



Crestone Peak Resources

Sec 20 T1N-R67W

Herbers Pad

HERBERS 1F-20H-B167

Wellbore #1

Design #1 06Aug18 kjs

Anticollision Summary Report

15 August, 2018

Anticollision Summary Report

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well HERBERS 1F-20H-B167
Project:	Sec 20 T1N-R67W	TVD Reference:	WELL @ 5129.52usft (Original Well Elev)
Reference Site:	Herbers Pad	MD Reference:	WELL @ 5129.52usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	HERBERS 1F-20H-B167	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.15 Single User Db
Reference Design:	Design #1 06Aug18 kjs	Offset TVD Reference:	Offset Datum

Reference	Design #1 06Aug18 kjs		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	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	8/9/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	15,101.76	Design #1 06Aug18 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 (Herbers)						
BLANCHE C 4 - KAUFFMAN - No Survey	1,000.00	1,012.48	984.02	978.85	190.136	CC, ES
BLANCHE C 4 - KAUFFMAN - No Survey	5,100.00	4,986.62	1,698.97	1,669.88	58.401	SF
BLANCHE C HOPKINS 2 - KAUFFMAN - No Survey	1,000.00	1,000.48	1,469.48	1,464.33	285.162	CC, ES
BLANCHE C HOPKINS 2 - KAUFFMAN - No Survey	11,300.00	4,990.00	3,688.62	3,639.78	75.515	SF
GRIFFITHS 14N-20HZ - KMG - MWD	12,457.79	17,328.00	1,947.48	1,688.89	7.531	CC, ES
GRIFFITHS 14N-20HZ - KMG - MWD	12,500.00	17,328.00	1,947.94	1,689.06	7.525	SF
GRIFFITHS 36C-20HZ - KMG - MWD	7,856.05	12,167.00	1,508.69	1,393.87	13.140	CC
GRIFFITHS 36C-20HZ - KMG - MWD	10,900.00	15,185.88	1,577.90	1,385.57	8.204	ES
GRIFFITHS 36C-20HZ - KMG - MWD	12,500.00	16,559.98	1,710.86	1,475.61	7.272	SF
HEINZE 1 - PETERSON - No Survey	11,096.12	5,092.00	2,420.86	2,376.19	54.189	CC
HEINZE 1 - PETERSON - No Survey	11,100.00	5,092.00	2,420.86	2,376.14	54.130	ES
HEINZE 1 - PETERSON - No Survey	12,100.00	5,092.00	2,620.75	2,565.23	47.204	SF
HEINZE 1A - PETERSON - No Survey	1,000.00	957.48	2,450.40	2,445.33	482.750	CC, ES
