



# **Crestone Peak Resources**

**Sec 19 T2N-R68W**

**Regnier Farms Pad**

**REGNIER FARMS 1D-19H-B268**

**Wellbore #1**

**Design #1 22Mar18 kjs**

## **Anticollision Summary Report**

**06 April, 2018**

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

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

<b>Survey Tool Program</b>	<b>Date</b>	4/2/2018		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.00	22,712.36	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	15,925.71	4,907.00	2,766.44	2,659.79	25.939	CC, ES
A C N O 2 - KAUFFMAN - No Surveys	16,400.00	4,907.00	2,806.81	2,696.04	25.340	SF
ANDERSON TRUST C UNIT 2 - CPR - Gyro	18,826.22	7,281.41	3,132.59	2,900.21	13.481	CC
ANDERSON TRUST C UNIT 2 - CPR - Gyro	18,900.00	7,280.85	3,133.46	2,899.84	13.413	ES
ANDERSON TRUST C UNIT 2 - CPR - Gyro	19,200.00	7,278.61	3,154.81	2,917.35	13.286	SF
ANSELM 1 - PETERSON - No Surveys	21,264.81	4,970.00	2,720.54	2,548.82	15.843	CC
ANSELM 1 - PETERSON - No Surveys	21,300.00	4,970.00	2,720.77	2,548.64	15.806	ES
ANSELM 1 - PETERSON - No Surveys	21,500.00	4,970.00	2,730.69	2,556.73	15.698	SF
ARMSTEAD GAS UNIT 4-31 - EXTRACTION - Gyro	22,299.17	7,270.82	1,450.99	1,157.53	4.944	CC
ARMSTEAD GAS UNIT 4-31 - EXTRACTION - Gyro	22,300.00	7,270.81	1,450.99	1,157.51	4.944	ES
ARMSTEAD GAS UNIT 4-31 - EXTRACTION - Gyro	22,400.00	7,269.80	1,454.49	1,159.88	4.937	SF
ARMSTEAD GU 5-31 - NOBLE ENERGY - No Surveys	19,173.61	7,259.00	1,561.72	1,335.57	6.906	CC
ARMSTEAD GU 5-31 - NOBLE ENERGY - No Surveys	19,200.00	7,259.00	1,561.94	1,335.36	6.894	ES
ARMSTEAD GU 5-31 - NOBLE ENERGY - No Surveys	19,300.00	7,259.00	1,566.83	1,339.14	6.881	SF
BALLANTINE 3-30 - KMG - Gyro	13,375.18	7,283.46	1,743.23	1,606.05	12.707	CC
BALLANTINE 3-30 - KMG - Gyro	13,400.00	7,283.59	1,743.41	1,605.80	12.670	ES
BALLANTINE 3-30 - KMG - Gyro	13,600.00	7,284.63	1,757.67	1,617.49	12.539	SF
BECKY 1 - KAUFFMAN - No Surveys	22,712.55	5,010.00	2,907.15	2,738.59	17.247	CC, ES, SF
BROWN C UNIT 2 - CPR - Gyro	22,712.55	7,425.66	3,009.49	2,736.18	11.011	CC, ES, SF
BRYANT 10-30 - KMG - MWD	15,896.90	7,546.52	163.68	-19.29	0.895	Level 2, CC, ES, SF
BRYANT 16-30 - KMG - MWD	17,145.67	7,350.22	1,144.33	940.17	5.605	CC, ES
BRYANT 16-30 - KMG - MWD	17,200.00	7,350.05	1,145.62	940.83	5.594	SF
BRYANT 20-30 - KMG - MWD	16,495.90	7,382.89	499.92	302.45	2.532	CC
BRYANT 20-30 - KMG - MWD	16,500.00	7,382.87	499.93	302.40	2.531	ES, SF
BRYANT 23-30 - KMG - MWD	16,636.47	7,457.48	672.29	472.33	3.362	CC, ES, SF
BRYANT 24-30 - KMG - MWD	15,122.57	7,373.00	641.76	469.15	3.718	CC, ES, SF
BRYANT 33-29 - KMG - MWD	16,473.59	7,572.23	1,903.61	1,704.55	9.563	CC
BRYANT 33-29 - KMG - MWD	16,500.00	7,572.14	1,903.79	1,704.46	9.551	ES
BRYANT 33-29 - KMG - MWD	16,600.00	7,571.80	1,907.80	1,707.70	9.534	SF
BRYANT 34-30 - KMG - No Surveys	17,423.80	4,906.00	2,359.08	2,268.80	26.131	CC, ES
BRYANT 34-30 - KMG - No Surveys	17,700.00	4,906.00	2,375.19	2,282.98	25.757	SF
BRYANT 36-30 - KMG - No Surveys	17,872.91	7,446.00	878.64	660.43	4.027	CC
BRYANT 36-30 - KMG - No Surveys	17,900.00	7,446.00	879.06	660.31	4.019	ES, SF
BRYANT 8-30 - KMG - MWD	14,444.93	7,545.60	1,023.86	856.23	6.108	CC, ES
BRYANT 8-30 - KMG - MWD	14,500.00	7,545.80	1,025.34	856.71	6.080	SF
BRYANT FEDERAL 37-30 - KMG - MWD	17,810.45	7,278.86	574.47	359.37	2.671	CC, ES, SF
BULTHAUP 1-6 - KMG - Gyro	22,712.55	7,320.00	1,731.19	1,504.17	7.626	CC, ES, SF

