

SandRidge Energy

North Park Basin

T7N-R80W-S9

Janet 0780 3-16H21

Wellbore #1

Design #1

Anticollision Summary Report

18 December, 2017

SandRidge Energy

Anticollision Summary Report

Company:	SandRidge Energy	Local Co-ordinate Reference:	Well Janet 0780 3-16H21
Project:	North Park Basin	TVD Reference:	WELL @ 8151.0usft (Original Well Elev)
Reference Site:	T7N-R80W-S9	MD Reference:	WELL @ 8151.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Janet 0780 3-16H21	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDMProd
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference	Design #1			
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		WARNING: There is hidden tight data in this project	
Interpolation Method:	Stations	Error Model:		ISCWSA
Depth Range:	Unlimited	Scan Method:		Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 usft	Error Surface:		Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:		Not applied

Survey Tool Program		Date	12/18/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	17,918.8	Design #1 (Wellbore #1)	Sperry MWD	Fixed:v2:standard declination	

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						
T7N-R80W-S16						
Pintail SWD 0780 1-16D - Wellbore #1 - 33 deg	8,761.1	8,465.6	779.5	698.7	9.648	CC, ES
Pintail SWD 0780 1-16D - Wellbore #1 - 33 deg	8,900.0	8,382.1	787.3	705.0	9.562	SF
Pintail SWD 0780 2-16D - Wellbore #1 - Design #1	11,571.7	6,798.6	2,260.0	2,174.5	26.454	CC
Pintail SWD 0780 2-16D - Wellbore #1 - Design #1	11,600.0	6,800.1	2,260.1	2,174.0	26.238	ES
Pintail SWD 0780 2-16D - Wellbore #1 - Design #1	12,500.0	6,849.8	2,442.6	2,337.2	23.174	SF
Pintail SWD 0780 3-16D - Wellbore #1 - Design #1	11,992.7	7,393.8	1,604.9	1,508.3	16.613	CC
Pintail SWD 0780 3-16D - Wellbore #1 - Design #1	12,000.0	7,394.8	1,604.9	1,508.2	16.583	ES
Pintail SWD 0780 3-16D - Wellbore #1 - Design #1	12,500.0	7,466.5	1,681.6	1,574.4	15.683	SF
T7N-R80W-S9						
Castle 0780 5-17H20 - Wellbore #1 - Design #1	2,500.0	2,483.0	519.2	508.3	47.506	CC
Castle 0780 5-17H20 - Wellbore #1 - Design #1	2,600.0	2,581.2	519.3	508.0	45.701	ES
Castle 0780 5-17H20 - Wellbore #1 - Design #1	17,919.2	18,926.2	3,309.8	2,902.8	8.133	SF
Castle 0780 6-17H20 - Wellbore #1 - Design #1	2,608.8	2,593.8	512.5	501.0	44.872	CC
Castle 0780 6-17H20 - Wellbore #1 - Design #1	2,800.0	2,781.7	512.9	500.6	41.882	ES
Castle 0780 6-17H20 - Wellbore #1 - Design #1	17,919.2	18,590.6	2,649.4	2,243.0	6.519	SF
Castle 0780 7-17H20 - Wellbore #1 - Design #1	2,800.0	2,785.0	506.1	493.8	41.211	CC
Castle 0780 7-17H20 - Wellbore #1 - Design #1	2,900.0	2,881.5	506.4	493.7	39.832	ES
Castle 0780 7-17H20 - Wellbore #1 - Design #1	17,919.2	18,366.1	1,988.9	1,581.8	4.885	SF
Castle 0780 8-17H20 - Wellbore #1 - Design #1	3,538.8	3,520.3	500.0	484.5	32.075	CC
Castle 0780 8-17H20 - Wellbore #1 - Design #1	3,600.0	3,577.1	500.2	484.3	31.567	ES
Castle 0780 8-17H20 - Wellbore #1 - Design #1	17,919.2	18,294.6	1,328.6	920.1	3.253	SF
Gregory 0780 1-9H - Wellbore #1 - Wellbore #1	3,781.7	3,779.1	237.3	220.9	14.518	CC
Gregory 0780 1-9H - Wellbore #1 - Wellbore #1	3,800.0	3,797.4	237.3	220.9	14.449	ES
Gregory 0780 1-9H - Wellbore #1 - Wellbore #1	4,100.0	4,096.3	245.5	227.7	13.778	SF
Gregory 0780 2-9H - Wellbore #1 - Design #1	7,501.9	7,465.2	8.4	-26.1	0.244	Level 1, CC, ES, SF
Gregory 0780 3-9H - Wellbore #1 - Design #1	5,117.5	5,070.3	316.7	292.3	12.979	CC
Gregory 0780 3-9H - Wellbore #1 - Design #1	5,200.0	5,152.1	316.9	292.1	12.789	ES
Gregory 0780 3-9H - Wellbore #1 - Design #1	6,000.0	5,945.1	337.4	309.5	12.079	SF
Gregory 0780 4-9H - Wellbore #1 - Design #1	2,500.0	2,483.0	323.2	312.3	29.575	CC
Gregory 0780 4-9H - Wellbore #1 - Design #1	2,700.0	2,681.7	323.6	311.8	27.442	ES
Gregory 0780 4-9H - Wellbore #1 - Design #1	7,800.0	7,533.8	844.9	799.3	18.549	SF
Janet 0780 1-16H21 - Wellbore #1 - Design #1	3,500.0	3,500.0	30.0	14.5	1.941	Level 4, CC
Janet 0780 1-16H21 - Wellbore #1 - Design #1	3,600.0	3,600.0	30.4	14.5	1.911	Level 4, ES
Janet 0780 1-16H21 - Wellbore #1 - Design #1	17,919.2	17,485.9	675.8	284.2	1.726	Level 4, SF
Janet 0780 2-16H21 - Wellbore #1 - Design #1	3,500.0	3,500.0	15.0	-0.5	0.971	Level 1, CC
Janet 0780 2-16H21 - Wellbore #1 - Design #1	3,600.0	3,600.0	15.4	-0.5	0.970	Level 1, ES, SF

