



Crestone Peak Resources

Sec 19 T2N-R68W

Regnier Farms Pad

REGNIER FARMS 1C-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 1C-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 1C-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	22,799.57	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	16,004.89	4,907.00	2,706.50	2,608.65	27.661	CC, ES
A C N O 2 - KAUFFMAN - No Surveys	16,500.00	4,907.00	2,751.41	2,649.20	26.920	SF
ANDERSON TRUST C UNIT 2 - CPR - Gyro	18,912.90	7,346.33	3,424.56	3,192.02	14.727	CC
ANDERSON TRUST C UNIT 2 - CPR - Gyro	19,000.00	7,345.36	3,425.66	3,191.77	14.646	ES
ANDERSON TRUST C UNIT 2 - CPR - Gyro	19,300.00	7,342.08	3,446.36	3,208.83	14.509	SF
ANSELM I 1 - PETERSON - No Surveys	21,343.85	4,970.00	2,652.87	2,495.59	16.866	CC
ANSELM I 1 - PETERSON - No Surveys	21,400.00	4,970.00	2,653.47	2,495.53	16.801	ES
ANSELM I 1 - PETERSON - No Surveys	21,600.00	4,970.00	2,665.21	2,505.47	16.685	SF
ARMSTEAD GAS UNIT 4-31 - EXTRACTION - Gyro	22,377.27	7,360.53	1,165.06	871.50	3.969	CC
ARMSTEAD GAS UNIT 4-31 - EXTRACTION - Gyro	22,400.00	7,360.26	1,165.28	871.29	3.964	ES, SF
ARMSTEAD GU 5-31 - NOBLE ENERGY - No Surveys	19,252.48	7,344.00	1,270.21	1,044.12	5.618	CC, ES
ARMSTEAD GU 5-31 - NOBLE ENERGY - No Surveys	19,300.00	7,344.00	1,271.10	1,044.16	5.601	SF
BALLANTINE 3-30 - KMG - Gyro	13,488.44	7,377.02	1,471.01	1,332.92	10.653	CC
BALLANTINE 3-30 - KMG - Gyro	13,500.00	7,376.96	1,471.06	1,332.76	10.637	ES
BALLANTINE 3-30 - KMG - Gyro	13,600.00	7,376.44	1,475.24	1,335.46	10.554	SF
BECKY 1 - KAUFFMAN - No Surveys	22,800.38	5,010.00	2,852.11	2,698.86	18.612	CC, ES, SF
BROWN C UNIT 2 - CPR - Gyro	22,800.38	7,525.53	3,262.48	2,982.52	11.653	CC, ES, SF
BRYANT 10-30 - KMG - MWD	15,978.81	7,632.78	133.46	-49.61	0.729	Level 2, CC, ES, SF
BRYANT 16-30 - KMG - MWD	17,229.44	7,440.74	1,439.19	1,234.87	7.044	CC, ES
BRYANT 16-30 - KMG - MWD	17,300.00	7,440.95	1,440.92	1,235.90	7.028	SF
BRYANT 20-30 - KMG - MWD	16,578.27	7,461.12	797.96	600.44	4.040	CC, ES
BRYANT 20-30 - KMG - MWD	16,600.00	7,461.07	798.26	600.53	4.037	SF
BRYANT 23-30 - KMG - MWD	16,714.88	7,545.63	378.35	178.29	1.891	CC, ES, SF
BRYANT 24-30 - KMG - MWD	15,205.05	7,452.75	941.03	768.33	5.449	CC, ES
BRYANT 24-30 - KMG - MWD	15,300.00	7,452.44	945.80	772.00	5.442	SF
BRYANT 33-29 - KMG - MWD	16,558.41	7,648.10	2,199.38	2,000.22	11.043	CC, ES
BRYANT 33-29 - KMG - MWD	16,700.00	7,647.15	2,203.93	2,003.67	11.005	SF
BRYANT 34-30 - KMG - No Surveys	17,505.08	4,906.00	2,431.45	2,342.90	27.458	CC, ES
