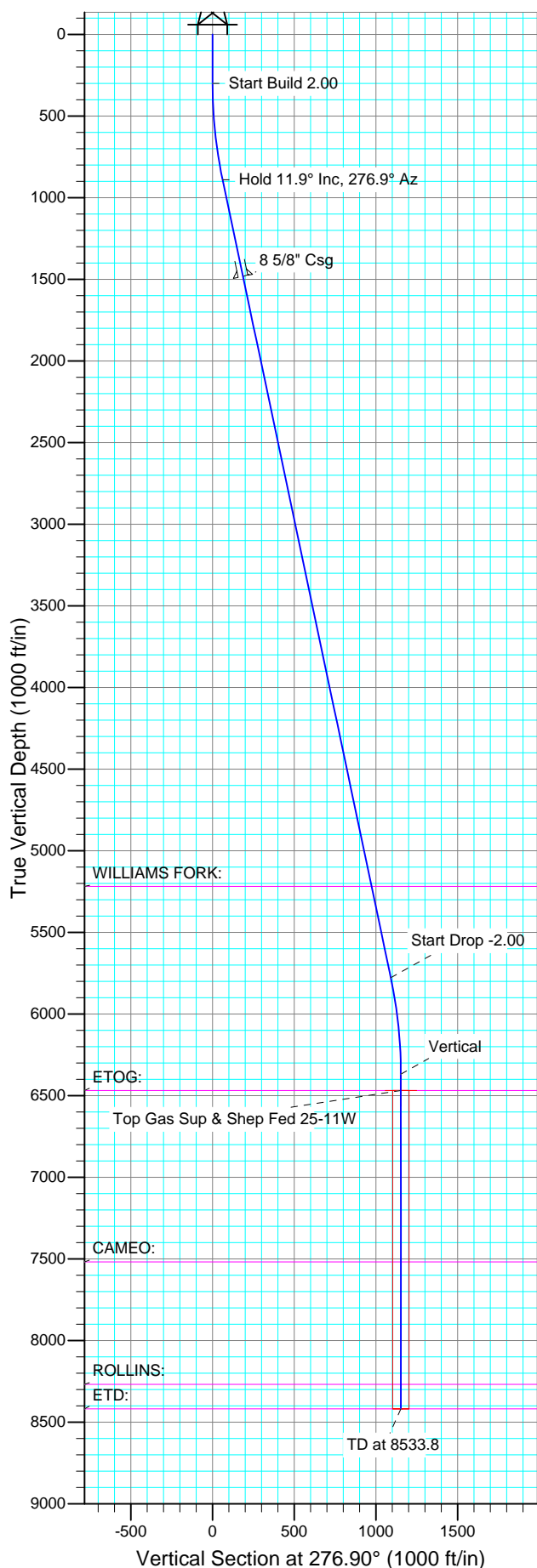




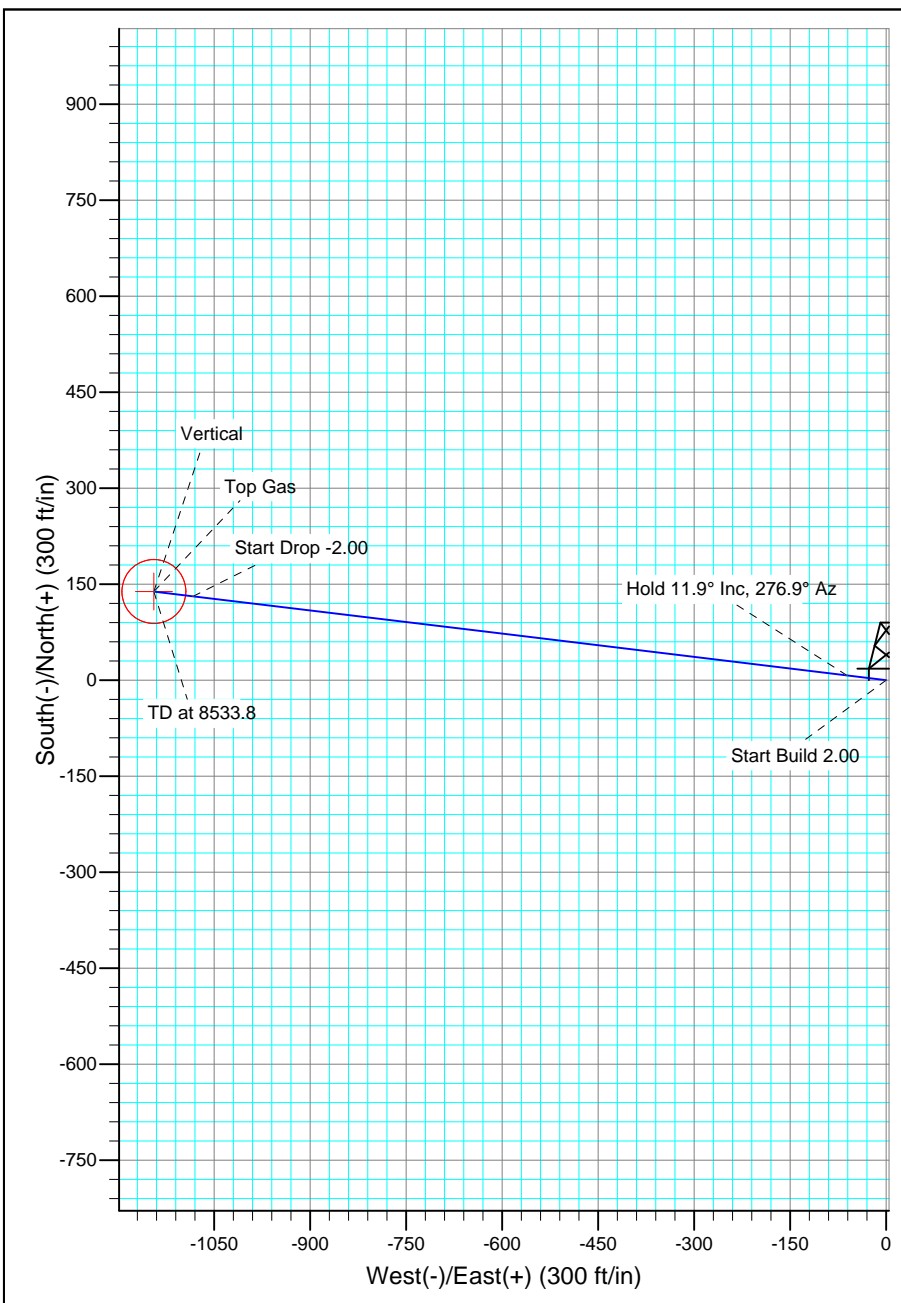
Well Name: Sup & Shep Fed 25-11W  
Surface Location: Sup & Shep Federal Pad  
North American Datum 1983  
US State Plane 1983 , Colorado Central Zone  
Ground Elevation: 8077.0  
WELL @ 8098.0ft (Original Well Elev)  
Easting 2370559.68 Latitude 39° 14' 42.180 N Longitude 107° 43' 21.972 W

Project: Mesa County, CO  
Site: Sup & Shep Federal Pad  
Well: Sup & Shep Fed 25-11W  
Wellbore: Wellbore #1  
Design: Plan #1 13Apr14 kjs

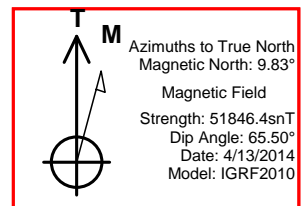
+N/-S 0.0 +E/-W 0.0 Northing 1521844.70  
Slot



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	894.8	11.90	276.90	890.5	7.4	-61.1	2.00	276.90	61.5	
4	5889.0	11.90	276.90	5777.5	131.1	-1083.1	0.00	0.00	1091.0	
5	6483.8	0.00	0.00	6368.0	138.4	-1144.1	2.00	180.00	1152.5	
6	6583.8	0.00	0.00	6468.0	138.4	-1144.1	0.00	0.00	1152.5	Top Gas
7	8533.8	0.00	0.00	8418.0	138.4	-1144.1	0.00	0.00	1152.5	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
5218.0	5317.2	WILLIAMS FORK:
6468.0	6583.8	ETOG:
7518.0	7633.8	CAMEO:
8268.0	8383.8	ROLLINS:
8418.0	8533.8	ETD:



# **Piceance Energy, LLC**

**Mesa County, CO**

**Sup & Shep Federal Pad**

**Sup & Shep Fed 25-11W**

**Wellbore #1**

**Plan: Plan #1 13Apr14 kjs**

## **Standard Planning Report**

**23 April, 2014**

# New Tech

## Planning Report

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Company:</b>	Piceance Energy, LLC	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Project:</b>	Mesa County, CO	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site:</b>	Sup & Shep Federal Pad	<b>North Reference:</b>	True
<b>Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 13Apr14 kjs		

<b>Project</b>	Mesa County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Central Zone		

Site		Sup & Shep Federal Pad			
Site Position: From:		Northing:	1,521,823.28 ft	Latitude:	39° 14' 41.964 N
	Lat/Long	Easting:	2,370,542.15 ft	Longitude:	107° 43' 22.188 W
	Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:

Well	Sup & Shep Fed 25-11W					
Well Position	+N/-S	0.0 ft	Northing:	1,521,844.70 ft	Latitude:	39° 14' 42.180 N
	+E/-W	0.0 ft	Easting:	2,370,559.68 ft	Longitude:	107° 43' 21.972 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	8,077.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	4/13/2014	9.83	65.51	51,846

<b>Design</b>	Plan #1 13Apr14 kjs				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	276.90	

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
894.8	11.90	276.90	890.5	7.4	-61.1	2.00	2.00	0.00	276.90	
5,889.0	11.90	276.90	5,777.5	131.1	-1,083.1	0.00	0.00	0.00	0.00	
6,483.8	0.00	0.00	6,368.0	138.4	-1,144.1	2.00	-2.00	0.00	180.00	
6,583.8	0.00	0.00	6,468.0	138.4	-1,144.1	0.00	0.00	0.00	0.00	Top Gas Sup & Shep
8,533.8	0.00	0.00	8,418.0	138.4	-1,144.1	0.00	0.00	0.00	0.00	

# New Tech

## Planning Report

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Company:</b>	Piceance Energy, LLC	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Project:</b>	Mesa County, CO	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site:</b>	Sup & Shep Federal Pad	<b>North Reference:</b>	True
<b>Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 13Apr14 kjs		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>Start Build 2.00</b>									
400.0	2.00	276.90	400.0	0.2	-1.7	1.7	2.00	2.00	0.00
600.0	6.00	276.90	599.5	1.9	-15.6	15.7	2.00	2.00	0.00
800.0	10.00	276.90	797.5	5.2	-43.2	43.5	2.00	2.00	0.00
894.8	11.90	276.90	890.5	7.4	-61.1	61.5	2.00	2.00	0.00
<b>Hold 11.9° Inc, 276.9° Az</b>									
1,000.0	11.90	276.90	993.5	10.0	-82.6	83.2	0.00	0.00	0.00
1,200.0	11.90	276.90	1,189.2	14.9	-123.5	124.4	0.00	0.00	0.00
1,400.0	11.90	276.90	1,384.9	19.9	-164.5	165.7	0.00	0.00	0.00
1,500.0	11.90	276.90	1,482.7	22.4	-184.9	186.3	0.00	0.00	0.00
<b>8 5/8" Csg</b>									
1,600.0	11.90	276.90	1,580.6	24.9	-205.4	206.9	0.00	0.00	0.00
1,800.0	11.90	276.90	1,776.3	29.8	-246.3	248.1	0.00	0.00	0.00
2,000.0	11.90	276.90	1,972.0	34.8	-287.2	289.3	0.00	0.00	0.00
2,200.0	11.90	276.90	2,167.7	39.7	-328.2	330.6	0.00	0.00	0.00
2,400.0	11.90	276.90	2,363.4	44.7	-369.1	371.8	0.00	0.00	0.00
2,600.0	11.90	276.90	2,559.1	49.6	-410.0	413.0	0.00	0.00	0.00
2,800.0	11.90	276.90	2,754.8	54.6	-451.0	454.2	0.00	0.00	0.00
3,000.0	11.90	276.90	2,950.5	59.5	-491.9	495.5	0.00	0.00	0.00
3,200.0	11.90	276.90	3,146.2	64.5	-532.8	536.7	0.00	0.00	0.00
3,400.0	11.90	276.90	3,341.9	69.4	-573.7	577.9	0.00	0.00	0.00
3,600.0	11.90	276.90	3,537.6	74.4	-614.7	619.1	0.00	0.00	0.00
3,800.0	11.90	276.90	3,733.3	79.3	-655.6	660.4	0.00	0.00	0.00
4,000.0	11.90	276.90	3,929.1	84.3	-696.5	701.6	0.00	0.00	0.00
4,200.0	11.90	276.90	4,124.8	89.2	-737.4	742.8	0.00	0.00	0.00
4,400.0	11.90	276.90	4,320.5	94.2	-778.4	784.0	0.00	0.00	0.00
4,600.0	11.90	276.90	4,516.2	99.1	-819.3	825.3	0.00	0.00	0.00
4,800.0	11.90	276.90	4,711.9	104.1	-860.2	866.5	0.00	0.00	0.00
5,000.0	11.90	276.90	4,907.6	109.0	-901.2	907.7	0.00	0.00	0.00
5,200.0	11.90	276.90	5,103.3	114.0	-942.1	948.9	0.00	0.00	0.00
5,317.2	11.90	276.90	5,218.0	116.9	-966.1	973.1	0.00	0.00	0.00
<b>WILLIAMS FORK:</b>									
5,400.0	11.90	276.90	5,299.0	118.9	-983.0	990.2	0.00	0.00	0.00
5,600.0	11.90	276.90	5,494.7	123.9	-1,023.9	1,031.4	0.00	0.00	0.00
5,800.0	11.90	276.90	5,690.4	128.8	-1,064.9	1,072.6	0.00	0.00	0.00
5,889.0	11.90	276.90	5,777.5	131.1	-1,083.1	1,091.0	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
6,000.0	9.68	276.90	5,886.5	133.5	-1,103.7	1,111.7	2.00	-2.00	0.00
6,200.0	5.68	276.90	6,084.7	136.8	-1,130.2	1,138.5	2.00	-2.00	0.00
6,400.0	1.68	276.90	6,284.2	138.3	-1,142.9	1,151.3	2.00	-2.00	0.00
6,483.8	0.00	0.00	6,368.0	138.4	-1,144.1	1,152.5	2.00	-2.00	99.19
<b>Vertical</b>									
6,583.8	0.00	0.00	6,468.0	138.4	-1,144.1	1,152.5	0.00	0.00	0.00
<b>Top Gas - ETOG: - Top Gas Sup &amp; Shep Fed 25-11W</b>									
6,600.0	0.00	0.00	6,484.2	138.4	-1,144.1	1,152.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,684.2	138.4	-1,144.1	1,152.5	0.00	0.00	0.00
7,000.0	0.00	0.00	6,884.2	138.4	-1,144.1	1,152.5	0.00	0.00	0.00
7,200.0	0.00	0.00	7,084.2	138.4	-1,144.1	1,152.5	0.00	0.00	0.00
7,400.0	0.00	0.00	7,284.2	138.4	-1,144.1	1,152.5	0.00	0.00	0.00
7,600.0	0.00	0.00	7,484.2	138.4	-1,144.1	1,152.5	0.00	0.00	0.00

# New Tech

## Planning Report

<b>Database:</b>	EDM 2003.16 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Company:</b>	Piceance Energy, LLC	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Project:</b>	Mesa County, CO	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site:</b>	Sup & Shep Federal Pad	<b>North Reference:</b>	True
<b>Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 13Apr14 kjs		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,633.8	0.00	0.00	7,518.0	138.4	-1,144.1	1,152.5	0.00	0.00	0.00
<b>CAMEO:</b>									
7,800.0	0.00	0.00	7,684.2	138.4	-1,144.1	1,152.5	0.00	0.00	0.00
8,000.0	0.00	0.00	7,884.2	138.4	-1,144.1	1,152.5	0.00	0.00	0.00
8,200.0	0.00	0.00	8,084.2	138.4	-1,144.1	1,152.5	0.00	0.00	0.00
8,383.8	0.00	0.00	8,268.0	138.4	-1,144.1	1,152.5	0.00	0.00	0.00
<b>ROLLINS:</b>									
8,400.0	0.00	0.00	8,284.2	138.4	-1,144.1	1,152.5	0.00	0.00	0.00
8,533.8	0.00	0.00	8,418.0	138.4	-1,144.1	1,152.5	0.00	0.00	0.00
<b>TD at 8533.8</b>									

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Top Gas Sup & Shep Fe - plan hits target - Circle (radius 50.0)	0.00	0.00	6,468.0	138.4	-1,144.1	1,522,011.09	2,369,419.26	39° 14' 43.548 N	107° 43' 36.516 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
1,500.0	1,482.7	8 5/8" Csg	0	0	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,633.8	7,518.0	CAMEO:			
8,533.8	8,418.0	ETD:			
8,383.8	8,268.0	ROLLINS:			
6,583.8	6,468.0	ETOG:			
5,317.2	5,218.0	WILLIAMS FORK:			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.0	300.0	0.0	0.0	Start Build 2.00
894.8	890.5	7.4	-61.1	Hold 11.9° Inc, 276.9° Az
5,889.0	5,777.5	131.1	-1,083.1	Start Drop -2.00
6,483.8	6,368.0	138.4	-1,144.1	Vertical
6,583.8	6,468.0	138.4	-1,144.1	Top Gas
8,533.8	8,418.0	138.4	-1,144.1	TD at 8533.8

# **Piceance Energy, LLC**

**Mesa County, CO**

**Sup & Shep Federal Pad**

**Sup & Shep Fed 25-11W**

**Wellbore #1**

**Plan #1 13Apr14 kjs**

## **Anticollision Risk Report**

**23 April, 2014**

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 13Apr14 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 10,000.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

Risk Settings		
Vertical Depth for Analysis:	ft	(Below TVD Reference Datum)
Level of Acceptable Risk (1 in):		
Minimum Separation:	0 ft	

<b>Survey Tool Program</b>	<b>Date</b>	4/19/2014		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	8,533.8	Plan #1 13Apr14 kjs (Wellbore #1)	MWD	MWD - Standard

<b>Summary</b>						
<b>Site Name</b>	<b>Reference Measured Depth (ft)</b>	<b>Offset Measured Depth (ft)</b>	<b>Distance Between Centres (ft)</b>	<b>Distance Between Ellipses (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Offset Well - Wellbore - Design</b>						
Sup & Shep Federal Pad						
Sup & Shep Fed 25-18W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	38.1	37.0	35.394 CC, ES	
Sup & Shep Fed 25-18W - Wellbore #1 - Plan #1 13Apr1	600.0	591.0	56.7	54.4	23.762 SF	
Sup & Shep Fed 25-11M - Wellbore #1 - Plan #1 13Apr14	300.0	300.0	6.7	5.7	6.250 CC, ES, SF	
Sup & Shep Fed 25-12M - Wellbore #1 - Plan #1 13Apr14	300.0	300.0	13.5	12.4	12.512 CC, ES	
Sup & Shep Fed 25-12M - Wellbore #1 - Plan #1 13Apr14	400.0	399.1	17.6	16.1	11.693 SF	
Sup & Shep Fed 25-12W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	6.7	5.7	6.257 CC	
Sup & Shep Fed 25-12W - Wellbore #1 - Plan #1 13Apr1	400.0	399.8	7.0	5.5	4.629 ES	
Sup & Shep Fed 25-12W - Wellbore #1 - Plan #1 13Apr1	600.0	599.3	9.2	6.8	3.827 SF	
Sup & Shep Fed 25-13M - Wellbore #1 - Plan #1 13Apr14	300.0	300.0	11.3	10.2	10.500 CC, ES	
Sup & Shep Fed 25-13M - Wellbore #1 - Plan #1 13Apr14	400.0	399.3	14.6	13.1	9.716 SF	
Sup & Shep Fed 25-13W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	15.9	14.8	14.791 CC	
Sup & Shep Fed 25-13W - Wellbore #1 - Plan #1 13Apr1	400.0	399.4	16.2	14.7	10.808 ES	
Sup & Shep Fed 25-13W - Wellbore #1 - Plan #1 13Apr1	700.0	697.4	23.3	20.4	8.049 SF	
Sup & Shep Fed 25-14M - Wellbore #1 - Plan #1 13Apr14	300.0	300.0	14.8	13.8	13.785 CC, ES	
Sup & Shep Fed 25-14M - Wellbore #1 - Plan #1 13Apr14	400.0	399.2	17.1	15.6	11.420 SF	
Sup & Shep Fed 25-14W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	38.6	37.5	35.812 CC, ES	
Sup & Shep Fed 25-14W - Wellbore #1 - Plan #1 13Apr1	8,533.8	8,550.2	794.1	737.6	14.051 SF	
Sup & Shep Fed 25-15M - Wellbore #1 - Plan #1 13Apr14	300.0	300.0	20.1	19.0	18.665 CC, ES	
Sup & Shep Fed 25-15M - Wellbore #1 - Plan #1 13Apr14	400.0	399.1	21.6	20.1	14.468 SF	
Sup & Shep Fed 25-15W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	31.8	30.8	29.581 CC, ES	
Sup & Shep Fed 25-15W - Wellbore #1 - Plan #1 13Apr1	600.0	594.0	43.6	41.2	18.410 SF	
Sup & Shep Fed 25-16W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	22.6	21.6	21.025 CC, ES	
Sup & Shep Fed 25-16W - Wellbore #1 - Plan #1 13Apr1	600.0	596.2	32.1	29.7	13.552 SF	
Sup & Shep Fed 25-17W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	47.0	45.9	43.610 CC, ES	
Sup & Shep Fed 25-17W - Wellbore #1 - Plan #1 13Apr1	700.0	689.5	66.5	63.6	23.224 SF	
Sup & Shep Fed 25-19W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	31.5	30.4	29.238 CC, ES	
Sup & Shep Fed 25-19W - Wellbore #1 - Plan #1 13Apr1	500.0	495.2	40.4	38.4	20.995 SF	
Sup & Shep Fed 25-20W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	27.7	26.6	25.702 CC, ES	
Sup & Shep Fed 25-20W - Wellbore #1 - Plan #1 13Apr1	500.0	495.2	38.4	36.5	19.900 SF	

