



Crestone Peak Resources

Sec 19 T2N-R68W

Regnier Farms Pad

REGNIER FARMS 1K-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 1K-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 1K-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	23,038.07	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
Existing Wells (Regnier Farms)						
A C N O 2 - KAUFFMAN - No Surveys	16,362.74	4,907.00	4,002.54	3,866.12	29.341	CC
A C N O 2 - KAUFFMAN - No Surveys	16,400.00	4,907.00	4,002.71	3,865.98	29.275	ES
A C N O 2 - KAUFFMAN - No Surveys	16,900.00	4,907.00	4,038.43	3,898.53	28.866	SF
ANDERSON TRUST C UNIT 2 - CPR - Gyro	19,150.44	7,349.31	1,451.57	1,219.78	6.262	CC
ANDERSON TRUST C UNIT 2 - CPR - Gyro	19,200.00	7,348.67	1,452.41	1,218.98	6.222	ES
ANDERSON TRUST C UNIT 2 - CPR - Gyro	19,300.00	7,347.38	1,459.25	1,223.23	6.183	SF
ANSELM 1 - PETERSON - No Surveys	21,528.78	4,970.00	3,975.40	3,759.60	18.421	CC
ANSELM 1 - PETERSON - No Surveys	21,600.00	4,970.00	3,976.04	3,759.44	18.357	ES
ANSELM 1 - PETERSON - No Surveys	22,000.00	4,970.00	4,003.23	3,783.38	18.209	SF
ARMSTEAD GAS UNIT 4-31 - EXTRACTION - Gyro	22,561.96	7,377.31	3,202.58	2,909.35	10.922	CC
ARMSTEAD GAS UNIT 4-31 - EXTRACTION - Gyro	22,600.00	7,376.75	3,202.81	2,909.10	10.905	ES
ARMSTEAD GAS UNIT 4-31 - EXTRACTION - Gyro	22,800.00	7,373.84	3,211.41	2,915.80	10.864	SF
ARMSTEAD GU 5-31 - NOBLE ENERGY - No Surveys	19,613.76	7,345.00	3,232.61	3,005.16	14.212	CC, ES
ARMSTEAD GU 5-31 - NOBLE ENERGY - No Surveys	19,800.00	7,345.00	3,239.19	3,010.33	14.154	SF
BALLANTINE 3-30 - KMG - Gyro	13,821.74	7,331.98	3,557.75	3,418.46	25.542	CC, ES
BALLANTINE 3-30 - KMG - Gyro	14,300.00	7,332.74	3,589.76	3,446.70	25.093	SF
BECKY 1 - KAUFFMAN - No Surveys	23,038.97	5,010.00	4,105.29	3,871.60	17.567	CC, ES, SF
BROWN C UNIT 2 - CPR - Gyro	23,038.97	7,489.69	1,654.65	1,487.61	9.906	CC, ES, SF
BRYANT 10-30 - KMG - MWD	16,304.18	7,629.13	1,915.75	1,731.61	10.404	CC, ES, SF
BRYANT 16-30 - KMG - MWD	17,500.00	7,431.22	577.82	372.77	2.818	ES, SF
BRYANT 16-30 - KMG - MWD	17,519.95	7,431.27	577.48	372.78	2.821	CC
BRYANT 20-30 - KMG - MWD	16,885.82	7,504.63	1,235.22	1,036.67	6.221	CC, ES, SF
BRYANT 23-30 - KMG - MWD	17,054.40	7,495.25	2,407.22	2,206.46	11.990	CC, ES
BRYANT 23-30 - KMG - MWD	17,100.00	7,494.38	2,407.66	2,206.80	11.987	SF
BRYANT 24-30 - KMG - MWD	15,500.00	7,468.17	1,128.86	955.23	6.501	ES, SF
BRYANT 24-30 - KMG - MWD	15,509.37	7,468.15	1,128.82	955.29	6.505	CC
BRYANT 33-29 - KMG - MWD	16,829.20	7,637.62	164.76	-34.77	0.826	Level 2, CC, ES, SF
BRYANT 34-30 - KMG - No Surveys	17,832.24	4,906.00	3,124.94	2,988.68	22.933	CC, ES
BRYANT 34-30 - KMG - No Surveys	18,000.00	4,906.00	3,129.44	2,992.41	22.838	SF
BRYANT 36-30 - KMG - No Surveys	18,295.88	7,525.28	2,581.78	2,362.21	11.758	CC
BRYANT 36-30 - KMG - No Surveys	18,300.00	7,525.24	2,581.79	2,362.18	11.756	ES