HEINZE 1A - PETERSON - No Survey	12,000.00	4,980.00	2,828.54	2,779.84	58.084	SF
HEINZE 2 - DENVER EAST - No Survey	12,306.94	5,090.00	2,478.60	2,426.96	47.999	CC, ES
HEINZE 2 - DENVER EAST - No Survey	13,000.00	5,090.00	2,573.67	2,516.55	45.054	SF
HEINZE HERBER 33-20 - PDC ENERGY - Gyro	10,900.35	7,428.54	990.25	906.97	11.890	CC, ES, SF
HEINZE-HERBERS B 1 - PDC ENERGY - Gyro	11,870.37	7,454.49	73.76	-24.93	0.747	Level 2, CC, ES, SF
HERBERS 1 - CPR - Gyro	9,148.74	7,463.51	181.23	120.12	2.966	CC, ES, SF
HERBERS 2 - DENVER EAST - No Survey	1,000.00	973.48	1,237.07	1,231.96	242.246	CC, ES
HERBERS 2 - DENVER EAST - No Survey	5,300.00	5,090.00	1,970.05	1,939.48	64.446	SF
HERBERS 31-20 - KMG - Gyro	2,566.26	2,506.40	105.49	86.62	5.590	CC, ES
HERBERS 31-20 - KMG - Gyro	2,600.00	2,538.90	105.88	86.72	5.527	SF
HOWARD 10-29 - KMG - MWD	15,101.76	7,579.45	1,241.55	1,129.57	11.088	CC, ES, SF
HOWARD 10C-29HZ - KMG - MWD	15,101.76	12,351.00	1,381.63	1,215.91	8.337	CC, ES, SF
HOWARD 24-29 - KMG - MWD	15,101.76	7,646.39	493.70	414.27	6.216	CC, ES, SF
HOWARD 24N-29HZ - KMG - MWD	15,101.76	12,081.00	945.12	879.30	14.360	CC, ES, SF
HOWARD 28N-29HZ - KMG - MWD	13,236.05	14,922.94	1,538.71	1,309.15	6.703	CC, ES
HOWARD 28N-29HZ - KMG - MWD	13,300.00	14,870.20	1,538.89	1,309.20	6.700	SF
HOWARD 30C-28HZ - KMG - MWD	15,000.73	10,805.36	1,306.05	1,125.20	7.222	CC, ES
HOWARD 30C-28HZ - KMG - MWD	15,101.76	10,726.04	1,307.14	1,125.45	7.194	SF
HOWARD 30N-21HZX - KMG - MWD	12,370.53	7,865.31	1,263.02	1,153.40	11.522	CC
HOWARD 30N-21HZX - KMG - MWD	12,400.00	7,843.42	1,263.12	1,153.02	11.473	ES
HOWARD 30N-21HZX - KMG - MWD	12,800.00	7,568.12	1,288.53	1,172.36	11.092	SF
HOWARD 30N-21HZX - KMG Wellbore#2 - MWD	8,148.86	12,103.00	1,261.04	1,148.20	11.176	ES
HOWARD 30N-21HZX - KMG Wellbore#2 - MWD	11,479.35	8,768.00	1,255.74	1,155.34	12.507	CC
HOWARD 30N-21HZX - KMG Wellbore#2 - MWD	12,800.00	7,568.12	1,288.53	1,172.36	11.092	SF