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

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Sup & Shep Federal Pad - Sup & Shep Fed 25-18W - Wellbore #1 - Plan #1 13Apr14 kjs													
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risk Separation Factor	Probability of Collision	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-131.99	38.1						
100.0	100.0	100.0	100.0	0.1	0.1	-131.99	38.1	37.9	0.18	214.602			
200.0	200.0	200.0	200.0	0.3	0.3	-131.99	38.1	37.5	0.63	60.766			
300.0	300.0	300.0	300.0	0.5	0.5	-131.99	38.1	37.0	1.08	35.394			CC, ES
400.0	400.0	397.7	397.7	0.8	0.7	-51.79	39.9	38.4	1.49	26.749			
500.0	499.8	494.9	494.4	1.0	1.0	-58.99	45.8	43.9	1.92	23.898			
600.0	599.5	591.0	589.4	1.2	1.2	-67.31	56.7	54.4	2.39	23.762			SF
700.0	698.7	685.5	682.0	1.5	1.6	-74.44	73.3	70.4	2.92	25.112			
800.0	797.5	778.1	771.3	1.8	2.0	-79.72	95.4	91.8	3.52	27.060			
894.8	890.5	863.7	852.6	2.2	2.5	-83.24	121.2	117.0	4.18	28.996			
900.0	895.6	868.3	857.0	2.2	2.5	-83.42	122.7	118.5	4.22	29.100			
1,000.0	993.5	958.2	940.7	2.6	3.1	-85.97	154.9	149.9	4.99	31.062			
1,100.0	1,091.3	1,052.3	1,027.9	3.0	3.8	-87.57	188.4	182.7	5.78	32.616			
1,200.0	1,189.2	1,146.4	1,115.1	3.5	4.5	-88.68	222.0	215.4	6.59	33.690			
1,300.0	1,287.0	1,240.5	1,202.4	3.9	5.2	-89.50	255.7	248.3	7.42	34.442			
1,400.0	1,384.9	1,334.6	1,289.6	4.3	5.9	-90.13	289.4	281.1	8.27	34.986			
1,500.0	1,482.7	1,428.7	1,376.8	4.8	6.6	-90.63	323.1	314.0	9.13	35.392			
1,600.0	1,580.6	1,522.8	1,464.0	5.2	7.2	-91.04	356.8	346.8	9.99	35.703			
1,700.0	1,678.4	1,616.9	1,551.3	5.7	8.0	-91.37	390.6	379.7	10.86	35.946			
1,800.0	1,776.3	1,711.1	1,638.5	6.1	8.7	-91.65	424.3	412.6	11.74	36.141			
1,900.0	1,874.1	1,805.2	1,725.7	6.6	9.4	-91.89	458.1	445.5	12.62	36.298			
2,000.0	1,972.0	1,899.3	1,813.0	7.0	10.1	-92.10	491.8	478.3	13.50	36.428			
2,100.0	2,069.9	1,993.4	1,900.2	7.5	10.8	-92.28	525.6	511.2	14.39	36.537			
2,200.0	2,167.7	2,087.5	1,987.4	7.9	11.5	-92.44	559.4	544.1	15.27	36.628			
2,300.0	2,265.6	2,181.6	2,074.7	8.4	12.2	-92.58	593.2	577.0	16.16	36.706			
2,400.0	2,363.4	2,275.7	2,161.9	8.8	12.9	-92.71	627.0	609.9	17.05	36.773			
2,500.0	2,461.3	2,369.8	2,249.1	9.3	13.6	-92.82	660.7	642.8	17.94	36.831			
2,600.0	2,559.1	2,464.0	2,336.4	9.7	14.3	-92.92	694.5	675.7	18.83	36.882			
2,700.0	2,657.0	2,558.1	2,423.6	10.2	15.0	-93.01	728.3	708.6	19.72	36.927			
2,800.0	2,754.8	2,652.2	2,510.8	10.6	15.7	-93.10	762.1	741.5	20.62	36.966			
2,900.0	2,852.7	2,746.3	2,598.0	11.1	16.4	-93.17	795.9	774.4	21.51	37.001			
3,000.0	2,950.5	2,840.4	2,685.3	11.5	17.1	-93.24	829.7	807.3	22.40	37.033			
3,100.0	3,048.4	2,934.5	2,772.5	12.0	17.8	-93.31	863.5	840.2	23.30	37.061			
3,200.0	3,146.2	3,028.6	2,859.7	12.4	18.5	-93.37	897.3	873.1	24.19	37.086			
3,300.0	3,244.1	3,122.7	2,947.0	12.9	19.2	-93.43	931.1	906.0	25.09	37.109			
3,400.0	3,341.9	3,216.9	3,034.2	13.4	20.0	-93.48	964.9	938.9	25.99	37.130			
3,500.0	3,439.8	3,311.0	3,121.4	13.8	20.7	-93.53	998.7	971.8	26.88	37.149			
3,600.0	3,537.6	3,405.1	3,208.7	14.3	21.4	-93.57	1,032.5	1,004.7	27.78	37.167			
3,700.0	3,635.5	3,499.2	3,295.9	14.7	22.1	-93.61	1,066.3	1,037.6	28.68	37.183			
3,800.0	3,733.3	3,593.3	3,383.1	15.2	22.8	-93.65	1,100.1	1,070.5	29.57	37.197			
3,900.0	3,831.2	3,687.4	3,470.3	15.6	23.5	-93.69	1,133.9	1,103.4	30.47	37.211			
4,000.0	3,929.1	3,781.5	3,557.6	16.1	24.2	-93.73	1,167.7	1,136.3	31.37	37.223			
4,100.0	4,026.9	3,875.6	3,644.8	16.5	24.9	-93.76	1,201.5	1,169.2	32.27	37.235			
4,200.0	4,124.8	3,969.8	3,732.0	17.0	25.6	-93.79	1,235.3	1,202.1	33.17	37.246			
4,300.0	4,222.6	4,063.9	3,819.3	17.4	26.3	-93.82	1,269.1	1,235.0	34.06	37.256			
4,400.0	4,320.5	4,158.0	3,906.5	17.9	27.0	-93.85	1,302.9	1,267.9	34.96	37.265			
4,500.0	4,418.3	4,252.1	3,993.7	18.4	27.8	-93.88	1,336.7	1,300.8	35.86	37.273			
4,600.0	4,516.2	4,346.2	4,081.0	18.8	28.5	-93.90	1,370.5	1,333.7	36.76	37.281			
4,700.0	4,614.0	4,440.3	4,168.2	19.3	29.2	-93.93	1,404.3	1,366.6	37.66	37.289			
4,800.0	4,711.9	4,534.4	4,255.4	19.7	29.9	-93.95	1,438.1	1,399.5	38.56	37.296			
4,900.0	4,809.7	4,628.5	4,342.7	20.2	30.6	-93.97	1,471.9	1,432.4	39.46	37.302			
5,000.0	4,907.6	4,722.7	4,429.9	20.6	31.3	-93.99	1,505.7	1,465.3	40.36	37.308			
5,100.0	5,005.4	4,816.8	4,517.1	21.1	32.0	-94.01	1,539.5	1,498.2	41.26	37.314			

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



# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Sup & Shep Federal Pad - Sup & Shep Fed 25-18W - Wellbore #1 - Plan #1 13Apr14 kjs										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis		Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor		Probability of Collision	
5,200.0	5,103.3	4,910.9	4,604.3	21.5	32.7	-94.03	1,573.3	1,531.1	42.16	37.320				
5,300.0	5,201.1	5,005.0	4,691.6	22.0	33.4	-94.05	1,607.1	1,564.0	43.06	37.325				
5,400.0	5,299.0	5,099.1	4,778.8	22.4	34.1	-94.07	1,640.9	1,596.9	43.96	37.329				
5,500.0	5,396.8	5,193.2	4,866.0	22.9	34.8	-94.08	1,674.7	1,629.8	44.86	37.334				
5,600.0	5,494.7	5,322.7	4,986.5	23.4	35.7	-94.13	1,707.9	1,662.0	45.87	37.234				
5,700.0	5,592.5	5,476.5	5,131.5	23.8	36.4	-94.28	1,738.1	1,691.2	46.91	37.056				
5,800.0	5,690.4	5,633.3	5,281.3	24.3	37.2	-94.54	1,765.1	1,717.1	47.95	36.813				
5,889.0	5,777.5	5,774.9	5,418.1	24.7	37.7	-94.86	1,786.3	1,737.4	48.88	36.548				
5,900.0	5,788.3	5,792.5	5,435.2	24.7	37.8	-94.96	1,788.7	1,739.7	49.00	36.503				
6,000.0	5,886.5	5,954.1	5,593.0	25.0	38.4	-95.73	1,808.7	1,758.7	50.02	36.161				
6,100.0	5,985.4	6,117.7	5,754.2	25.3	38.8	-96.35	1,825.0	1,774.0	50.90	35.851				
6,200.0	6,084.7	6,283.1	5,918.1	25.5	39.2	-96.83	1,837.2	1,785.6	51.64	35.575				
6,300.0	6,184.3	6,449.7	6,084.1	25.7	39.5	-97.17	1,845.5	1,793.3	52.24	35.329				
6,400.0	6,284.2	6,617.1	6,251.3	25.9	39.7	-97.37	1,849.7	1,797.0	52.68	35.109				
6,483.8	6,368.0	6,733.8	6,368.0	26.0	39.8	179.48	1,850.3	1,797.4	52.93	34.957				
6,500.0	6,384.2	6,750.0	6,384.2	26.0	39.8	179.48	1,850.3	1,797.3	52.96	34.935				
6,583.8	6,468.0	6,833.8	6,468.0	26.1	39.9	179.48	1,850.3	1,797.2	53.14	34.819				
6,600.0	6,484.2	6,850.0	6,484.2	26.1	39.9	179.48	1,850.3	1,797.1	53.17	34.796				
6,700.0	6,584.2	6,950.0	6,584.2	26.2	39.9	179.48	1,850.3	1,796.9	53.39	34.657				
6,800.0	6,684.2	7,050.0	6,684.2	26.3	40.0	179.48	1,850.3	1,796.7	53.61	34.517				
6,900.0	6,784.2	7,150.0	6,784.2	26.5	40.1	179.48	1,850.3	1,796.5	53.83	34.376				
7,000.0	6,884.2	7,250.0	6,884.2	26.6	40.1	179.48	1,850.3	1,796.2	54.05	34.234				
7,100.0	6,984.2	7,350.0	6,984.2	26.7	40.2	179.48	1,850.3	1,796.0	54.27	34.092				
7,200.0	7,084.2	7,450.0	7,084.2	26.8	40.3	179.48	1,850.3	1,795.8	54.50	33.949				
7,300.0	7,184.2	7,550.0	7,184.2	27.0	40.4	179.48	1,850.3	1,795.6	54.73	33.806				
7,400.0	7,284.2	7,650.0	7,284.2	27.1	40.4	179.48	1,850.3	1,795.3	54.97	33.662				
7,500.0	7,384.2	7,750.0	7,384.2	27.2	40.5	179.48	1,850.3	1,795.1	55.20	33.518				
7,600.0	7,484.2	7,850.0	7,484.2	27.3	40.6	179.48	1,850.3	1,794.9	55.44	33.373				
7,700.0	7,584.2	7,950.0	7,584.2	27.5	40.6	179.48	1,850.3	1,794.6	55.68	33.228				
7,800.0	7,684.2	8,050.0	7,684.2	27.6	40.7	179.48	1,850.3	1,794.4	55.93	33.083				
7,900.0	7,784.2	8,150.0	7,784.2	27.7	40.8	179.48	1,850.3	1,794.1	56.17	32.938				
8,000.0	7,884.2	8,250.0	7,884.2	27.9	40.9	179.48	1,850.3	1,793.9	56.42	32.793				
8,100.0	7,984.2	8,350.0	7,984.2	28.0	41.0	179.48	1,850.3	1,793.6	56.68	32.647				
8,200.0	8,084.2	8,450.0	8,084.2	28.1	41.0	179.48	1,850.3	1,793.4	56.93	32.501				
8,300.0	8,184.2	8,550.0	8,184.2	28.3	41.1	179.48	1,850.3	1,793.1	57.19	32.356				
8,400.0	8,284.2	8,650.0	8,284.2	28.4	41.2	179.48	1,850.3	1,792.9	57.45	32.210				
8,466.3	8,350.5	8,716.3	8,350.5	28.5	41.3	179.48	1,850.3	1,792.7	57.62	32.113				
8,500.0	8,384.2	8,748.8	8,383.0	28.5	41.3	179.48	1,850.3	1,792.6	57.70	32.065				
8,533.8	8,418.0	8,748.8	8,383.0	28.6	41.3	179.48	1,850.6	1,792.9	57.75	32.044				

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	
0.0	0.0	0.0	0.0	0.0	0.0	57.32	6.7						
100.0	100.0	100.0	100.0	0.1	0.1	57.32	6.7	6.6	0.18	37.897			
178.9	178.9	178.9	178.9	0.3	0.3	57.32	6.7	6.2	0.53	12.647			
200.0	200.0	200.0	200.0	0.3	0.3	57.32	6.7	6.1	0.63	10.731			
278.9	278.9	278.9	278.9	0.5	0.5	57.32	6.7	5.7	0.98	6.855			
300.0	300.0	300.0	300.0	0.5	0.5	57.32	6.7	5.7	1.08	6.250			CC, ES, SF
400.0	400.0	399.6	399.5	0.8	0.8	157.07	10.3	8.8	1.51	6.833			
500.0	499.8	498.5	498.2	1.0	1.0	171.39	22.1	20.1	1.98	11.183			
600.0	599.5	597.1	596.5	1.2	1.2	176.25	38.3	35.9	2.42	15.876			
700.0	698.7	695.1	694.2	1.5	1.5	178.32	58.1	55.3	2.86	20.337			
800.0	797.5	792.4	791.2	1.8	1.7	179.37	81.4	78.1	3.31	24.622			
894.8	890.5	883.7	882.2	2.2	1.9	179.93	106.5	102.8	3.73	28.564			
900.0	895.6	888.7	887.2	2.2	2.0	179.96	108.0	104.3	3.75	28.779			
1,000.0	993.5	984.7	982.9	2.6	2.2	-179.69	136.2	132.0	4.20	32.412			
1,100.0	1,091.3	1,080.6	1,078.6	3.0	2.5	-179.46	164.3	159.6	4.66	35.291			
1,200.0	1,189.2	1,176.6	1,174.2	3.5	2.7	-179.29	192.4	187.3	5.12	37.621			
1,300.0	1,287.0	1,272.6	1,269.9	3.9	3.0	-179.17	220.6	215.0	5.58	39.536			
1,400.0	1,384.9	1,368.5	1,365.6	4.3	3.2	-179.08	248.8	242.7	6.05	41.134			
1,500.0	1,482.7	1,464.5	1,461.2	4.8	3.5	-179.00	276.9	270.4	6.52	42.492			
1,600.0	1,580.6	1,560.4	1,556.9	5.2	3.7	-178.94	305.1	298.1	6.99	43.655			
1,700.0	1,678.4	1,656.4	1,652.5	5.7	4.0	-178.89	333.2	325.7	7.46	44.662			
1,800.0	1,776.3	1,752.3	1,748.2	6.1	4.2	-178.85	361.4	353.4	7.93	45.541			
1,900.0	1,874.1	1,848.3	1,843.9	6.6	4.5	-178.81	389.5	381.1	8.41	46.315			
2,000.0	1,972.0	1,944.2	1,939.5	7.0	4.7	-178.78	417.7	408.8	8.89	47.001			
2,100.0	2,069.9	2,040.2	2,035.2	7.5	5.0	-178.75	445.8	436.5	9.36	47.614			
2,200.0	2,167.7	2,136.1	2,130.9	7.9	5.3	-178.72	474.0	464.1	9.84	48.164			
2,300.0	2,265.6	2,232.1	2,226.5	8.4	5.5	-178.70	502.1	491.8	10.32	48.660			
2,400.0	2,363.4	2,328.1	2,322.2	8.8	5.8	-178.68	530.3	519.5	10.80	49.110			
2,500.0	2,461.3	2,424.0	2,417.8	9.3	6.0	-178.67	558.4	547.2	11.28	49.520			
2,600.0	2,559.1	2,520.0	2,513.5	9.7	6.3	-178.65	586.6	574.8	11.76	49.895			
2,700.0	2,657.0	2,615.9	2,609.2	10.2	6.5	-178.64	614.7	602.5	12.24	50.239			
2,800.0	2,754.8	2,711.9	2,704.8	10.6	6.8	-178.62	642.9	630.2	12.72	50.555			
2,900.0	2,852.7	2,807.8	2,800.5	11.1	7.1	-178.61	671.1	657.9	13.20	50.848			
3,000.0	2,950.5	2,903.8	2,896.2	11.5	7.3	-178.60	699.2	685.5	13.68	51.118			
3,100.0	3,048.4	2,999.7	2,991.8	12.0	7.6	-178.59	727.4	713.2	14.16	51.370			
3,200.0	3,146.2	3,095.7	3,087.5	12.4	7.8	-178.58	755.5	740.9	14.64	51.604			
3,300.0	3,244.1	3,191.7	3,183.1	12.9	8.1	-178.57	783.7	768.5	15.12	51.822			
3,400.0	3,341.9	3,287.6	3,278.8	13.4	8.3	-178.56	811.8	796.2	15.60	52.027			
3,500.0	3,439.8	3,383.6	3,374.5	13.8	8.6	-178.55	840.0	823.9	16.09	52.218			
3,600.0	3,537.6	3,479.5	3,470.1	14.3	8.9	-178.55	868.1	851.6	16.57	52.398			
3,700.0	3,635.5	3,575.5	3,565.8	14.7	9.1	-178.54	896.3	879.2	17.05	52.567			
3,800.0	3,733.3	3,671.4	3,661.5	15.2	9.4	-178.53	924.4	906.9	17.53	52.726			
3,900.0	3,831.2	3,767.4	3,757.1	15.6	9.6	-178.53	952.6	934.6	18.02	52.876			
4,000.0	3,929.1	3,863.3	3,852.8	16.1	9.9	-178.52	980.7	962.2	18.50	53.018			
4,100.0	4,026.9	3,959.3	3,948.4	16.5	10.1	-178.52	1,008.9	989.9	18.98	53.152			
4,200.0	4,124.8	4,055.2	4,044.1	17.0	10.4	-178.51	1,037.1	1,017.6	19.46	53.279			
4,300.0	4,222.6	4,151.2	4,139.8	17.4	10.7	-178.51	1,065.2	1,045.3	19.95	53.400			
4,400.0	4,320.5	4,247.2	4,235.4	17.9	10.9	-178.50	1,093.4	1,072.9	20.43	53.514			
4,500.0	4,418.3	4,343.1	4,331.1	18.4	11.2	-178.50	1,121.5	1,100.6	20.91	53.623			
4,600.0	4,516.2	4,439.1	4,426.8	18.8	11.4	-178.50	1,149.7	1,128.3	21.40	53.727			
4,700.0	4,614.0	4,535.0	4,522.4	19.3	11.7	-178.49	1,177.8	1,155.9	21.88	53.826			
4,800.0	4,711.9	4,631.0	4,618.1	19.7	11.9	-178.49	1,206.0	1,183.6	22.37	53.920			
4,900.0	4,809.7	4,726.9	4,713.7	20.2	12.2	-178.48	1,234.1	1,211.3	22.85	54.010			
5,000.0	4,907.6	4,822.9	4,809.4	20.6	12.5	-178.48	1,262.3	1,239.0	23.33	54.096			

