

# **SandRidge Energy**

**North Park Basin**

**T7N-R80W-S16**

**Evans 0780 5-21H**

**Wellbore #1**

**Design #1**

## **Anticollision Summary Report**

**08 July, 2016**

# SandRidge Energy

## Anticollision Summary Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Evans 0780 5-21H
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	KB @ 8152.0usft
<b>Reference Site:</b>	T7N-R80W-S16	<b>MD Reference:</b>	KB @ 8152.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Evans 0780 5-21H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMProd
<b>Reference Design:</b>	Design #1	<b>Offset TVD Reference:</b>	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:		Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:		Not applied

Survey Tool Program		Date	7/8/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	14,450.1	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
T7N-R80W-S16						
Evans 0780 6-21H - Wellbore #1 - Design #1	7,407.2	7,409.2	15.0	-18.0	0.454	Level 1, CC, ES, SF
Evans 0780 7-21H - Wellbore #1 - Design #1	7,434.8	7,435.8	29.0	-4.2	0.875	Level 1, CC, ES, SF
Evans 0780 8-21H - Wellbore #1 - Design #1	2,600.0	2,600.0	45.0	33.6	3.938	CC
Evans 0780 8-21H - Wellbore #1 - Design #1	2,700.0	2,699.7	45.4	33.5	3.824	ES
Evans 0780 8-21H - Wellbore #1 - Design #1	3,400.0	3,399.4	53.4	38.5	3.585	SF
Ray Ranch 0780 5-16H - Wellbore #1 - Design #1	4,571.1	4,577.4	68.3	48.3	3.408	CC, ES
Ray Ranch 0780 5-16H - Wellbore #1 - Design #1	4,600.0	4,605.4	68.7	48.5	3.406	SF
Ray Ranch 0780 6-16H - Wellbore #1 - Design #1	4,911.4	4,918.9	7.1	-14.5	0.328	Level 1, CC, ES, SF
Ray Ranch 0780 7-16H - Wellbore #1 - Design #1	4,283.7	4,287.9	44.9	26.1	2.387	CC, ES
Ray Ranch 0780 7-16H - Wellbore #1 - Design #1	4,300.0	4,303.8	45.0	26.1	2.384	SF
Ray Ranch 0780 8-16H - Wellbore #1 - Design #1	2,974.1	2,976.3	45.2	32.2	3.482	CC, ES
Ray Ranch 0780 8-16H - Wellbore #1 - Design #1	3,000.0	3,001.8	45.4	32.3	3.468	SF
T7N-R80W-S21						
Evans 0780 1-21H - Wellbore #1 - Design #1	14,450.1	13,192.3	729.5	454.0	2.648	CC, ES, SF
Evans 0780 2-21H - Wellbore #1 - Design #1	9,355.8	8,050.0	1,303.9	1,254.6	26.488	CC
Evans 0780 2-21H - Wellbore #1 - Design #1	14,450.1	13,300.6	1,389.3	1,169.9	6.332	ES, SF
Evans 0780 3-21H - Wellbore #1 - Design #1	9,378.9	7,890.3	1,918.4	1,869.3	39.030	CC
Evans 0780 3-21H - Wellbore #1 - Design #1	14,450.1	13,460.1	2,053.5	1,835.4	9.413	ES, SF
Evans 0780 4-21H - Wellbore #1 - Design #1	9,575.0	7,910.5	2,016.5	1,964.8	38.966	CC
Evans 0780 4-21H - Wellbore #1 - Design #1	9,600.0	7,909.4	2,016.7	1,964.5	38.687	ES
Evans 0780 4-21H - Wellbore #1 - Design #1	14,450.1	13,652.6	2,699.9	2,482.6	12.422	SF
Ray Ranch 0780 1-16H - Wellbore #1 - Design #1	9,344.4	8,590.1	877.0	826.5	17.369	CC
Ray Ranch 0780 1-16H - Wellbore #1 - Design #1	9,400.0	8,550.0	877.4	826.4	17.200	ES
Ray Ranch 0780 1-16H - Wellbore #1 - Design #1	9,900.0	8,218.7	929.4	872.8	16.402	SF
Ray Ranch 0780 2-16H - Wellbore #1 - Design #1	9,796.2	8,195.6	1,515.2	1,459.6	27.220	CC
Ray Ranch 0780 2-16H - Wellbore #1 - Design #1	9,800.0	8,193.3	1,515.2	1,459.5	27.193	ES
Ray Ranch 0780 2-16H - Wellbore #1 - Design #1	10,600.0	7,968.5	1,681.1	1,613.1	24.697	SF
Ray Ranch 0780 3-16H - Wellbore #1 - Design #1	9,921.3	7,936.3	1,894.5	1,837.3	33.077	CC, ES
Ray Ranch 0780 3-16H - Wellbore #1 - Design #1	11,000.0	7,950.0	2,179.9	2,104.0	28.703	SF
Ray Ranch 0780 4-16H - Wellbore #1 - Design #1	2,400.0	2,498.0	2,410.0	2,399.2	224.218	CC, ES
Ray Ranch 0780 4-16H - Wellbore #1 - Design #1	11,800.0	7,707.4	3,254.5	3,165.2	36.417	SF