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

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Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

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Offset Well - Wellbore - Design						
T7N-R80W-S9						
Janet 0780 4-16H21 - Wellbore #1 - Design #1	2,800.0	2,800.0	15.0	2.7	1.219	Level 2, CC
Janet 0780 4-16H21 - Wellbore #1 - Design #1	2,900.0	2,899.9	15.2	2.4	1.189	Level 2, ES, SF
Mutual 0780 5-8H - Wellbore #1 - Design #1	2,917.6	2,901.9	648.9	636.2	50.888	CC
Mutual 0780 5-8H - Wellbore #1 - Design #1	3,000.0	2,983.2	649.1	635.9	49.427	ES
Mutual 0780 5-8H - Wellbore #1 - Design #1	4,000.0	3,903.2	728.6	709.8	38.718	SF
Mutual 0780 6-8H - Wellbore #1 - Design #1	3,905.9	3,911.9	622.9	605.2	35.051	CC, ES
Mutual 0780 6-8H - Wellbore #1 - Design #1	4,500.0	4,441.1	680.5	659.1	31.902	SF
Mutual 0780 7-8H - Wellbore #1 - Design #1	4,397.1	4,397.0	623.4	603.6	31.534	CC
Mutual 0780 7-8H - Wellbore #1 - Design #1	4,400.0	4,399.5	623.4	603.6	31.507	ES
Mutual 0780 7-8H - Wellbore #1 - Design #1	4,900.0	4,838.2	668.5	645.6	29.262	SF
Mutual 0780 8-8H - Wellbore #1 - Design #1	4,774.0	4,780.8	607.4	585.7	27.921	CC
Mutual 0780 8-8H - Wellbore #1 - Design #1	4,800.0	4,804.3	607.5	585.6	27.725	ES
Mutual 0780 8-8H - Wellbore #1 - Design #1	5,300.0	5,256.2	647.8	622.9	26.045	SF