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

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance				Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)						
5,100.0	5,005.4	4,918.8	4,905.1	21.1	12.7	-178.48	1,290.4	1,266.6		23.82	54.178			
5,200.0	5,103.3	5,014.8	5,000.7	21.5	13.0	-178.47	1,318.6	1,294.3		24.30	54.256			
5,300.0	5,201.1	5,110.8	5,096.4	22.0	13.2	-178.47	1,346.8	1,322.0		24.79	54.332			
5,400.0	5,299.0	5,206.7	5,192.1	22.4	13.5	-178.47	1,374.9	1,349.6		25.27	54.404			
5,500.0	5,396.8	5,302.7	5,287.7	22.9	13.7	-178.47	1,403.1	1,377.3		25.76	54.473			
5,600.0	5,494.7	5,398.6	5,383.4	23.4	14.0	-178.46	1,431.2	1,405.0		26.24	54.539			
5,700.0	5,592.5	5,494.6	5,479.0	23.8	14.3	-178.46	1,459.4	1,432.6		26.73	54.603			
5,800.0	5,690.4	5,590.5	5,574.7	24.3	14.5	-178.46	1,487.5	1,460.3		27.21	54.664			
5,889.0	5,777.5	5,675.9	5,659.8	24.7	14.7	-178.46	1,512.6	1,484.9		27.64	54.716			
5,900.0	5,788.3	5,686.5	5,670.4	24.7	14.8	-178.46	1,515.7	1,487.9		27.71	54.704			
6,000.0	5,886.5	5,783.0	5,766.6	25.0	15.0	-178.47	1,541.8	1,513.5		28.23	54.613			
6,100.0	5,985.4	5,880.4	5,863.7	25.3	15.3	-178.47	1,564.5	1,535.8		28.72	54.476			
6,200.0	6,084.7	5,978.5	5,961.5	25.5	15.6	-178.47	1,583.8	1,554.6		29.17	54.295			
6,300.0	6,184.3	6,080.8	6,063.5	25.7	15.8	-178.47	1,599.7	1,570.1		29.59	54.063			
6,400.0	6,284.2	6,252.0	6,234.4	25.9	16.1	-178.45	1,609.6	1,579.6		30.03	53.595			
6,483.8	6,368.0	6,385.6	6,368.0	26.0	16.4	98.45	1,611.9	1,581.6		30.37	53.076			
6,500.0	6,384.2	6,401.8	6,384.2	26.0	16.4	98.45	1,611.9	1,581.5		30.43	52.974			
6,583.8	6,468.0	6,485.6	6,468.0	26.1	16.5	98.45	1,611.9	1,581.2		30.73	52.451			
6,600.0	6,484.2	6,501.8	6,484.2	26.1	16.6	98.45	1,611.9	1,581.1		30.79	52.351			
6,700.0	6,584.2	6,601.8	6,584.2	26.2	16.7	98.45	1,611.9	1,580.8		31.16	51.739			
6,800.0	6,684.2	6,701.8	6,684.2	26.3	16.9	98.45	1,611.9	1,580.4		31.52	51.137			
6,900.0	6,784.2	6,801.8	6,784.2	26.5	17.1	98.45	1,611.9	1,580.0		31.89	50.546			
7,000.0	6,884.2	6,901.8	6,884.2	26.6	17.2	98.45	1,611.9	1,579.7		32.26	49.965			
7,100.0	6,984.2	7,001.8	6,984.2	26.7	17.4	98.45	1,611.9	1,579.3		32.63	49.394			
7,200.0	7,084.2	7,101.8	7,084.2	26.8	17.6	98.45	1,611.9	1,578.9		33.01	48.834			
7,300.0	7,184.2	7,201.8	7,184.2	27.0	17.8	98.45	1,611.9	1,578.5		33.39	48.283			
7,400.0	7,284.2	7,301.8	7,284.2	27.1	18.0	98.45	1,611.9	1,578.2		33.76	47.742			
7,500.0	7,384.2	7,401.8	7,384.2	27.2	18.1	98.45	1,611.9	1,577.8		34.14	47.211			
7,600.0	7,484.2	7,501.8	7,484.2	27.3	18.3	98.45	1,611.9	1,577.4		34.52	46.689			
7,700.0	7,584.2	7,601.8	7,584.2	27.5	18.5	98.45	1,611.9	1,577.0		34.91	46.177			
7,800.0	7,684.2	7,701.8	7,684.2	27.6	18.7	98.45	1,611.9	1,576.6		35.29	45.673			
7,900.0	7,784.2	7,801.8	7,784.2	27.7	18.9	98.45	1,611.9	1,576.3		35.68	45.179			
8,000.0	7,884.2	7,901.8	7,884.2	27.9	19.1	98.45	1,611.9	1,575.9		36.07	44.693			
8,100.0	7,984.2	8,001.8	7,984.2	28.0	19.2	98.45	1,611.9	1,575.5		36.46	44.216			
8,200.0	8,084.2	8,101.8	8,084.2	28.1	19.4	98.45	1,611.9	1,575.1		36.85	43.747			
8,300.0	8,184.2	8,201.8	8,184.2	28.3	19.6	98.45	1,611.9	1,574.7		37.24	43.287			
8,400.0	8,284.2	8,301.8	8,284.2	28.4	19.8	98.45	1,611.9	1,574.3		37.63	42.835			
8,500.0	8,384.2	8,401.8	8,384.2	28.5	20.0	98.45	1,611.9	1,573.9		38.03	42.391			
8,513.5	8,397.7	8,415.3	8,397.7	28.6	20.0	98.45	1,611.9	1,573.9		38.08	42.331			
8,533.8	8,418.0	8,420.6	8,403.0	28.6	20.0	98.45	1,612.0	1,573.9		38.13	42.278			

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	
0.0	0.0	0.0	0.0	0.0	0.0	122.76	13.5						
100.0	100.0	100.0	100.0	0.1	0.1	122.76	13.5	13.3	0.18	75.863			
200.0	200.0	200.0	200.0	0.3	0.3	122.76	13.5	12.8	0.63	21.481			
300.0	300.0	300.0	300.0	0.5	0.5	122.76	13.5	12.4	1.08	12.512			CC, ES
400.0	400.0	399.1	399.1	0.8	0.7	-155.66	17.6	16.1	1.51	11.693			SF
500.0	499.8	497.3	496.9	1.0	1.0	-157.68	30.1	28.1	1.98	15.215			
600.0	599.5	595.7	594.9	1.2	1.2	-159.53	47.7	45.3	2.42	19.739			
700.0	698.7	693.5	692.2	1.5	1.5	-161.29	68.7	65.8	2.87	23.949			
800.0	797.5	790.4	788.7	1.8	1.7	-162.82	92.9	89.6	3.33	27.934			
894.8	890.5	881.5	879.3	2.2	2.0	-164.07	118.9	115.1	3.77	31.571			
900.0	895.6	886.5	884.3	2.2	2.0	-164.14	120.4	116.6	3.79	31.771			
1,000.0	993.5	982.2	979.5	2.6	2.3	-165.22	149.4	145.2	4.26	35.114			
1,100.0	1,091.3	1,077.9	1,074.7	3.0	2.5	-165.95	178.5	173.7	4.73	37.742			
1,200.0	1,189.2	1,173.5	1,169.9	3.5	2.8	-166.48	207.5	202.3	5.21	39.853			
1,300.0	1,287.0	1,269.2	1,265.2	3.9	3.1	-166.88	236.6	230.9	5.69	41.575			
1,400.0	1,384.9	1,364.9	1,360.4	4.3	3.4	-167.19	265.7	259.5	6.18	43.002			
1,500.0	1,482.7	1,460.6	1,455.6	4.8	3.6	-167.44	294.8	288.1	6.67	44.214			
1,600.0	1,580.6	1,556.2	1,550.8	5.2	3.9	-167.64	323.9	316.7	7.16	45.244			
1,700.0	1,678.4	1,651.9	1,646.0	5.7	4.2	-167.81	353.0	345.3	7.65	46.131			
1,800.0	1,776.3	1,747.6	1,741.2	6.1	4.5	-167.96	382.1	373.9	8.15	46.903			
1,900.0	1,874.1	1,843.2	1,836.4	6.6	4.8	-168.08	411.2	402.5	8.64	47.581			
2,000.0	1,972.0	1,938.9	1,931.6	7.0	5.0	-168.19	440.3	431.1	9.14	48.180			
2,100.0	2,069.9	2,034.6	2,026.8	7.5	5.3	-168.28	469.4	459.7	9.64	48.713			
2,200.0	2,167.7	2,130.2	2,122.0	7.9	5.6	-168.37	498.5	488.4	10.13	49.190			
2,300.0	2,265.6	2,225.9	2,217.2	8.4	5.9	-168.44	527.6	517.0	10.63	49.620			
2,400.0	2,363.4	2,321.6	2,312.4	8.8	6.1	-168.51	556.7	545.6	11.13	50.009			
2,500.0	2,461.3	2,417.2	2,407.6	9.3	6.4	-168.57	585.8	574.2	11.63	50.362			
2,600.0	2,559.1	2,512.9	2,502.9	9.7	6.7	-168.62	614.9	602.8	12.13	50.684			
2,700.0	2,657.0	2,608.6	2,598.1	10.2	7.0	-168.67	644.0	631.4	12.63	50.980			
2,800.0	2,754.8	2,704.2	2,693.3	10.6	7.3	-168.72	673.1	660.0	13.13	51.251			
2,900.0	2,852.7	2,799.9	2,788.5	11.1	7.5	-168.76	702.2	688.6	13.64	51.501			
3,000.0	2,950.5	2,895.6	2,883.7	11.5	7.8	-168.80	731.3	717.2	14.14	51.733			
3,100.0	3,048.4	2,991.2	2,978.9	12.0	8.1	-168.83	760.5	745.8	14.64	51.947			
3,200.0	3,146.2	3,086.9	3,074.1	12.4	8.4	-168.86	789.6	774.4	15.14	52.147			
3,300.0	3,244.1	3,182.6	3,169.3	12.9	8.7	-168.89	818.7	803.0	15.64	52.333			
3,400.0	3,341.9	3,278.3	3,264.5	13.4	8.9	-168.92	847.8	831.6	16.15	52.507			
3,500.0	3,439.8	3,373.9	3,359.7	13.8	9.2	-168.95	876.9	860.2	16.65	52.669			
3,600.0	3,537.6	3,469.6	3,454.9	14.3	9.5	-168.97	906.0	888.9	17.15	52.822			
3,700.0	3,635.5	3,565.3	3,550.1	14.7	9.8	-168.99	935.1	917.5	17.66	52.965			
3,800.0	3,733.3	3,660.9	3,645.3	15.2	10.1	-169.02	964.2	946.1	18.16	53.100			
3,900.0	3,831.2	3,756.6	3,740.6	15.6	10.3	-169.04	993.3	974.7	18.66	53.227			
4,000.0	3,929.1	3,852.3	3,835.8	16.1	10.6	-169.06	1,022.4	1,003.3	19.17	53.346			
4,100.0	4,026.9	3,947.9	3,931.0	16.5	10.9	-169.07	1,051.6	1,031.9	19.67	53.460			
4,200.0	4,124.8	4,043.6	4,026.2	17.0	11.2	-169.09	1,080.7	1,060.5	20.17	53.567			
4,300.0	4,222.6	4,139.3	4,121.4	17.4	11.5	-169.11	1,109.8	1,089.1	20.68	53.669			
4,400.0	4,320.5	4,234.9	4,216.6	17.9	11.7	-169.12	1,138.9	1,117.7	21.18	53.765			
4,500.0	4,418.3	4,330.6	4,311.8	18.4	12.0	-169.14	1,168.0	1,146.3	21.69	53.857			
4,600.0	4,516.2	4,426.3	4,407.0	18.8	12.3	-169.15	1,197.1	1,174.9	22.19	53.944			
4,700.0	4,614.0	4,521.9	4,502.2	19.3	12.6	-169.17	1,226.2	1,203.5	22.70	54.027			
4,800.0	4,711.9	4,617.6	4,597.4	19.7	12.9	-169.18	1,255.3	1,232.1	23.20	54.106			
4,900.0	4,809.7	4,713.3	4,692.6	20.2	13.1	-169.19	1,284.4	1,260.7	23.71	54.181			
5,000.0	4,907.6	4,809.0	4,787.8	20.6	13.4	-169.20	1,313.6	1,289.3	24.21	54.253			
5,100.0	5,005.4	4,904.6	4,883.0	21.1	13.7	-169.21	1,342.7	1,318.0	24.72	54.322			
5,200.0	5,103.3	5,000.3	4,978.3	21.5	14.0	-169.22	1,371.8	1,346.6	25.22	54.387			

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

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Sup & Shep Federal Pad - Sup & Shep Fed 25-12M - Wellbore #1 - Plan #1 13Apr14 kjs										Offset Site Error:		0.0 ft	
Survey Program:		0-MWD										Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis		Distance						Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Riskd Separation Factor		Probability of Collision		
5,300.0	5,201.1	5,096.0	5,073.5	22.0	14.3	-169.23	1,400.9	1,375.2	25.73	54.450					
5,400.0	5,299.0	5,191.6	5,168.7	22.4	14.6	-169.24	1,430.0	1,403.8	26.23	54.510					
5,500.0	5,396.8	5,287.3	5,263.9	22.9	14.8	-169.25	1,459.1	1,432.4	26.74	54.568					
5,600.0	5,494.7	5,383.0	5,359.1	23.4	15.1	-169.26	1,488.2	1,461.0	27.25	54.623					
5,700.0	5,592.5	5,478.6	5,454.3	23.8	15.4	-169.27	1,517.3	1,489.6	27.75	54.676					
5,800.0	5,690.4	5,574.3	5,549.5	24.3	15.7	-169.28	1,546.5	1,518.2	28.26	54.727					
5,889.0	5,777.5	5,659.4	5,634.2	24.7	15.9	-169.29	1,572.4	1,543.7	28.71	54.770					
5,900.0	5,788.3	5,670.0	5,644.7	24.7	16.0	-169.30	1,575.5	1,546.8	28.77	54.758					
6,000.0	5,886.5	5,766.2	5,740.5	25.0	16.2	-169.40	1,602.6	1,573.3	29.31	54.674					
6,100.0	5,985.4	5,863.3	5,837.2	25.3	16.5	-169.46	1,626.4	1,596.6	29.82	54.544					
6,200.0	6,084.7	5,961.2	5,934.6	25.5	16.8	-169.48	1,646.9	1,616.6	30.29	54.374					
6,300.0	6,184.3	6,100.1	6,072.9	25.7	17.2	-169.45	1,663.2	1,632.4	30.78	54.029					
6,400.0	6,284.2	6,267.8	6,240.4	25.9	17.5	-169.43	1,672.5	1,641.2	31.22	53.572					
6,483.8	6,368.0	6,395.5	6,368.0	26.0	17.7	107.47	1,674.5	1,643.0	31.55	53.082					
6,500.0	6,384.2	6,411.7	6,384.2	26.0	17.7	107.47	1,674.5	1,642.9	31.60	52.990					
6,583.8	6,468.0	6,495.5	6,468.0	26.1	17.8	107.47	1,674.5	1,642.6	31.88	52.520					
6,600.0	6,484.2	6,511.7	6,484.2	26.1	17.8	107.47	1,674.5	1,642.6	31.94	52.429					
6,700.0	6,584.2	6,611.7	6,584.2	26.2	18.0	107.47	1,674.5	1,642.2	32.28	51.875					
6,800.0	6,684.2	6,711.7	6,684.2	26.3	18.1	107.47	1,674.5	1,641.9	32.62	51.329					
6,900.0	6,784.2	6,811.7	6,784.2	26.5	18.3	107.47	1,674.5	1,641.5	32.97	50.790					
7,000.0	6,884.2	6,911.7	6,884.2	26.6	18.4	107.47	1,674.5	1,641.2	33.32	50.259					
7,100.0	6,984.2	7,011.7	6,984.2	26.7	18.6	107.47	1,674.5	1,640.8	33.67	49.735					
7,200.0	7,084.2	7,111.7	7,084.2	26.8	18.7	107.47	1,674.5	1,640.5	34.02	49.218					
7,300.0	7,184.2	7,211.7	7,184.2	27.0	18.9	107.47	1,674.5	1,640.1	34.38	48.709					
7,400.0	7,284.2	7,311.7	7,284.2	27.1	19.1	107.47	1,674.5	1,639.8	34.74	48.208					
7,500.0	7,384.2	7,411.7	7,384.2	27.2	19.2	107.47	1,674.5	1,639.4	35.10	47.713					
7,600.0	7,484.2	7,511.7	7,484.2	27.3	19.4	107.47	1,674.5	1,639.0	35.46	47.226					
7,700.0	7,584.2	7,611.7	7,584.2	27.5	19.5	107.47	1,674.5	1,638.7	35.82	46.747					
7,800.0	7,684.2	7,711.7	7,684.2	27.6	19.7	107.47	1,674.5	1,638.3	36.19	46.274					
7,900.0	7,784.2	7,811.7	7,784.2	27.7	19.9	107.47	1,674.5	1,638.0	36.55	45.809					
8,000.0	7,884.2	7,911.7	7,884.2	27.9	20.0	107.47	1,674.5	1,637.6	36.92	45.350					
8,100.0	7,984.2	8,011.7	7,984.2	28.0	20.2	107.47	1,674.5	1,637.2	37.30	44.899					
8,200.0	8,084.2	8,111.7	8,084.2	28.1	20.4	107.47	1,674.5	1,636.8	37.67	44.454					
8,300.0	8,184.2	8,211.7	8,184.2	28.3	20.5	107.47	1,674.5	1,636.5	38.04	44.017					
8,400.0	8,284.2	8,311.7	8,284.2	28.4	20.7	107.47	1,674.5	1,636.1	38.42	43.586					
8,500.0	8,384.2	8,411.7	8,384.2	28.5	20.9	107.47	1,674.5	1,635.7	38.80	43.161					
8,506.2	8,390.4	8,417.8	8,390.4	28.6	20.9	107.47	1,674.5	1,635.7	38.82	43.135					
8,533.8	8,418.0	8,425.5	8,398.0	28.6	20.9	107.47	1,674.6	1,635.7	38.89	43.064					

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Sup & Shep Federal Pad - Sup & Shep Fed 25-12W - Wellbore #1 - Plan #1 13Apr14 kjs												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Riskd Separation Factor	Probability of Collision	
0.0	0.0	0.0	0.0	0.0	0.0	-122.77	6.7						
100.0	100.0	100.0	100.0	0.1	0.1	-122.77	6.7	6.6	0.18	37.938			
178.9	178.9	178.9	178.9	0.3	0.3	-122.77	6.7	6.2	0.53	12.660			
200.0	200.0	200.0	200.0	0.3	0.3	-122.77	6.7	6.1	0.63	10.742			
278.9	278.9	278.9	278.9	0.5	0.5	-122.77	6.7	5.8	0.98	6.863			
300.0	300.0	300.0	300.0	0.5	0.5	-122.77	6.7	5.7	1.08	6.257			CC
400.0	400.0	399.8	399.8	0.8	0.8	-42.43	7.0	5.5	1.50	4.629			ES
500.0	499.8	499.6	499.4	1.0	1.0	-49.66	7.7	5.8	1.93	3.995			
600.0	599.5	599.3	598.8	1.2	1.2	-58.81	9.2	6.8	2.40	3.827			SF
700.0	698.7	699.1	697.8	1.5	1.5	-67.38	11.5	8.6	2.93	3.915			
800.0	797.5	798.8	796.2	1.8	1.8	-74.22	14.7	11.1	3.57	4.120			
894.8	890.5	893.2	889.0	2.2	2.2	-79.08	18.5	14.3	4.27	4.347			
900.0	895.6	898.4	894.1	2.2	2.2	-79.32	18.8	14.5	4.31	4.358			
1,000.0	993.5	998.3	991.9	2.6	2.6	-82.99	23.3	18.2	5.13	4.541			
1,100.0	1,091.3	1,098.2	1,089.6	3.0	3.0	-85.46	27.8	21.9	5.97	4.663			
1,200.0	1,189.2	1,198.1	1,187.4	3.5	3.4	-87.24	32.5	25.6	6.83	4.749			
1,300.0	1,287.0	1,298.0	1,285.2	3.9	3.9	-88.57	37.1	29.4	7.71	4.812			
1,400.0	1,384.9	1,397.9	1,382.9	4.3	4.3	-89.61	41.7	33.1	8.59	4.859			
1,500.0	1,482.7	1,497.8	1,480.7	4.8	4.8	-90.44	46.4	36.9	9.47	4.896			
1,600.0	1,580.6	1,597.7	1,578.5	5.2	5.2	-91.12	51.0	40.7	10.36	4.926			
1,700.0	1,678.4	1,697.5	1,676.2	5.7	5.7	-91.68	55.7	44.5	11.25	4.950			
1,800.0	1,776.3	1,797.4	1,774.0	6.1	6.1	-92.16	60.4	48.2	12.15	4.971			
1,900.0	1,874.1	1,897.3	1,871.8	6.6	6.6	-92.57	65.1	52.0	13.04	4.988			
2,000.0	1,972.0	1,997.2	1,969.5	7.0	7.0	-92.92	69.7	55.8	13.94	5.002			
2,100.0	2,069.9	2,097.1	2,067.3	7.5	7.5	-93.23	74.4	59.6	14.84	5.015			
2,200.0	2,167.7	2,197.0	2,165.1	7.9	7.9	-93.50	79.1	63.4	15.74	5.026			
2,300.0	2,265.6	2,296.9	2,262.8	8.4	8.4	-93.74	83.8	67.1	16.64	5.036			
2,400.0	2,363.4	2,396.8	2,360.6	8.8	8.8	-93.96	88.5	70.9	17.54	5.044			
2,500.0	2,461.3	2,496.7	2,458.4	9.3	9.3	-94.15	93.2	74.7	18.44	5.052			
2,600.0	2,559.1	2,596.6	2,556.1	9.7	9.7	-94.33	97.8	78.5	19.34	5.059			
2,700.0	2,657.0	2,696.4	2,653.9	10.2	10.2	-94.49	102.5	82.3	20.24	5.065			
2,800.0	2,754.8	2,796.3	2,751.7	10.6	10.6	-94.64	107.2	86.1	21.15	5.070			
2,900.0	2,852.7	2,896.2	2,849.5	11.1	11.1	-94.77	111.9	89.9	22.05	5.076			
3,000.0	2,950.5	2,996.1	2,947.2	11.5	11.5	-94.89	116.6	93.6	22.95	5.080			
3,100.0	3,048.4	3,096.0	3,045.0	12.0	12.0	-95.01	121.3	97.4	23.86	5.085			
3,200.0	3,146.2	3,195.9	3,142.8	12.4	12.4	-95.11	126.0	101.2	24.76	5.088			
3,300.0	3,244.1	3,295.8	3,240.5	12.9	12.9	-95.21	130.7	105.0	25.66	5.092			
3,400.0	3,341.9	3,395.7	3,338.3	13.4	13.3	-95.30	135.4	108.8	26.57	5.095			
3,500.0	3,439.8	3,495.6	3,436.1	13.8	13.8	-95.38	140.1	112.6	27.47	5.099			
3,600.0	3,537.6	3,595.4	3,533.8	14.3	14.2	-95.46	144.8	116.4	28.37	5.101			
3,700.0	3,635.5	3,695.3	3,631.6	14.7	14.7	-95.54	149.4	120.2	29.28	5.104			
3,800.0	3,733.3	3,795.2	3,729.4	15.2	15.2	-95.61	154.1	124.0	30.18	5.107			
3,900.0	3,831.2	3,895.1	3,827.1	15.6	15.6	-95.67	158.8	127.7	31.09	5.109			
4,000.0	3,929.1	3,995.0	3,924.9	16.1	16.1	-95.73	163.5	131.5	31.99	5.111			
4,100.0	4,026.9	4,094.9	4,022.7	16.5	16.5	-95.79	168.2	135.3	32.90	5.113			
4,200.0	4,124.8	4,194.8	4,120.4	17.0	17.0	-95.85	172.9	139.1	33.80	5.115			
4,300.0	4,222.6	4,294.7	4,218.2	17.4	17.4	-95.90	177.6	142.9	34.71	5.117			
4,400.0	4,320.5	4,394.6	4,316.0	17.9	17.9	-95.95	182.3	146.7	35.61	5.119			
4,500.0	4,418.3	4,494.5	4,413.7	18.4	18.3	-96.00	187.0	150.5	36.52	5.121			
4,600.0	4,516.2	4,594.3	4,511.5	18.8	18.8	-96.04	191.7	154.3	37.42	5.122			
4,700.0	4,614.0	4,694.2	4,609.3	19.3	19.2	-96.08	196.4	158.1	38.33	5.124			
4,800.0	4,711.9	4,794.1	4,707.1	19.7	19.7	-96.13	201.1	161.8	39.23	5.125			
4,900.0	4,809.7	4,894.0	4,804.8	20.2	20.1	-96.16	205.8	165.6	40.14	5.127			
5,000.0	4,907.6	4,993.9	4,902.6	20.6	20.6	-96.20	210.5	169.4	41.04	5.128			