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

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well REGNIER FARMS 1D-19H-B268
<b>Project:</b>	Sec 19 T2N-R68W	<b>TVD Reference:</b>	WELL @ 4989.00usft (Original Well Elev)
<b>Reference Site:</b>	Regnier Farms Pad	<b>MD Reference:</b>	WELL @ 4989.00usft (Original Well Elev)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	REGNIER FARMS 1D-19H-B268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Single User Db
<b>Reference Design:</b>	Design #1 22Mar18 kjs	<b>Offset TVD Reference:</b>	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	22,712.55	7,403.50	1,797.65	1,693.14	17.202	CC, ES, SF
BULTHAUP 21-6 - KMG - MWD	22,712.55	7,395.79	1,911.25	1,775.28	14.057	CC, ES, SF
BULTHAUP 27-6 - KMG - MWD	22,712.55	7,430.12	701.57	479.60	3.161	CC, ES, SF
CARLA PETERSON 1 - KAUFFMAN - No Surveys	22,712.55	5,010.00	2,559.95	2,440.37	21.408	CC, ES, SF
CHAMPLIN 86 'N' 1 - KMG - Gyro	17,055.37	7,321.39	2,609.98	2,408.61	12.961	CC
CHAMPLIN 86 'N' 1 - KMG - Gyro	17,100.00	7,319.75	2,610.36	2,408.24	12.915	ES
CHAMPLIN 86 'N' 1 - KMG - Gyro	17,400.00	7,309.19	2,632.60	2,426.75	12.789	SF
CINQUE 1 - FOUNDATION ENERGY - No oSurveys	19,896.75	4,907.00	2,348.52	2,240.18	21.677	CC
CINQUE 1 - FOUNDATION ENERGY - No oSurveys	19,900.00	4,907.00	2,348.52	2,240.15	21.671	ES
CINQUE 1 - FOUNDATION ENERGY - No oSurveys	20,100.00	4,907.00	2,357.30	2,247.52	21.474	SF
CINQUE 2 - FOUNDATION ENERGY - No Surveys	18,546.94	4,911.00	2,343.90	2,246.07	23.959	CC, ES
CINQUE 2 - FOUNDATION ENERGY - No Surveys	18,800.00	4,911.00	2,357.52	2,257.95	23.677	SF
CINQUE 3 - FOUNDATION ENERGY - No Surveys	19,938.91	4,905.00	2,783.16	2,627.46	17.875	CC
CINQUE 3 - FOUNDATION ENERGY - No Surveys	20,000.00	4,905.00	2,783.83	2,627.44	17.800	ES
CINQUE 3 - FOUNDATION ENERGY - No Surveys	20,200.00	4,905.00	2,795.38	2,637.19	17.671	SF
CINQUE 4 - FOUNDATION ENERGY - No Surveys	18,512.40	4,975.00	2,726.77	2,585.30	19.274	CC, ES
CINQUE 4 - FOUNDATION ENERGY - No Surveys	18,800.00	4,975.00	2,741.90	2,597.66	19.009	SF
CINQUE 6-31 - FOUNDATION ENERGY - No Surveys	21,204.98	4,973.00	2,306.27	2,185.87	19.155	CC, ES
CINQUE 6-31 - FOUNDATION ENERGY - No Surveys	21,400.00	4,973.00	2,314.50	2,192.74	19.009	SF
CINQUE 7-31 - EXTRACTION - No surveys	19,512.17	7,260.00	327.88	95.77	1.413	Level 3, CC, ES, SF
CINQUE 8-31 - EXTRACTION - No Surveys	22,459.37	7,273.00	149.25	-134.81	0.525	Level 1, CC, ES, SF
CINQUE 9-31 - EXTRACTION - Gyro	21,450.48	7,271.81	517.26	238.78	1.857	CC, ES, SF