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

Anticollision Summary Report

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Reference Site:	Herbers Pad	MD Reference:	WELL @ 5129.52usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	HERBERS 1F-20H-B167	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.15 Single User Db
Reference Design:	Design #1 06Aug18 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 (Herbers)						
HOWARD 3C-29HZ - KMG - MWD	13,959.15	14,423.76	2,007.90	1,779.92	8.807	CC
HOWARD 3C-29HZ - KMG - MWD	14,000.00	14,390.00	2,007.95	1,779.89	8.805	ES
HOWARD 3C-29HZ - KMG - MWD	14,100.00	14,308.24	2,008.70	1,780.46	8.801	SF
HOWARD 4C-21HZ - KMG - MWD	12,614.71	7,785.00	1,698.19	1,585.61	15.085	CC
HOWARD 4C-21HZ - KMG - MWD	12,700.00	7,743.00	1,699.77	1,585.45	14.868	ES
HOWARD 4C-21HZ - KMG - MWD	13,100.00	7,527.99	1,745.41	1,624.20	14.400	SF
HOWARD 4N-28HZ - KMG - MWD	12,949.39	12,586.00	1,723.45	1,540.35	9.413	CC
HOWARD 4N-28HZ - KMG - MWD	13,000.00	12,586.00	1,724.19	1,539.69	9.345	ES, SF
HOWARD 9-29 - KMG - MWD	15,101.76	7,532.85	1,163.53	1,090.33	15.896	CC, ES, SF
HOWARD 9C-29HZ - KMG - MWD	15,101.76	12,440.00	1,197.24	1,064.17	8.997	CC, ES, SF
HSR-UNDERHILL 15-17A - KMG - Gyro	6,900.00	6,712.44	668.89	611.28	11.611	CC, ES
HSR-UNDERHILL 15-17A - KMG - Gyro	7,000.00	6,812.78	676.11	617.69	11.573	SF
MARK 1 - VESSELS - No Survey	5,297.76	5,063.00	1,143.15	1,109.03	33.509	CC
MARK 1 - VESSELS - No Survey	5,300.00	5,063.00	1,143.15	1,109.02	33.497	ES
MARK 1 - VESSELS - No Survey	5,400.00	5,063.00	1,147.71	1,113.17	33.223	SF
MARK 1-A - CHAPARRAL - No Survey	2,845.62	2,773.19	132.02	115.29	7.888	CC, ES
MARK 1-A - CHAPARRAL - No Survey	2,900.00	2,825.67	132.79	115.68	7.759	SF
NGL C2B - NGL WATER - MWD	15,101.76	9,116.57	2,046.19	1,887.23	12.873	CC, ES, SF
PAUL HEINZE 1 - KPK - No Survey	1,000.00	973.48	2,477.62	2,472.51	485.209	CC, ES
PAUL HEINZE 1 - KPK - No Survey	12,100.00	5,000.00	3,504.77	3,446.60	60.246	SF
SCHEIDT STATE VV16-13 - KMG - Gyro	7,389.93	7,178.53	1,790.43	1,736.85	33.415	CC, ES
SCHEIDT STATE VV16-13 - KMG - Gyro	7,400.00	7,186.92	1,790.47	1,736.88	33.409	SF
UNDERHILL 1N-17HZ - KMG - MWD	7,531.72	7,398.36	746.52	686.97	12.537	CC, ES, SF
UNDERHILL 27C-17HZ - KMG - MWD	7,600.00	7,413.62	318.14	259.39	5.415	ES, SF
UNDERHILL 27C-17HZ - KMG - MWD	7,606.71	7,416.72	318.07	259.43	5.425	CC