BRYANT 36-30 - KMG - No Surveys	18,500.00	7,523.41	2,589.84	2,368.92	11.723	SF
BRYANT 8-30 - KMG - MWD	14,800.00	7,640.30	763.70	594.74	4.520	ES, SF
BRYANT 8-30 - KMG - MWD	14,823.45	7,640.43	763.34	594.85	4.531	CC
BRYANT FEDERAL 37-30 - KMG - MWD	18,193.77	7,366.83	1,130.54	914.82	5.241	CC, ES, SF
BULTHAUP 1-6 - KMG - Gyro	23,038.97	7,436.83	1,325.46	1,165.69	8.296	CC, ES, SF
BULTHAUP 17-6 - KMG - MWD	23,038.97	7,478.92	2,203.88	1,990.38	10.322	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 1K-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 1K-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 21-6 - KMG - MWD	23,038.97	7,467.31	3,068.41	2,801.46	11.494	CC, ES, SF
BULTHAUP 27-6 - KMG - MWD	23,038.97	7,499.36	1,380.22	1,086.77	4.703	CC, ES, SF
CARLA PETERSON 1 - KAUFFMAN - No Surveys	23,038.97	5,010.00	3,300.24	3,100.31	16.508	CC, ES, SF
CHAMPLIN 86 'N' 1 - KMG - Gyro	17,392.05	7,360.67	884.20	683.24	4.400	CC
CHAMPLIN 86 'N' 1 - KMG - Gyro	17,400.00	7,360.31	884.23	682.91	4.392	ES
CHAMPLIN 86 'N' 1 - KMG - Gyro	17,500.00	7,355.78	890.75	685.98	4.350	SF
CINQUE 1 - FOUNDATION ENERGY - No oSurveys	20,202.37	4,907.00	3,029.18	2,867.43	18.728	CC, ES
CINQUE 1 - FOUNDATION ENERGY - No oSurveys	20,500.00	4,907.00	3,043.77	2,880.19	18.607	SF
CINQUE 2 - FOUNDATION ENERGY - No Surveys	18,952.27	4,911.00	3,033.88	2,887.40	20.712	CC, ES
CINQUE 2 - FOUNDATION ENERGY - No Surveys	19,100.00	4,911.00	3,037.48	2,890.38	20.649	SF
CINQUE 3 - FOUNDATION ENERGY - No Surveys	20,202.82	4,905.00	3,997.05	3,802.76	20.572	CC, ES
CINQUE 3 - FOUNDATION ENERGY - No Surveys	20,700.00	4,905.00	4,027.85	3,829.23	20.279	SF
CINQUE 4 - FOUNDATION ENERGY - No Surveys	18,951.20	4,975.00	3,967.09	3,790.21	22.428	CC
CINQUE 4 - FOUNDATION ENERGY - No Surveys	19,000.00	4,975.00	3,967.39	3,790.10	22.378	ES
CINQUE 4 - FOUNDATION ENERGY - No Surveys	19,400.00	4,975.00	3,992.40	3,812.65	22.211	SF
CINQUE 6-31 - FOUNDATION ENERGY - No Surveys	21,506.64	4,973.00	3,080.94	2,896.40	16.695	CC, ES
CINQUE 6-31 - FOUNDATION ENERGY - No Surveys	21,700.00	4,973.00	3,087.00	2,901.07	16.603	SF
CINQUE 7-31 - EXTRACTION - No surveys	19,845.56	7,346.00	1,339.55	1,107.07	5.762	CC, ES
CINQUE 7-31 - EXTRACTION - No surveys	19,874.63	7,346.00	1,340.01	1,107.43	5.761	SF
CINQUE 8-31 - EXTRACTION - No Surveys	22,763.15	7,359.00	1,906.61	1,622.31	6.706	CC, ES
CINQUE 8-31 - EXTRACTION - No Surveys	22,800.00	7,359.00	1,906.97	1,622.34	6.700	SF
CINQUE 9-31 - EXTRACTION - Gyro	21,773.31	7,354.69	1,209.73	930.61	4.334	CC, ES
CINQUE 9-31 - EXTRACTION - Gyro	21,800.00	7,354.12	1,210.02	930.82	4.334	SF
FILE FED 3I-32H-K268 - CPR - MWD	10,724.21	19,132.00	244.28	41.98	1.207	Level 3, CC
FILE FED 3I-32H-K268 - CPR - MWD	22,100.00	7,719.14	262.55	-26.10	0.910	Level 3, ES, SF
FILE FED 3J-32H-K268 - CPR - MWD	12,900.00	16,683.91	251.09	-8.92	0.966	Level 3, ES, SF