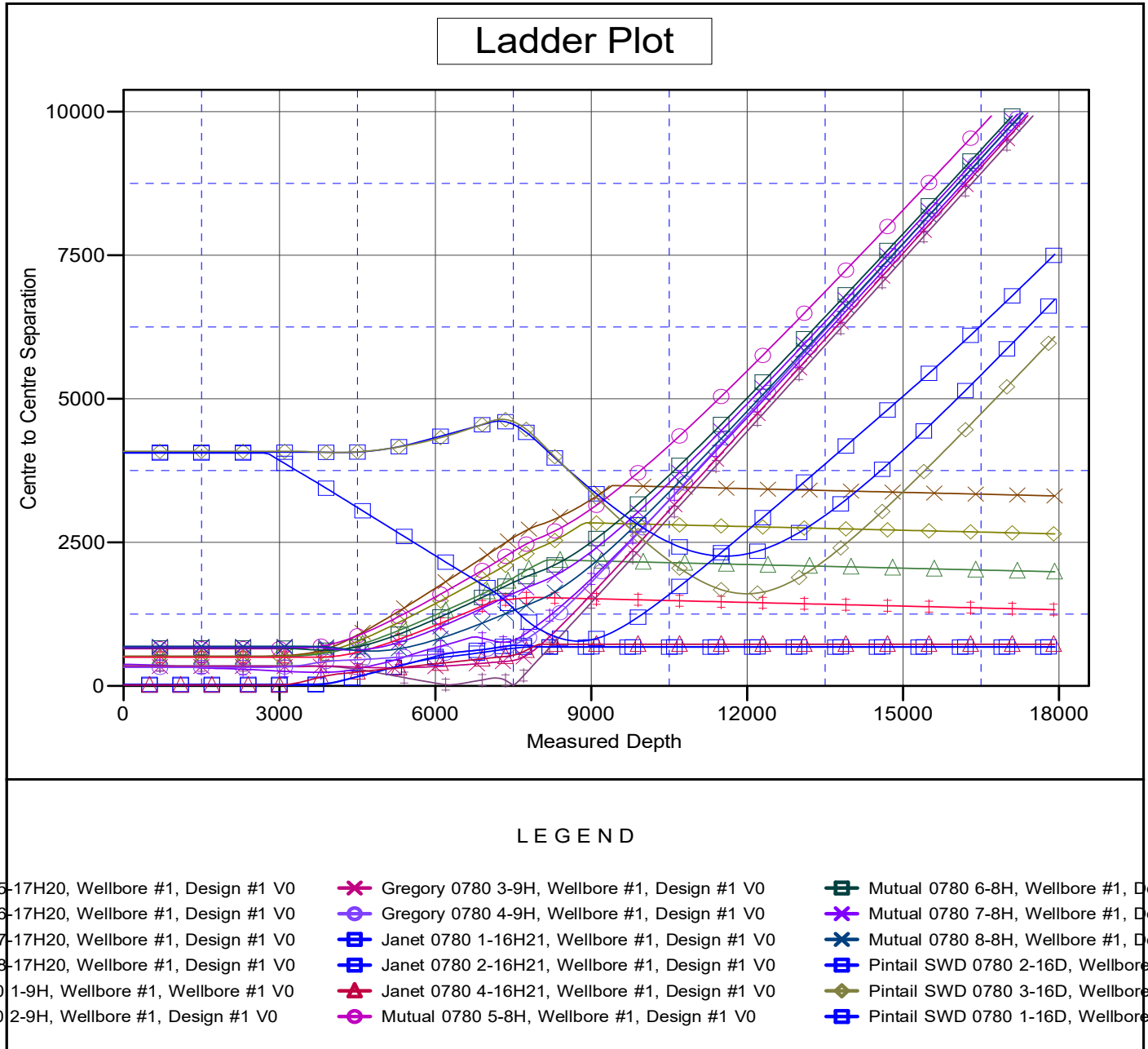
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Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 8151.0usft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Janet 0780 3-16H21
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: -0.57°