UNDERHILL 27N-17HZ - KMG - MWD	7,448.87	7,305.50	83.34	25.02	1.429	Level 3, CC, ES, SF
UNDERHILL 28N-17HZ - KMG - MWD	5,233.36	5,189.72	580.93	533.22	12.175	CC, ES
UNDERHILL 28N-17HZ - KMG - MWD	5,400.00	5,334.30	586.37	537.28	11.943	SF
UNDERHILL 2C-17HZ - KMG - MWD	5,704.66	5,638.62	351.23	300.16	6.877	CC, ES
UNDERHILL 2C-17HZ - KMG - MWD	5,800.00	5,728.92	353.13	301.29	6.812	SF
UNDERHILL STATE 26C-17HZ - KMG - MWD	7,505.55	7,339.88	1,218.33	1,158.14	20.241	CC, ES, SF
UPRR 42 PAN AM AN 4 - KAUFFMAN - No Survey	10,950.63	4,961.00	3,098.93	3,044.09	56.509	CC
UPRR 42 PAN AM AN 4 - KAUFFMAN - No Survey	11,000.00	4,961.00	3,099.33	3,043.77	55.783	ES
UPRR 42 PAN AM AN 4 - KAUFFMAN - No Survey	12,300.00	4,961.00	3,379.97	3,308.49	47.287	SF
UPRR 42 PAN AM N 4 - KAUFFMAN - MWD	2,963.15	3,009.35	1,760.48	1,736.08	72.140	CC
UPRR 42 PAN AM N 4 - KAUFFMAN - MWD	3,200.00	3,237.90	1,761.58	1,735.32	67.084	ES
UPRR 42 PAN AM N 4 - KAUFFMAN - MWD	5,200.00	5,115.00	1,856.45	1,814.23	43.975	SF
UPRR 42 PAN AM-AN 1 - KAUFFMAN - No Survey	12,165.61	4,985.00	3,080.53	3,011.90	44.885	CC
UPRR 42 PAN AM-AN 1 - KAUFFMAN - No Survey	12,200.00	4,985.00	3,080.72	3,011.55	44.536	ES
UPRR 42 PAN AM-AN 1 - KAUFFMAN - No Survey	13,300.00	4,985.00	3,282.76	3,199.68	39.513	SF
UPRR 43 PAN AM GU K 1 - KMG - Gyro	14,515.07	7,428.01	135.82	-7.04	0.951	Level 3, CC, ES, SF
UPRR 43 PAN AM-G 12 - KAUFFMAN - No Survey	15,101.76	5,018.00	2,740.45	2,669.16	38.443	CC, ES, SF
UPRR 43 PAN AM-G 3 - KAUFFMAN - Gyro	14,726.22	7,425.21	2,188.32	2,040.94	14.848	CC, ES
UPRR 43 PAN AM-G 3 - KAUFFMAN - Gyro	14,900.00	7,420.07	2,195.21	2,046.32	14.744	SF
UPRR 43 PAN AM-G 6 - KAUFFMAN - No Survey	13,555.91	5,005.00	3,223.52	3,142.78	39.927	CC
UPRR 43 PAN AM-G 6 - KAUFFMAN - No Survey	13,600.00	5,005.00	3,223.82	3,142.63	39.706	ES
UPRR 43 PAN AM-G 6 - KAUFFMAN - No Survey	14,300.00	5,005.00	3,308.28	3,221.45	38.100	SF
UPRR 43 PAN AM-G 9 - KAUFFMAN - No Survey	15,101.76	4,975.00	3,302.36	3,206.13	34.317	CC, ES, SF
ZARLENGO 1 - UPRC - No Survey	14,939.39	4,960.00	2,518.21	2,442.14	33.103	CC
ZARLENGO 1 - UPRC - No Survey	15,000.00	4,960.00	2,518.94	2,442.06	32.768	ES
ZARLENGO 1 - UPRC - No Survey	15,101.76	4,960.00	2,523.44	2,445.29	32.291	SF
ZARLENGO 3 - ANADARKO - No Survey	14,933.27	4,990.00	2,558.13	2,483.49	34.272	CC, ES
ZARLENGO 3 - ANADARKO - No Survey	15,101.76	4,990.00	2,563.68	2,487.60	33.700	SF