FILE FED 3I-32H-K268 - CPR - MWD	14,045.61	15,443.69	1,974.57	1,715.59	7.625	CC
FILE FED 3I-32H-K268 - CPR - MWD	21,400.00	8,104.81	1,989.66	1,708.52	7.077	ES
FILE FED 3I-32H-K268 - CPR - MWD	21,900.00	7,696.27	2,007.89	1,718.70	6.943	SF
FILE FED 3J-32H-K268 - CPR - MWD	18,862.93	10,357.97	2,063.05	1,798.98	7.812	CC
FILE FED 3J-32H-K268 - CPR - MWD	18,900.00	10,330.00	2,063.11	1,798.75	7.804	ES
FILE FED 3J-32H-K268 - CPR - MWD	21,500.00	7,824.00	2,094.30	1,811.84	7.414	SF
FILE FED 3K-32H-K268 - CPR - MWD	12,202.22	16,684.86	2,256.72	1,997.34	8.701	CC, ES
FILE FED 3K-32H-K268 - CPR - MWD	13,000.00	15,987.00	2,263.56	2,002.22	8.661	SF
FILE FED 3L-32H-K268 - CPR - MWD	10,352.65	18,515.00	2,678.94	2,417.53	10.248	CC
FILE FED 3L-32H-K268 - CPR - MWD	10,400.00	18,515.00	2,679.36	2,417.04	10.214	ES
FILE FED 3L-32H-K268 - CPR - MWD	21,700.00	7,441.00	2,851.74	2,569.51	10.104	SF
FILE FED 3M-32H-K268 - CPR - MWD	14,607.22	14,791.80	2,858.68	2,597.77	10.957	CC
FILE FED 3M-32H-K268 - CPR - MWD	14,700.00	14,729.29	2,859.19	2,597.69	10.934	ES
FILE FED 3M-32H-K268 - CPR - MWD	22,200.00	7,293.00	2,963.70	2,670.60	10.111	SF
FILE FED 3N-32H-K268 - CPR - MWD	14,757.28	14,452.75	2,910.79	2,649.36	11.134	CC
FILE FED 3N-32H-K268 - CPR - MWD	14,800.00	14,430.74	2,911.07	2,649.24	11.118	ES
FILE FED 3N-32H-K268 - CPR - MWD	22,000.00	7,396.00	3,044.94	2,756.01	10.539	SF
GLADYS-SAWDEY 1 - KMG - Gyro	13,965.34	7,297.62	2,214.47	2,066.93	15.009	CC
GLADYS-SAWDEY 1 - KMG - Gyro	14,000.00	7,296.32	2,214.74	2,066.62	14.952	ES
GLADYS-SAWDEY 1 - KMG - Gyro	14,300.00	7,285.09	2,239.59	2,087.68	14.743	SF
HANKINS 1 - KAUFFMAN - No Surveys	12,035.56	4,920.00	2,671.16	2,609.50	43.321	CC, ES
HANKINS 1 - KAUFFMAN - No Surveys	12,700.00	4,920.00	2,752.56	2,685.12	40.819	SF
HSR-BRYANT 9-30A - KMG - Gyro	15,962.95	7,260.82	1,205.31	1,023.17	6.617	CC
HSR-BRYANT 9-30A - KMG - Gyro	16,000.00	7,259.81	1,205.88	1,023.16	6.600	ES, SF
JACK HEIN UNIT 1 - HS RESOURCES - No Surveys	21,197.44	5,085.00	2,547.60	2,380.49	15.245	CC
JACK HEIN UNIT 1 - HS RESOURCES - No Surveys	21,200.00	5,085.00	2,547.60	2,380.46	15.242	ES
JACK HEIN UNIT 1 - HS RESOURCES - No Surveys	21,400.00	5,085.00	2,555.64	2,386.64	15.122	SF
JOHN LAMAR 1 - KAUFFMAN - No Surveys	13,172.82	4,930.00	2,598.83	2,526.34	35.851	CC
JOHN LAMAR 1 - KAUFFMAN - No Surveys	13,200.00	4,930.00	2,598.97	2,526.19	35.711	ES
JOHN LAMAR 1 - KAUFFMAN - No Surveys	13,700.00	4,930.00	2,651.76	2,574.73	34.428	SF
JOHNSON 32-30 - KAUFFMAN - No Surveys	14,727.35	4,895.00	2,377.40	2,309.76	35.151	CC, ES