BRYANT 34-30 - KMG - No Surveys	17,800.00	4,906.00	2,449.27	2,358.71	27.047	SF
BRYANT 36-30 - KMG - No Surveys	17,952.18	7,529.81	584.86	366.59	2.680	CC, ES
BRYANT 36-30 - KMG - No Surveys	18,000.00	7,529.34	586.81	367.55	2.676	SF
BRYANT 8-30 - KMG - MWD	14,497.48	7,630.77	1,321.15	1,154.01	7.904	CC
BRYANT 8-30 - KMG - MWD	14,500.00	7,630.78	1,321.15	1,153.96	7.902	ES
BRYANT 8-30 - KMG - MWD	14,620.47	7,631.44	1,326.86	1,157.85	7.851	SF
BRYANT FEDERAL 37-30 - KMG - MWD	17,888.94	7,358.90	868.55	653.41	4.037	CC
BRYANT FEDERAL 37-30 - KMG - MWD	17,900.00	7,358.24	868.62	653.35	4.035	ES, SF
BULTHAUP 1-6 - KMG - Gyro	22,800.38	7,423.23	1,944.32	1,696.22	7.837	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 1C-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 1C-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 17-6 - KMG - MWD	22,800.38	7,495.44	1,882.41	1,737.58	12.997	CC, ES, SF
BULTHAUP 21-6 - KMG - MWD	22,800.38	7,510.89	1,817.23	1,715.63	17.885	CC, ES, SF
BULTHAUP 27-6 - KMG - MWD	22,800.38	7,521.50	919.30	656.35	3.496	CC, ES, SF
CARLA PETERSON 1 - KAUFFMAN - No Surveys	22,800.38	5,010.00	2,625.95	2,505.94	21.882	CC, ES, SF
CHAMPLIN 86 'N' 1 - KMG - Gyro	17,138.05	7,400.28	2,903.25	2,701.70	14.405	CC
CHAMPLIN 86 'N' 1 - KMG - Gyro	17,200.00	7,400.00	2,903.91	2,701.41	14.340	ES
CHAMPLIN 86 'N' 1 - KMG - Gyro	17,500.00	7,384.01	2,925.67	2,719.69	14.204	SF
CINQUE 1 - FOUNDATION ENERGY - No oSurveys	19,978.26	4,907.00	2,435.37	2,326.83	22.436	CC
CINQUE 1 - FOUNDATION ENERGY - No oSurveys	20,000.00	4,907.00	2,435.47	2,326.74	22.400	ES
CINQUE 1 - FOUNDATION ENERGY - No oSurveys	20,200.00	4,907.00	2,445.45	2,335.40	22.223	SF
CINQUE 2 - FOUNDATION ENERGY - No Surveys	18,628.43	4,911.00	2,430.11	2,332.20	24.820	CC, ES
CINQUE 2 - FOUNDATION ENERGY - No Surveys	18,900.00	4,911.00	2,445.24	2,345.54	24.525	SF
CINQUE 3 - FOUNDATION ENERGY - No Surveys	20,017.92	4,905.00	2,715.49	2,572.60	19.004	CC, ES
CINQUE 3 - FOUNDATION ENERGY - No Surveys	20,300.00	4,905.00	2,730.10	2,584.50	18.750	SF
CINQUE 4 - FOUNDATION ENERGY - No Surveys	18,591.39	4,975.00	2,652.94	2,523.17	20.443	CC
CINQUE 4 - FOUNDATION ENERGY - No Surveys	18,600.00	4,975.00	2,652.95	2,523.08	20.427	ES
CINQUE 4 - FOUNDATION ENERGY - No Surveys	18,900.00	4,975.00	2,670.83	2,538.05	20.116	SF
CINQUE 6-31 - FOUNDATION ENERGY - No Surveys	21,286.28	4,973.00	2,379.53	2,261.38	20.140	CC
CINQUE 6-31 - FOUNDATION ENERGY - No Surveys	21,300.00	4,973.00	2,379.57	2,261.30	20.120	ES
CINQUE 6-31 - FOUNDATION ENERGY - No Surveys	21,500.00	4,973.00	2,389.11	2,269.52	19.979	SF