FILE FED 3J-32H-K268 - CPR - MWD	13,037.59	16,544.11	250.65	-8.90	0.966	Level 3, CC
FILE FED 3K-32H-K268 - CPR - MWD	13,066.89	16,176.00	426.92	169.04	1.655	CC
FILE FED 3K-32H-K268 - CPR - MWD	13,100.00	16,146.00	427.23	168.97	1.654	ES, SF
FILE FED 3L-32H-K268 - CPR - MWD	10,722.74	18,515.00	878.71	615.01	3.332	CC, ES
FILE FED 3L-32H-K268 - CPR - MWD	10,800.00	18,466.78	880.79	615.91	3.325	SF
FILE FED 3M-32H-K268 - CPR - MWD	12,600.00	17,172.38	1,058.59	798.50	4.070	SF
FILE FED 3M-32H-K268 - CPR - MWD	13,035.53	16,726.70	1,055.74	796.38	4.071	CC, ES
FILE FED 3N-32H-K268 - CPR - MWD	13,207.26	16,327.58	1,105.23	844.41	4.238	CC
FILE FED 3N-32H-K268 - CPR - MWD	13,300.00	16,271.00	1,106.44	843.98	4.216	ES
FILE FED 3N-32H-K268 - CPR - MWD	13,400.00	16,207.26	1,110.99	847.16	4.211	SF
GLADYS-SAWDEY 1 - KMG - Gyro	14,420.70	7,376.21	4,013.96	3,864.09	26.782	CC
GLADYS-SAWDEY 1 - KMG - Gyro	14,500.00	7,372.79	4,014.75	3,864.06	26.644	ES
GLADYS-SAWDEY 1 - KMG - Gyro	15,000.00	7,351.19	4,055.50	3,900.78	26.213	SF
HANKINS 1 - KAUFFMAN - No Surveys	12,386.66	4,920.00	2,528.67	2,477.05	48.992	CC
HANKINS 1 - KAUFFMAN - No Surveys	12,400.00	4,920.00	2,528.70	2,477.02	48.927	ES
HANKINS 1 - KAUFFMAN - No Surveys	12,900.00	4,920.00	2,580.24	2,526.18	47.727	SF
HSR-BRYANT 9-30A - KMG - Gyro	16,300.00	7,334.38	546.94	363.47	2.981	SF
HSR-BRYANT 9-30A - KMG - Gyro	16,334.50	7,333.65	545.86	363.14	2.987	CC, ES
JACK HEIN UNIT 1 - HS RESOURCES - No Surveys	21,546.46	5,085.00	2,310.16	2,183.89	18.295	CC, ES
JACK HEIN UNIT 1 - HS RESOURCES - No Surveys	21,700.00	5,085.00	2,315.26	2,188.16	18.217	SF
JOHN LAMAR 1 - KAUFFMAN - No Surveys	13,548.07	4,930.00	2,502.11	2,439.87	40.206	CC, ES
JOHN LAMAR 1 - KAUFFMAN - No Surveys	13,900.00	4,930.00	2,526.74	2,463.17	39.752	SF
JOHNSON 32-30 - KAUFFMAN - No Surveys	15,131.58	4,895.00	3,064.80	2,965.37	30.824	CC, ES
JOHNSON 32-30 - KAUFFMAN - No Surveys	15,400.00	4,895.00	3,076.53	2,976.00	30.604	SF
JOHNSON 7-30A - KMG - Gyro	15,089.08	7,379.30	1,968.22	1,806.91	12.201	CC
JOHNSON 7-30A - KMG - Gyro	15,100.00	7,379.09	1,968.25	1,806.90	12.198	ES, SF
KENYON 34-19 - CPR - MWD	12,333.30	7,551.16	1,978.81	1,861.60	16.883	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 1K-19H-B268
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Site Error:	0.00 usft	North Reference:	True
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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)						
KENYON 34-19 - CPR - MWD	12,500.00	7,548.79	1,985.82	1,867.54	16.789	SF
KENYON 4-8-19 - CPR - MWD	12,829.66	7,637.23	2,378.01	2,248.60	18.376	CC, ES
KENYON 4-8-19 - CPR - MWD	13,200.00	7,630.18	2,401.57	2,268.63	18.066	SF
KENYON 8-4-19 - CPR - MWD	10,323.06	7,782.72	108.68	13.36	1.140	Level 3, CC, ES, SF
KENYON 8-6-19 - CPR - MWD	11,600.00	7,545.01	93.22	-12.25	0.884	Level 2, ES, SF
KENYON 8-6-19 - CPR - MWD	11,603.86	7,545.11	93.14	-11.71	0.888	Level 2, CC