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

Anticollision Summary Report

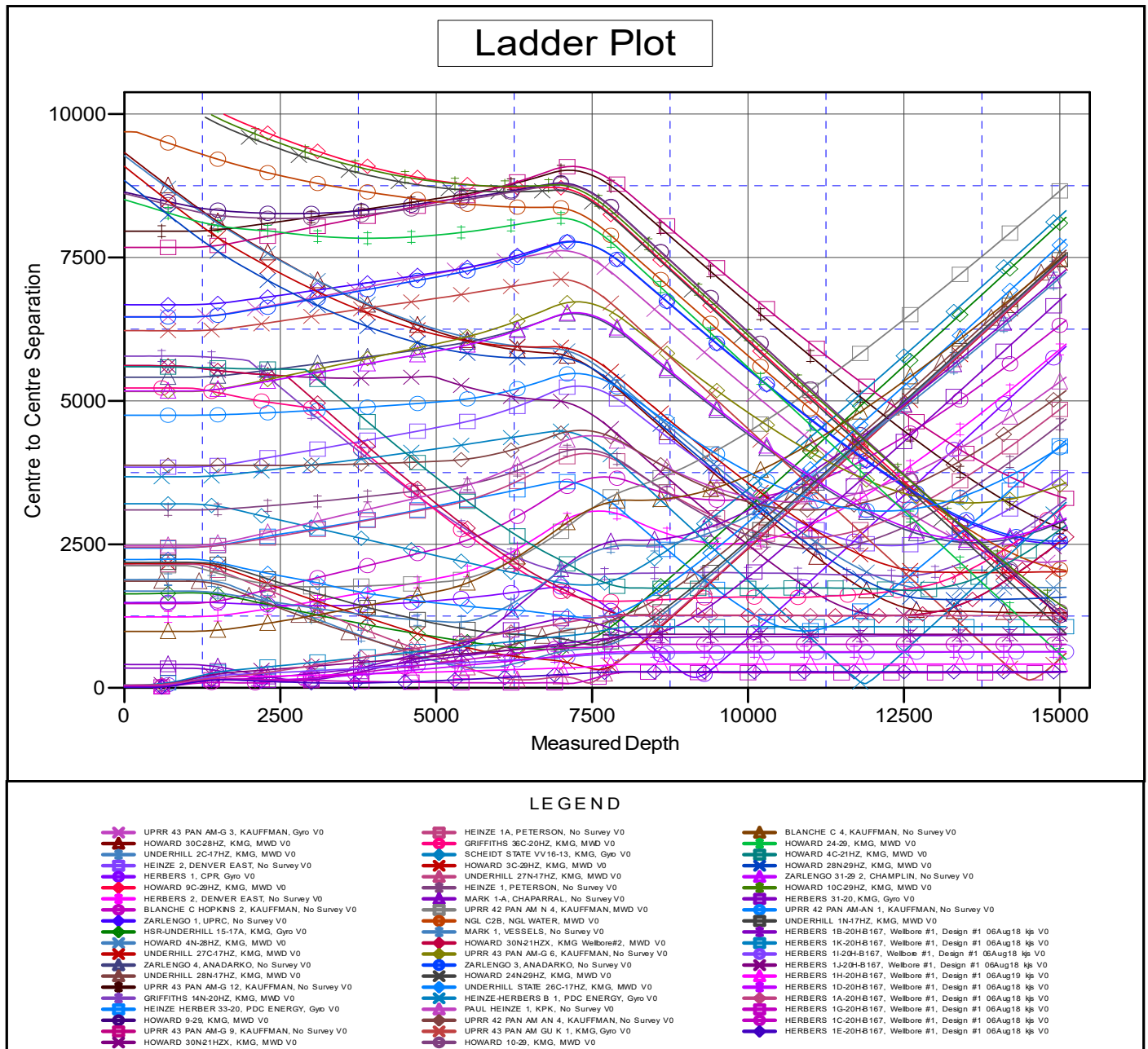
Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well HERBERS 1F-20H-B167
Project:	Sec 20 T1N-R67W	TVD Reference:	WELL @ 5129.52usft (Original Well Elev)
Reference Site:	Herbers Pad	MD Reference:	WELL @ 5129.52usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
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Reference Design:	Design #1 06Aug18 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 (Herbers)						
ZARLENGO 31-29 2 - CHAMPLIN - No Survey	13,640.10	4,990.00	2,571.55	2,508.49	40.780	CC, ES
ZARLENGO 31-29 2 - CHAMPLIN - No Survey	14,200.00	4,990.00	2,631.79	2,564.48	39.098	SF
ZARLENGO 4 - ANADARKO - No Survey	13,620.72	4,965.00	2,529.66	2,464.61	38.884	CC, ES
ZARLENGO 4 - ANADARKO - No Survey	14,400.00	4,965.00	2,646.98	2,573.74	36.146	SF
Herbers Pad						
HERBERS 1A-20H-B167 - Wellbore #1 - Design #1 06Au	116.39	117.22	50.00	49.60	126.107	CC
HERBERS 1A-20H-B167 - Wellbore #1 - Design #1 06Au	300.00	300.64	50.18	48.47	29.309	ES
HERBERS 1A-20H-B167 - Wellbore #1 - Design #1 06Au	15,101.76	14,995.53	1,259.69	1,005.06	4.947	SF
HERBERS 1B-20H-B167 - Wellbore #1 - Design #1 06Au	477.04	478.04	38.96	35.97	13.043	CC
HERBERS 1B-20H-B167 - Wellbore #1 - Design #1 06Au	500.00	500.91	39.00	35.85	12.372	ES
HERBERS 1B-20H-B167 - Wellbore #1 - Design #1 06Au	15,101.76	15,107.63	926.24	672.50	3.650	SF
HERBERS 1C-20H-B167 - Wellbore #1 - Design #1 06Au	566.82	567.76	27.27	23.64	7.506	CC
HERBERS 1C-20H-B167 - Wellbore #1 - Design #1 06Au	600.00	600.76	27.47	23.59	7.091	ES