CINQUE 7-31 - EXTRACTION - No surveys	19,594.51	7,345.00	618.76	386.65	2.666	CC
CINQUE 7-31 - EXTRACTION - No surveys	19,600.00	7,345.00	618.78	386.62	2.665	ES, SF
CINQUE 8-31 - EXTRACTION - No Surveys	22,540.83	7,358.00	136.21	-147.85	0.480	Level 1, CC, ES, SF
CINQUE 9-31 - EXTRACTION - Gyro	21,531.30	7,355.00	804.27	525.66	2.887	CC, ES, SF
FILE FED 3I-32H-K268 - CPR - MWD	11,450.28	18,207.81	2,230.31	1,967.51	8.487	CC, ES
FILE FED 3I-32H-K268 - CPR - MWD	21,900.00	7,756.87	2,286.05	1,997.97	7.935	SF
FILE FED 3J-32H-K268 - CPR - MWD	11,586.43	17,693.00	2,307.41	2,047.05	8.862	CC, ES
FILE FED 3J-32H-K268 - CPR - MWD	21,600.00	7,842.99	2,383.00	2,100.96	8.449	SF
FILE FED 3K-32H-K268 - CPR - MWD	11,558.16	17,409.00	2,487.80	2,227.64	9.562	CC, ES
FILE FED 3K-32H-K268 - CPR - MWD	11,600.00	17,372.49	2,488.16	2,227.91	9.560	SF
FILE FED 3L-32H-K268 - CPR - MWD	11,456.51	17,595.00	2,956.81	2,694.68	11.280	CC, ES
FILE FED 3L-32H-K268 - CPR - MWD	21,700.00	7,489.00	3,132.19	2,851.36	11.153	SF
FILE FED 3M-32H-K268 - CPR - MWD	11,478.14	18,088.48	3,116.68	2,852.84	11.813	CC, ES
FILE FED 3M-32H-K268 - CPR - MWD	22,300.00	7,338.65	3,253.46	2,960.79	11.116	SF
FILE FED 3N-32H-K268 - CPR - MWD	11,507.07	17,833.17	3,176.11	2,912.86	12.065	CC, ES
FILE FED 3N-32H-K268 - CPR - MWD	22,200.00	7,396.00	3,344.53	3,055.16	11.558	SF
GLADYS-SAWDEY 1 - KMG - Gyro	14,085.52	7,401.46	1,928.47	1,779.93	12.983	CC
GLADYS-SAWDEY 1 - KMG - Gyro	14,100.00	7,400.84	1,928.53	1,779.73	12.961	ES
GLADYS-SAWDEY 1 - KMG - Gyro	14,300.00	7,393.67	1,940.35	1,788.77	12.801	SF
HANKINS 1 - KAUFFMAN - No Surveys	12,083.87	4,920.00	2,864.33	2,800.64	44.972	CC
HANKINS 1 - KAUFFMAN - No Surveys	12,100.00	4,920.00	2,864.38	2,800.51	44.850	ES
HANKINS 1 - KAUFFMAN - No Surveys	12,900.00	4,920.00	2,978.33	2,907.64	42.128	SF
HSR-BRYANT 9-30A - KMG - Gyro	16,044.98	7,345.32	1,502.05	1,319.76	8.240	CC, ES
HSR-BRYANT 9-30A - KMG - Gyro	16,100.00	7,344.32	1,503.06	1,320.06	8.213	SF
JACK HEIN UNIT 1 - HS RESOURCES - No Surveys	21,281.58	5,085.00	2,775.64	2,599.02	15.715	CC
JACK HEIN UNIT 1 - HS RESOURCES - No Surveys	21,300.00	5,085.00	2,775.70	2,598.88	15.698	ES
JACK HEIN UNIT 1 - HS RESOURCES - No Surveys	21,500.00	5,085.00	2,784.22	2,605.68	15.594	SF
JOHN LAMAR 1 - KAUFFMAN - No Surveys	13,222.42	4,930.00	2,802.03	2,726.25	36.977	CC, ES
JOHN LAMAR 1 - KAUFFMAN - No Surveys	13,800.00	4,930.00	2,860.94	2,780.05	35.369	SF
JOHNSON 32-30 - KAUFFMAN - No Surveys	14,809.01	4,895.00	2,475.30	2,406.58	36.020	CC, ES