KENYON 8-8-19 - CPR - MWD	12,800.00	7,606.84	95.62	-37.35	0.719	Level 2, ES, SF
KENYON 8-8-19 - CPR - MWD	12,821.69	7,606.75	93.12	-35.93	0.722	Level 2, CC
KOCH 41-6 - KAUFFMAN - No Surveys	23,038.97	5,037.00	2,706.27	2,569.63	19.807	CC, ES, SF
NELSON 1-A - TEXAS TEA - No Surveys	19,985.47	5,011.00	2,480.37	2,347.87	18.720	CC
NELSON 1-A - TEXAS TEA - No Surveys	20,000.00	5,011.00	2,480.41	2,347.72	18.693	ES
NELSON 1-A - TEXAS TEA - No Surveys	20,300.00	5,011.00	2,500.23	2,364.39	18.405	SF
NELSON 2 - TEXAS TEA - No Surveys	21,795.71	4,918.00	2,560.13	2,413.68	17.481	CC
NELSON 2 - TEXAS TEA - No Surveys	21,800.00	4,918.00	2,560.14	2,413.63	17.474	ES
NELSON 2 - TEXAS TEA - No Surveys	22,100.00	4,918.00	2,578.15	2,428.61	17.240	SF
NELSON 5 - TEXAS TEA - No Surveys	22,503.99	5,035.00	2,449.81	2,295.81	15.908	CC, ES
NELSON 5 - TEXAS TEA - No Surveys	22,800.00	5,035.00	2,467.63	2,310.64	15.719	SF
NELSON-E UNIT 1 - CPR - Gyro	22,293.24	7,381.65	1,144.59	856.18	3.969	CC
NELSON-E UNIT 1 - CPR - Gyro	22,300.00	7,381.60	1,144.61	856.00	3.966	ES
NELSON-E UNIT 1 - CPR - Gyro	22,400.00	7,380.77	1,149.56	859.02	3.957	SF
NOAA FEDERAL 11-32 - CPR - Gyro	18,880.66	7,281.56	704.46	477.61	3.105	CC
NOAA FEDERAL 11-32 - CPR - Gyro	18,900.00	7,281.79	704.73	476.89	3.093	ES, SF
RASMUSSEN 19-11 - CPR - Gyro	10,896.30	7,441.90	3,223.89	3,131.97	35.071	CC
RASMUSSEN 19-11 - CPR - Gyro	10,900.00	7,441.80	3,223.90	3,131.94	35.058	ES
RASMUSSEN 19-11 - CPR - Gyro	11,600.00	7,422.96	3,299.75	3,202.32	33.869	SF
RASMUSSEN 19-14 - CPR - Gyro	12,482.22	7,493.09	3,219.19	3,100.89	27.213	CC
RASMUSSEN 19-14 - CPR - Gyro	12,500.00	7,493.22	3,219.24	3,100.76	27.172	ES
RASMUSSEN 19-14 - CPR - Gyro	13,008.98	7,497.16	3,262.00	3,139.44	26.617	SF
RASMUSSEN 4-6-19 - CPR - MWD	11,474.57	7,659.55	2,834.35	2,729.94	27.146	CC
RASMUSSEN 4-6-19 - CPR - MWD	11,500.00	7,659.24	2,834.47	2,729.78	27.075	ES
RASMUSSEN 4-6-19 - CPR - MWD	12,000.00	7,652.90	2,882.64	2,773.37	26.382	SF
RASMUSSEN FEDERAL 35-29 - KMG - MWD	18,079.99	7,418.08	1,411.09	1,195.92	6.558	CC
RASMUSSEN FEDERAL 35-29 - KMG - MWD	18,100.00	7,418.24	1,411.23	1,195.41	6.539	ES
RASMUSSEN FEDERAL 35-29 - KMG - MWD	18,200.00	7,419.05	1,416.18	1,197.66	6.481	SF
RAY NELSON 0-4-32 - CPR - MWD	20,636.79	7,449.57	184.65	-76.85	0.706	Level 2, CC, ES, SF
RAY NELSON 12-32 - CPR - Gyro	20,073.78	7,301.89	738.69	489.84	2.968	CC
RAY NELSON 12-32 - CPR - Gyro	20,100.00	7,301.96	739.15	489.46	2.960	ES, SF
RAY NELSON 13-32 - CPR - MWD	21,375.67	7,535.96	608.76	329.34	2.179	CC
RAY NELSON 13-32 - CPR - MWD	21,400.00	7,535.66	609.24	328.82	2.173	ES, SF
RAY NELSON 14-32 - CPR - MWD	22,985.81	7,435.24	579.18	276.66	1.914	CC
RAY NELSON 14-32 - CPR - MWD	23,000.00	7,435.23	579.35	276.36	1.912	ES, SF
RAY NELSON 24-32 - CPR - MWD	23,038.97	7,548.40	1,933.44	1,631.21	6.397	CC, ES, SF