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

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<b>Reference Site:</b>	Regnier Farms Pad	<b>MD Reference:</b>	WELL @ 4989.00usft (Original Well Elev)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	REGNIER FARMS 1D-19H-B268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Single User Db
<b>Reference Design:</b>	Design #1 22Mar18 kjs	<b>Offset TVD Reference:</b>	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 32-30 - KAUFFMAN - No Surveys	15,100.00	4,895.00	2,406.43	2,336.19	34.259	SF
JOHNSON 7-30A - KMG - Gyro	14,682.27	7,274.20	186.87	27.15	1.170	Level 3, CC, ES, SF
KENYON 34-19 - CPR - MWD	12,001.48	7,456.33	157.71	41.99	1.363	Level 3, CC, ES, SF
KENYON 4-8-19 - CPR - MWD	12,502.11	7,591.41	548.80	420.33	4.272	CC, ES
KENYON 4-8-19 - CPR - MWD	12,600.00	7,590.64	557.46	426.73	4.264	SF
KENYON 8-4-19 - CPR - MWD	9,964.84	7,708.21	1,686.97	1,593.65	18.076	CC, ES
KENYON 8-4-19 - CPR - MWD	10,100.00	7,710.08	1,692.38	1,597.92	17.918	SF
KENYON 8-6-19 - CPR - MWD	11,243.60	7,417.00	1,715.49	1,613.16	16.764	CC
KENYON 8-6-19 - CPR - MWD	11,300.00	7,434.36	1,716.27	1,613.11	16.637	ES
KENYON 8-6-19 - CPR - MWD	11,500.00	7,436.62	1,734.37	1,628.92	16.448	SF
KENYON 8-8-19 - CPR - MWD	12,464.33	7,497.00	1,732.65	1,605.89	13.668	CC
KENYON 8-8-19 - CPR - MWD	12,500.00	7,497.00	1,733.02	1,605.51	13.591	ES
KENYON 8-8-19 - CPR - MWD	12,800.00	7,497.00	1,764.87	1,632.71	13.354	SF
KOCH 41-6 - KAUFFMAN - No Surveys	22,712.55	5,037.00	2,802.47	2,642.62	17.532	CC, ES, SF
NELSON 1-A - TEXAS TEA - No Surveys	19,599.31	5,011.00	3,361.24	3,176.47	18.191	CC
NELSON 1-A - TEXAS TEA - No Surveys	19,600.00	5,011.00	3,361.24	3,176.46	18.190	ES
NELSON 1-A - TEXAS TEA - No Surveys	20,000.00	5,011.00	3,385.04	3,195.78	17.886	SF
NELSON 2 - TEXAS TEA - No Surveys	21,409.68	4,918.00	3,442.85	3,234.79	16.547	CC
NELSON 2 - TEXAS TEA - No Surveys	21,500.00	4,918.00	3,444.04	3,234.76	16.457	ES
NELSON 2 - TEXAS TEA - No Surveys	21,800.00	4,918.00	3,464.91	3,252.58	16.319	SF
NELSON 5 - TEXAS TEA - No Surveys	22,118.19	5,035.00	3,371.07	3,149.63	15.223	CC
NELSON 5 - TEXAS TEA - No Surveys	22,200.00	5,035.00	3,372.06	3,149.51	15.152	ES
NELSON 5 - TEXAS TEA - No Surveys	22,500.00	5,035.00	3,392.62	3,167.04	15.039	SF
NELSON-E UNIT 1 - CPR - Gyro	21,896.65	7,318.64	2,886.83	2,600.29	10.075	CC
NELSON-E UNIT 1 - CPR - Gyro	21,900.00	7,318.61	2,886.83	2,600.24	10.073	ES
NELSON-E UNIT 1 - CPR - Gyro	22,200.00	7,316.36	2,902.72	2,612.29	9.995	SF
NOAA FEDERAL 11-32 - CPR - Gyro	18,535.92	7,179.46	2,391.25	2,164.37	10.540	CC
NOAA FEDERAL 11-32 - CPR - Gyro	18,600.00	7,180.47	2,392.11	2,164.17	10.495	ES
NOAA FEDERAL 11-32 - CPR - Gyro	18,800.00	7,183.59	2,405.78	2,175.47	10.446	SF
RASMUSSEN 19-11 - CPR - Gyro	10,582.58	7,327.39	1,422.63	1,332.40	15.767	CC
RASMUSSEN 19-11 - CPR - Gyro	10,600.00	7,326.92	1,422.74	1,332.23	15.719	ES
RASMUSSEN 19-11 - CPR - Gyro	10,800.00	7,321.50	1,439.14	1,346.01	15.453	SF
RASMUSSEN 19-14 - CPR - Gyro	12,164.29	7,373.23	1,398.92	1,282.23	11.988	CC
RASMUSSEN 19-14 - CPR - Gyro	12,200.00	7,373.44	1,399.38	1,282.11	11.933	ES
RASMUSSEN 19-14 - CPR - Gyro	12,300.00	7,374.05	1,405.49	1,286.89	11.851	SF
RASMUSSEN 4-6-19 - CPR - MWD	11,153.88	7,551.34	1,025.70	922.82	9.970	CC, ES
RASMUSSEN 4-6-19 - CPR - MWD	11,300.00	7,550.19	1,036.06	930.47	9.813	SF
RASMUSSEN FEDERAL 35-29 - KMG - MWD	17,753.45	7,321.58	3,116.89	2,901.53	14.473	CC
RASMUSSEN FEDERAL 35-29 - KMG - MWD	17,800.00	7,321.75	3,117.24	2,901.13	14.425	ES
RASMUSSEN FEDERAL 35-29 - KMG - MWD	18,200.00	7,323.27	3,148.71	2,927.91	14.261	SF
RAY NELSON 0-4-32 - CPR - MWD	20,270.63	7,360.00	1,875.47	1,615.19	7.205	CC
RAY NELSON 0-4-32 - CPR - MWD	20,300.00	7,360.00	1,875.70	1,614.99	7.194	ES
RAY NELSON 0-4-32 - CPR - MWD	20,400.00	7,360.00	1,879.93	1,618.17	7.182	SF
RAY NELSON 12-32 - CPR - Gyro	19,689.88	7,221.08	2,412.72	2,165.40	9.755	CC
RAY NELSON 12-32 - CPR - Gyro	19,700.00	7,221.12	2,412.74	2,165.25	9.749	ES
RAY NELSON 12-32 - CPR - Gyro	19,900.00	7,221.90	2,421.85	2,171.68	9.681	SF
RAY NELSON 13-32 - CPR - MWD	20,996.16	7,466.19	2,323.08	2,045.28	8.363	CC
RAY NELSON 13-32 - CPR - MWD	21,000.00	7,466.16	2,323.08	2,045.21	8.360	ES
RAY NELSON 13-32 - CPR - MWD	21,200.00	7,464.31	2,332.00	2,051.15	8.303	SF
RAY NELSON 14-32 - CPR - MWD	22,605.94	7,354.55	2,342.63	2,041.71	7.785	CC, ES
RAY NELSON 14-32 - CPR - MWD	22,712.55	7,353.89	2,345.05	2,042.66	7.755	SF
RAY NELSON 24-32 - CPR - MWD	22,624.78	7,523.60	3,699.65	3,399.26	12.316	CC
RAY NELSON 24-32 - CPR - MWD	22,700.00	7,521.14	3,700.41	3,398.68	12.264	ES