JOHNSON 32-30 - KAUFFMAN - No Surveys	15,200.00	4,895.00	2,505.98	2,434.63	35.119	SF
JOHNSON 7-30A - KMG - Gyro	14,762.98	7,359.17	112.98	-46.85	0.707	Level 2, CC, ES, SF
KENYON 34-19 - CPR - MWD	12,079.02	7,540.86	86.03	-30.11	0.741	Level 2, 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 1C-19H-B268
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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 4-8-19 - CPR - MWD	12,588.62	7,682.22	295.80	166.67	2.291	CC
KENYON 4-8-19 - CPR - MWD	12,600.00	7,682.19	296.02	166.29	2.282	ES, SF
KENYON 8-4-19 - CPR - MWD	10,150.50	7,800.98	1,992.59	1,898.21	21.113	CC, ES
KENYON 8-4-19 - CPR - MWD	10,300.00	7,802.92	1,998.19	1,902.84	20.958	SF
KENYON 8-6-19 - CPR - MWD	11,419.52	7,484.26	1,955.44	1,851.56	18.824	CC, ES
KENYON 8-6-19 - CPR - MWD	11,620.47	7,486.97	1,972.72	1,866.72	18.610	SF
KENYON 8-8-19 - CPR - MWD	12,501.37	7,560.60	1,986.78	1,860.66	15.754	CC, ES
KENYON 8-8-19 - CPR - MWD	12,900.00	7,559.82	2,026.37	1,894.11	15.320	SF
KOCH 41-6 - KAUFFMAN - No Surveys	22,800.38	5,037.00	2,996.19	2,822.20	17.220	CC, ES, SF
NELSON 1-A - TEXAS TEA - No Surveys	19,685.63	5,011.00	3,636.30	3,448.18	19.330	CC
NELSON 1-A - TEXAS TEA - No Surveys	19,700.00	5,011.00	3,636.32	3,448.02	19.311	ES
NELSON 1-A - TEXAS TEA - No Surveys	20,200.00	5,011.00	3,672.49	3,479.21	19.000	SF
NELSON 2 - TEXAS TEA - No Surveys	21,496.04	4,918.00	3,713.37	3,501.35	17.514	CC
NELSON 2 - TEXAS TEA - No Surveys	21,500.00	4,918.00	3,713.37	3,501.30	17.510	ES
NELSON 2 - TEXAS TEA - No Surveys	21,900.00	4,918.00	3,735.28	3,519.03	17.273	SF
NELSON 5 - TEXAS TEA - No Surveys	22,204.56	5,035.00	3,643.59	3,418.23	16.168	CC, ES
NELSON 5 - TEXAS TEA - No Surveys	22,600.00	5,035.00	3,664.99	3,435.52	15.972	SF
NELSON-E UNIT 1 - CPR - Gyro	21,983.00	7,400.00	3,172.56	2,885.79	11.063	CC
NELSON-E UNIT 1 - CPR - Gyro	22,000.00	7,400.00	3,172.61	2,885.56	11.053	ES
NELSON-E UNIT 1 - CPR - Gyro	22,300.00	7,391.95	3,188.35	2,897.73	10.971	SF
NOAA FEDERAL 11-32 - CPR - Gyro	18,623.22	7,261.62	2,684.72	2,457.63	11.822	CC
NOAA FEDERAL 11-32 - CPR - Gyro	18,700.00	7,262.59	2,685.82	2,457.57	11.767	ES
NOAA FEDERAL 11-32 - CPR - Gyro	18,900.00	7,265.10	2,698.95	2,468.47	11.710	SF
RASMUSSEN 19-11 - CPR - Gyro	10,598.89	7,409.82	1,143.35	1,054.11	12.812	CC
RASMUSSEN 19-11 - CPR - Gyro	10,600.00	7,409.79	1,143.35	1,054.08	12.809	ES
RASMUSSEN 19-11 - CPR - Gyro	10,800.00	7,404.53	1,160.89	1,068.12	12.515	SF
RASMUSSEN 19-14 - CPR - Gyro	12,270.59	7,437.94	1,149.13	1,031.67	9.783	CC