RAY NELSON 2-4-32 - CPR - MWD	20,755.05	7,459.36	1,521.66	1,257.36	5.757	CC
RAY NELSON 2-4-32 - CPR - MWD	20,800.00	7,458.58	1,522.32	1,256.77	5.733	ES
RAY NELSON 2-4-32 - CPR - MWD	20,900.00	7,456.84	1,528.55	1,260.92	5.711	SF
REGNIER 4-4-19 - CPR - MWD	10,203.19	7,431.11	2,542.68	2,460.45	30.922	CC, ES
REGNIER 4-4-19 - CPR - MWD	10,500.00	7,430.36	2,559.94	2,476.25	30.585	SF
REGNIER FARMS 31-19 - CPR - Gyro	0.00	15.19	816.14			
REGNIER FARMS 31-19 - CPR - Gyro	8,800.00	7,366.11	2,366.95	2,307.30	39.686	SF
REGNIER FARMS 32-19 - CPR - Gyro	0.00	0.00	1,814.44			
REGNIER FARMS 32-19 - CPR - Gyro	200.00	180.99	1,815.35	1,814.42	1,948.742	ES
REGNIER FARMS 32-19 - CPR - Gyro	9,700.00	7,386.16	2,054.81	1,983.71	28.901	SF
REGNIER FARMS 33-19 - CPR - Gyro	10,773.89	7,392.32	2,146.75	2,057.14	23.956	CC

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 1K-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 1K-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 33-19 - CPR - Gyro	10,800.00	7,392.25	2,146.91	2,057.14	23.914	ES
REGNIER FARMS 33-19 - CPR - Gyro	11,000.00	7,391.70	2,158.63	2,067.81	23.769	SF
REGNIER FARMS 42-19 - CPR - Gyro	9,400.00	7,373.25	754.64	684.51	10.760	SF
REGNIER FARMS 42-19 - CPR - Gyro	9,446.56	7,373.15	753.20	683.43	10.795	CC, ES
REGNIER FARMS 43-19 - CPR - MWD	10,600.00	7,633.17	713.98	589.43	5.733	SF
REGNIER FARMS 43-19 - CPR - MWD	10,900.00	7,632.30	631.86	533.51	6.424	ES
REGNIER FARMS 43-19 - CPR - MWD	10,934.20	7,632.20	630.94	535.48	6.610	CC
REGNIER FARMS B 2 - CPR - Gyro	11,886.11	7,400.00	1,140.56	1,032.79	10.583	CC, ES, SF
REGNIER FARMS-B UNIT 1 - CPR - Gyro	8,500.00	7,374.35	1,064.45	1,005.48	18.051	SF
REGNIER FARMS-B UNIT 1 - CPR - Gyro	8,511.45	7,374.40	1,064.39	1,005.43	18.052	CC, ES
ROSS 21-19 - CPR - Gyro	0.00	0.00	1,487.03			
ROSS 21-19 - CPR - Gyro	200.00	192.63	1,487.28	1,486.28	1,485.007	ES
ROSS 21-19 - CPR - Gyro	9,300.00	7,431.67	3,458.71	3,395.86	55.028	SF
ROSS 22-19 - CPR - Gyro	0.00	0.00	2,440.17			
ROSS 22-19 - CPR - Gyro	10,600.00	7,364.15	3,539.86	3,460.17	44.423	SF
ROSS 2-4-19 - CPR - MWD	356.23	537.49	3,331.92	3,329.10	1,180.156	CC, ES
ROSS 2-4-19 - CPR - MWD	11,300.00	7,567.09	3,966.84	3,874.26	42.847	SF
ROSS 4-2-19 - CPR - MWD	8,995.82	7,689.21	2,666.43	2,598.09	39.014	CC
ROSS 4-2-19 - CPR - MWD	9,000.00	7,689.09	2,666.43	2,598.05	38.991	ES
ROSS 4-2-19 - CPR - MWD	9,900.00	7,668.62	2,815.48	2,738.06	36.364	SF
SAWDEY 21-30 - KMG - MWD	14,381.34	7,568.77	2,547.56	2,396.42	16.856	CC
SAWDEY 21-30 - KMG - MWD	14,400.00	7,568.62	2,547.63	2,396.35	16.840	ES
SAWDEY 21-30 - KMG - MWD	14,600.00	7,567.04	2,556.93	2,404.48	16.773	SF
SAWDEY 22-30 - KMG - MWD	15,641.99	7,544.47	3,891.92	3,714.79	21.972	CC
SAWDEY 22-30 - KMG - MWD	15,700.00	7,542.46	3,892.36	3,714.61	21.898	ES
SAWDEY 22-30 - KMG - MWD	16,100.00	7,528.46	3,918.75	3,737.66	21.639	SF
SAWDEY 31-30 - KMG - MWD	14,449.96	7,593.24	5,123.32	4,970.70	33.570	CC
