22Mar18 kjs

Local Co-ordinate Reference: Well REGNIER FARMS 1H-19H-B268
TVD Reference: WELL @ 4988.00usft (Original Well Elev)
MD Reference: WELL @ 4988.00usft (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 @ 4988.00usft (Original Well E
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: REGNIER FARMS 1H-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
WOOLLEYBECKY 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
REGNIER FARMS 32-19, 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
WOOLLEYBECKY 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 3K32H-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
WOOLLEYBECKY 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
WOOLLEYBECKY 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 18-16, 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