RASMUSSEN 19-14 - CPR - Gyro	12,300.00	7,438.14	1,149.51	1,031.56	9.746	ES
RASMUSSEN 19-14 - CPR - Gyro	12,400.00	7,438.82	1,156.39	1,037.18	9.700	SF
RASMUSSEN 4-6-19 - CPR - MWD	11,191.85	7,627.54	777.27	675.31	7.623	CC
RASMUSSEN 4-6-19 - CPR - MWD	11,200.00	7,627.44	777.31	675.10	7.605	ES
RASMUSSEN 4-6-19 - CPR - MWD	11,300.00	7,626.16	784.75	679.93	7.487	SF
RASMUSSEN FEDERAL 35-29 - KMG - MWD	17,841.46	7,389.49	3,412.08	3,196.60	15.834	CC
RASMUSSEN FEDERAL 35-29 - KMG - MWD	17,900.00	7,389.96	3,412.59	3,196.23	15.773	ES
RASMUSSEN FEDERAL 35-29 - KMG - MWD	18,300.00	7,393.15	3,442.76	3,221.90	15.588	SF
RAY NELSON 0-4-32 - CPR - MWD	20,355.13	7,437.07	2,165.26	1,904.87	8.315	CC
RAY NELSON 0-4-32 - CPR - MWD	20,400.00	7,436.85	2,165.73	1,904.75	8.299	ES
RAY NELSON 0-4-32 - CPR - MWD	20,500.00	7,436.36	2,170.10	1,908.20	8.286	SF
RAY NELSON 12-32 - CPR - Gyro	19,776.35	7,312.20	2,702.86	2,455.29	10.917	CC
RAY NELSON 12-32 - CPR - Gyro	19,800.00	7,312.27	2,702.96	2,455.02	10.902	ES
RAY NELSON 12-32 - CPR - Gyro	20,000.00	7,312.86	2,712.10	2,461.69	10.831	SF
RAY NELSON 13-32 - CPR - MWD	21,081.21	7,551.60	2,610.48	2,332.50	9.391	CC
RAY NELSON 13-32 - CPR - MWD	21,100.00	7,551.36	2,610.54	2,332.24	9.380	ES
RAY NELSON 13-32 - CPR - MWD	21,300.00	7,548.83	2,619.63	2,338.62	9.322	SF
RAY NELSON 14-32 - CPR - MWD	22,691.74	7,448.93	2,627.35	2,326.19	8.724	CC
RAY NELSON 14-32 - CPR - MWD	22,700.00	7,448.93	2,627.36	2,326.08	8.721	ES
RAY NELSON 14-32 - CPR - MWD	22,800.38	7,448.98	2,629.60	2,327.03	8.691	SF
RAY NELSON 24-32 - CPR - MWD	22,711.33	7,619.45	3,981.23	3,680.58	13.242	CC
RAY NELSON 24-32 - CPR - MWD	22,799.57	7,618.30	3,982.21	3,680.07	13.180	ES
RAY NELSON 24-32 - CPR - MWD	22,800.38	7,618.29	3,982.23	3,680.08	13.180	SF
RAY NELSON 2-4-32 - CPR - MWD	20,435.24	7,431.53	3,504.96	3,242.79	13.369	CC
RAY NELSON 2-4-32 - CPR - MWD	20,500.00	7,430.38	3,505.56	3,242.29	13.315	ES
RAY NELSON 2-4-32 - CPR - MWD	20,900.00	7,423.28	3,535.63	3,267.31	13.177	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 1C-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 1C-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 4-4-19 - CPR - MWD	9,942.39	7,435.28	435.37	354.97	5.415	CC, ES, SF
REGNIER FARMS 31-19 - CPR - Gyro	8,164.96	7,406.57	274.38	218.37	4.899	CC, ES
REGNIER FARMS 31-19 - CPR - Gyro	8,200.00	7,406.23	276.61	220.14	4.898	SF
REGNIER FARMS 32-19 - CPR - Gyro	9,200.00	7,380.81	49.49	-18.56	0.727	Level 2, ES, SF
REGNIER FARMS 32-19 - CPR - Gyro	9,201.55	7,380.81	49.47	-18.54	0.727	Level 2, CC