SAWDEY 31-30 - KMG - MWD	14,500.00	7,592.64	5,123.56	4,970.36	33.443	ES
SAWDEY 31-30 - KMG - MWD	15,600.00	7,579.19	5,250.79	5,087.14	32.086	SF
SAWDEY 32-30 - KMG - MWD	15,891.30	7,643.54	5,073.48	4,887.69	27.307	CC
SAWDEY 32-30 - KMG - MWD	16,000.00	7,645.20	5,074.65	4,887.27	27.082	ES
SAWDEY 32-30 - KMG - MWD	17,000.00	7,659.57	5,193.19	4,994.67	26.159	SF
SAWDEY 5-30 - KMG - MWD	15,245.47	7,494.82	4,673.05	4,505.17	27.834	CC
SAWDEY 5-30 - KMG - MWD	15,300.00	7,492.64	4,673.37	4,504.79	27.722	ES
SAWDEY 5-30 - KMG - MWD	16,200.00	7,456.59	4,769.38	4,592.09	26.901	SF
SAWDEY 6-30 - KMG - MWD	15,082.55	7,480.34	3,133.09	2,970.00	19.210	CC
SAWDEY 6-30 - KMG - MWD	15,100.00	7,480.30	3,133.14	2,969.90	19.194	ES
SAWDEY 6-30 - KMG - MWD	15,400.00	7,479.56	3,149.14	2,984.10	19.082	SF
SAWDEY UNIT 2 - KMG - Gyro	14,028.22	7,400.79	1,641.77	1,498.63	11.470	CC, ES, SF
SHAW 12-29A - KMG - Gyro	14,887.11	7,337.45	802.37	644.73	5.090	CC
SHAW 12-29A - KMG - Gyro	14,900.00	7,337.21	802.48	644.21	5.070	ES
SHAW 12-29A - KMG - Gyro	15,000.00	7,335.31	810.27	648.31	5.003	SF
TEGELER 11-30 - KMG - Gyro	16,328.20	7,368.74	3,165.16	2,982.48	17.326	CC, ES
TEGELER 11-30 - KMG - Gyro	16,600.00	7,370.05	3,176.81	2,992.19	17.207	SF
WILLIAMS 13-20 - KMG - MWD	12,248.55	7,668.53	634.54	509.83	5.088	CC
WILLIAMS 13-20 - KMG - MWD	12,300.00	7,667.86	636.62	508.49	4.968	ES
WILLIAMS 13-20 - KMG - MWD	12,400.00	7,666.58	652.36	519.32	4.904	SF
WILLIAMS 18-16 - CPR - Gyro	3,907.72	3,731.35	910.99	878.14	27.736	CC
WILLIAMS 18-16 - CPR - Gyro	4,000.00	3,818.19	911.40	877.74	27.072	ES
WILLIAMS 18-16 - CPR - Gyro	6,800.00	6,547.89	1,163.61	1,107.97	20.915	SF
WILLIAMS 24-18 - CPR - Gyro	0.00	0.00	1,666.53			
WILLIAMS 24-18 - CPR - Gyro	7,500.00	7,266.17	3,344.05	3,289.96	61.819	SF
WILLIAMS 34-18 - CPR - MWD	4,186.20	4,352.93	1,382.26	1,344.77	36.869	CC

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 1K-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 1K-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

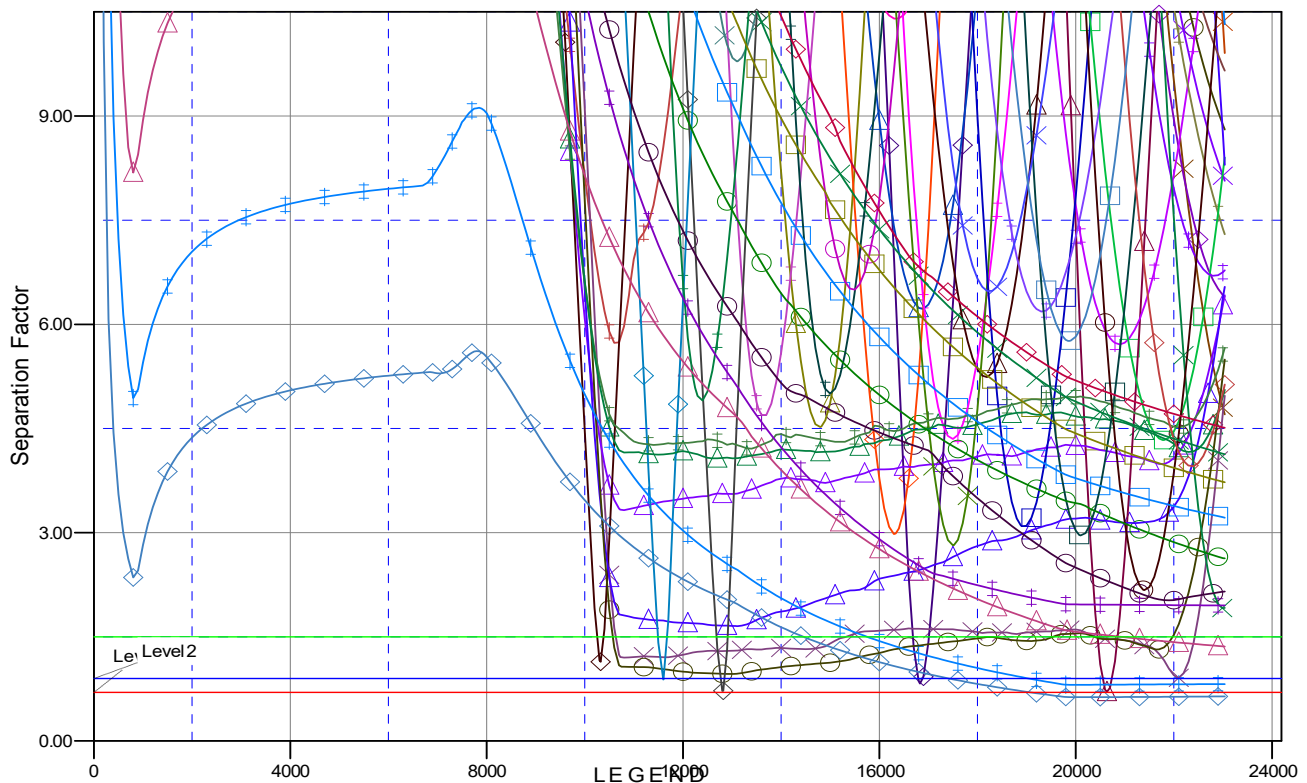
Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Existing Wells (Regnier Farms)						
WILLIAMS 34-18 - CPR - MWD	4,300.00	4,455.87	1,383.12	1,344.57	35.879	ES
WILLIAMS 34-18 - CPR - MWD	6,200.00	6,162.86	1,604.71	1,550.73	29.725	SF
WILLIAMS 35-20 - KMG - MWD	12,849.05	7,470.50	1,294.18	1,166.84	10.163	CC
WILLIAMS 35-20 - KMG - MWD	12,900.00	7,470.58	1,295.19	1,166.03	10.028	ES
WILLIAMS 35-20 - KMG - MWD	13,100.00	7,470.90	1,319.71	1,184.87	9.788	SF
WILLIAMS 4-29 - KMG - MWD	13,544.28	7,514.64	650.58	514.29	4.774	CC
WILLIAMS 4-29 - KMG - MWD	13,600.00	7,514.57	652.97	513.90	4.695	ES
WILLIAMS 4-29 - KMG - MWD	13,700.00	7,514.45	668.96	526.48	4.695	SF
WOOLLEY-BECKY 2E-7H-E168 - CPR - MWD	23,038.97	14,800.00	3,810.72	3,415.94	9.653	CC, ES, SF
WOOLLEY-BECKY 2F-7H-E168 - CPR - MWD	23,038.97	14,555.00	3,424.32	3,035.39	8.804	CC, ES, SF