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

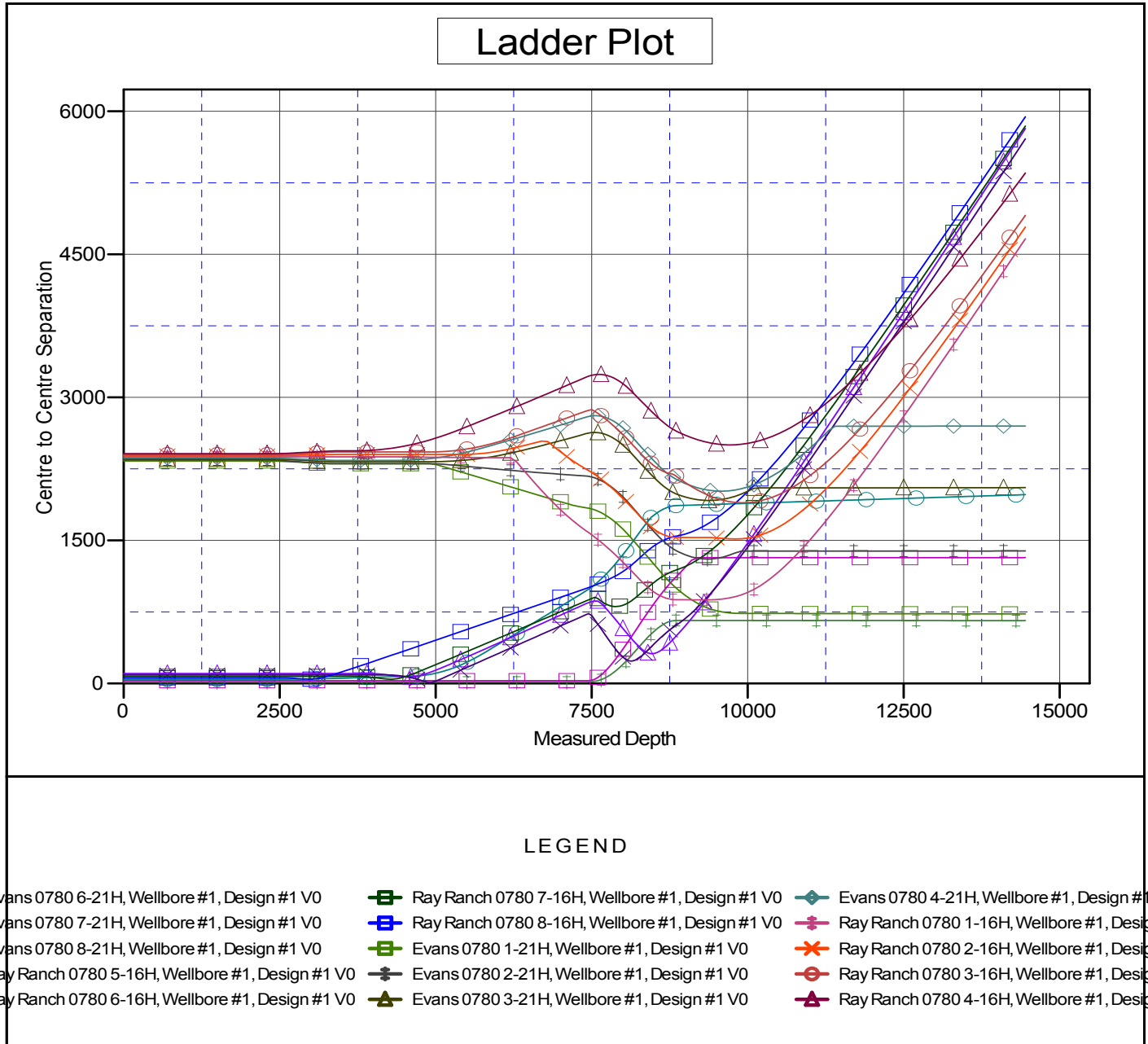
# SandRidge Energy

## Anticollision Summary Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Evans 0780 5-21H
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	KB @ 8152.0usft
<b>Reference Site:</b>	T7N-R80W-S16	<b>MD Reference:</b>	KB @ 8152.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Evans 0780 5-21H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMProd
<b>Reference Design:</b>	Design #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB @ 8152.0usft  
Offset Depths are relative to Offset Datum  
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Evans 0780 5-21H  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: -0.57°