REGNIER FARMS 33-19 - CPR - Gyro	10,518.95	7,392.66	61.86	-25.98	0.704	Level 2, CC, ES, SF
REGNIER FARMS 42-19 - CPR - Gyro	9,156.07	7,380.75	1,335.77	1,268.34	19.808	CC, ES
REGNIER FARMS 42-19 - CPR - Gyro	9,400.00	7,380.44	1,357.86	1,287.99	19.435	SF
REGNIER FARMS 43-19 - CPR - MWD	10,739.98	7,621.42	1,446.28	1,349.87	15.002	CC
REGNIER FARMS 43-19 - CPR - MWD	10,800.00	7,621.25	1,447.52	1,348.33	14.593	ES
REGNIER FARMS 43-19 - CPR - MWD	11,405.47	7,619.56	1,592.04	1,465.80	12.611	SF
REGNIER FARMS B 2 - CPR - Gyro	11,606.92	7,407.12	908.20	801.96	8.548	CC
REGNIER FARMS B 2 - CPR - Gyro	11,620.47	7,406.98	908.34	801.90	8.534	ES
REGNIER FARMS B 2 - CPR - Gyro	11,700.00	7,406.10	913.37	806.10	8.515	SF
REGNIER FARMS-B UNIT 1 - CPR - Gyro	8,230.05	7,378.56	998.60	942.15	17.691	CC, ES
REGNIER FARMS-B UNIT 1 - CPR - Gyro	8,400.00	7,379.36	1,012.96	955.31	17.572	SF
ROSS 21-19 - CPR - Gyro	8,015.46	7,404.91	1,234.52	1,179.79	22.558	CC, ES
ROSS 21-19 - CPR - Gyro	8,300.00	7,407.12	1,266.88	1,209.56	22.100	SF
ROSS 22-19 - CPR - Gyro	9,398.63	7,380.53	1,305.49	1,234.63	18.423	CC
ROSS 22-19 - CPR - Gyro	9,400.00	7,380.53	1,305.49	1,234.60	18.417	ES
ROSS 22-19 - CPR - Gyro	9,700.00	7,381.00	1,339.82	1,264.78	17.853	SF
ROSS 2-4-19 - CPR - MWD	9,937.89	7,538.92	1,710.11	1,628.53	20.963	CC, ES
ROSS 2-4-19 - CPR - MWD	10,300.00	7,529.42	1,755.55	1,668.97	20.275	SF
ROSS 4-2-19 - CPR - MWD	8,758.17	7,728.08	589.57	522.51	8.792	CC, ES
ROSS 4-2-19 - CPR - MWD	8,900.00	7,725.36	606.38	534.59	8.446	SF
SAWDEY 21-30 - KMG - MWD	14,050.84	7,555.51	461.93	312.30	3.087	CC, ES, SF
SAWDEY 22-30 - KMG - MWD	15,265.23	7,529.11	1,824.63	1,649.78	10.435	CC
SAWDEY 22-30 - KMG - MWD	15,300.00	7,527.92	1,824.96	1,649.42	10.396	ES
SAWDEY 22-30 - KMG - MWD	15,500.00	7,521.19	1,839.66	1,661.20	10.309	SF
SAWDEY 31-30 - KMG - MWD	14,112.66	7,591.68	3,037.81	2,886.74	20.108	CC
SAWDEY 31-30 - KMG - MWD	14,200.00	7,590.59	3,039.07	2,886.53	19.924	ES
SAWDEY 31-30 - KMG - MWD	14,688.54	7,584.38	3,092.70	2,933.58	19.436	SF
SAWDEY 32-30 - KMG - MWD	15,483.10	7,669.30	3,012.43	2,829.47	16.465	CC
SAWDEY 32-30 - KMG - MWD	15,600.00	7,670.79	3,014.69	2,829.12	16.246	ES
SAWDEY 32-30 - KMG - MWD	16,100.00	7,676.96	3,074.93	2,880.86	15.844	SF
SAWDEY 5-30 - KMG - MWD	14,846.94	7,513.24	2,595.00	2,429.73	15.702	CC
SAWDEY 5-30 - KMG - MWD	14,900.00	7,511.05	2,595.54	2,429.18	15.602	ES
SAWDEY 5-30 - KMG - MWD	15,300.00	7,494.51	2,634.18	2,461.38	15.244	SF
SAWDEY 6-30 - KMG - MWD	14,725.49	7,474.38	1,051.24	889.99	6.519	CC, ES