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

<b>Company:</b>	Crestone Peak Resources	<b>Local Co-ordinate Reference:</b>	Well REGNIER FARMS 1D-19H-B268
<b>Project:</b>	Sec 19 T2N-R68W	<b>TVD Reference:</b>	WELL @ 4989.00usft (Original Well Elev)
<b>Reference Site:</b>	Regnier Farms Pad	<b>MD Reference:</b>	WELL @ 4989.00usft (Original Well Elev)
<b>Site Error:</b>	0.00 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	REGNIER FARMS 1D-19H-B268	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 5000.14 Single User Db
<b>Reference Design:</b>	Design #1 22Mar18 kjs	<b>Offset TVD Reference:</b>	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)						
RAY NELSON 24-32 - CPR - MWD	22,712.55	7,520.73	3,700.69	3,398.74	12.256	SF
RAY NELSON 2-4-32 - CPR - MWD	20,349.04	7,351.54	3,214.49	2,952.47	12.269	CC
RAY NELSON 2-4-32 - CPR - MWD	20,400.00	7,350.62	3,214.89	2,951.94	12.226	ES
RAY NELSON 2-4-32 - CPR - MWD	20,700.00	7,345.22	3,233.58	2,966.31	12.098	SF
REGNIER 4-4-19 - CPR - MWD	9,877.68	7,351.27	748.84	668.47	9.318	CC, ES
REGNIER 4-4-19 - CPR - MWD	9,900.00	7,351.27	749.17	668.62	9.301	SF
REGNIER FARMS 31-19 - CPR - Gyro	8,083.82	7,314.08	563.06	507.69	10.168	CC, ES
REGNIER FARMS 31-19 - CPR - Gyro	8,100.00	7,313.86	563.29	507.78	10.147	SF
REGNIER FARMS 32-19 - CPR - Gyro	9,124.07	7,296.60	256.53	188.89	3.793	CC, ES, SF
REGNIER FARMS 33-19 - CPR - Gyro	10,443.29	7,309.34	345.83	257.99	3.937	CC, ES, SF
REGNIER FARMS 42-19 - CPR - Gyro	9,098.18	7,296.27	1,030.94	963.62	15.314	CC
REGNIER FARMS 42-19 - CPR - Gyro	9,100.00	7,296.25	1,030.94	963.60	15.309	ES
REGNIER FARMS 42-19 - CPR - Gyro	9,300.00	7,294.61	1,050.51	980.91	15.093	SF
REGNIER FARMS 43-19 - CPR - MWD	10,583.99	7,537.44	1,171.68	1,078.78	12.613	CC
REGNIER FARMS 43-19 - CPR - MWD	10,600.00	7,537.39	1,171.79	1,078.11	12.509	ES
REGNIER FARMS 43-19 - CPR - MWD	11,200.00	7,535.42	1,323.74	1,198.42	10.563	SF
REGNIER FARMS B 2 - CPR - Gyro	11,543.12	7,316.51	675.04	569.00	6.366	CC, ES
REGNIER FARMS B 2 - CPR - Gyro	11,600.00	7,315.80	677.43	570.71	6.348	SF
REGNIER FARMS-B UNIT 1 - CPR - Gyro	8,166.51	7,289.88	707.26	651.23	12.623	CC, ES
REGNIER FARMS-B UNIT 1 - CPR - Gyro	8,200.00	7,289.93	708.05	651.72	12.569	SF
ROSS 21-19 - CPR - Gyro	0.00	0.00	1,423.35			