# SandRidge Energy

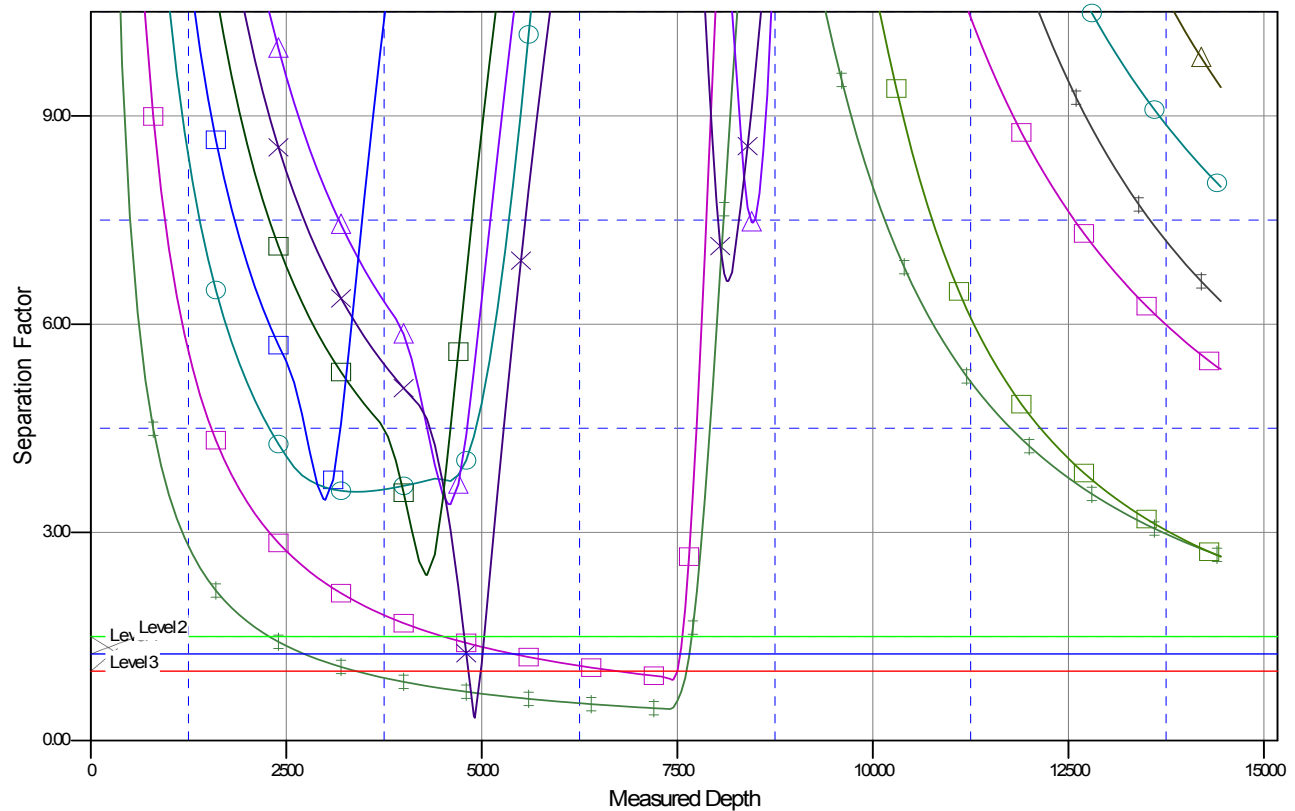
## Anticollision Summary Report

<b>Company:</b>	SandRidge Energy	<b>Local Co-ordinate Reference:</b>	Well Evans 0780 5-21H
<b>Project:</b>	North Park Basin	<b>TVD Reference:</b>	KB @ 8152.0usft
<b>Reference Site:</b>	T7N-R80W-S16	<b>MD Reference:</b>	KB @ 8152.0usft
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Evans 0780 5-21H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDMProd
<b>Reference Design:</b>	Design #1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB @ 8152.0usft  
Offset Depths are relative to Offset Datum  
Central Meridian is 105° 30' 0.000 W

Coordinates are relative to: Evans 0780 5-21H  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: -0.57°

### Separation Factor Plot



### LEGEND

Evans 0780 6-21H, Wellbore #1, Design #1 V0	Ray Ranch 0780 7-16H, Wellbore #1, Design #1 V0	Evans 0780 4-21H, Wellbore #1, Design #1 V0
Evans 0780 7-21H, Wellbore #1, Design #1 V0	Ray Ranch 0780 8-16H, Wellbore #1, Design #1 V0	Ray Ranch 0780 1-16H, Wellbore #1, Design #1 V0
Evans 0780 8-21H, Wellbore #1, Design #1 V0	Evans 0780 1-21H, Wellbore #1, Design #1 V0	Ray Ranch 0780 2-16H, Wellbore #1, Design #1 V0
Ray Ranch 0780 5-16H, Wellbore #1, Design #1 V0	Evans 0780 2-21H, Wellbore #1, Design #1 V0	Ray Ranch 0780 3-16H, Wellbore #1, Design #1 V0
Ray Ranch 0780 6-16H, Wellbore #1, Design #1 V0	Evans 0780 3-21H, Wellbore #1, Design #1 V0	Ray Ranch 0780 4-16H, Wellbore #1, Design #1 V0