SAWDEY 6-30 - KMG - MWD	14,800.00	7,474.20	1,053.88	891.56	6.492	SF
SAWDEY UNIT 2 - KMG - Gyro	13,700.00	7,402.18	444.82	303.09	3.138	CC
SAWDEY UNIT 2 - KMG - Gyro	13,700.00	7,402.18	444.82	303.09	3.138	ES, SF
SHAW 12-29A - KMG - Gyro	14,564.87	7,358.06	2,886.55	2,729.96	18.434	CC
SHAW 12-29A - KMG - Gyro	14,620.47	7,357.29	2,887.09	2,729.58	18.330	ES
SHAW 12-29A - KMG - Gyro	15,100.00	7,350.37	2,925.30	2,761.88	17.901	SF
TEGELER 11-30 - KMG - Gyro	15,969.90	7,378.14	1,116.17	935.13	6.165	CC
TEGELER 11-30 - KMG - Gyro	16,000.00	7,378.29	1,116.57	934.95	6.148	ES, SF
WILLIAMS 13-20 - KMG - MWD	11,902.69	7,690.64	2,694.75	2,573.06	22.146	CC
WILLIAMS 13-20 - KMG - MWD	12,000.00	7,689.21	2,696.50	2,572.79	21.796	ES
WILLIAMS 13-20 - KMG - MWD	12,600.00	7,680.70	2,783.49	2,649.97	20.847	SF
WILLIAMS 18-16 - CPR - Gyro	6,364.17	6,289.68	1,262.21	1,216.97	27.904	CC
WILLIAMS 18-16 - CPR - Gyro	6,400.00	6,321.87	1,262.25	1,216.77	27.756	ES
WILLIAMS 18-16 - CPR - Gyro	6,800.00	6,719.44	1,275.69	1,227.42	26.432	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 1C-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 1C-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 24-18 - CPR - Gyro	6,799.47	6,800.77	1,391.67	1,343.71	29.017	CC
WILLIAMS 24-18 - CPR - Gyro	6,800.00	6,801.30	1,391.67	1,343.71	29.015	ES
WILLIAMS 24-18 - CPR - Gyro	7,100.00	7,077.00	1,413.40	1,363.74	28.465	SF
WILLIAMS 34-18 - CPR - MWD	6,678.30	6,761.19	405.70	357.50	8.416	CC, ES
WILLIAMS 34-18 - CPR - MWD	6,700.00	6,783.19	406.01	357.65	8.395	SF
WILLIAMS 35-20 - KMG - MWD	12,480.11	7,490.76	3,374.96	3,250.72	27.165	CC
WILLIAMS 35-20 - KMG - MWD	12,500.00	7,490.79	3,375.02	3,250.42	27.088	ES
WILLIAMS 35-20 - KMG - MWD	13,400.00	7,492.09	3,498.08	3,361.05	25.528	SF
WILLIAMS 4-29 - KMG - MWD	13,222.51	7,415.00	2,736.13	2,601.87	20.379	CC
WILLIAMS 4-29 - KMG - MWD	13,300.00	7,415.00	2,737.22	2,601.71	20.199	ES
WILLIAMS 4-29 - KMG - MWD	13,800.00	7,415.00	2,796.40	2,654.51	19.707	SF
WOOLLEY-BECKY 2E-7H-E168 - CPR - MWD	22,800.38	14,800.00	1,896.97	1,554.91	5.546	CC, ES, SF
WOOLLEY-BECKY 2F-7H-E168 - CPR - MWD	22,800.38	14,555.00	1,562.45	1,255.05	5.083	CC, ES, SF
WOOLLEY-BECKY 2G-7H-E168 - CPR - MWD	22,800.38	15,260.00	1,348.27	1,073.54	4.908	CC, ES, SF
WOOLLEY-BECKY 2H-7H-E168 - CPR - MWD	22,800.38	15,075.00	1,095.85	897.28	5.519	CC, ES, SF
Regnier Farms Pad						
REGNIER FARMS 1A-19H-B268 - Wellbore #1 - Design	200.00	200.00	20.00	19.01	20.141	CC
REGNIER FARMS 1A-19H-B268 - Wellbore #1 - Design	16,800.00	16,717.13	249.45	-75.75	0.767	Level 2, SF