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

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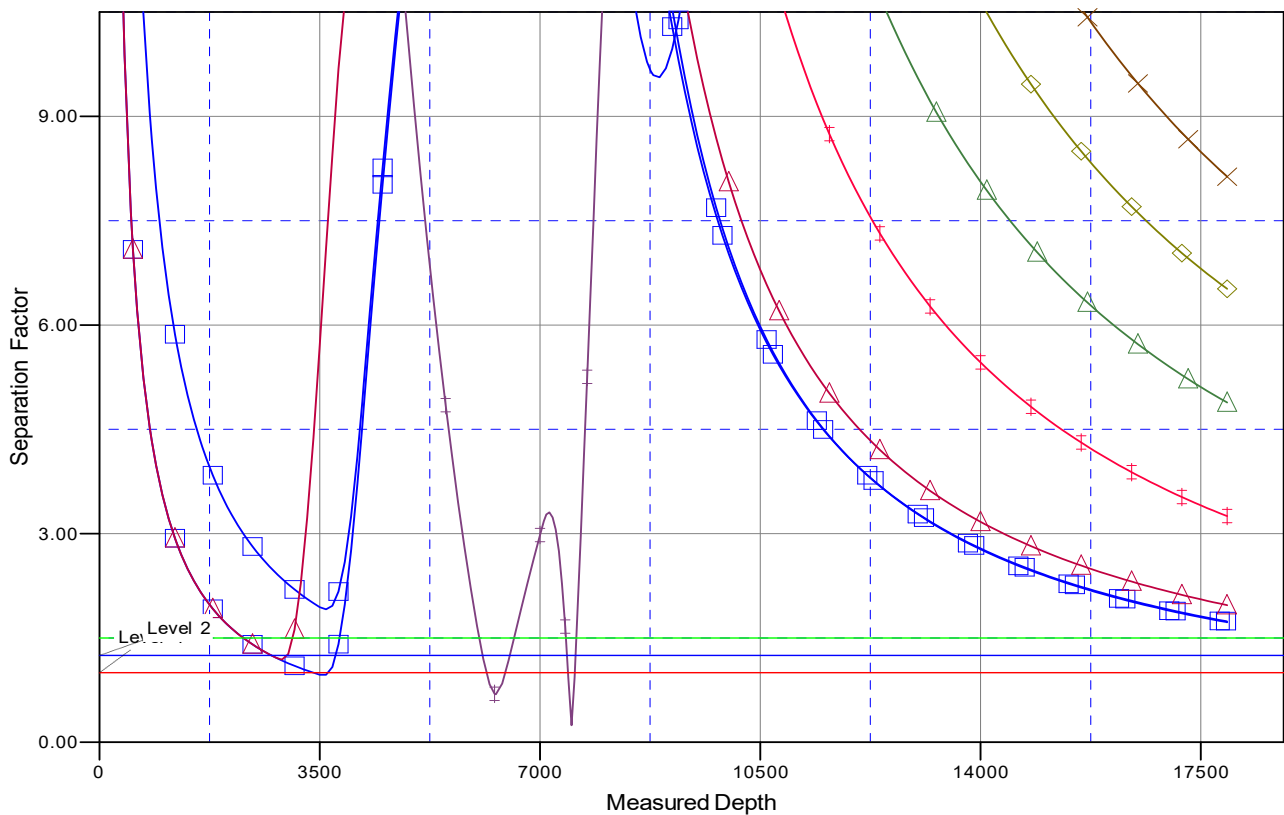
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Separation Factor Plot



LEGEND

5-17H20, Wellbore #1, Design #1 V0	✕ Gregory 0780 3-9H, Wellbore #1, Design #1 V0	⊞ Mutual 0780 6-8H, Wellbore #1, Design #1 V0
6-17H20, Wellbore #1, Design #1 V0	⊞ Gregory 0780 4-9H, Wellbore #1, Design #1 V0	✕ Mutual 0780 7-8H, Wellbore #1, Design #1 V0
7-17H20, Wellbore #1, Design #1 V0	⊞ Janet 0780 1-16H21, Wellbore #1, Design #1 V0	✕ Mutual 0780 8-8H, Wellbore #1, Design #1 V0
8-17H20, Wellbore #1, Design #1 V0	⊞ Janet 0780 2-16H21, Wellbore #1, Design #1 V0	⊞ Pintail SWD 0780 2-16D, Wellbore #1, Design #1 V0
30 1-9H, Wellbore #1, Design #1 V0	⊞ Janet 0780 4-16H21, Wellbore #1, Design #1 V0	⊞ Pintail SWD 0780 3-16D, Wellbore #1, Design #1 V0
30 2-9H, Wellbore #1, Design #1 V0	⊞ Mutual 0780 5-8H, Wellbore #1, Design #1 V0	⊞ Pintail SWD 0780 1-16D, Wellbore #1, Design #1 V0