HERBERS 1C-20H-B167 - Wellbore #1 - Design #1 06Au	15,097.66	14,978.72	757.62	514.18	3.112	SF
HERBERS 1D-20H-B167 - Wellbore #1 - Design #1 06Au	457.69	458.18	18.52	15.67	6.509	CC, ES
HERBERS 1D-20H-B167 - Wellbore #1 - Design #1 06Au	15,099.97	15,011.37	629.84	375.41	2.476	SF
HERBERS 1E-20H-B167 - Wellbore #1 - Design #1 06Au	481.37	481.65	8.18	5.17	2.716	CC
HERBERS 1E-20H-B167 - Wellbore #1 - Design #1 06Au	500.00	500.23	8.27	5.13	2.630	ES
HERBERS 1E-20H-B167 - Wellbore #1 - Design #1 06Au	15,099.97	15,153.15	282.19	39.49	1.163	Level 3, SF
HERBERS 1G-20H-B167 - Wellbore #1 - Design #1 06A	305.73	305.52	10.00	8.25	5.713	CC
HERBERS 1G-20H-B167 - Wellbore #1 - Design #1 06A	400.00	399.73	10.08	7.65	4.154	ES
HERBERS 1G-20H-B167 - Wellbore #1 - Design #1 06A	7,100.00	7,074.41	76.02	11.69	1.182	Level 3, SF
HERBERS 1H-20H-B167 - Wellbore #1 - Design #1 06Au	304.13	303.79	20.00	18.26	11.506	CC
HERBERS 1H-20H-B167 - Wellbore #1 - Design #1 06Au	400.00	399.39	20.33	17.91	8.390	ES
HERBERS 1H-20H-B167 - Wellbore #1 - Design #1 06Au	15,101.76	15,254.06	414.84	170.36	1.697	SF
HERBERS 1I-20H-B167 - Wellbore #1 - Design #1 06Au	300.00	299.59	30.00	28.29	17.560	CC, ES
HERBERS 1I-20H-B167 - Wellbore #1 - Design #1 06Au	15,101.76	15,184.92	629.82	375.54	2.477	SF
HERBERS 1J-20H-B167 - Wellbore #1 - Design #1 06Au	204.54	203.67	40.00	38.98	39.123	CC
HERBERS 1J-20H-B167 - Wellbore #1 - Design #1 06Au	300.00	298.52	40.37	38.67	23.704	ES
HERBERS 1J-20H-B167 - Wellbore #1 - Design #1 06Au	15,101.76	15,501.94	932.98	689.85	3.837	SF
HERBERS 1K-20H-B167 - Wellbore #1 - Design #1 06Au	200.00	199.06	50.00	49.01	50.526	CC, ES
HERBERS 1K-20H-B167 - Wellbore #1 - Design #1 06Au	15,101.76	15,398.17	1,065.51	813.82	4.233	SF