REGNIER FARMS 1A-19H-B268 - Wellbore #1 - Design	22,799.57	22,713.82	429.06	-113.39	0.791	Level 2, ES
REGNIER FARMS 1B-19H-B268 - Wellbore #1 - Design	203.91	203.91	10.00	8.98	9.795	CC
REGNIER FARMS 1B-19H-B268 - Wellbore #1 - Design	22,800.38	22,933.17	253.32	-230.68	0.523	Level 1, ES, SF
REGNIER FARMS 1D-19H-B268 - Wellbore #1 - Design	300.00	300.00	10.00	8.29	5.848	CC
REGNIER FARMS 1D-19H-B268 - Wellbore #1 - Design	22,793.86	22,712.55	297.40	-234.94	0.559	Level 1, ES, SF
REGNIER FARMS 1E-19H-B268 - Wellbore #1 - Design	300.00	300.00	20.00	18.29	11.696	CC
REGNIER FARMS 1E-19H-B268 - Wellbore #1 - Design	20,000.00	20,013.82	446.30	-5.30	0.988	Level 3, ES, SF
REGNIER FARMS 1F-19H-B268 - Wellbore #1 - Design	300.00	299.00	30.00	28.29	17.582	CC, ES
REGNIER FARMS 1F-19H-B268 - Wellbore #1 - Design	22,799.57	22,996.52	895.38	349.68	1.641	SF
REGNIER FARMS 1G-19H-B268 - Wellbore #1 - Design	200.00	199.00	40.00	39.01	40.430	CC, ES
REGNIER FARMS 1G-19H-B268 - Wellbore #1 - Design	22,799.57	22,756.35	988.71	439.07	1.799	SF
REGNIER FARMS 1H-19H-B268 - Wellbore #1 - Design	204.67	203.67	50.00	48.98	48.882	CC
REGNIER FARMS 1H-19H-B268 - Wellbore #1 - Design	300.00	298.20	50.39	48.69	29.606	ES
REGNIER FARMS 1H-19H-B268 - Wellbore #1 - Design	22,800.38	22,891.17	1,300.23	749.22	2.360	SF
REGNIER FARMS 1I-19H-B268 - Wellbore #1 - Design #	200.00	199.00	60.00	59.01	60.644	CC, ES
REGNIER FARMS 1I-19H-B268 - Wellbore #1 - Design #	22,800.38	22,843.98	1,617.44	1,066.52	2.936	SF
REGNIER FARMS 1J-19H-B268 - Wellbore #1 - Design	200.00	199.00	70.00	69.01	70.751	CC, ES
REGNIER FARMS 1J-19H-B268 - Wellbore #1 - Design	22,800.38	23,097.91	1,750.51	1,200.97	3.185	SF
REGNIER FARMS 1K-19H-B268 - Wellbore #1 - Design	200.00	199.00	80.00	79.01	80.859	CC, ES
REGNIER FARMS 1K-19H-B268 - Wellbore #1 - Design	22,800.38	23,018.66	2,050.25	1,499.40	3.722	SF

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

Local Co-ordinate Reference: Well REGNIER FARMS 1C-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

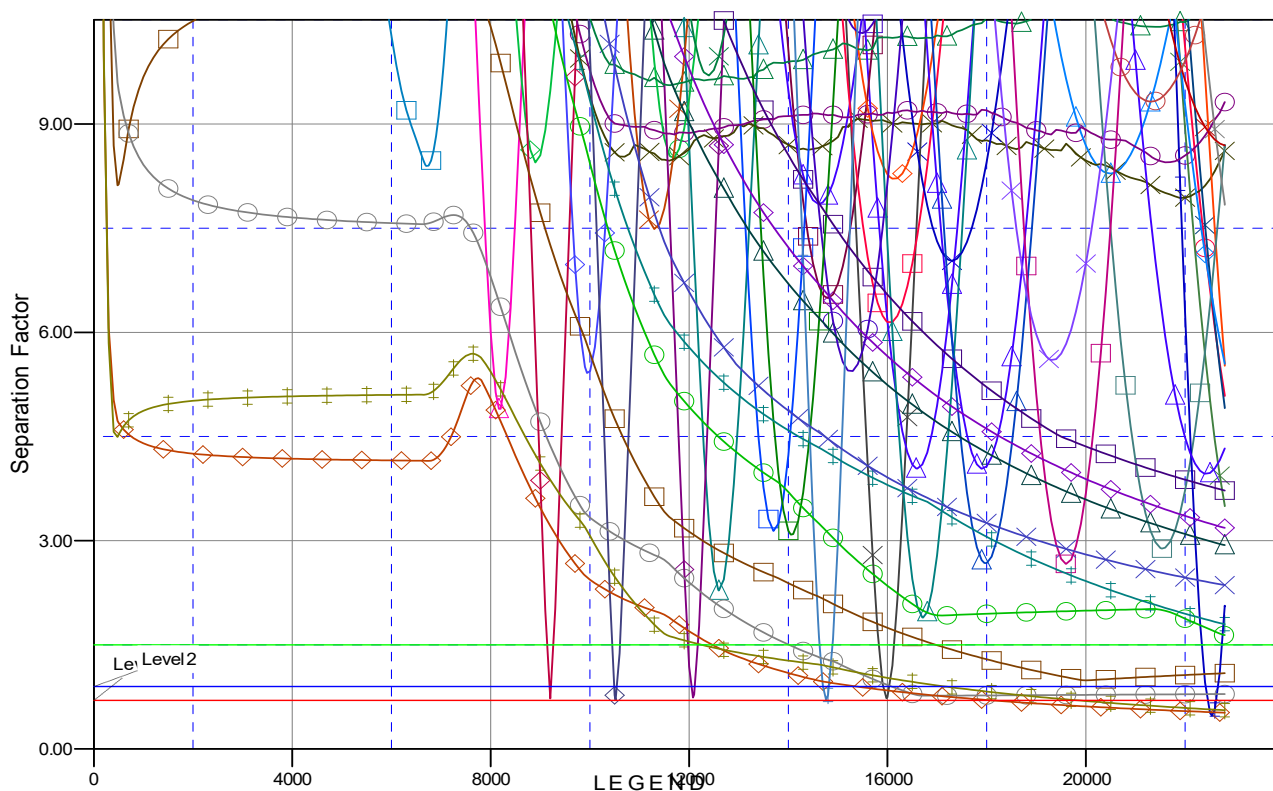
Central Meridian is -105.5000000

Coordinates are relative to: REGNIER FARMS 1C-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 1E-19H-B268, Wellbore #1, Design #1 22Mar18 kjs V0
WILLIAMS 4-29, KMG, MWD V0	SAWDEY 22-30, KMG, MWD V0	REGNIER FARMS 1A-19H-B268, Wellbore #1, Design #1 22Mar18 kjs V0
BALLANTINE 3-30, KMG, Gyro V0	ANSELM 1, PETERSON, No Surveys V0	REGNIER FARMS 1H-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