ROSS 21-19 - CPR - Gyro	350.00	338.14	1,424.38	1,422.33	695.478	ES
ROSS 21-19 - CPR - Gyro	8,300.00	7,322.31	1,570.09	1,512.97	27.488	SF
ROSS 22-19 - CPR - Gyro	9,300.72	7,300.00	1,613.39	1,543.16	22.976	CC, ES
ROSS 22-19 - CPR - Gyro	9,700.00	7,300.00	1,662.06	1,586.98	22.137	SF
ROSS 2-4-19 - CPR - MWD	9,912.25	7,472.29	2,025.98	1,943.68	24.616	CC, ES
ROSS 2-4-19 - CPR - MWD	10,400.00	7,450.00	2,083.81	1,995.99	23.729	SF
ROSS 4-2-19 - CPR - MWD	8,673.05	7,636.70	887.11	820.74	13.367	CC
ROSS 4-2-19 - CPR - MWD	8,700.00	7,636.17	887.52	820.51	13.244	ES
ROSS 4-2-19 - CPR - MWD	8,900.00	7,632.22	915.67	843.96	12.769	SF
SAWDEY 21-30 - KMG - MWD	13,960.11	7,468.30	748.77	599.59	5.019	CC, ES
SAWDEY 21-30 - KMG - MWD	14,000.00	7,468.14	749.83	600.03	5.006	SF
SAWDEY 22-30 - KMG - MWD	15,189.97	7,443.04	2,124.09	1,949.17	12.143	CC
SAWDEY 22-30 - KMG - MWD	15,200.00	7,442.76	2,124.11	1,949.01	12.131	ES
SAWDEY 22-30 - KMG - MWD	15,400.00	7,437.28	2,134.44	1,956.42	11.990	SF
SAWDEY 31-30 - KMG - MWD	13,966.10	7,513.90	3,325.31	3,175.54	22.203	CC
SAWDEY 31-30 - KMG - MWD	14,000.00	7,513.44	3,325.48	3,175.15	22.120	ES
SAWDEY 31-30 - KMG - MWD	14,700.00	7,503.70	3,405.32	3,245.72	21.337	SF
SAWDEY 32-30 - KMG - MWD	15,406.15	7,579.30	3,309.75	3,126.79	18.090	CC
SAWDEY 32-30 - KMG - MWD	15,500.00	7,580.87	3,311.08	3,126.15	17.905	ES
SAWDEY 32-30 - KMG - MWD	16,100.00	7,590.37	3,381.68	3,187.17	17.386	SF
SAWDEY 5-30 - KMG - MWD	14,774.21	7,427.36	2,894.01	2,728.67	17.503	CC
SAWDEY 5-30 - KMG - MWD	14,800.00	7,425.40	2,894.13	2,728.29	17.451	ES
SAWDEY 5-30 - KMG - MWD	15,300.00	7,385.16	2,941.22	2,767.98	16.977	SF
SAWDEY 6-30 - KMG - MWD	14,646.32	7,387.95	1,351.25	1,190.09	8.384	CC, ES
SAWDEY 6-30 - KMG - MWD	14,700.00	7,388.04	1,352.31	1,190.42	8.353	SF
SAWDEY UNIT 2 - KMG - Gyro	13,629.20	7,316.81	165.75	24.12	1.170	Level 3, CC, ES, SF
SHAW 12-29A - KMG - Gyro	14,548.50	7,288.88	2,589.22	2,431.67	16.435	CC
SHAW 12-29A - KMG - Gyro	14,600.00	7,287.70	2,589.73	2,431.32	16.348	ES
SHAW 12-29A - KMG - Gyro	14,900.00	7,281.21	2,612.96	2,450.54	16.088	SF
TEGELER 11-30 - KMG - Gyro	15,890.26	7,297.18	1,413.38	1,232.43	7.811	CC
TEGELER 11-30 - KMG - Gyro	15,900.00	7,297.25	1,413.41	1,232.30	7.804	ES
TEGELER 11-30 - KMG - Gyro	16,000.00	7,297.98	1,417.63	1,235.22	7.771	SF