Company:	Crestone Peak Resources	Local Co-ordinate Reference:	Well HERBERS 1F-20H-B167
Project:	Sec 20 T1N-R67W	TVD Reference:	WELL @ 5129.52usft (Original Well Elev)
Reference Site:	Herbers Pad	MD Reference:	WELL @ 5129.52usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	True
Reference Well:	HERBERS 1F-20H-B167	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.15 Single User Db
Reference Design:	Design #1 06Aug18 kjs	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5129.52usft (Original Well E
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: HERBERS 1F-20H-B167
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.38°

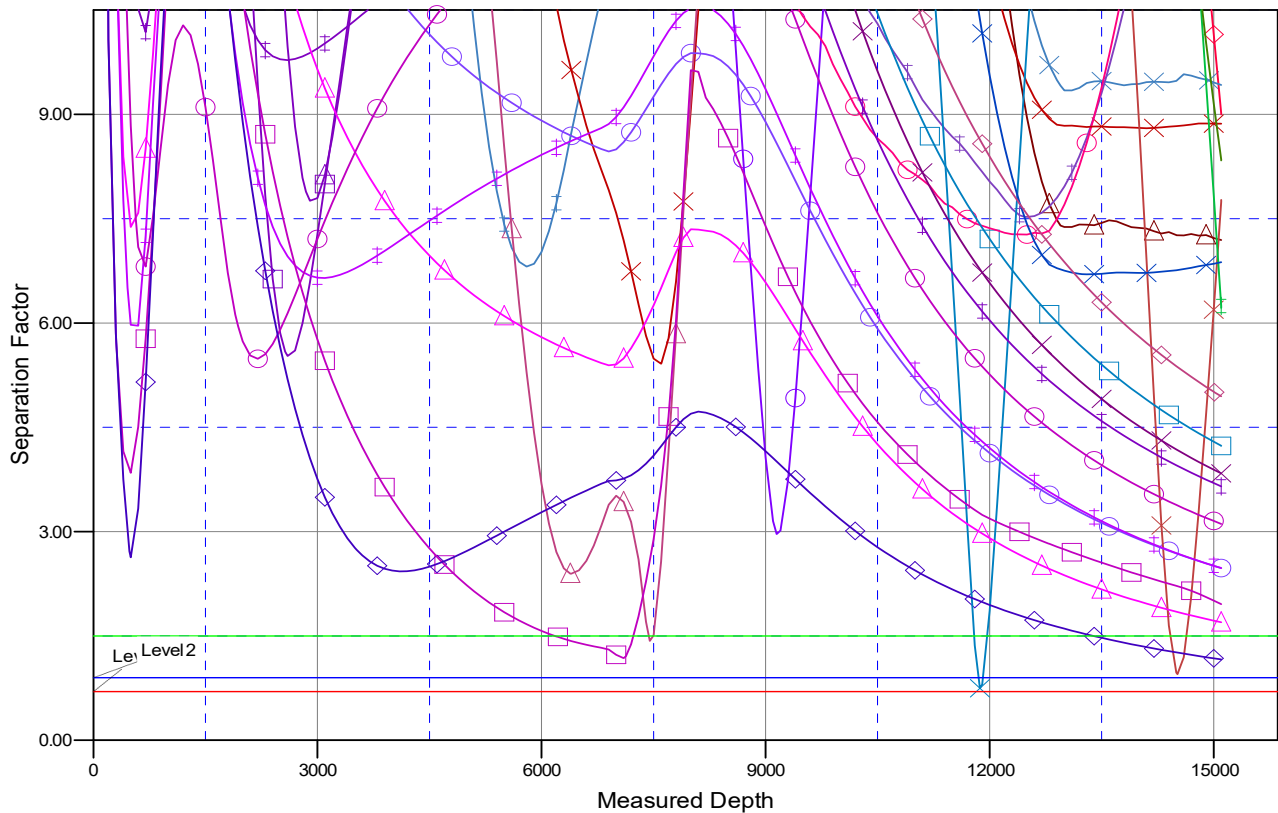


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Project:	Sec 20 T1N-R67W	TVD Reference:	WELL @ 5129.52usft (Original Well Elev)
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Reference Well:	HERBERS 1F-20H-B167	Survey Calculation Method:	Minimum Curvature
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Reference Depths are relative to WELL @ 5129.52usft (Original Well E
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: HERBERS 1F-20H-B167
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.38°