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

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Sup & Shep Federal Pad - Sup & Shep Fed 25-12W - Wellbore #1 - Plan #1 13Apr14 kjs													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis		Distance					Risked Separation Factor	Probability of Collision	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
5,100.0	5,005.4	5,093.8	5,000.4	21.1	21.1	-96.24	215.2	173.2	41.95	5.129				
5,200.0	5,103.3	5,193.7	5,098.1	21.5	21.5	-96.27	219.9	177.0	42.85	5.130				
5,300.0	5,201.1	5,293.6	5,195.9	22.0	22.0	-96.30	224.6	180.8	43.76	5.132				
5,400.0	5,299.0	5,393.5	5,293.7	22.4	22.4	-96.33	229.3	184.6	44.67	5.133				
5,500.0	5,396.8	5,493.4	5,391.4	22.9	22.9	-96.36	233.9	188.4	45.57	5.134				
5,600.0	5,494.7	5,593.2	5,489.2	23.4	23.3	-96.39	238.6	192.2	46.48	5.135				
5,700.0	5,592.5	5,693.1	5,587.0	23.8	23.8	-96.42	243.3	196.0	47.38	5.136				
5,800.0	5,690.4	5,793.0	5,684.7	24.3	24.2	-96.45	248.0	199.7	48.29	5.137				
5,889.0	5,777.5	5,882.0	5,771.9	24.7	24.6	-96.47	252.2	203.1	49.09	5.138				
5,900.0	5,788.3	5,893.1	5,782.7	24.7	24.7	-96.50	252.7	203.5	49.17	5.139				
6,000.0	5,886.5	5,994.0	5,882.0	25.0	25.0	-96.70	256.9	207.1	49.81	5.157				
6,100.0	5,985.4	6,094.9	5,981.8	25.3	25.3	-96.89	260.3	209.9	50.36	5.169				
6,200.0	6,084.7	6,195.9	6,082.1	25.5	25.5	-97.06	262.9	212.1	50.82	5.173				
6,300.0	6,184.3	6,296.8	6,182.8	25.7	25.7	-97.23	264.7	213.5	51.19	5.170				
6,400.0	6,284.2	6,397.8	6,283.6	25.9	25.8	-97.39	265.7	214.2	51.48	5.161				
6,483.8	6,368.0	6,482.1	6,368.0	26.0	25.9	179.39	265.9	214.2	51.66	5.147				
6,500.0	6,384.2	6,498.4	6,384.2	26.0	25.9	179.39	265.9	214.2	51.70	5.143				
6,583.8	6,468.0	6,582.1	6,468.0	26.1	26.0	179.39	265.9	214.0	51.89	5.124				
6,600.0	6,484.2	6,598.4	6,484.2	26.1	26.0	179.39	265.9	214.0	51.93	5.120				
6,700.0	6,584.2	6,698.4	6,584.2	26.2	26.1	179.39	265.9	213.7	52.16	5.098				
6,800.0	6,684.2	6,798.4	6,684.2	26.3	26.3	179.39	265.9	213.5	52.39	5.075				
6,900.0	6,784.2	6,898.4	6,784.2	26.5	26.4	179.39	265.9	213.3	52.63	5.052				
7,000.0	6,884.2	6,998.4	6,884.2	26.6	26.5	179.39	265.9	213.0	52.87	5.029				
7,100.0	6,984.2	7,098.4	6,984.2	26.7	26.6	179.39	265.9	212.8	53.11	5.006				
7,200.0	7,084.2	7,198.4	7,084.2	26.8	26.7	179.39	265.9	212.5	53.36	4.983				
7,300.0	7,184.2	7,298.4	7,184.2	27.0	26.9	179.39	265.9	212.3	53.61	4.960				
7,400.0	7,284.2	7,398.4	7,284.2	27.1	27.0	179.39	265.9	212.0	53.86	4.937				
7,500.0	7,384.2	7,498.4	7,384.2	27.2	27.1	179.39	265.9	211.8	54.11	4.914				
7,600.0	7,484.2	7,598.4	7,484.2	27.3	27.2	179.39	265.9	211.5	54.36	4.891				
7,700.0	7,584.2	7,698.4	7,584.2	27.5	27.4	179.39	265.9	211.3	54.62	4.868				
7,800.0	7,684.2	7,798.4	7,684.2	27.6	27.5	179.39	265.9	211.0	54.88	4.845				
7,900.0	7,784.2	7,898.4	7,784.2	27.7	27.6	179.39	265.9	210.8	55.15	4.822				
8,000.0	7,884.2	7,998.4	7,884.2	27.9	27.7	179.39	265.9	210.5	55.41	4.799				
8,100.0	7,984.2	8,098.4	7,984.2	28.0	27.9	179.39	265.9	210.2	55.68	4.775				
8,200.0	8,084.2	8,198.4	8,084.2	28.1	28.0	179.39	265.9	209.9	55.95	4.752				
8,300.0	8,184.2	8,298.4	8,184.2	28.3	28.1	179.39	265.9	209.7	56.22	4.729				
8,400.0	8,284.2	8,398.4	8,284.2	28.4	28.3	179.39	265.9	209.4	56.50	4.706				
8,500.0	8,384.2	8,498.4	8,384.2	28.5	28.4	179.39	265.9	209.1	56.77	4.683				
8,506.2	8,390.4	8,504.5	8,390.4	28.6	28.4	179.39	265.9	209.1	56.79	4.682				
8,533.8	8,418.0	8,512.1	8,398.0	28.6	28.4	179.39	266.6	209.8	56.84	4.691				

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	165.49	11.3					CC, ES SF	
100.0	100.0	100.0	100.0	0.1	0.1	165.49	11.3	11.1	0.18	63.666			
200.0	200.0	200.0	200.0	0.3	0.3	165.49	11.3	10.7	0.63	18.027			
300.0	300.0	300.0	300.0	0.5	0.5	165.49	11.3	10.2	1.08	10.500			
400.0	400.0	399.3	399.2	0.8	0.7	-121.53	14.6	13.1	1.50	9.716			
500.0	499.8	497.5	497.2	1.0	1.0	-134.86	25.6	23.7	1.95	13.132			
600.0	599.5	594.7	593.6	1.2	1.2	-142.03	44.5	42.1	2.44	18.246			
700.0	698.7	691.9	689.9	1.5	1.5	-146.34	67.5	64.6	2.90	23.232			
800.0	797.5	788.4	785.5	1.8	1.8	-149.47	93.5	90.1	3.38	27.643			
894.8	890.5	878.9	875.2	2.2	2.1	-151.79	121.1	117.2	3.85	31.450			
900.0	895.6	883.9	880.2	2.2	2.1	-151.92	122.6	118.8	3.87	31.654			
1,000.0	993.5	979.0	974.4	2.6	2.4	-153.88	153.3	148.9	4.37	35.067			
1,100.0	1,091.3	1,074.0	1,068.6	3.0	2.7	-155.18	184.1	179.2	4.88	37.734			
1,200.0	1,189.2	1,169.1	1,162.8	3.5	3.0	-156.11	214.9	209.5	5.39	39.861			
1,300.0	1,287.0	1,264.2	1,257.1	3.9	3.4	-156.81	245.8	239.9	5.91	41.587			
1,400.0	1,384.9	1,359.3	1,351.3	4.3	3.7	-157.35	276.7	270.2	6.43	43.003			
1,500.0	1,482.7	1,454.4	1,445.5	4.8	4.0	-157.78	307.6	300.6	6.96	44.201			
1,600.0	1,580.6	1,549.4	1,539.7	5.2	4.3	-158.14	338.5	331.0	7.49	45.215			
1,700.0	1,678.4	1,644.5	1,634.0	5.7	4.6	-158.43	369.4	361.4	8.02	46.085			
1,800.0	1,776.3	1,739.6	1,728.2	6.1	5.0	-158.68	400.3	391.8	8.55	46.838			
1,900.0	1,874.1	1,834.7	1,822.4	6.6	5.3	-158.90	431.3	422.2	9.08	47.497			
2,000.0	1,972.0	1,929.8	1,916.6	7.0	5.6	-159.08	462.2	452.6	9.61	48.078			
2,100.0	2,069.9	2,024.8	2,010.9	7.5	5.9	-159.24	493.2	483.0	10.15	48.593			
2,200.0	2,167.7	2,119.9	2,105.1	7.9	6.3	-159.38	524.2	513.5	10.69	49.053			
2,300.0	2,265.6	2,215.0	2,199.3	8.4	6.6	-159.51	555.1	543.9	11.22	49.466			
2,400.0	2,363.4	2,310.1	2,293.5	8.8	6.9	-159.62	586.1	574.3	11.76	49.839			
2,500.0	2,461.3	2,405.2	2,387.8	9.3	7.2	-159.73	617.0	604.7	12.30	50.177			
2,600.0	2,559.1	2,500.3	2,482.0	9.7	7.6	-159.82	648.0	635.2	12.84	50.485			
2,700.0	2,657.0	2,595.3	2,576.2	10.2	7.9	-159.90	679.0	665.6	13.37	50.766			
2,800.0	2,754.8	2,690.4	2,670.4	10.6	8.2	-159.98	709.9	696.0	13.91	51.025			
2,900.0	2,852.7	2,785.5	2,764.7	11.1	8.5	-160.05	740.9	726.4	14.45	51.262			
3,000.0	2,950.5	2,880.6	2,858.9	11.5	8.9	-160.11	771.9	756.9	14.99	51.482			
3,100.0	3,048.4	2,975.7	2,953.1	12.0	9.2	-160.17	802.8	787.3	15.53	51.686			
3,200.0	3,146.2	3,070.7	3,047.3	12.4	9.5	-160.23	833.8	817.7	16.07	51.874			
3,300.0	3,244.1	3,165.8	3,141.6	12.9	9.8	-160.28	864.8	848.2	16.61	52.050			
3,400.0	3,341.9	3,260.9	3,235.8	13.4	10.2	-160.33	895.7	878.6	17.16	52.214			
3,500.0	3,439.8	3,356.0	3,330.0	13.8	10.5	-160.37	926.7	909.0	17.70	52.368			
3,600.0	3,537.6	3,451.1	3,424.2	14.3	10.8	-160.41	957.7	939.5	18.24	52.511			
3,700.0	3,635.5	3,546.1	3,518.5	14.7	11.1	-160.45	988.7	969.9	18.78	52.646			
3,800.0	3,733.3	3,641.2	3,612.7	15.2	11.5	-160.49	1,019.6	1,000.3	19.32	52.773			
3,900.0	3,831.2	3,736.3	3,706.9	15.6	11.8	-160.52	1,050.6	1,030.7	19.86	52.893			
4,000.0	3,929.1	3,831.4	3,801.1	16.1	12.1	-160.56	1,081.6	1,061.2	20.41	53.005			
4,100.0	4,026.9	3,926.5	3,895.4	16.5	12.4	-160.59	1,112.6	1,091.6	20.95	53.112			
4,200.0	4,124.8	4,021.5	3,989.6	17.0	12.8	-160.61	1,143.5	1,122.0	21.49	53.212			
4,300.0	4,222.6	4,116.6	4,083.8	17.4	13.1	-160.64	1,174.5	1,152.5	22.03	53.308			
4,400.0	4,320.5	4,211.7	4,178.0	17.9	13.4	-160.67	1,205.5	1,182.9	22.58	53.398			
4,500.0	4,418.3	4,306.8	4,272.2	18.4	13.7	-160.69	1,236.5	1,213.3	23.12	53.484			
4,600.0	4,516.2	4,401.9	4,366.5	18.8	14.1	-160.72	1,267.4	1,243.8	23.66	53.565			
4,700.0	4,614.0	4,496.9	4,460.7	19.3	14.4	-160.74	1,298.4	1,274.2	24.20	53.643			
4,800.0	4,711.9	4,592.0	4,554.9	19.7	14.7	-160.76	1,329.4	1,304.6	24.75	53.717			
4,900.0	4,809.7	4,687.1	4,649.1	20.2	15.0	-160.78	1,360.4	1,335.1	25.29	53.787			
5,000.0	4,907.6	4,782.2	4,743.4	20.6	15.4	-160.80	1,391.3	1,365.5	25.84	53.854			
5,100.0	5,005.4	4,877.3	4,837.6	21.1	15.7	-160.82	1,422.3	1,395.9	26.38	53.918			
5,200.0	5,103.3	4,972.3	4,931.8	21.5	16.0	-160.84	1,453.3	1,426.4	26.92	53.980			

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



# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Riskd Separation Factor	Probability of Collision	
5,300.0	5,201.1	5,067.4	5,026.0	22.0	16.3	-160.85	1,484.3	1,456.8	27.47	54.038			
5,400.0	5,299.0	5,162.5	5,120.3	22.4	16.7	-160.87	1,515.2	1,487.2	28.01	54.094			
5,500.0	5,396.8	5,257.6	5,214.5	22.9	17.0	-160.89	1,546.2	1,517.7	28.56	54.148			
5,600.0	5,494.7	5,352.7	5,308.7	23.4	17.3	-160.90	1,577.2	1,548.1	29.10	54.199			
5,700.0	5,592.5	5,447.7	5,402.9	23.8	17.6	-160.92	1,608.2	1,578.5	29.64	54.249			
5,800.0	5,690.4	5,542.8	5,497.2	24.3	18.0	-160.93	1,639.1	1,609.0	30.19	54.296			
5,889.0	5,777.5	5,627.4	5,581.0	24.7	18.3	-160.94	1,666.7	1,636.0	30.67	54.337			
5,900.0	5,788.3	5,637.9	5,591.4	24.7	18.3	-160.97	1,670.1	1,639.4	30.74	54.324			
6,000.0	5,886.5	5,733.6	5,686.2	25.0	18.6	-161.15	1,699.2	1,667.8	31.32	54.248			
6,100.0	5,985.4	5,830.2	5,781.9	25.3	18.9	-161.27	1,725.0	1,693.2	31.87	54.134			
6,200.0	6,084.7	5,959.4	5,910.1	25.5	19.3	-161.32	1,747.3	1,714.9	32.41	53.916			
6,300.0	6,184.3	6,125.4	6,075.4	25.7	19.7	-161.32	1,763.1	1,730.1	32.92	53.562			
6,400.0	6,284.2	6,293.8	6,243.5	25.9	19.9	-161.34	1,771.7	1,738.3	33.36	53.113			
6,483.8	6,368.0	6,418.2	6,368.0	26.0	20.1	115.55	1,773.5	1,739.9	33.67	52.668			
6,500.0	6,384.2	6,434.5	6,384.2	26.0	20.1	115.55	1,773.5	1,739.8	33.72	52.590			
6,583.8	6,468.0	6,518.2	6,468.0	26.1	20.2	115.55	1,773.5	1,739.6	33.99	52.184			
6,600.0	6,484.2	6,534.5	6,484.2	26.1	20.3	115.55	1,773.5	1,739.5	34.04	52.106			
6,700.0	6,584.2	6,634.5	6,584.2	26.2	20.4	115.55	1,773.5	1,739.2	34.35	51.626			
6,800.0	6,684.2	6,734.5	6,684.2	26.3	20.5	115.55	1,773.5	1,738.9	34.67	51.151			
6,900.0	6,784.2	6,834.5	6,784.2	26.5	20.6	115.55	1,773.5	1,738.5	34.99	50.680			
7,000.0	6,884.2	6,934.5	6,884.2	26.6	20.8	115.55	1,773.5	1,738.2	35.32	50.214			
7,100.0	6,984.2	7,034.5	6,984.2	26.7	20.9	115.55	1,773.5	1,737.9	35.65	49.752			
7,200.0	7,084.2	7,134.5	7,084.2	26.8	21.0	115.55	1,773.5	1,737.6	35.98	49.295			
7,300.0	7,184.2	7,234.5	7,184.2	27.0	21.2	115.55	1,773.5	1,737.2	36.31	48.844			
7,400.0	7,284.2	7,334.5	7,284.2	27.1	21.3	115.55	1,773.5	1,736.9	36.65	48.397			
7,500.0	7,384.2	7,434.5	7,384.2	27.2	21.5	115.55	1,773.5	1,736.6	36.98	47.955			
7,600.0	7,484.2	7,534.5	7,484.2	27.3	21.6	115.55	1,773.5	1,736.2	37.32	47.518			
7,700.0	7,584.2	7,634.5	7,584.2	27.5	21.7	115.55	1,773.5	1,735.9	37.67	47.086			
7,800.0	7,684.2	7,734.5	7,684.2	27.6	21.9	115.55	1,773.5	1,735.5	38.01	46.659			
7,900.0	7,784.2	7,834.5	7,784.2	27.7	22.0	115.55	1,773.5	1,735.2	38.36	46.237			
8,000.0	7,884.2	7,934.5	7,884.2	27.9	22.2	115.55	1,773.5	1,734.8	38.71	45.820			
8,100.0	7,984.2	8,034.5	7,984.2	28.0	22.3	115.55	1,773.5	1,734.5	39.06	45.408			
8,200.0	8,084.2	8,134.5	8,084.2	28.1	22.5	115.55	1,773.5	1,734.1	39.41	45.001			
8,300.0	8,184.2	8,234.5	8,184.2	28.3	22.6	115.55	1,773.5	1,733.8	39.77	44.600			
8,400.0	8,284.2	8,334.5	8,284.2	28.4	22.8	115.55	1,773.5	1,733.4	40.12	44.203			
8,500.0	8,384.2	8,434.5	8,384.2	28.5	22.9	115.55	1,773.5	1,733.1	40.48	43.811			
8,533.8	8,418.0	8,443.2	8,393.0	28.6	22.9	115.55	1,773.7	1,733.2	40.56	43.732			

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	
0.0	0.0	0.0	0.0	0.0	0.0	-117.22	15.9						
100.0	100.0	100.0	100.0	0.1	0.1	-117.22	15.9	15.7	0.18	89.680			
200.0	200.0	200.0	200.0	0.3	0.3	-117.22	15.9	15.3	0.63	25.393			
300.0	300.0	300.0	300.0	0.5	0.5	-117.22	15.9	14.8	1.08	14.791			CC
400.0	400.0	399.4	399.4	0.8	0.7	-36.66	16.2	14.7	1.50	10.808			ES
500.0	499.8	498.9	498.7	1.0	1.0	-43.69	17.3	15.3	1.92	8.986			
600.0	599.5	598.2	597.7	1.2	1.2	-53.46	19.5	17.1	2.38	8.199			
700.0	698.7	697.4	696.2	1.5	1.5	-63.54	23.3	20.4	2.90	8.049			SF
800.0	797.5	796.5	794.1	1.8	1.8	-72.22	28.9	25.4	3.51	8.246			
894.8	890.5	890.3	886.1	2.2	2.1	-78.64	36.0	31.8	4.20	8.572			
900.0	895.6	895.5	891.2	2.2	2.2	-78.94	36.4	32.2	4.24	8.593			
1,000.0	993.5	994.9	988.3	2.6	2.6	-82.87	45.3	40.3	5.04	8.985			
1,100.0	1,091.3	1,094.4	1,085.6	3.0	3.0	-85.43	54.4	48.5	5.88	9.253			
1,200.0	1,189.2	1,194.0	1,182.9	3.5	3.5	-87.26	63.5	56.8	6.73	9.438			
1,300.0	1,287.0	1,293.6	1,280.1	3.9	3.9	-88.63	72.7	65.1	7.60	9.572			
1,400.0	1,384.9	1,393.1	1,377.4	4.3	4.4	-89.69	81.9	73.5	8.47	9.672			
1,500.0	1,482.7	1,492.7	1,474.7	4.8	4.8	-90.53	91.2	81.8	9.35	9.750			
1,600.0	1,580.6	1,592.3	1,571.9	5.2	5.3	-91.22	100.4	90.2	10.24	9.812			
1,700.0	1,678.4	1,691.8	1,669.2	5.7	5.7	-91.79	109.7	98.6	11.12	9.861			
1,800.0	1,776.3	1,791.4	1,766.5	6.1	6.2	-92.28	119.0	107.0	12.02	9.903			
1,900.0	1,874.1	1,891.0	1,863.7	6.6	6.7	-92.69	128.3	115.4	12.91	9.937			
2,000.0	1,972.0	1,990.5	1,961.0	7.0	7.1	-93.05	137.6	123.8	13.80	9.966			
2,100.0	2,069.9	2,090.1	2,058.3	7.5	7.6	-93.36	146.9	132.2	14.70	9.991			
2,200.0	2,167.7	2,189.6	2,155.5	7.9	8.1	-93.63	156.2	140.6	15.60	10.013			
2,300.0	2,265.6	2,289.2	2,252.8	8.4	8.5	-93.88	165.5	149.0	16.50	10.032			
2,400.0	2,363.4	2,388.8	2,350.0	8.8	9.0	-94.10	174.8	157.4	17.40	10.049			
2,500.0	2,461.3	2,488.3	2,447.3	9.3	9.5	-94.29	184.1	165.8	18.30	10.063			
2,600.0	2,559.1	2,587.9	2,544.6	9.7	9.9	-94.47	193.4	174.2	19.20	10.077			
2,700.0	2,657.0	2,687.5	2,641.8	10.2	10.4	-94.63	202.7	182.6	20.10	10.088			
2,800.0	2,754.8	2,787.0	2,739.1	10.6	10.9	-94.78	212.1	191.1	21.00	10.099			
2,900.0	2,852.7	2,886.6	2,836.4	11.1	11.3	-94.91	221.4	199.5	21.90	10.109			
3,000.0	2,950.5	2,986.2	2,933.6	11.5	11.8	-95.04	230.7	207.9	22.80	10.118			
3,100.0	3,048.4	3,085.7	3,030.9	12.0	12.3	-95.15	240.0	216.3	23.70	10.126			
3,200.0	3,146.2	3,185.3	3,128.2	12.4	12.7	-95.26	249.3	224.7	24.61	10.133			
3,300.0	3,244.1	3,284.8	3,225.4	12.9	13.2	-95.35	258.7	233.2	25.51	10.140			
3,400.0	3,341.9	3,384.4	3,322.7	13.4	13.7	-95.44	268.0	241.6	26.41	10.147			
3,500.0	3,439.8	3,484.0	3,420.0	13.8	14.1	-95.53	277.3	250.0	27.31	10.153			
3,600.0	3,537.6	3,583.5	3,517.2	14.3	14.6	-95.61	286.6	258.4	28.22	10.158			
3,700.0	3,635.5	3,683.1	3,614.5	14.7	15.1	-95.68	296.0	266.8	29.12	10.163			
3,800.0	3,733.3	3,782.7	3,711.8	15.2	15.5	-95.75	305.3	275.3	30.02	10.168			
3,900.0	3,831.2	3,882.2	3,809.0	15.6	16.0	-95.82	314.6	283.7	30.93	10.172			
4,000.0	3,929.1	3,981.8	3,906.3	16.1	16.5	-95.88	323.9	292.1	31.83	10.176			
4,100.0	4,026.9	4,081.4	4,003.6	16.5	16.9	-95.94	333.3	300.5	32.74	10.180			
4,200.0	4,124.8	4,180.9	4,100.8	17.0	17.4	-96.00	342.6	308.9	33.64	10.184			
4,300.0	4,222.6	4,280.5	4,198.1	17.4	17.9	-96.05	351.9	317.4	34.54	10.188			
4,400.0	4,320.5	4,380.0	4,295.4	17.9	18.4	-96.10	361.2	325.8	35.45	10.191			
4,500.0	4,418.3	4,479.6	4,392.6	18.4	18.8	-96.14	370.6	334.2	36.35	10.194			
4,600.0	4,516.2	4,579.2	4,489.9	18.8	19.3	-96.19	379.9	342.6	37.26	10.197			
4,700.0	4,614.0	4,678.7	4,587.2	19.3	19.8	-96.23	389.2	351.1	38.16	10.200			
4,800.0	4,711.9	4,778.3	4,684.4	19.7	20.2	-96.27	398.5	359.5	39.06	10.202			
4,900.0	4,809.7	4,877.9	4,781.7	20.2	20.7	-96.31	407.9	367.9	39.97	10.205			
5,000.0	4,907.6	4,977.4	4,879.0	20.6	21.2	-96.35	417.2	376.3	40.87	10.207			
5,100.0	5,005.4	5,077.0	4,976.2	21.1	21.6	-96.38	426.5	384.8	41.78	10.210			
5,200.0	5,103.3	5,176.6	5,073.5	21.5	22.1	-96.42	435.9	393.2	42.68	10.212			