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



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

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
Existing Wells (Regnier Farms)						
WILLIAMS 13-20 - KMG - MWD	11,882.31	7,594.80	2,455.21	2,332.62	20.028	CC
WILLIAMS 13-20 - KMG - MWD	11,900.00	7,594.64	2,455.27	2,332.29	19.964	ES
WILLIAMS 13-20 - KMG - MWD	12,500.00	7,589.50	2,531.71	2,398.25	18.971	SF
WILLIAMS 18-16 - CPR - Gyro	6,581.59	6,500.53	1,084.30	1,038.03	23.434	CC, ES
WILLIAMS 18-16 - CPR - Gyro	6,700.00	6,624.35	1,091.44	1,044.38	23.191	SF
WILLIAMS 24-18 - CPR - Gyro	0.00	0.00	1,603.80			
WILLIAMS 24-18 - CPR - Gyro	6,650.00	6,665.25	1,630.20	1,583.06	34.582	ES
WILLIAMS 24-18 - CPR - Gyro	7,000.00	6,982.67	1,656.84	1,607.79	33.773	SF
WILLIAMS 34-18 - CPR - MWD	6,594.77	6,680.76	404.23	356.63	8.492	CC
WILLIAMS 34-18 - CPR - MWD	6,600.00	6,686.04	404.25	356.61	8.486	ES
WILLIAMS 34-18 - CPR - MWD	6,650.00	6,736.50	406.19	358.26	8.474	SF
WILLIAMS 35-20 - KMG - MWD	12,473.21	7,398.21	3,122.62	2,997.41	24.940	CC
WILLIAMS 35-20 - KMG - MWD	12,500.00	7,398.27	3,122.73	2,997.04	24.843	ES
WILLIAMS 35-20 - KMG - MWD	13,200.00	7,399.76	3,206.08	3,070.18	23.592	SF
WILLIAMS 4-29 - KMG - MWD	13,201.99	7,368.72	2,463.53	2,328.25	18.210	CC, ES
WILLIAMS 4-29 - KMG - MWD	13,700.00	7,365.82	2,513.36	2,371.32	17.695	SF
WOOLLEY-BECKY 2E-7H-E168 - CPR - MWD	22,712.55	14,800.00	2,158.64	1,802.72	6.065	CC, ES, SF
WOOLLEY-BECKY 2F-7H-E168 - CPR - MWD	22,712.55	14,555.00	1,798.59	1,466.11	5.410	CC, ES, SF
WOOLLEY-BECKY 2G-7H-E168 - CPR - MWD	22,712.55	15,260.00	1,576.19	1,265.67	5.076	CC, ES, SF
WOOLLEY-BECKY 2H-7H-E168 - CPR - MWD	22,712.55	15,075.00	1,273.69	1,013.46	4.894	CC, ES, SF
<b>Regnier Farms Pad</b>						
REGNIER FARMS 1A-19H-B268 - Wellbore #1 - Design	200.00	200.00	30.00	29.01	30.213	CC, ES
REGNIER FARMS 1A-19H-B268 - Wellbore #1 - Design	22,712.55	22,699.70	705.25	154.96	1.282	Level 3, SF
REGNIER FARMS 1B-19H-B268 - Wellbore #1 - Design	203.63	203.63	20.00	18.98	19.628	CC
REGNIER FARMS 1B-19H-B268 - Wellbore #1 - Design	300.00	299.72	20.35	18.64	11.917	ES
REGNIER FARMS 1B-19H-B268 - Wellbore #1 - Design	22,712.55	22,925.32	545.79	32.31	1.063	Level 3, SF
REGNIER FARMS 1C-19H-B268 - Wellbore #1 - Design	300.00	300.00	10.00	8.29	5.848	CC
REGNIER FARMS 1C-19H-B268 - Wellbore #1 - Design	22,712.55	22,794.29	297.40	-234.94	0.559	Level 1, ES, SF
REGNIER FARMS 1E-19H-B268 - Wellbore #1 - Design	385.94	385.94	10.00	7.67	4.298	CC
REGNIER FARMS 1E-19H-B268 - Wellbore #1 - Design	19,900.00	20,003.01	177.48	-229.69	0.436	Level 1, SF
REGNIER FARMS 1E-19H-B268 - Wellbore #1 - Design	20,400.00	20,496.67	201.33	-231.71	0.465	Level 1, ES
REGNIER FARMS 1F-19H-B268 - Wellbore #1 - Design	300.00	299.00	20.00	18.29	11.721	CC
REGNIER FARMS 1F-19H-B268 - Wellbore #1 - Design	350.00	348.71	20.35	18.29	9.866	ES
REGNIER FARMS 1F-19H-B268 - Wellbore #1 - Design	22,712.55	22,996.52	639.15	115.69	1.221	Level 3, SF
REGNIER FARMS 1G-19H-B268 - Wellbore #1 - Design	200.00	199.00	30.00	29.01	30.322	CC, ES
REGNIER FARMS 1G-19H-B268 - Wellbore #1 - Design	22,712.55	22,756.35	700.09	148.87	1.270	Level 3, SF
REGNIER FARMS 1H-19H-B268 - Wellbore #1 - Design	204.68	203.68	40.00	38.98	39.103	CC
REGNIER FARMS 1H-19H-B268 - Wellbore #1 - Design	300.00	298.36	40.39	38.69	23.723	ES
REGNIER FARMS 1H-19H-B268 - Wellbore #1 - Design	22,712.55	22,891.17	1,018.80	469.59	1.855	SF
REGNIER FARMS 1I-19H-B268 - Wellbore #1 - Design #	200.00	199.00	50.00	49.01	50.536	CC, ES
REGNIER FARMS 1I-19H-B268 - Wellbore #1 - Design #	22,712.55	22,843.98	1,330.20	778.78	2.412	SF
REGNIER FARMS 1J-19H-B268 - Wellbore #1 - Design	200.00	199.00	60.00	59.01	60.643	CC, ES
REGNIER FARMS 1J-19H-B268 - Wellbore #1 - Design	22,712.55	23,097.91	1,476.71	931.13	2.707	SF
REGNIER FARMS 1K-19H-B268 - Wellbore #1 - Design	200.00	199.00	70.00	69.01	70.751	CC, ES
REGNIER FARMS 1K-19H-B268 - Wellbore #1 - Design	22,712.55	23,020.79	1,767.29	1,217.10	3.212	SF