Separation Factor Plot



LEGEND

UPRR 43 PAN AM-G 3, KAUFFMAN, Gyro V0	HEINZE 1A, PETERSON, No Survey V0	BLANCHE C 4, KAUFFMAN, No Survey V0
HOWARD 30C28HZ, KMG, MWD V0	GRIFFITHS 3C-20HZ, KMG, MWD V0	HOWARD 24-28, KMG, MWD V0
UNDERHILL 2C47HZ, KMG, MWD V0	SCHIEDT STATE VV16-13, KMG, Gyro V0	HOWARD 4C21HZ, KMG, MWD V0
HEINZE 2, DENVER EAST, No Survey V0	HOWARD 3C-28HZ, KMG, MWD V0	HOWARD 28N29HZ, KMG, MWD V0
HERBERS 1, CPR, Gyro V0	UNDERHILL 27N47HZ, KMG, MWD V0	ZARLENGO 31-29 2, CHAMPLIN, No Survey V0
HOWARD 9C-20HZ, KMG, MWD V0	HEINZE 1, PETERSON, No Survey V0	HOWARD 10C29HZ, KMG, MWD V0
HERBERS 2, DENVER EAST, No Survey V0	MARK 1-A, CHAPARRAL, No Survey V0	HERBERS 31-20, KMG, Gyro V0
BLANCHE C HOPKINS 2, KAUFFMAN, No Survey V0	UPRR 42 PAN AM N 4, KAUFFMAN, MWD V0	UPRR 42 PAN AM-N 1, KAUFFMAN, No Survey V0
ZARLENGO 1, UPRC, No Survey V0	NCL C28, NGL WATER, MWD V0	UNDERHILL 1N47HZ, KMG, MWD V0
HSR-UNDERHILL 15-17A, KMG, Gyro V0	MARK 1, VESSELS, No Survey V0	HERBERS 1B-20H8167, Wellbore #1, Design #1 06Aug18 kjs V0
HOWARD 4N-28HZ, KMG, MWD V0	HOWARD 30N21HZX, KMG Wellbore#2, MWD V0	HERBERS 1K-20H8167, Wellbore #1, Design #1 06Aug18 kjs V0
UNDERHILL 27C47HZ, KMG, MWD V0	UPRR 43 PAN AM-G 6, KAUFFMAN, No Survey V0	HERBERS 1J-20H8167, Wellbore #1, Design #1 06Aug18 kjs V0
ZARLENGO 4, ANADARKO, No Survey V0	ZARLENGO 3, ANADARKO, No Survey V0	HERBERS 1I-20H8167, Wellbore #1, Design #1 06Aug18 kjs V0
UNDERHILL 28N47HZ, KMG, MWD V0	HOWARD 24N29HZ, KMG, MWD V0	HERBERS 1H-20H8167, Wellbore #1, Design #1 06Aug18 kjs V0
UPRR 43 PAN AM-G 12, KAUFFMAN, No Survey V0	UNDERHILL STATE 28C-17HZ, KMG, MWD V0	HERBERS 10-20H8167, Wellbore #1, Design #1 06Aug18 kjs V0
GRIFFITHS 14N-20HZ, KMG, MWD V0	HEINZE-HERBERS B 1, PDC ENERGY, Gyro V0	HERBERS 1A-20H8167, Wellbore #1, Design #1 06Aug18 kjs V0
HEINZE HERBER 33-20, PDC ENERGY, Gyro V0	PAUL HEINZE 1, KPC, No Survey V0	HERBERS 1G-20H8167, Wellbore #1, Design #1 06Aug18 kjs V0
HOWARD 9-29, KMG, MWD V0	UPRR 42 PAN AM AN 4, KAUFFMAN, No Survey V0	HERBERS 1C-20H8167, Wellbore #1, Design #1 06Aug18 kjs V0
UPRR 43 PAN AM-G 9, KAUFFMAN, No Survey V0	UPRR 43 PAN AM GU K 1, KMG, Gyro V0	HERBERS 1E-20H8167, Wellbore #1, Design #1 06Aug18 kjs V0
HOWARD 30N21HZX, KMG, MWD V0	HOWARD 10-29, KMG, MWD V0	