WOOLLEY-BECKY 2G-7H-E168 - CPR - MWD	23,038.97	15,260.00	3,145.63	2,755.73	8.068	CC, ES, SF
WOOLLEY-BECKY 2H-7H-E168 - CPR - MWD	23,038.97	15,075.00	2,786.40	2,404.54	7.297	CC, ES, SF
Regnier Farms Pad						
REGNIER FARMS 1A-19H-B268 - Wellbore #1 - Design	116.33	117.33	100.00	99.60	252.089	CC
REGNIER FARMS 1A-19H-B268 - Wellbore #1 - Design	200.00	200.00	100.00	99.01	100.609	ES
REGNIER FARMS 1A-19H-B268 - Wellbore #1 - Design	23,038.97	22,612.28	2,469.87	1,922.35	4.511	SF
REGNIER FARMS 1B-19H-B268 - Wellbore #1 - Design	200.00	201.00	90.00	89.00	90.312	CC, ES
REGNIER FARMS 1B-19H-B268 - Wellbore #1 - Design	23,038.97	22,881.70	2,268.58	1,719.21	4.129	SF
REGNIER FARMS 1C-19H-B268 - Wellbore #1 - Design	200.00	201.00	80.00	79.00	80.277	CC, ES
REGNIER FARMS 1C-19H-B268 - Wellbore #1 - Design	23,038.97	22,761.57	2,049.99	1,499.81	3.726	SF
REGNIER FARMS 1D-19H-B268 - Wellbore #1 - Design	200.00	201.00	70.00	69.00	70.242	CC, ES
REGNIER FARMS 1D-19H-B268 - Wellbore #1 - Design	23,038.97	22,676.60	1,767.02	1,217.63	3.216	SF
REGNIER FARMS 1E-19H-B268 - Wellbore #1 - Design	200.00	201.00	60.00	59.00	60.208	CC, ES
REGNIER FARMS 1E-19H-B268 - Wellbore #1 - Design	23,038.97	22,817.05	1,450.24	898.97	2.631	SF
REGNIER FARMS 1F-19H-B268 - Wellbore #1 - Design	200.00	200.00	50.00	49.01	50.354	CC, ES
REGNIER FARMS 1F-19H-B268 - Wellbore #1 - Design	21,900.00	21,814.55	1,028.83	521.18	2.027	SF
REGNIER FARMS 1G-19H-B268 - Wellbore #1 - Design	200.00	200.00	40.00	39.01	40.283	CC
REGNIER FARMS 1G-19H-B268 - Wellbore #1 - Design	400.00	402.39	40.85	38.43	16.868	ES
REGNIER FARMS 1G-19H-B268 - Wellbore #1 - Design	23,000.00	22,656.61	1,064.25	519.06	1.952	SF
REGNIER FARMS 1H-19H-B268 - Wellbore #1 - Design	200.00	200.00	30.00	29.01	30.213	CC, ES
REGNIER FARMS 1H-19H-B268 - Wellbore #1 - Design	23,038.97	22,886.15	750.11	198.94	1.361	Level 3, SF
REGNIER FARMS 1I-19H-B268 - Wellbore #1 - Design #	200.00	200.00	20.00	19.01	20.141	CC
REGNIER FARMS 1I-19H-B268 - Wellbore #1 - Design #	19,874.63	19,670.84	344.14	-81.65	0.808	Level 2, SF
REGNIER FARMS 1I-19H-B268 - Wellbore #1 - Design #	23,038.97	22,833.55	443.20	-97.41	0.820	Level 2, ES
REGNIER FARMS 1J-19H-B268 - Wellbore #1 - Design	200.00	200.00	10.00	9.01	10.071	CC
REGNIER FARMS 1J-19H-B268 - Wellbore #1 - Design	20,400.00	20,453.65	261.06	-152.09	0.632	Level 1, SF
REGNIER FARMS 1J-19H-B268 - Wellbore #1 - Design	23,038.97	23,091.38	333.13	-185.71	0.642	Level 1, ES

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well REGNIER FARMS 1K-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 1K-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 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 1K-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	RASMUSSEN 19-11, CPR, Gyro V0	BULTHAUP 1-6, KMG, Gyro V0