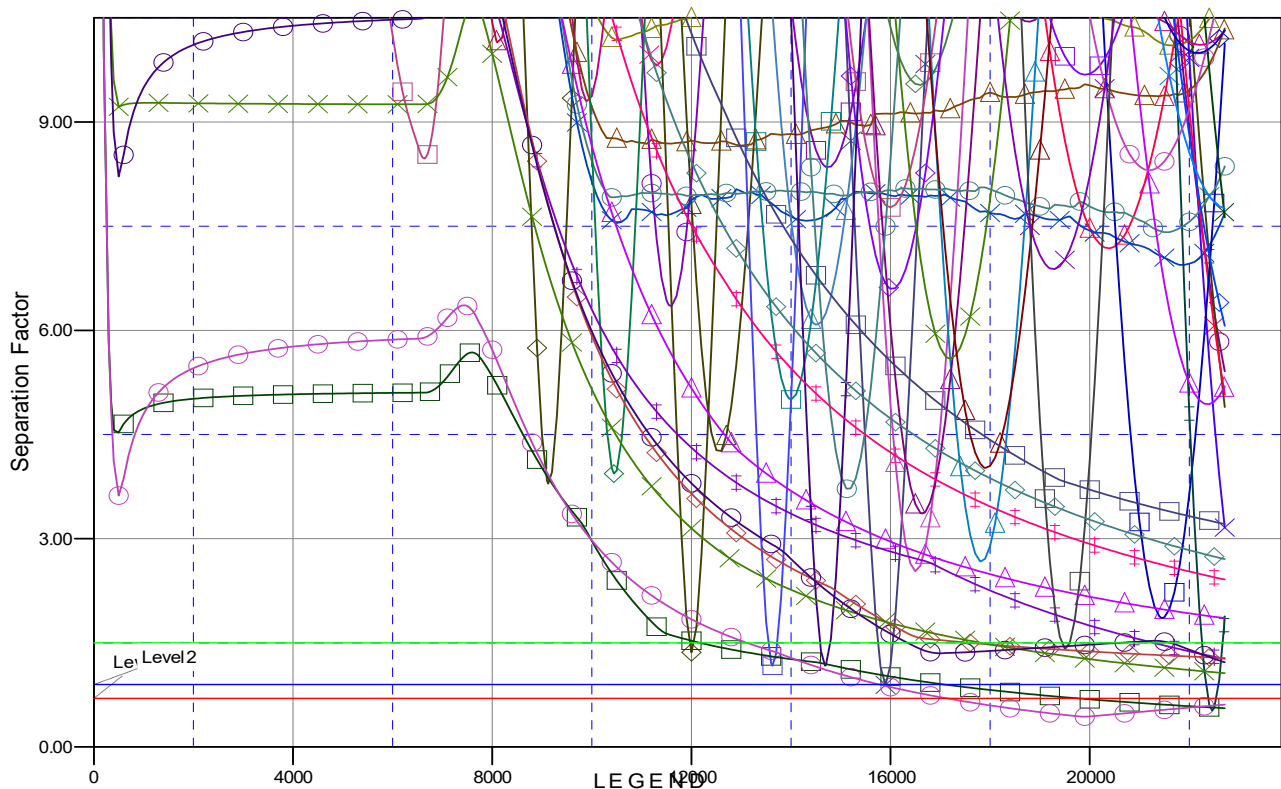
**Company:** Crestone Peak Resources  
**Project:** Sec 19 T2N-R68W  
**Reference Site:** Regnier Farms Pad  
**Site Error:** 0.00 usft  
**Reference Well:** REGNIER FARMS 1D-19H-B268  
**Well Error:** 0.00 usft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Design #1 22Mar18 kjs

**Local Co-ordinate Reference:** Well REGNIER FARMS 1D-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 1D-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 2F-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 3I-32H-K268, CPR, MWD V0	KENYON 8-4-19, CPR, MWD 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 3I-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