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

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Sup & Shep Federal Pad - Sup & Shep Fed 25-13W - Wellbore #1 - Plan #1 13Apr14 kjs										Offset Site Error:		0.0 ft	
Survey Program: 0-MWD												Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis		Distance						Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor		Probability of Collision		
5,300.0	5,201.1	5,276.1	5,170.8	22.0	22.6	-96.45	445.2	401.6	43.59	10.214					
5,400.0	5,299.0	5,375.7	5,268.0	22.4	23.0	-96.48	454.5	410.0	44.49	10.216					
5,500.0	5,396.8	5,475.2	5,365.3	22.9	23.5	-96.51	463.9	418.5	45.40	10.218					
5,600.0	5,494.7	5,574.8	5,462.6	23.4	24.0	-96.54	473.2	426.9	46.30	10.219					
5,700.0	5,592.5	5,674.4	5,559.8	23.8	24.5	-96.57	482.5	435.3	47.21	10.221					
5,800.0	5,690.4	5,773.9	5,657.1	24.3	24.9	-96.59	491.8	443.7	48.11	10.223					
5,889.0	5,777.5	5,862.5	5,743.7	24.7	25.3	-96.62	500.1	451.2	48.92	10.224					
5,900.0	5,788.3	5,873.7	5,754.5	24.7	25.4	-96.64	501.2	452.2	49.01	10.226					
6,000.0	5,886.5	5,979.2	5,858.1	25.0	25.7	-96.80	509.6	459.9	49.69	10.256					
6,100.0	5,985.4	6,085.0	5,962.5	25.3	26.0	-96.94	516.5	466.2	50.27	10.274					
6,200.0	6,084.7	6,190.9	6,067.6	25.5	26.3	-97.04	521.8	471.1	50.76	10.280					
6,300.0	6,184.3	6,297.0	6,173.3	25.7	26.5	-97.12	525.5	474.3	51.16	10.272					
6,400.0	6,284.2	6,403.2	6,279.4	25.9	26.6	-97.18	527.6	476.1	51.47	10.251					
6,483.8	6,368.0	6,491.8	6,368.0	26.0	26.7	179.70	528.1	476.5	51.67	10.221					
6,500.0	6,384.2	6,508.0	6,384.2	26.0	26.8	179.70	528.1	476.4	51.71	10.214					
6,583.8	6,468.0	6,591.8	6,468.0	26.1	26.8	179.70	528.1	476.2	51.89	10.177					
6,600.0	6,484.2	6,608.0	6,484.2	26.1	26.9	179.70	528.1	476.2	51.93	10.170					
6,700.0	6,584.2	6,708.0	6,584.2	26.2	27.0	179.70	528.1	476.0	52.16	10.125					
6,800.0	6,684.2	6,808.0	6,684.2	26.3	27.1	179.70	528.1	475.7	52.39	10.081					
6,900.0	6,784.2	6,908.0	6,784.2	26.5	27.2	179.70	528.1	475.5	52.62	10.036					
7,000.0	6,884.2	7,008.0	6,884.2	26.6	27.3	179.70	528.1	475.3	52.86	9.991					
7,100.0	6,984.2	7,108.0	6,984.2	26.7	27.4	179.70	528.1	475.0	53.10	9.946					
7,200.0	7,084.2	7,208.0	7,084.2	26.8	27.5	179.70	528.1	474.8	53.34	9.901					
7,300.0	7,184.2	7,308.0	7,184.2	27.0	27.6	179.70	528.1	474.5	53.59	9.855					
7,400.0	7,284.2	7,408.0	7,284.2	27.1	27.8	179.70	528.1	474.3	53.83	9.810					
7,500.0	7,384.2	7,508.0	7,384.2	27.2	27.9	179.70	528.1	474.0	54.08	9.765					
7,600.0	7,484.2	7,608.0	7,484.2	27.3	28.0	179.70	528.1	473.8	54.34	9.720					
7,700.0	7,584.2	7,708.0	7,584.2	27.5	28.1	179.70	528.1	473.5	54.59	9.674					
7,800.0	7,684.2	7,808.0	7,684.2	27.6	28.2	179.70	528.1	473.3	54.85	9.629					
7,900.0	7,784.2	7,908.0	7,784.2	27.7	28.4	179.70	528.1	473.0	55.11	9.583					
8,000.0	7,884.2	8,008.0	7,884.2	27.9	28.5	179.70	528.1	472.8	55.37	9.538					
8,100.0	7,984.2	8,108.0	7,984.2	28.0	28.6	179.70	528.1	472.5	55.64	9.492					
8,200.0	8,084.2	8,208.0	8,084.2	28.1	28.7	179.70	528.1	472.2	55.90	9.447					
8,300.0	8,184.2	8,308.0	8,184.2	28.3	28.9	179.70	528.1	471.9	56.17	9.402					
8,400.0	8,284.2	8,408.0	8,284.2	28.4	29.0	179.70	528.1	471.7	56.44	9.356					
8,500.0	8,384.2	8,508.0	8,384.2	28.5	29.1	179.70	528.1	471.4	56.72	9.311					
8,520.6	8,404.8	8,528.6	8,404.8	28.6	29.1	179.70	528.1	471.3	56.78	9.302					
8,533.8	8,418.0	8,536.8	8,413.0	28.6	29.2	179.70	528.1	471.3	56.81	9.298					

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Sup & Shep Federal Pad - Sup & Shep Fed 25-14M - Wellbore #1 - Plan #1 13Apr14 kjs												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Riskd Separation Factor	Probability of Collision	
0.0	0.0	0.0	0.0	0.0	0.0	-169.00	14.8						
100.0	100.0	100.0	100.0	0.1	0.1	-169.00	14.8	14.7	0.18	83.583			
200.0	200.0	200.0	200.0	0.3	0.3	-169.00	14.8	14.2	0.63	23.667			
300.0	300.0	300.0	300.0	0.5	0.5	-169.00	14.8	13.8	1.08	13.785			CC, ES
400.0	400.0	399.2	399.2	0.8	0.7	-97.09	17.1	15.6	1.50	11.420			SF
500.0	499.8	497.5	497.2	1.0	1.0	-116.22	26.1	24.2	1.94	13.464			
600.0	599.5	593.9	592.8	1.2	1.2	-128.37	43.7	41.3	2.43	18.000			
700.0	698.7	689.2	686.6	1.5	1.5	-134.74	68.8	65.9	2.94	23.377			
800.0	797.5	784.8	780.7	1.8	1.9	-138.85	97.5	94.1	3.44	28.318			
894.8	890.5	874.5	869.0	2.2	2.2	-141.76	127.4	123.4	3.94	32.358			
900.0	895.6	879.5	873.8	2.2	2.2	-141.92	129.1	125.1	3.96	32.569			
1,000.0	993.5	973.7	966.5	2.6	2.6	-144.37	162.2	157.7	4.50	36.069			
1,100.0	1,091.3	1,067.9	1,059.1	3.0	3.0	-145.99	195.4	190.4	5.04	38.768			
1,200.0	1,189.2	1,162.0	1,151.8	3.5	3.3	-147.14	228.7	223.1	5.59	40.893			
1,300.0	1,287.0	1,256.2	1,244.5	3.9	3.7	-148.00	262.1	256.0	6.15	42.594			
1,400.0	1,384.9	1,350.4	1,337.2	4.3	4.1	-148.66	295.6	288.9	6.72	43.976			
1,500.0	1,482.7	1,444.6	1,429.8	4.8	4.5	-149.19	329.0	321.8	7.29	45.133			
1,600.0	1,580.6	1,538.8	1,522.5	5.2	4.9	-149.62	362.5	354.7	7.86	46.103			
1,700.0	1,678.4	1,633.0	1,615.2	5.7	5.2	-149.98	396.0	387.6	8.44	46.930			
1,800.0	1,776.3	1,727.2	1,707.9	6.1	5.6	-150.28	429.6	420.5	9.02	47.641			
1,900.0	1,874.1	1,821.4	1,800.5	6.6	6.0	-150.54	463.1	453.5	9.60	48.258			
2,000.0	1,972.0	1,915.6	1,893.2	7.0	6.4	-150.76	496.6	486.4	10.18	48.799			
2,100.0	2,069.9	2,009.8	1,985.9	7.5	6.8	-150.96	530.1	519.4	10.76	49.277			
2,200.0	2,167.7	2,104.0	2,078.5	7.9	7.2	-151.13	563.7	552.3	11.34	49.701			
2,300.0	2,265.6	2,198.2	2,171.2	8.4	7.6	-151.28	597.2	585.3	11.93	50.081			
2,400.0	2,363.4	2,292.4	2,263.9	8.8	7.9	-151.42	630.8	618.3	12.51	50.422			
2,500.0	2,461.3	2,386.6	2,356.6	9.3	8.3	-151.54	664.3	651.2	13.10	50.730			
2,600.0	2,559.1	2,480.8	2,449.2	9.7	8.7	-151.65	697.9	684.2	13.68	51.010			
2,700.0	2,657.0	2,575.0	2,541.9	10.2	9.1	-151.75	731.4	717.2	14.27	51.265			
2,800.0	2,754.8	2,669.2	2,634.6	10.6	9.5	-151.85	765.0	750.1	14.85	51.498			
2,900.0	2,852.7	2,763.3	2,727.2	11.1	9.9	-151.93	798.6	783.1	15.44	51.713			
3,000.0	2,950.5	2,857.5	2,819.9	11.5	10.3	-152.01	832.1	816.1	16.03	51.910			
3,100.0	3,048.4	2,951.7	2,912.6	12.0	10.6	-152.08	865.7	849.1	16.62	52.093			
3,200.0	3,146.2	3,045.9	3,005.3	12.4	11.0	-152.15	899.2	882.0	17.21	52.262			
3,300.0	3,244.1	3,140.1	3,097.9	12.9	11.4	-152.21	932.8	915.0	17.80	52.419			
3,400.0	3,341.9	3,234.3	3,190.6	13.4	11.8	-152.26	966.4	948.0	18.38	52.565			
3,500.0	3,439.8	3,328.5	3,283.3	13.8	12.2	-152.32	999.9	981.0	18.97	52.702			
3,600.0	3,537.6	3,422.7	3,376.0	14.3	12.6	-152.37	1,033.5	1,013.9	19.56	52.829			
3,700.0	3,635.5	3,516.9	3,468.6	14.7	13.0	-152.41	1,067.1	1,046.9	20.15	52.949			
3,800.0	3,733.3	3,611.1	3,561.3	15.2	13.4	-152.46	1,100.6	1,079.9	20.74	53.061			
3,900.0	3,831.2	3,705.3	3,654.0	15.6	13.7	-152.50	1,134.2	1,112.9	21.33	53.167			
4,000.0	3,929.1	3,799.5	3,746.6	16.1	14.1	-152.54	1,167.8	1,145.9	21.92	53.266			
4,100.0	4,026.9	3,893.7	3,839.3	16.5	14.5	-152.57	1,201.4	1,178.8	22.51	53.360			
4,200.0	4,124.8	3,987.9	3,932.0	17.0	14.9	-152.61	1,234.9	1,211.8	23.10	53.448			
4,300.0	4,222.6	4,082.1	4,024.7	17.4	15.3	-152.64	1,268.5	1,244.8	23.70	53.532			
4,400.0	4,320.5	4,176.3	4,117.3	17.9	15.7	-152.67	1,302.1	1,277.8	24.29	53.612			
4,500.0	4,418.3	4,270.5	4,210.0	18.4	16.1	-152.70	1,335.6	1,310.8	24.88	53.687			
4,600.0	4,516.2	4,364.7	4,302.7	18.8	16.4	-152.73	1,369.2	1,343.7	25.47	53.758			
4,700.0	4,614.0	4,458.8	4,395.4	19.3	16.8	-152.76	1,402.8	1,376.7	26.06	53.826			
4,800.0	4,711.9	4,553.0	4,488.0	19.7	17.2	-152.78	1,436.3	1,409.7	26.65	53.891			
4,900.0	4,809.7	4,647.2	4,580.7	20.2	17.6	-152.81	1,469.9	1,442.7	27.24	53.952			
5,000.0	4,907.6	4,741.4	4,673.4	20.6	18.0	-152.83	1,503.5	1,475.7	27.84	54.011			
5,100.0	5,005.4	4,835.6	4,766.0	21.1	18.4	-152.85	1,537.1	1,508.6	28.43	54.067			
5,200.0	5,103.3	4,929.8	4,858.7	21.5	18.8	-152.87	1,570.6	1,541.6	29.02	54.120			

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

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Sup & Shep Federal Pad - Sup & Shep Fed 25-14M - Wellbore #1 - Plan #1 13Apr14 kjs													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
Reference		Offset		Semi Major Axis		Distance				Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)						
5,300.0	5,201.1	5,024.0	4,951.4	22.0	19.2	-152.89	1,604.2	1,574.6	29.61	54.171				
5,400.0	5,299.0	5,118.2	5,044.1	22.4	19.5	-152.91	1,637.8	1,607.6	30.21	54.220				
5,500.0	5,396.8	5,212.4	5,136.7	22.9	19.9	-152.93	1,671.4	1,640.6	30.80	54.266				
5,600.0	5,494.7	5,306.6	5,229.4	23.4	20.3	-152.95	1,704.9	1,673.5	31.39	54.311				
5,700.0	5,592.5	5,400.8	5,322.1	23.8	20.7	-152.97	1,738.5	1,706.5	31.99	54.354				
5,800.0	5,690.4	5,495.0	5,414.7	24.3	21.1	-152.98	1,772.1	1,739.5	32.58	54.395				
5,889.0	5,777.5	5,578.8	5,497.2	24.7	21.4	-153.00	1,802.0	1,768.9	33.11	54.430				
5,900.0	5,788.3	5,589.2	5,507.4	24.7	21.5	-153.04	1,805.6	1,772.5	33.18	54.415				
6,000.0	5,886.5	5,684.0	5,600.7	25.0	21.9	-153.32	1,837.4	1,803.6	33.82	54.331				
6,100.0	5,985.4	5,810.3	5,725.1	25.3	22.3	-153.51	1,865.9	1,831.4	34.47	54.124				
6,200.0	6,084.7	5,980.5	5,893.6	25.5	22.8	-153.62	1,888.2	1,853.1	35.09	53.808				
6,300.0	6,184.3	6,154.4	6,066.7	25.7	23.1	-153.71	1,903.6	1,868.0	35.63	53.425				
6,400.0	6,284.2	6,330.6	6,242.7	25.9	23.4	-153.76	1,912.0	1,875.9	36.09	52.979				
6,483.8	6,368.0	6,455.9	6,368.0	26.0	23.5	123.11	1,913.7	1,877.3	36.39	52.582				
6,500.0	6,384.2	6,472.1	6,384.2	26.0	23.5	123.11	1,913.7	1,877.2	36.44	52.512				
6,583.8	6,468.0	6,555.9	6,468.0	26.1	23.6	123.11	1,913.7	1,877.0	36.69	52.159				
6,600.0	6,484.2	6,572.1	6,484.2	26.1	23.7	123.11	1,913.7	1,876.9	36.74	52.092				
6,700.0	6,584.2	6,672.1	6,584.2	26.2	23.8	123.11	1,913.7	1,876.7	37.03	51.681				
6,800.0	6,684.2	6,772.1	6,684.2	26.3	23.9	123.11	1,913.7	1,876.4	37.32	51.272				
6,900.0	6,784.2	6,872.1	6,784.2	26.5	24.0	123.11	1,913.7	1,876.1	37.62	50.865				
7,000.0	6,884.2	6,972.1	6,884.2	26.6	24.1	123.11	1,913.7	1,875.8	37.92	50.461				
7,100.0	6,984.2	7,072.1	6,984.2	26.7	24.2	123.11	1,913.7	1,875.5	38.23	50.060				
7,200.0	7,084.2	7,172.1	7,084.2	26.8	24.3	123.11	1,913.7	1,875.1	38.54	49.661				
7,300.0	7,184.2	7,272.1	7,184.2	27.0	24.4	123.11	1,913.7	1,874.8	38.84	49.265				
7,400.0	7,284.2	7,372.1	7,284.2	27.1	24.6	123.11	1,913.7	1,874.5	39.16	48.872				
7,500.0	7,384.2	7,472.1	7,384.2	27.2	24.7	123.11	1,913.7	1,874.2	39.47	48.481				
7,600.0	7,484.2	7,572.1	7,484.2	27.3	24.8	123.11	1,913.7	1,873.9	39.79	48.094				
7,700.0	7,584.2	7,672.1	7,584.2	27.5	24.9	123.11	1,913.7	1,873.6	40.11	47.710				
7,800.0	7,684.2	7,772.1	7,684.2	27.6	25.0	123.11	1,913.7	1,873.2	40.43	47.329				
7,900.0	7,784.2	7,872.1	7,784.2	27.7	25.2	123.11	1,913.7	1,872.9	40.76	46.952				
8,000.0	7,884.2	7,972.1	7,884.2	27.9	25.3	123.11	1,913.7	1,872.6	41.09	46.577				
8,100.0	7,984.2	8,072.1	7,984.2	28.0	25.4	123.11	1,913.7	1,872.3	41.42	46.206				
8,200.0	8,084.2	8,172.1	8,084.2	28.1	25.5	123.11	1,913.7	1,871.9	41.75	45.839				
8,300.0	8,184.2	8,272.1	8,184.2	28.3	25.7	123.11	1,913.7	1,871.6	42.08	45.475				
8,400.0	8,284.2	8,372.1	8,284.2	28.4	25.8	123.11	1,913.7	1,871.3	42.42	45.114				
8,500.0	8,384.2	8,472.1	8,384.2	28.5	25.9	123.11	1,913.7	1,870.9	42.76	44.757				
8,533.8	8,418.0	8,475.9	8,388.0	28.6	25.9	123.11	1,913.9	1,871.1	42.82	44.695				