REGNIER FARMS 43-19, CPR, MWD V0	JOHN LAMAR 1, KAUFFMAN, No Surveys V0	NELSON 1-A, TEXAS TEA, No Surveys V0
WOOLLEY-BECKY 27-7H-E168, CPR, MWD V0	BRYANT 23-30, KMG, MWD V0	REGNIER FARMS 33-19, CPR, Gyro V0
CINQUE 1, FOUNDATION ENERGY, No Surveys V0	WILLIAMS 34-18, CPR, MWD V0	RASMUSSEN 19-14, CPR, Gyro V0
BRYANT 33-29, KMG, MWD V0	CARL A PETERSON 1, KAUFFMAN, No Surveys V0	JACK HEIN UNIT 1, HS RESOURCES, No Surveys V0
BULTHAUP 27-6, KMG, MWD V0	WOOLLEY-BECKY 2H-7H-E168, CPR, MWD V0	WOOLLEY-BECKY 2E-7H-E168, CPR, MWD V0
REGNIER FARMS 31-19, CPR, Gyro V0	SAWDEY UNIT 2, KMG, Gyro V0	RAY NELSON 14-32, CPR, MWD V0
ROSS 4-2-19, CPR, MWD V0	CHAMPLIN 86 N 1, KMG, Gyro V0	BRYANT 24-30, KMG, MWD V0
REGNIER FARMS B 2, CPR, Gyro V0	WILLIAMS 35-20, KMG, MWD V0	SAWDEY 5-30, KMG, MWD V0
BRYANT 10-30, KMG, MWD V0	FILE FED 31-32H-K268, CPR, MWD V0	KENYON 8-4-19, CPR, Gyro V0
RAY NELSON 24-32, CPR, MWD V0	SHAW 12-29A, KMG, Gyro V0	GLADYS-SAWDEY 1, KMG, Gyro V0
BROWN C UNIT 2, CPR, Gyro V0	HANKINS 1, KAUFFMAN, No Surveys V0	SAWDEY 21-30, KMG, MWD V0
BRYANT 20-30, KMG, MWD V0	ROSS 21-19, CPR, Gyro V0	SAWDEY 31-30, KMG, MWD V0
SAWDEY 6-30, KMG, MWD V0	REGNIER 4-4-19, CPR, MWD V0	FILE FED 3N-32H-K268, CPR, MWD V0
RASMUSSEN 46-19, CPR, MWD V0	CINQUE 2, FOUNDATION ENERGY, No Surveys V0	WILLIAMS 13-20, KMG, MWD V0
RAY NELSON 04-32, CPR, MWD V0	KENYON 8-4-19, CPR, MWD V0	WILLIAMS 18-16, CPR, Gyro V0
SAWDEY 32-30, KMG, MWD V0	FILE FED 3K-32H-K268, CPR, MWD V0	FILE FED 3M-32H-K268, CPR, MWD V0
REGNIER FARMS-B UNIT 1, CPR, Gyro V0	BRYANT 16-30, KMG, MWD V0	RAY NELSON 12-32, CPR, Gyro V0
BULTHAUP 17-6, KMG, MWD V0	NOAA FEDERAL 11-32, CPR, Gyro V0	RASMUSSEN FEDERAL 35-29, KMG, MWD V0
REGNIER FARMS 42-19, CPR, Gyro V0	WOOLLEY-BECKY 2G-7H-E168, CPR, MWD V0	ARMSTEAD GAS UNIT 4-31, EXTRACTION, Gyro V0
REGNIER FARMS 32-19, CPR, Gyro V0	NELSON 5, TEXAS TEA, No Surveys V0	JOHNSON 7-30A, KMG, Gyro V0
FILE FED 3K-32H-K268, CPR, MWD V0	CINQUE 9-31, EXTRACTION, Gyro V0	RAY NELSON 13-32, CPR, MWD V0
NELSON 2, TEXAS TEA, No Surveys V0	CINQUE 6-31, FOUNDATION ENERGY, No Surveys V0	NELSON UNIT 1, CPR, Gyro V0
CINQUE 4, FOUNDATION ENERGY, No Surveys V0	ANDERSON TRUST C UNIT 2, CPR, Gyro V0	CINQUE 7-31, EXTRACTION, No Surveys V0
CINQUE 3, FOUNDATION ENERGY, No Surveys V0	A C N O 2, KAUFFMAN, No Surveys V0	ARMSTEAD GU 5-31, NOBLE ENERGY, No Surveys V0
BRYANT 8-30, KMG, MWD V0	BRYANT 36-30, KMG, No Surveys V0	REGNIER FARMS 1G-19H-B268, Wellbore #1, Design #1 22Mar18 kjs V0
RAY NELSON 24-32, CPR, MWD V0	CINQUE 8-31, EXTRACTION, No Surveys V0	REGNIER FARMS 1C-19H-B268, Wellbore #1, Design #1 22Mar18 kjs V0
WILLIAMS 4-29, KMG, MWD V0	SAWDEY 22-30, KMG, MWD V0	REGNIER FARMS 1E-19H-B268, Wellbore #1, Design #1 22Mar18 kjs V0
BALLANTINE 3-30, KMG, Gyro V0	ANSELM 1, PETERSON, No Surveys V0	REGNIER FARMS 1B-19H-B268, Wellbore #1, Design #1 22Mar18 kjs V0

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