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-118.18	38.6						
100.0	100.0	100.0	100.0	0.1	0.1	-118.18	38.6	38.4	0.18	217.140			
200.0	200.0	200.0	200.0	0.3	0.3	-118.18	38.6	37.9	0.63	61.484			
300.0	300.0	300.0	300.0	0.5	0.5	-118.18	38.6	37.5	1.08	35.812			CC, ES
400.0	400.0	397.6	397.6	0.8	0.7	-36.59	40.1	38.6	1.50	26.824			
500.0	499.8	495.0	494.5	1.0	1.0	-40.47	45.0	43.0	1.92	23.424			
600.0	599.5	591.6	590.1	1.2	1.2	-45.27	53.4	51.0	2.38	22.440			
700.0	698.7	687.8	684.1	1.5	1.6	-49.84	65.5	62.6	2.89	22.685			
800.0	797.5	786.8	780.5	1.8	2.0	-54.55	78.1	74.7	3.45	22.628			
894.8	890.5	880.6	871.9	2.2	2.5	-59.50	88.8	84.7	4.07	21.796			
900.0	895.6	885.8	876.9	2.2	2.5	-59.80	89.4	85.3	4.11	21.735			
1,000.0	993.5	984.8	973.3	2.6	3.0	-64.79	100.6	95.7	4.87	20.658			
1,100.0	1,091.3	1,083.9	1,069.7	3.0	3.4	-68.76	112.4	106.7	5.67	19.810			
1,200.0	1,189.2	1,182.9	1,166.2	3.5	3.9	-71.97	124.6	118.1	6.51	19.147			
1,300.0	1,287.0	1,281.9	1,262.6	3.9	4.4	-74.59	137.2	129.8	7.36	18.627			
1,400.0	1,384.9	1,381.0	1,359.0	4.3	4.9	-76.78	150.0	141.7	8.23	18.212			
1,500.0	1,482.7	1,480.0	1,455.4	4.8	5.4	-78.62	163.0	153.8	9.11	17.879			
1,600.0	1,580.6	1,579.0	1,551.8	5.2	5.9	-80.19	176.1	166.1	10.00	17.607			
1,700.0	1,678.4	1,678.0	1,648.2	5.7	6.4	-81.54	189.3	178.4	10.89	17.382			
1,800.0	1,776.3	1,777.1	1,744.6	6.1	6.8	-82.71	202.6	190.8	11.78	17.195			
1,900.0	1,874.1	1,876.1	1,841.0	6.6	7.3	-83.74	216.0	203.3	12.68	17.036			
2,000.0	1,972.0	1,975.1	1,937.4	7.0	7.8	-84.65	229.5	215.9	13.58	16.901			
2,100.0	2,069.9	2,074.2	2,033.8	7.5	8.3	-85.46	243.0	228.5	14.48	16.784			
2,200.0	2,167.7	2,173.2	2,130.2	7.9	8.8	-86.18	256.5	241.1	15.38	16.683			
2,300.0	2,265.6	2,272.2	2,226.6	8.4	9.3	-86.83	270.1	253.8	16.28	16.595			
2,400.0	2,363.4	2,371.2	2,323.0	8.8	9.8	-87.42	283.7	266.5	17.18	16.517			
2,500.0	2,461.3	2,470.3	2,419.4	9.3	10.3	-87.96	297.4	279.3	18.08	16.447			
2,600.0	2,559.1	2,569.3	2,515.8	9.7	10.8	-88.44	311.0	292.0	18.98	16.386			
2,700.0	2,657.0	2,668.3	2,612.2	10.2	11.3	-88.89	324.7	304.8	19.88	16.330			
2,800.0	2,754.8	2,767.4	2,708.6	10.6	11.8	-89.30	338.4	317.6	20.79	16.281			
2,900.0	2,852.7	2,866.4	2,805.0	11.1	12.2	-89.68	352.1	330.4	21.69	16.236			
3,000.0	2,950.5	2,965.4	2,901.4	11.5	12.7	-90.03	365.9	343.3	22.59	16.195			
3,100.0	3,048.4	3,064.4	2,997.8	12.0	13.2	-90.35	379.6	356.1	23.49	16.157			
3,200.0	3,146.2	3,163.5	3,094.2	12.4	13.7	-90.65	393.4	369.0	24.40	16.123			
3,300.0	3,244.1	3,262.5	3,190.6	12.9	14.2	-90.94	407.1	381.8	25.30	16.092			
3,400.0	3,341.9	3,361.5	3,287.0	13.4	14.7	-91.20	420.9	394.7	26.20	16.063			
3,500.0	3,439.8	3,460.6	3,383.4	13.8	15.2	-91.44	434.7	407.6	27.11	16.036			
3,600.0	3,537.6	3,559.6	3,479.8	14.3	15.7	-91.68	448.5	420.5	28.01	16.011			
3,700.0	3,635.5	3,658.6	3,576.2	14.7	16.2	-91.89	462.3	433.4	28.91	15.988			
3,800.0	3,733.3	3,757.6	3,672.6	15.2	16.7	-92.10	476.1	446.3	29.82	15.967			
3,900.0	3,831.2	3,856.7	3,769.0	15.6	17.2	-92.29	489.9	459.2	30.72	15.947			
4,000.0	3,929.1	3,955.7	3,865.4	16.1	17.7	-92.47	503.7	472.1	31.62	15.928			
4,100.0	4,026.9	4,054.7	3,961.8	16.5	18.2	-92.65	517.5	485.0	32.53	15.911			
4,200.0	4,124.8	4,153.8	4,058.2	17.0	18.7	-92.81	531.3	497.9	33.43	15.894			
4,300.0	4,222.6	4,252.8	4,154.6	17.4	19.1	-92.97	545.2	510.8	34.33	15.879			
4,400.0	4,320.5	4,351.8	4,251.0	17.9	19.6	-93.11	559.0	523.8	35.24	15.864			
4,500.0	4,418.3	4,450.9	4,347.4	18.4	20.1	-93.26	572.8	536.7	36.14	15.851			
4,600.0	4,516.2	4,549.9	4,443.8	18.8	20.6	-93.39	586.7	549.6	37.04	15.838			
4,700.0	4,614.0	4,648.9	4,540.2	19.3	21.1	-93.52	600.5	562.6	37.95	15.825			
4,800.0	4,711.9	4,747.9	4,636.6	19.7	21.6	-93.64	614.3	575.5	38.85	15.814			
4,900.0	4,809.7	4,847.0	4,733.0	20.2	22.1	-93.76	628.2	588.4	39.75	15.803			
5,000.0	4,907.6	4,946.0	4,829.4	20.6	22.6	-93.87	642.0	601.4	40.65	15.792			
5,100.0	5,005.4	5,045.0	4,925.8	21.1	23.1	-93.98	655.9	614.3	41.56	15.782			
5,200.0	5,103.3	5,144.1	5,022.2	21.5	23.6	-94.08	669.7	627.3	42.46	15.773			

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

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Sup & Shep Federal Pad - Sup & Shep Fed 25-14W - Wellbore #1 - Plan #1 13Apr14 kjs											Offset Site Error:		0.0 ft	
Survey Program: 0-MWD													Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis		Distance						Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)								
5,300.0	5,201.1	5,243.1	5,118.6	22.0	24.1	-94.18	683.6	640.2	43.36	15.764						
5,400.0	5,299.0	5,342.1	5,215.0	22.4	24.6	-94.27	697.4	653.2	44.27	15.755						
5,500.0	5,396.8	5,441.1	5,311.4	22.9	25.1	-94.36	711.3	666.1	45.17	15.747						
5,600.0	5,494.7	5,540.2	5,407.8	23.4	25.6	-94.45	725.2	679.1	46.07	15.739						
5,700.0	5,592.5	5,641.5	5,506.5	23.8	26.0	-94.54	739.0	692.0	46.97	15.732						
5,800.0	5,690.4	5,751.9	5,614.4	24.3	26.5	-94.78	751.8	704.0	47.84	15.715						
5,889.0	5,777.5	5,850.3	5,711.2	24.7	26.8	-95.16	762.0	713.4	48.58	15.685						
5,900.0	5,788.3	5,862.4	5,723.2	24.7	26.8	-95.24	763.1	714.5	48.67	15.681						
6,000.0	5,886.5	5,973.2	5,832.6	25.0	27.1	-95.88	772.8	723.5	49.36	15.656						
6,100.0	5,985.4	6,084.1	5,942.7	25.3	27.4	-96.40	780.8	730.8	49.97	15.625						
6,200.0	6,084.7	6,195.3	6,053.4	25.5	27.6	-96.80	786.9	736.4	50.48	15.589						
6,300.0	6,184.3	6,306.6	6,164.5	25.7	27.8	-97.08	791.1	740.2	50.89	15.545						
6,400.0	6,284.2	6,418.0	6,275.8	25.9	27.9	-97.25	793.5	742.3	51.21	15.494						
6,483.8	6,368.0	6,510.2	6,368.0	26.0	28.0	179.59	794.0	742.6	51.42	15.441						
6,500.0	6,384.2	6,526.5	6,384.2	26.0	28.0	179.59	794.0	742.6	51.46	15.431						
6,583.8	6,468.0	6,610.2	6,468.0	26.1	28.1	179.59	794.0	742.4	51.64	15.375						
6,600.0	6,484.2	6,626.5	6,484.2	26.1	28.1	179.59	794.0	742.3	51.68	15.364						
6,700.0	6,584.2	6,726.5	6,584.2	26.2	28.2	179.59	794.0	742.1	51.91	15.297						
6,800.0	6,684.2	6,826.5	6,684.2	26.3	28.3	179.59	794.0	741.9	52.14	15.230						
6,900.0	6,784.2	6,926.5	6,784.2	26.5	28.4	179.59	794.0	741.6	52.37	15.163						
7,000.0	6,884.2	7,026.5	6,884.2	26.6	28.5	179.59	794.0	741.4	52.60	15.095						
7,100.0	6,984.2	7,126.5	6,984.2	26.7	28.6	179.59	794.0	741.2	52.84	15.027						
7,200.0	7,084.2	7,226.5	7,084.2	26.8	28.7	179.59	794.0	740.9	53.08	14.959						
7,300.0	7,184.2	7,326.5	7,184.2	27.0	28.8	179.59	794.0	740.7	53.32	14.891						
7,400.0	7,284.2	7,426.5	7,284.2	27.1	28.9	179.59	794.0	740.4	53.57	14.823						
7,500.0	7,384.2	7,526.5	7,384.2	27.2	29.0	179.59	794.0	740.2	53.82	14.754						
7,600.0	7,484.2	7,626.5	7,484.2	27.3	29.2	179.59	794.0	739.9	54.07	14.686						
7,700.0	7,584.2	7,726.5	7,584.2	27.5	29.3	179.59	794.0	739.7	54.32	14.617						
7,800.0	7,684.2	7,826.5	7,684.2	27.6	29.4	179.59	794.0	739.4	54.58	14.549						
7,900.0	7,784.2	7,926.5	7,784.2	27.7	29.5	179.59	794.0	739.2	54.83	14.480						
8,000.0	7,884.2	8,026.5	7,884.2	27.9	29.6	179.59	794.0	738.9	55.10	14.412						
8,100.0	7,984.2	8,126.5	7,984.2	28.0	29.7	179.59	794.0	738.7	55.36	14.343						
8,200.0	8,084.2	8,226.5	8,084.2	28.1	29.8	179.59	794.0	738.4	55.62	14.275						
8,300.0	8,184.2	8,326.5	8,184.2	28.3	30.0	179.59	794.0	738.1	55.89	14.206						
8,400.0	8,284.2	8,426.5	8,284.2	28.4	30.1	179.59	794.0	737.9	56.16	14.138						
8,500.0	8,384.2	8,526.5	8,384.2	28.5	30.2	179.59	794.0	737.6	56.43	14.070						
8,517.8	8,402.0	8,544.2	8,402.0	28.6	30.2	179.59	794.0	737.5	56.48	14.057						
8,533.8	8,418.0	8,550.2	8,408.0	28.6	30.2	179.59	794.1	737.6	56.51	14.051	SF					

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Sup & Shep Federal Pad - Sup & Shep Fed 25-15M - Wellbore #1 - Plan #1 13Apr14 kjs												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	
0.0	0.0	0.0	0.0	0.0	0.0	-154.99	20.1						
100.0	100.0	100.0	100.0	0.1	0.1	-154.99	20.1	19.9	0.18	113.171			
200.0	200.0	200.0	200.0	0.3	0.3	-154.99	20.1	19.5	0.63	32.045			
300.0	300.0	300.0	300.0	0.5	0.5	-154.99	20.1	19.0	1.08	18.665			CC, ES
400.0	400.0	399.1	399.1	0.8	0.7	-81.28	21.6	20.1	1.49	14.468			SF
500.0	499.8	497.4	497.0	1.0	1.0	-101.14	28.7	26.8	1.93	14.861			
600.0	599.5	593.8	592.7	1.2	1.2	-116.90	44.4	42.0	2.42	18.327			
700.0	698.7	687.7	685.0	1.5	1.5	-125.87	68.5	65.6	2.94	23.304			
800.0	797.5	780.7	775.8	1.8	1.9	-130.96	99.6	96.1	3.49	28.558			
894.8	890.5	869.5	862.3	2.2	2.3	-134.34	132.1	128.1	4.00	33.014			
900.0	895.6	874.3	867.0	2.2	2.3	-134.53	134.0	129.9	4.03	33.243			
1,000.0	993.5	967.4	957.8	2.6	2.7	-137.32	169.7	165.2	4.59	37.015			
1,100.0	1,091.3	1,060.6	1,048.6	3.0	3.2	-139.14	205.8	200.6	5.16	39.888			
1,200.0	1,189.2	1,153.7	1,139.4	3.5	3.6	-140.42	241.9	236.2	5.74	42.121			
1,300.0	1,287.0	1,246.8	1,230.1	3.9	4.0	-141.37	278.1	271.8	6.34	43.884			
1,400.0	1,384.9	1,339.9	1,320.9	4.3	4.5	-142.10	314.4	307.5	6.94	45.301			
1,500.0	1,482.7	1,433.1	1,411.7	4.8	4.9	-142.68	350.7	343.2	7.55	46.476			
1,600.0	1,580.6	1,526.2	1,502.4	5.2	5.4	-143.15	387.0	378.9	8.16	47.452			
1,700.0	1,678.4	1,619.3	1,593.2	5.7	5.8	-143.54	423.4	414.6	8.77	48.277			
1,800.0	1,776.3	1,712.4	1,684.0	6.1	6.3	-143.87	459.7	450.4	9.39	48.980			
1,900.0	1,874.1	1,805.6	1,774.7	6.6	6.7	-144.15	496.1	486.1	10.00	49.588			
2,000.0	1,972.0	1,898.7	1,865.5	7.0	7.1	-144.39	532.5	521.9	10.63	50.116			
2,100.0	2,069.9	1,991.8	1,956.3	7.5	7.6	-144.60	568.9	557.6	11.25	50.580			
2,200.0	2,167.7	2,084.9	2,047.1	7.9	8.0	-144.78	605.3	593.4	11.87	50.990			
2,300.0	2,265.6	2,178.1	2,137.8	8.4	8.5	-144.95	641.7	629.2	12.49	51.356			
2,400.0	2,363.4	2,271.2	2,228.6	8.8	8.9	-145.10	678.1	665.0	13.12	51.683			
2,500.0	2,461.3	2,364.3	2,319.4	9.3	9.4	-145.23	714.5	700.8	13.75	51.977			
2,600.0	2,559.1	2,457.4	2,410.1	9.7	9.8	-145.35	750.9	736.5	14.37	52.243			
2,700.0	2,657.0	2,550.6	2,500.9	10.2	10.3	-145.45	787.3	772.3	15.00	52.485			
2,800.0	2,754.8	2,643.7	2,591.7	10.6	10.7	-145.55	823.7	808.1	15.63	52.706			
2,900.0	2,852.7	2,736.8	2,682.5	11.1	11.2	-145.64	860.2	843.9	16.26	52.908			
3,000.0	2,950.5	2,829.9	2,773.2	11.5	11.6	-145.73	896.6	879.7	16.89	53.094			
3,100.0	3,048.4	2,923.1	2,864.0	12.0	12.1	-145.80	933.0	915.5	17.52	53.265			
3,200.0	3,146.2	3,016.2	2,954.8	12.4	12.5	-145.87	969.4	951.3	18.15	53.423			
3,300.0	3,244.1	3,109.3	3,045.5	12.9	13.0	-145.94	1,005.9	987.1	18.78	53.570			
3,400.0	3,341.9	3,202.4	3,136.3	13.4	13.4	-146.00	1,042.3	1,022.9	19.41	53.706			
3,500.0	3,439.8	3,295.6	3,227.1	13.8	13.9	-146.06	1,078.7	1,058.7	20.04	53.833			
3,600.0	3,537.6	3,388.7	3,317.8	14.3	14.3	-146.11	1,115.1	1,094.5	20.67	53.951			
3,700.0	3,635.5	3,481.8	3,408.6	14.7	14.8	-146.16	1,151.6	1,130.3	21.30	54.062			
3,800.0	3,733.3	3,574.9	3,499.4	15.2	15.2	-146.20	1,188.0	1,166.1	21.93	54.166			
3,900.0	3,831.2	3,668.0	3,590.2	15.6	15.7	-146.25	1,224.4	1,201.9	22.56	54.263			
4,000.0	3,929.1	3,761.2	3,680.9	16.1	16.1	-146.29	1,260.8	1,237.7	23.20	54.355			
4,100.0	4,026.9	3,854.3	3,771.7	16.5	16.6	-146.33	1,297.3	1,273.5	23.83	54.441			
4,200.0	4,124.8	3,947.4	3,862.5	17.0	17.0	-146.37	1,333.7	1,309.2	24.46	54.523			
4,300.0	4,222.6	4,040.5	3,953.2	17.4	17.5	-146.40	1,370.1	1,345.0	25.09	54.599			
4,400.0	4,320.5	4,133.7	4,044.0	17.9	17.9	-146.43	1,406.6	1,380.8	25.73	54.672			
4,500.0	4,418.3	4,226.8	4,134.8	18.4	18.4	-146.47	1,443.0	1,416.6	26.36	54.741			
4,600.0	4,516.2	4,319.9	4,225.5	18.8	18.8	-146.50	1,479.4	1,452.4	26.99	54.806			
4,700.0	4,614.0	4,413.0	4,316.3	19.3	19.3	-146.52	1,515.9	1,488.2	27.63	54.868			
4,800.0	4,711.9	4,506.2	4,407.1	19.7	19.8	-146.55	1,552.3	1,524.0	28.26	54.927			
4,900.0	4,809.7	4,599.3	4,497.9	20.2	20.2	-146.58	1,588.7	1,559.8	28.89	54.983			
5,000.0	4,907.6	4,692.4	4,588.6	20.6	20.7	-146.60	1,625.2	1,595.6	29.53	55.037			
5,100.0	5,005.4	4,785.5	4,679.4	21.1	21.1	-146.63	1,661.6	1,631.4	30.16	55.087			
5,200.0	5,103.3	4,878.7	4,770.2	21.5	21.6	-146.65	1,698.0	1,667.2	30.80	55.136			

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



# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Riskd Separation Factor			
5,300.0	5,201.1	4,971.8	4,860.9	22.0	22.0	-146.67	1,734.5	1,703.0	31.43	55.182				
5,400.0	5,299.0	5,064.9	4,951.7	22.4	22.5	-146.69	1,770.9	1,738.8	32.07	55.226				
5,500.0	5,396.8	5,158.0	5,042.5	22.9	22.9	-146.71	1,807.3	1,774.6	32.70	55.268				
5,600.0	5,494.7	5,251.2	5,133.3	23.4	23.4	-146.73	1,843.8	1,810.4	33.34	55.309				
5,700.0	5,592.5	5,344.3	5,224.0	23.8	23.8	-146.75	1,880.2	1,846.2	33.97	55.347				
5,800.0	5,690.4	5,437.4	5,314.8	24.3	24.3	-146.77	1,916.7	1,882.0	34.61	55.384				
5,889.0	5,777.5	5,520.3	5,395.6	24.7	24.7	-146.78	1,949.1	1,913.9	35.17	55.416				
5,900.0	5,788.3	5,530.5	5,405.6	24.7	24.7	-146.83	1,953.1	1,917.8	35.26	55.397				
6,000.0	5,886.5	5,643.6	5,515.8	25.0	25.2	-147.21	1,987.7	1,951.7	36.00	55.221				
6,100.0	5,985.4	5,820.7	5,689.6	25.3	25.8	-147.48	2,016.9	1,980.1	36.77	54.846				
6,200.0	6,084.7	6,003.2	5,870.2	25.5	26.3	-147.69	2,039.2	2,001.7	37.45	54.450				
6,300.0	6,184.3	6,189.7	6,055.9	25.7	26.6	-147.85	2,054.4	2,016.4	38.03	54.015				
6,400.0	6,284.2	6,378.8	6,244.8	25.9	26.9	-147.94	2,062.5	2,024.0	38.52	53.546				
6,483.8	6,368.0	6,502.0	6,368.0	26.0	27.0	128.92	2,063.9	2,025.1	38.83	53.160				
6,500.0	6,384.2	6,518.3	6,384.2	26.0	27.1	128.92	2,063.9	2,025.1	38.87	53.101				
6,583.8	6,468.0	6,602.0	6,468.0	26.1	27.1	128.92	2,063.9	2,024.8	39.10	52.793				
6,600.0	6,484.2	6,618.3	6,484.2	26.1	27.2	128.92	2,063.9	2,024.8	39.14	52.733				
6,700.0	6,584.2	6,718.3	6,584.2	26.2	27.2	128.92	2,063.9	2,024.5	39.41	52.365				
6,800.0	6,684.2	6,818.3	6,684.2	26.3	27.3	128.92	2,063.9	2,024.2	39.69	51.999				
6,900.0	6,784.2	6,918.3	6,784.2	26.5	27.4	128.92	2,063.9	2,024.0	39.97	51.633				
7,000.0	6,884.2	7,018.3	6,884.2	26.6	27.5	128.92	2,063.9	2,023.7	40.26	51.269				
7,100.0	6,984.2	7,118.3	6,984.2	26.7	27.6	128.92	2,063.9	2,023.4	40.54	50.906				
7,200.0	7,084.2	7,218.3	7,084.2	26.8	27.7	128.92	2,063.9	2,023.1	40.83	50.545				
7,300.0	7,184.2	7,318.3	7,184.2	27.0	27.8	128.92	2,063.9	2,022.8	41.13	50.185				
7,400.0	7,284.2	7,418.3	7,284.2	27.1	27.9	128.92	2,063.9	2,022.5	41.42	49.827				
7,500.0	7,384.2	7,518.3	7,384.2	27.2	28.0	128.92	2,063.9	2,022.2	41.72	49.471				
7,600.0	7,484.2	7,618.3	7,484.2	27.3	28.1	128.92	2,063.9	2,021.9	42.02	49.116				
7,700.0	7,584.2	7,718.3	7,584.2	27.5	28.2	128.92	2,063.9	2,021.6	42.33	48.764				
7,800.0	7,684.2	7,818.3	7,684.2	27.6	28.4	128.92	2,063.9	2,021.3	42.63	48.414				
7,900.0	7,784.2	7,918.3	7,784.2	27.7	28.5	128.92	2,063.9	2,021.0	42.94	48.066				
8,000.0	7,884.2	8,018.3	7,884.2	27.9	28.6	128.92	2,063.9	2,020.7	43.25	47.720				
8,100.0	7,984.2	8,118.3	7,984.2	28.0	28.7	128.92	2,063.9	2,020.4	43.56	47.376				
8,200.0	8,084.2	8,218.3	8,084.2	28.1	28.8	128.92	2,063.9	2,020.1	43.88	47.035				
8,300.0	8,184.2	8,318.3	8,184.2	28.3	28.9	128.92	2,063.9	2,019.7	44.20	46.696				
8,400.0	8,284.2	8,418.3	8,284.2	28.4	29.0	128.92	2,063.9	2,019.4	44.52	46.360				
8,464.5	8,348.7	8,482.7	8,348.7	28.5	29.1	128.92	2,063.9	2,019.2	44.73	46.145				
8,500.0	8,384.2	8,512.0	8,378.0	28.5	29.1	128.92	2,063.9	2,019.1	44.83	46.037				
8,533.8	8,418.0	8,512.0	8,378.0	28.6	29.1	128.92	2,064.3	2,019.4	44.89	45.986				

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-117.22	31.8						
100.0	100.0	100.0	100.0	0.1	0.1	-117.22	31.8	31.7	0.18	179.360			
200.0	200.0	200.0	200.0	0.3	0.3	-117.22	31.8	31.2	0.63	50.787			
300.0	300.0	300.0	300.0	0.5	0.5	-117.22	31.8	30.8	1.08	29.581			CC, ES
400.0	400.0	398.3	398.3	0.8	0.7	-36.70	33.0	31.5	1.49	22.052			
500.0	499.8	496.4	496.1	1.0	1.0	-43.40	36.6	34.7	1.91	19.149			
600.0	599.5	594.0	592.8	1.2	1.2	-51.78	43.6	41.2	2.37	18.410			SF
700.0	698.7	690.7	688.0	1.5	1.5	-59.58	54.4	51.6	2.88	18.901			
800.0	797.5	786.4	781.2	1.8	2.0	-65.78	69.2	65.8	3.47	19.933			
894.8	890.5	878.9	870.5	2.2	2.4	-70.72	85.6	81.4	4.13	20.725			
900.0	895.6	884.0	875.4	2.2	2.4	-71.01	86.4	82.3	4.17	20.744			
1,000.0	993.5	982.2	970.3	2.6	2.9	-75.53	103.9	98.9	4.94	21.012			
1,100.0	1,091.3	1,080.4	1,065.1	3.0	3.5	-78.74	121.7	116.0	5.76	21.145			
1,200.0	1,189.2	1,178.6	1,159.9	3.5	4.0	-81.13	139.9	133.3	6.60	21.205			
1,300.0	1,287.0	1,276.8	1,254.7	3.9	4.5	-82.97	158.2	150.7	7.45	21.229			
1,400.0	1,384.9	1,375.0	1,349.5	4.3	5.0	-84.43	176.6	168.3	8.32	21.233			
1,500.0	1,482.7	1,473.2	1,444.3	4.8	5.6	-85.61	195.1	186.0	9.19	21.228			
1,600.0	1,580.6	1,571.4	1,539.1	5.2	6.1	-86.59	213.7	203.7	10.07	21.218			
1,700.0	1,678.4	1,669.6	1,633.9	5.7	6.6	-87.41	232.4	221.4	10.96	21.206			
1,800.0	1,776.3	1,767.8	1,728.7	6.1	7.2	-88.11	251.1	239.2	11.85	21.193			
1,900.0	1,874.1	1,866.0	1,823.5	6.6	7.7	-88.71	269.8	257.1	12.74	21.180			
2,000.0	1,972.0	1,964.2	1,918.3	7.0	8.3	-89.23	288.5	274.9	13.63	21.168			
2,100.0	2,069.9	2,062.4	2,013.1	7.5	8.8	-89.69	307.3	292.8	14.53	21.156			
2,200.0	2,167.7	2,160.6	2,107.9	7.9	9.3	-90.10	326.1	310.7	15.42	21.145			
2,300.0	2,265.6	2,258.8	2,202.7	8.4	9.9	-90.46	344.9	328.6	16.32	21.134			
2,400.0	2,363.4	2,357.0	2,297.5	8.8	10.4	-90.79	363.7	346.5	17.22	21.124			
2,500.0	2,461.3	2,455.2	2,392.3	9.3	11.0	-91.08	382.5	364.4	18.12	21.115			
2,600.0	2,559.1	2,553.4	2,487.1	9.7	11.5	-91.35	401.3	382.3	19.02	21.106			
2,700.0	2,657.0	2,651.6	2,581.9	10.2	12.0	-91.59	420.2	400.3	19.92	21.098			
2,800.0	2,754.8	2,749.8	2,676.7	10.6	12.6	-91.81	439.0	418.2	20.82	21.091			
2,900.0	2,852.7	2,848.0	2,771.5	11.1	13.1	-92.01	457.9	436.1	21.72	21.083			
3,000.0	2,950.5	2,946.2	2,866.3	11.5	13.7	-92.20	476.7	454.1	22.62	21.077			
3,100.0	3,048.4	3,044.3	2,961.1	12.0	14.2	-92.37	495.6	472.1	23.52	21.070			
3,200.0	3,146.2	3,142.5	3,055.9	12.4	14.8	-92.53	514.4	490.0	24.42	21.065			
3,300.0	3,244.1	3,240.7	3,150.7	12.9	15.3	-92.68	533.3	508.0	25.32	21.059			
3,400.0	3,341.9	3,338.9	3,245.5	13.4	15.8	-92.82	552.2	525.9	26.23	21.054			
3,500.0	3,439.8	3,437.1	3,340.3	13.8	16.4	-92.95	571.0	543.9	27.13	21.049			
3,600.0	3,537.6	3,535.3	3,435.1	14.3	16.9	-93.07	589.9	561.9	28.03	21.044			
3,700.0	3,635.5	3,633.5	3,529.9	14.7	17.5	-93.18	608.8	579.8	28.94	21.040			
3,800.0	3,733.3	3,731.7	3,624.7	15.2	18.0	-93.29	627.7	597.8	29.84	21.035			
3,900.0	3,831.2	3,829.9	3,719.5	15.6	18.6	-93.39	646.5	615.8	30.74	21.031			
4,000.0	3,929.1	3,928.1	3,814.3	16.1	19.1	-93.49	665.4	633.8	31.65	21.027			
4,100.0	4,026.9	4,026.3	3,909.1	16.5	19.6	-93.58	684.3	651.8	32.55	21.024			
4,200.0	4,124.8	4,124.5	4,003.9	17.0	20.2	-93.66	703.2	669.7	33.45	21.020			
4,300.0	4,222.6	4,222.7	4,098.7	17.4	20.7	-93.74	722.1	687.7	34.36	21.017			
4,400.0	4,320.5	4,320.9	4,193.5	17.9	21.3	-93.82	741.0	705.7	35.26	21.014			
4,500.0	4,418.3	4,419.1	4,288.3	18.4	21.8	-93.89	759.9	723.7	36.16	21.011			
4,600.0	4,516.2	4,517.3	4,383.1	18.8	22.4	-93.96	778.7	741.7	37.07	21.008			
4,700.0	4,614.0	4,615.5	4,477.9	19.3	22.9	-94.02	797.6	759.7	37.97	21.005			
4,800.0	4,711.9	4,713.7	4,572.7	19.7	23.4	-94.09	816.5	777.6	38.88	21.002			
4,900.0	4,809.7	4,811.9	4,667.5	20.2	24.0	-94.15	835.4	795.6	39.78	21.000			
5,000.0	4,907.6	4,910.1	4,762.3	20.6	24.5	-94.20	854.3	813.6	40.69	20.997			
5,100.0	5,005.4	5,008.3	4,857.1	21.1	25.1	-94.26	873.2	831.6	41.59	20.995			
5,200.0	5,103.3	5,106.5	4,951.9	21.5	25.6	-94.31	892.1	849.6	42.50	20.993			

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

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Sup & Shep Federal Pad - Sup & Shep Fed 25-15W - Wellbore #1 - Plan #1 13Apr14 kjs										Offset Site Error:		0.0 ft
Survey Program:		0-MWD										Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis		Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor		Probability of Collision	
5,300.0	5,201.1	5,204.6	5,046.7	22.0	26.2	-94.36	911.0	867.6	43.40	20.990				
5,400.0	5,299.0	5,302.8	5,141.5	22.4	26.7	-94.41	929.9	885.6	44.31	20.988				
5,500.0	5,396.8	5,401.0	5,236.3	22.9	27.2	-94.45	948.8	903.6	45.21	20.986				
5,600.0	5,494.7	5,499.2	5,331.1	23.4	27.8	-94.50	967.7	921.6	46.12	20.984				
5,700.0	5,592.5	5,611.7	5,439.9	23.8	28.3	-94.59	986.1	939.0	47.03	20.966				
5,800.0	5,690.4	5,730.2	5,555.4	24.3	28.7	-94.84	1,002.6	954.7	47.90	20.929				
5,889.0	5,777.5	5,836.1	5,659.2	24.7	29.1	-95.18	1,015.6	966.9	48.68	20.865				
5,900.0	5,788.3	5,849.2	5,672.1	24.7	29.1	-95.26	1,017.1	968.3	48.77	20.855				
6,000.0	5,886.5	5,968.6	5,790.0	25.0	29.5	-95.92	1,029.5	980.0	49.53	20.786				
6,100.0	5,985.4	6,088.6	5,908.9	25.3	29.8	-96.44	1,039.6	989.4	50.19	20.715				
6,200.0	6,084.7	6,209.0	6,028.7	25.5	30.0	-96.85	1,047.3	996.6	50.74	20.642				
6,300.0	6,184.3	6,329.7	6,149.1	25.7	30.2	-97.13	1,052.7	1,001.5	51.18	20.567				
6,400.0	6,284.2	6,450.5	6,269.8	25.9	30.3	-97.30	1,055.6	1,004.1	51.53	20.486				
6,483.8	6,368.0	6,548.7	6,368.0	26.0	30.4	179.54	1,056.3	1,004.5	51.75	20.412				
6,500.0	6,384.2	6,564.9	6,384.2	26.0	30.5	179.54	1,056.3	1,004.5	51.78	20.398				
6,583.8	6,468.0	6,648.7	6,468.0	26.1	30.5	179.54	1,056.3	1,004.3	51.97	20.326				
6,600.0	6,484.2	6,664.9	6,484.2	26.1	30.5	179.54	1,056.3	1,004.3	52.00	20.312				
6,700.0	6,584.2	6,764.9	6,584.2	26.2	30.6	179.54	1,056.3	1,004.0	52.23	20.225				
6,800.0	6,684.2	6,864.9	6,684.2	26.3	30.7	179.54	1,056.3	1,003.8	52.45	20.138				
6,900.0	6,784.2	6,964.9	6,784.2	26.5	30.8	179.54	1,056.3	1,003.6	52.68	20.051				
7,000.0	6,884.2	7,064.9	6,884.2	26.6	30.9	179.54	1,056.3	1,003.4	52.91	19.963				
7,100.0	6,984.2	7,164.9	6,984.2	26.7	31.0	179.54	1,056.3	1,003.1	53.14	19.875				
7,200.0	7,084.2	7,264.9	7,084.2	26.8	31.1	179.54	1,056.3	1,002.9	53.38	19.787				
7,300.0	7,184.2	7,364.9	7,184.2	27.0	31.2	179.54	1,056.3	1,002.6	53.62	19.699				
7,400.0	7,284.2	7,464.9	7,284.2	27.1	31.3	179.54	1,056.3	1,002.4	53.86	19.610				
7,500.0	7,384.2	7,564.9	7,384.2	27.2	31.4	179.54	1,056.3	1,002.2	54.11	19.521				
7,600.0	7,484.2	7,664.9	7,484.2	27.3	31.5	179.54	1,056.3	1,001.9	54.36	19.432				
7,700.0	7,584.2	7,764.9	7,584.2	27.5	31.6	179.54	1,056.3	1,001.7	54.61	19.343				
7,800.0	7,684.2	7,864.9	7,684.2	27.6	31.7	179.54	1,056.3	1,001.4	54.86	19.254				
7,900.0	7,784.2	7,964.9	7,784.2	27.7	31.8	179.54	1,056.3	1,001.1	55.11	19.165				
8,000.0	7,884.2	8,064.9	7,884.2	27.9	31.9	179.54	1,056.3	1,000.9	55.37	19.076				
8,100.0	7,984.2	8,164.9	7,984.2	28.0	32.0	179.54	1,056.3	1,000.6	55.63	18.987				
8,200.0	8,084.2	8,264.9	8,084.2	28.1	32.1	179.54	1,056.3	1,000.4	55.89	18.898				
8,300.0	8,184.2	8,364.9	8,184.2	28.3	32.2	179.54	1,056.3	1,000.1	56.16	18.809				
8,400.0	8,284.2	8,464.9	8,284.2	28.4	32.3	179.54	1,056.3	999.8	56.43	18.719				
8,500.0	8,384.2	8,564.9	8,384.2	28.5	32.4	179.54	1,056.3	999.6	56.65	18.644				
8,513.5	8,397.7	8,578.4	8,397.7	28.6	32.4	179.54	1,056.3	999.6	56.68	18.635				
8,533.8	8,418.0	8,583.7	8,403.0	28.6	32.4	179.54	1,056.4	999.7	56.71	18.627				

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Riskd Separation Factor	Probability of Collision	
0.0	0.0	0.0	0.0	0.0	0.0	-118.86	22.6						
100.0	100.0	100.0	100.0	0.1	0.1	-118.86	22.6	22.5	0.18	127.481			
200.0	200.0	200.0	200.0	0.3	0.3	-118.86	22.6	22.0	0.63	36.097			
300.0	300.0	300.0	300.0	0.5	0.5	-118.86	22.6	21.6	1.08	21.025			CC, ES
400.0	400.0	399.0	399.0	0.8	0.7	-39.83	23.3	21.8	1.49	15.623			
500.0	499.8	497.8	497.6	1.0	1.0	-50.43	26.1	24.2	1.91	13.651			
600.0	599.5	596.2	595.4	1.2	1.2	-63.22	32.1	29.7	2.37	13.552			SF
700.0	698.7	693.9	692.0	1.5	1.5	-74.14	42.3	39.4	2.89	14.598			
800.0	797.5	790.8	787.0	1.8	1.8	-81.98	56.6	53.0	3.51	16.133			
894.8	890.5	881.6	875.4	2.2	2.2	-87.05	73.7	69.6	4.18	17.658			
900.0	895.6	886.6	880.2	2.2	2.3	-87.29	74.8	70.6	4.21	17.743			
1,000.0	993.5	981.3	971.3	2.6	2.8	-90.14	96.6	91.6	5.00	19.344			
1,100.0	1,091.3	1,077.5	1,063.0	3.0	3.3	-91.09	120.8	115.0	5.81	20.800			
1,200.0	1,189.2	1,174.5	1,155.5	3.5	3.9	-91.70	145.2	138.5	6.65	21.843			
1,300.0	1,287.0	1,271.5	1,247.9	3.9	4.5	-92.13	169.5	162.0	7.50	22.610			
1,400.0	1,384.9	1,368.5	1,340.4	4.3	5.0	-92.46	193.8	185.5	8.36	23.187			
1,500.0	1,482.7	1,465.5	1,432.8	4.8	5.6	-92.71	218.2	208.9	9.23	23.636			
1,600.0	1,580.6	1,562.4	1,525.3	5.2	6.2	-92.91	242.5	232.4	10.11	23.992			
1,700.0	1,678.4	1,659.4	1,617.7	5.7	6.8	-93.08	266.8	255.9	10.99	24.281			
1,800.0	1,776.3	1,756.4	1,710.2	6.1	7.4	-93.21	291.2	279.3	11.88	24.520			
1,900.0	1,874.1	1,853.4	1,802.6	6.6	8.0	-93.33	315.5	302.8	12.76	24.720			
2,000.0	1,972.0	1,950.4	1,895.1	7.0	8.6	-93.43	339.9	326.2	13.66	24.889			
2,100.0	2,069.9	2,047.4	1,987.5	7.5	9.2	-93.52	364.2	349.7	14.55	25.035			
2,200.0	2,167.7	2,144.4	2,080.0	7.9	9.8	-93.59	388.6	373.2	15.44	25.161			
2,300.0	2,265.6	2,241.4	2,172.4	8.4	10.4	-93.66	412.9	396.6	16.34	25.271			
2,400.0	2,363.4	2,338.4	2,264.9	8.8	11.0	-93.72	437.3	420.1	17.24	25.369			
2,500.0	2,461.3	2,435.3	2,357.3	9.3	11.6	-93.77	461.7	443.5	18.14	25.455			
2,600.0	2,559.1	2,532.3	2,449.8	9.7	12.3	-93.82	486.0	467.0	19.04	25.532			
2,700.0	2,657.0	2,629.3	2,542.2	10.2	12.9	-93.86	510.4	490.4	19.94	25.601			
2,800.0	2,754.8	2,726.3	2,634.7	10.6	13.5	-93.90	534.7	513.9	20.84	25.664			
2,900.0	2,852.7	2,823.3	2,727.1	11.1	14.1	-93.94	559.1	537.3	21.74	25.720			
3,000.0	2,950.5	2,920.3	2,819.6	11.5	14.7	-93.97	583.4	560.8	22.64	25.772			
3,100.0	3,048.4	3,017.3	2,912.0	12.0	15.3	-94.00	607.8	584.2	23.54	25.819			
3,200.0	3,146.2	3,114.3	3,004.5	12.4	15.9	-94.03	632.1	607.7	24.44	25.862			
3,300.0	3,244.1	3,211.3	3,096.9	12.9	16.5	-94.05	656.5	631.1	25.34	25.902			
3,400.0	3,341.9	3,308.2	3,189.4	13.4	17.1	-94.08	680.8	654.6	26.25	25.939			
3,500.0	3,439.8	3,405.2	3,281.8	13.8	17.7	-94.10	705.2	678.0	27.15	25.973			
3,600.0	3,537.6	3,502.2	3,374.3	14.3	18.3	-94.12	729.6	701.5	28.05	26.005			
3,700.0	3,635.5	3,599.2	3,466.7	14.7	18.9	-94.14	753.9	724.9	28.96	26.034			
3,800.0	3,733.3	3,696.2	3,559.1	15.2	19.5	-94.16	778.3	748.4	29.86	26.062			
3,900.0	3,831.2	3,793.2	3,651.6	15.6	20.1	-94.17	802.6	771.9	30.77	26.087			
4,000.0	3,929.1	3,890.2	3,744.0	16.1	20.7	-94.19	827.0	795.3	31.67	26.111			
4,100.0	4,026.9	3,987.2	3,836.5	16.5	21.3	-94.20	851.3	818.8	32.58	26.134			
4,200.0	4,124.8	4,084.1	3,928.9	17.0	22.0	-94.22	875.7	842.2	33.48	26.155			
4,300.0	4,222.6	4,181.1	4,021.4	17.4	22.6	-94.23	900.0	865.7	34.39	26.175			
4,400.0	4,320.5	4,278.1	4,113.8	17.9	23.2	-94.25	924.4	889.1	35.29	26.194			
4,500.0	4,418.3	4,375.1	4,206.3	18.4	23.8	-94.26	948.7	912.6	36.20	26.212			
4,600.0	4,516.2	4,472.1	4,298.7	18.8	24.4	-94.27	973.1	936.0	37.10	26.229			
4,700.0	4,614.0	4,569.1	4,391.2	19.3	25.0	-94.28	997.5	959.5	38.01	26.245			
4,800.0	4,711.9	4,666.1	4,483.6	19.7	25.6	-94.29	1,021.8	982.9	38.91	26.260			
4,900.0	4,809.7	4,763.1	4,576.1	20.2	26.2	-94.30	1,046.2	1,006.4	39.82	26.274			
5,000.0	4,907.6	4,860.1	4,668.5	20.6	26.8	-94.31	1,070.5	1,029.8	40.72	26.288			
5,100.0	5,005.4	4,957.0	4,761.0	21.1	27.4	-94.32	1,094.9	1,053.3	41.63	26.301			
5,200.0	5,103.3	5,054.0	4,853.4	21.5	28.0	-94.33	1,119.2	1,076.7	42.53	26.314			

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

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Sup & Shep Federal Pad - Sup & Shep Fed 25-16W - Wellbore #1 - Plan #1 13Apr14 kjs												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Riskd Separation Factor	Probability of Collision	
5,300.0	5,201.1	5,151.0	4,945.9	22.0	28.6	-94.34	1,143.6	1,100.2	43.44	26.326			
5,400.0	5,299.0	5,248.0	5,038.3	22.4	29.2	-94.34	1,168.0	1,123.6	44.35	26.337			
5,500.0	5,396.8	5,345.0	5,130.8	22.9	29.8	-94.35	1,192.3	1,147.1	45.25	26.348			
5,600.0	5,494.7	5,453.3	5,234.1	23.4	30.5	-94.37	1,216.5	1,170.3	46.18	26.340			
5,700.0	5,592.5	5,581.1	5,357.0	23.8	31.1	-94.50	1,238.7	1,191.6	47.13	26.286			
5,800.0	5,690.4	5,710.0	5,482.1	24.3	31.6	-94.76	1,258.6	1,210.5	48.04	26.196			
5,889.0	5,777.5	5,825.5	5,595.0	24.7	31.9	-95.10	1,274.2	1,225.4	48.86	26.080			
5,900.0	5,788.3	5,839.8	5,609.0	24.7	32.0	-95.18	1,276.0	1,227.0	48.96	26.061			
6,000.0	5,886.5	5,970.5	5,737.7	25.0	32.4	-95.87	1,290.8	1,241.0	49.79	25.923			
6,100.0	5,985.4	6,102.1	5,867.9	25.3	32.7	-96.42	1,302.8	1,252.3	50.52	25.791			
6,200.0	6,084.7	6,234.4	5,999.4	25.5	33.0	-96.85	1,312.0	1,260.9	51.12	25.667			
6,300.0	6,184.3	6,367.1	6,131.8	25.7	33.2	-97.15	1,318.2	1,266.6	51.60	25.545			
6,400.0	6,284.2	6,500.1	6,264.7	25.9	33.4	-97.33	1,321.6	1,269.6	51.98	25.424			
6,483.8	6,368.0	6,603.4	6,368.0	26.0	33.5	179.51	1,322.2	1,269.9	52.21	25.326			
6,500.0	6,384.2	6,619.6	6,384.2	26.0	33.5	179.51	1,322.2	1,269.9	52.24	25.309			
6,583.8	6,468.0	6,703.4	6,468.0	26.1	33.5	179.51	1,322.2	1,269.7	52.42	25.222			
6,600.0	6,484.2	6,719.6	6,484.2	26.1	33.6	179.51	1,322.2	1,269.7	52.46	25.205			
6,700.0	6,584.2	6,819.6	6,584.2	26.2	33.6	179.51	1,322.2	1,269.5	52.68	25.100			
6,800.0	6,684.2	6,919.6	6,684.2	26.3	33.7	179.51	1,322.2	1,269.3	52.90	24.995			
6,900.0	6,784.2	7,019.6	6,784.2	26.5	33.8	179.51	1,322.2	1,269.0	53.12	24.889			
7,000.0	6,884.2	7,119.6	6,884.2	26.6	33.9	179.51	1,322.2	1,268.8	53.35	24.782			
7,100.0	6,984.2	7,219.6	6,984.2	26.7	34.0	179.51	1,322.2	1,268.6	53.58	24.676			
7,200.0	7,084.2	7,319.6	7,084.2	26.8	34.0	179.51	1,322.2	1,268.3	53.81	24.569			
7,300.0	7,184.2	7,419.6	7,184.2	27.0	34.1	179.51	1,322.2	1,268.1	54.05	24.461			
7,400.0	7,284.2	7,519.6	7,284.2	27.1	34.2	179.51	1,322.2	1,267.9	54.29	24.354			
7,500.0	7,384.2	7,619.6	7,384.2	27.2	34.3	179.51	1,322.2	1,267.6	54.53	24.246			
7,600.0	7,484.2	7,719.6	7,484.2	27.3	34.4	179.51	1,322.2	1,267.4	54.78	24.138			
7,700.0	7,584.2	7,819.6	7,584.2	27.5	34.5	179.51	1,322.2	1,267.1	55.02	24.030			
7,800.0	7,684.2	7,919.6	7,684.2	27.6	34.6	179.51	1,322.2	1,266.9	55.27	23.921			
7,900.0	7,784.2	8,019.6	7,784.2	27.7	34.7	179.51	1,322.2	1,266.6	55.52	23.813			
8,000.0	7,884.2	8,119.6	7,884.2	27.9	34.8	179.51	1,322.2	1,266.4	55.78	23.704			
8,100.0	7,984.2	8,219.6	7,984.2	28.0	34.9	179.51	1,322.2	1,266.1	56.03	23.596			
8,200.0	8,084.2	8,319.6	8,084.2	28.1	35.0	179.51	1,322.2	1,265.9	56.29	23.487			
8,300.0	8,184.2	8,419.6	8,184.2	28.3	35.1	179.51	1,322.2	1,265.6	56.55	23.378			
8,400.0	8,284.2	8,519.6	8,284.2	28.4	35.2	179.51	1,322.2	1,265.3	56.82	23.270			
8,500.0	8,384.2	8,619.6	8,384.2	28.5	35.3	179.51	1,322.2	1,265.1	57.08	23.161			
8,533.8	8,418.0	8,628.4	8,393.0	28.6	35.3	179.51	1,322.4	1,265.2	57.14	23.142			

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Sup & Shep Federal Pad - Sup & Shep Fed 25-17W - Wellbore #1 - Plan #1 13Apr14 kjs												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Riskd Separation Factor	Probability of Collision	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-128.36	47.0						
100.0	100.0	100.0	100.0	0.1	0.1	-128.36	47.0	46.8	0.18	264.419			
200.0	200.0	200.0	200.0	0.3	0.3	-128.36	47.0	46.3	0.63	74.872			
300.0	300.0	300.0	300.0	0.5	0.5	-128.36	47.0	45.9	1.08	43.610			CC, ES
400.0	400.0	398.0	398.0	0.8	0.7	-47.31	47.8	46.3	1.49	32.079			
500.0	499.8	495.8	495.5	1.0	0.9	-52.97	50.8	48.9	1.90	26.683			
600.0	599.5	593.0	592.2	1.2	1.2	-60.88	56.7	54.4	2.36	24.082			
700.0	698.7	689.5	687.7	1.5	1.5	-69.25	66.5	63.6	2.86	23.224			SF
800.0	797.5	785.1	781.5	1.8	1.8	-76.74	80.5	77.0	3.44	23.364			
894.8	890.5	874.6	868.6	2.2	2.2	-82.49	97.8	93.7	4.08	23.950			
900.0	895.6	879.5	873.3	2.2	2.2	-82.78	98.8	94.7	4.12	23.991			
1,000.0	993.5	972.6	963.0	2.6	2.7	-86.96	121.4	116.6	4.87	24.950			
1,100.0	1,091.3	1,064.3	1,050.2	3.0	3.2	-89.03	147.8	142.2	5.65	26.164			
1,200.0	1,189.2	1,158.4	1,138.8	3.5	3.8	-89.99	176.8	170.3	6.47	27.335			
1,300.0	1,287.0	1,254.1	1,228.8	3.9	4.5	-90.68	205.9	198.6	7.30	28.216			
1,400.0	1,384.9	1,349.7	1,318.8	4.3	5.1	-91.19	235.0	226.9	8.14	28.863			
1,500.0	1,482.7	1,445.3	1,408.8	4.8	5.7	-91.59	264.2	255.2	9.00	29.352			
1,600.0	1,580.6	1,541.0	1,498.8	5.2	6.4	-91.91	293.4	283.5	9.87	29.732			
1,700.0	1,678.4	1,636.6	1,588.8	5.7	7.0	-92.17	322.5	311.8	10.74	30.033			
1,800.0	1,776.3	1,732.3	1,678.7	6.1	7.7	-92.39	351.7	340.1	11.62	30.277			
1,900.0	1,874.1	1,827.9	1,768.7	6.6	8.3	-92.57	380.9	368.4	12.50	30.477			
2,000.0	1,972.0	1,923.5	1,858.7	7.0	9.0	-92.73	410.1	396.7	13.38	30.644			
2,100.0	2,069.9	2,019.2	1,948.7	7.5	9.6	-92.87	439.3	425.0	14.27	30.785			
2,200.0	2,167.7	2,114.8	2,038.7	7.9	10.3	-92.99	468.5	453.3	15.16	30.906			
2,300.0	2,265.6	2,210.5	2,128.7	8.4	10.9	-93.10	497.7	481.6	16.05	31.010			
2,400.0	2,363.4	2,306.1	2,218.7	8.8	11.6	-93.19	526.9	509.9	16.94	31.100			
2,500.0	2,461.3	2,401.7	2,308.7	9.3	12.2	-93.28	556.1	538.2	17.83	31.179			
2,600.0	2,559.1	2,497.4	2,398.6	9.7	12.9	-93.35	585.3	566.5	18.73	31.249			
2,700.0	2,657.0	2,593.0	2,488.6	10.2	13.6	-93.42	614.5	594.8	19.62	31.311			
2,800.0	2,754.8	2,688.6	2,578.6	10.6	14.2	-93.49	643.7	623.2	20.52	31.367			
2,900.0	2,852.7	2,784.3	2,668.6	11.1	14.9	-93.54	672.9	651.5	21.42	31.417			
3,000.0	2,950.5	2,879.9	2,758.6	11.5	15.5	-93.60	702.1	679.8	22.32	31.462			
3,100.0	3,048.4	2,975.6	2,848.6	12.0	16.2	-93.64	731.3	708.1	23.21	31.503			
3,200.0	3,146.2	3,071.2	2,938.6	12.4	16.8	-93.69	760.5	736.4	24.11	31.540			
3,300.0	3,244.1	3,166.8	3,028.6	12.9	17.5	-93.73	789.7	764.7	25.01	31.574			
3,400.0	3,341.9	3,262.5	3,118.5	13.4	18.2	-93.77	818.9	793.0	25.91	31.605			
3,500.0	3,439.8	3,358.1	3,208.5	13.8	18.8	-93.80	848.1	821.3	26.81	31.633			
3,600.0	3,537.6	3,453.8	3,298.5	14.3	19.5	-93.84	877.3	849.6	27.71	31.660			
3,700.0	3,635.5	3,549.4	3,388.5	14.7	20.1	-93.87	906.5	877.9	28.61	31.684			
3,800.0	3,733.3	3,645.0	3,478.5	15.2	20.8	-93.90	935.7	906.2	29.51	31.707			
3,900.0	3,831.2	3,740.7	3,568.5	15.6	21.4	-93.92	964.9	934.5	30.41	31.728			
4,000.0	3,929.1	3,836.3	3,658.5	16.1	22.1	-93.95	994.1	962.8	31.31	31.747			
4,100.0	4,026.9	3,932.0	3,748.5	16.5	22.8	-93.97	1,023.3	991.1	32.21	31.765			
4,200.0	4,124.8	4,027.6	3,838.4	17.0	23.4	-94.00	1,052.5	1,019.4	33.12	31.783			
4,300.0	4,222.6	4,123.2	3,928.4	17.4	24.1	-94.02	1,081.7	1,047.7	34.02	31.799			
4,400.0	4,320.5	4,218.9	4,018.4	17.9	24.7	-94.04	1,110.9	1,076.0	34.92	31.814			
4,500.0	4,418.3	4,314.5	4,108.4	18.4	25.4	-94.06	1,140.1	1,104.3	35.82	31.828			
4,600.0	4,516.2	4,410.2	4,198.4	18.8	26.1	-94.08	1,169.3	1,132.6	36.72	31.841			
4,700.0	4,614.0	4,505.8	4,288.4	19.3	26.7	-94.10	1,198.5	1,160.9	37.63	31.853			
4,800.0	4,711.9	4,601.4	4,378.4	19.7	27.4	-94.11	1,227.7	1,189.2	38.53	31.865			
4,900.0	4,809.7	4,697.1	4,468.4	20.2	28.0	-94.13	1,256.9	1,217.5	39.43	31.876			
5,000.0	4,907.6	4,792.7	4,558.3	20.6	28.7	-94.14	1,286.2	1,245.8	40.33	31.887			
5,100.0	5,005.4	4,888.4	4,648.3	21.1	29.4	-94.16	1,315.4	1,274.1	41.24	31.897			
5,200.0	5,103.3	4,984.0	4,738.3	21.5	30.0	-94.17	1,344.6	1,302.4	42.14	31.906			

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

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Sup & Shep Federal Pad - Sup & Shep Fed 25-17W - Wellbore #1 - Plan #1 13Apr14 kjs												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Riskd Separation Factor	Probability of Collision	Warning
5,300.0	5,201.1	5,079.6	4,828.3	22.0	30.7	-94.19	1,373.8	1,330.7	43.04	31.915			
5,400.0	5,299.0	5,175.3	4,918.3	22.4	31.3	-94.20	1,403.0	1,359.0	43.95	31.924			
5,500.0	5,396.8	5,270.9	5,008.3	22.9	32.0	-94.21	1,432.2	1,387.3	44.85	31.932			
5,600.0	5,494.7	5,391.9	5,122.4	23.4	32.7	-94.25	1,460.9	1,415.1	45.83	31.875			
5,700.0	5,592.5	5,531.5	5,255.5	23.8	33.4	-94.40	1,487.0	1,440.2	46.80	31.771			
5,800.0	5,690.4	5,673.0	5,391.9	24.3	34.0	-94.66	1,510.3	1,462.6	47.78	31.612			
5,889.0	5,777.5	5,800.2	5,515.7	24.7	34.4	-94.99	1,528.7	1,480.0	48.64	31.426			
5,900.0	5,788.3	5,816.0	5,531.1	24.7	34.5	-95.08	1,530.8	1,482.0	48.76	31.397			
6,000.0	5,886.5	5,960.5	5,672.9	25.0	34.9	-95.81	1,548.1	1,498.4	49.67	31.169			
6,100.0	5,985.4	6,106.3	5,816.9	25.3	35.3	-96.39	1,562.1	1,511.7	50.46	30.957			
6,200.0	6,084.7	6,253.3	5,962.9	25.5	35.7	-96.84	1,572.8	1,521.7	51.12	30.765			
6,300.0	6,184.3	6,401.0	6,110.1	25.7	35.9	-97.16	1,580.0	1,528.4	51.66	30.584			
6,400.0	6,284.2	6,549.2	6,258.2	25.9	36.1	-97.35	1,583.8	1,531.7	52.06	30.420			
6,483.8	6,368.0	6,659.0	6,368.0	26.0	36.2	179.49	1,584.4	1,532.1	52.30	30.294			
6,500.0	6,384.2	6,675.2	6,384.2	26.0	36.2	179.49	1,584.4	1,532.1	52.34	30.274			
6,583.8	6,468.0	6,759.0	6,468.0	26.1	36.3	179.49	1,584.4	1,531.9	52.52	30.170			
6,600.0	6,484.2	6,775.2	6,484.2	26.1	36.3	179.49	1,584.4	1,531.9	52.55	30.150			
6,700.0	6,584.2	6,875.2	6,584.2	26.2	36.3	179.49	1,584.4	1,531.6	52.77	30.026			
6,800.0	6,684.2	6,975.2	6,684.2	26.3	36.4	179.49	1,584.4	1,531.4	52.99	29.901			
6,900.0	6,784.2	7,075.2	6,784.2	26.5	36.5	179.49	1,584.4	1,531.2	53.21	29.775			
7,000.0	6,884.2	7,175.2	6,884.2	26.6	36.6	179.49	1,584.4	1,531.0	53.44	29.649			
7,100.0	6,984.2	7,275.2	6,984.2	26.7	36.6	179.49	1,584.4	1,530.7	53.67	29.523			
7,200.0	7,084.2	7,375.2	7,084.2	26.8	36.7	179.49	1,584.4	1,530.5	53.90	29.396			
7,300.0	7,184.2	7,475.2	7,184.2	27.0	36.8	179.49	1,584.4	1,530.3	54.13	29.269			
7,400.0	7,284.2	7,575.2	7,284.2	27.1	36.9	179.49	1,584.4	1,530.0	54.37	29.141			
7,500.0	7,384.2	7,675.2	7,384.2	27.2	37.0	179.49	1,584.4	1,529.8	54.61	29.013			
7,600.0	7,484.2	7,775.2	7,484.2	27.3	37.0	179.49	1,584.4	1,529.6	54.85	28.885			
7,700.0	7,584.2	7,875.2	7,584.2	27.5	37.1	179.49	1,584.4	1,529.3	55.10	28.756			
7,800.0	7,684.2	7,975.2	7,684.2	27.6	37.2	179.49	1,584.4	1,529.1	55.34	28.628			
7,900.0	7,784.2	8,075.2	7,784.2	27.7	37.3	179.49	1,584.4	1,528.8	55.60	28.499			
8,000.0	7,884.2	8,175.2	7,884.2	27.9	37.4	179.49	1,584.4	1,528.6	55.85	28.370			
8,100.0	7,984.2	8,275.2	7,984.2	28.0	37.5	179.49	1,584.4	1,528.3	56.10	28.241			
8,200.0	8,084.2	8,375.2	8,084.2	28.1	37.6	179.49	1,584.4	1,528.0	56.36	28.112			
8,300.0	8,184.2	8,475.2	8,184.2	28.3	37.6	179.49	1,584.4	1,527.8	56.62	27.983			
8,400.0	8,284.2	8,575.2	8,284.2	28.4	37.7	179.49	1,584.4	1,527.5	56.88	27.854			
8,500.0	8,384.2	8,675.2	8,384.2	28.5	37.8	179.49	1,584.4	1,527.3	57.15	27.725			
8,533.8	8,418.0	8,679.0	8,388.0	28.6	37.8	179.49	1,584.7	1,527.5	57.20	27.705			

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Sup & Shep Federal Pad - Sup & Shep Fed 25-19W - Wellbore #1 - Plan #1 13Apr14 kjs												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-133.97	31.5						
100.0	100.0	100.0	100.0	0.1	0.1	-133.97	31.5	31.3	0.18	177.276			
200.0	200.0	200.0	200.0	0.3	0.3	-133.97	31.5	30.9	0.63	50.197			
300.0	300.0	300.0	300.0	0.5	0.5	-133.97	31.5	30.4	1.08	29.238			CC, ES
400.0	400.0	398.0	397.9	0.8	0.7	-54.64	33.5	32.0	1.49	22.466			
500.0	499.8	495.2	494.7	1.0	1.0	-63.43	40.4	38.4	1.92	20.995			SF
600.0	599.5	591.2	589.5	1.2	1.2	-72.54	53.1	50.7	2.40	22.077			
700.0	698.7	685.3	681.2	1.5	1.6	-79.49	72.0	69.1	2.95	24.448			
800.0	797.5	777.0	769.3	1.8	2.1	-84.19	97.0	93.4	3.56	27.221			
894.8	890.5	861.3	848.7	2.2	2.6	-87.10	125.8	121.5	4.22	29.793			
900.0	895.6	865.8	853.0	2.2	2.6	-87.26	127.5	123.2	4.26	29.929			
1,000.0	993.5	951.6	932.1	2.6	3.2	-89.27	163.3	158.2	5.02	32.505			
1,100.0	1,091.3	1,042.6	1,014.6	3.0	3.9	-90.24	202.1	196.3	5.82	34.724			
1,200.0	1,189.2	1,134.7	1,098.2	3.5	4.7	-90.91	241.0	234.3	6.62	36.371			
1,300.0	1,287.0	1,226.8	1,181.8	3.9	5.4	-91.39	279.9	272.4	7.45	37.557			
1,400.0	1,384.9	1,318.9	1,265.3	4.3	6.1	-91.75	318.8	310.5	8.29	38.441			
1,500.0	1,482.7	1,411.0	1,348.9	4.8	6.9	-92.04	357.7	348.6	9.14	39.118			
1,600.0	1,580.6	1,503.1	1,432.4	5.2	7.7	-92.26	396.6	386.6	10.00	39.649			
1,700.0	1,678.4	1,595.2	1,516.0	5.7	8.4	-92.45	435.6	424.7	10.87	40.073			
1,800.0	1,776.3	1,687.3	1,599.6	6.1	9.2	-92.61	474.5	462.8	11.74	40.419			
1,900.0	1,874.1	1,779.4	1,683.1	6.6	9.9	-92.74	513.5	500.9	12.61	40.706			
2,000.0	1,972.0	1,871.5	1,766.7	7.0	10.7	-92.85	552.4	538.9	13.49	40.947			
2,100.0	2,069.9	1,963.6	1,850.3	7.5	11.5	-92.95	591.4	577.0	14.37	41.152			
2,200.0	2,167.7	2,055.7	1,933.8	7.9	12.2	-93.04	630.3	615.1	15.25	41.328			
2,300.0	2,265.6	2,147.8	2,017.4	8.4	13.0	-93.12	669.3	653.1	16.13	41.480			
2,400.0	2,363.4	2,239.9	2,100.9	8.8	13.8	-93.19	708.2	691.2	17.02	41.613			
2,500.0	2,461.3	2,332.0	2,184.5	9.3	14.5	-93.25	747.2	729.3	17.90	41.731			
2,600.0	2,559.1	2,424.1	2,268.1	9.7	15.3	-93.30	786.1	767.3	18.79	41.835			
2,700.0	2,657.0	2,516.2	2,351.6	10.2	16.1	-93.35	825.1	805.4	19.68	41.927			
2,800.0	2,754.8	2,608.3	2,435.2	10.6	16.8	-93.40	864.0	843.5	20.57	42.010			
2,900.0	2,852.7	2,700.4	2,518.8	11.1	17.6	-93.44	903.0	881.5	21.46	42.085			
3,000.0	2,950.5	2,792.5	2,602.3	11.5	18.4	-93.48	941.9	919.6	22.35	42.153			
3,100.0	3,048.4	2,884.6	2,685.9	12.0	19.1	-93.51	980.9	957.7	23.24	42.214			
3,200.0	3,146.2	2,976.7	2,769.4	12.4	19.9	-93.54	1,019.8	995.7	24.13	42.270			
3,300.0	3,244.1	3,068.8	2,853.0	12.9	20.6	-93.57	1,058.8	1,033.8	25.02	42.321			
3,400.0	3,341.9	3,160.9	2,936.6	13.4	21.4	-93.60	1,097.8	1,071.9	25.91	42.369			
3,500.0	3,439.8	3,253.0	3,020.1	13.8	22.2	-93.63	1,136.7	1,109.9	26.80	42.412			
3,600.0	3,537.6	3,345.1	3,103.7	14.3	22.9	-93.65	1,175.7	1,148.0	27.69	42.452			
3,700.0	3,635.5	3,437.2	3,187.3	14.7	23.7	-93.67	1,214.6	1,186.0	28.59	42.489			
3,800.0	3,733.3	3,529.3	3,270.8	15.2	24.5	-93.70	1,253.6	1,224.1	29.48	42.524			
3,900.0	3,831.2	3,621.4	3,354.4	15.6	25.2	-93.72	1,292.5	1,262.2	30.37	42.556			
4,000.0	3,929.1	3,713.5	3,437.9	16.1	26.0	-93.73	1,331.5	1,300.2	31.27	42.586			
4,100.0	4,026.9	3,805.6	3,521.5	16.5	26.8	-93.75	1,370.5	1,338.3	32.16	42.614			
4,200.0	4,124.8	3,897.7	3,605.1	17.0	27.5	-93.77	1,409.4	1,376.4	33.05	42.640			
4,300.0	4,222.6	3,989.8	3,688.6	17.4	28.3	-93.79	1,448.4	1,414.4	33.95	42.664			
4,400.0	4,320.5	4,081.9	3,772.2	17.9	29.1	-93.80	1,487.3	1,452.5	34.84	42.687			
4,500.0	4,418.3	4,174.0	3,855.8	18.4	29.8	-93.81	1,526.3	1,490.5	35.74	42.709			
4,600.0	4,516.2	4,266.1	3,939.3	18.8	30.6	-93.83	1,565.2	1,528.6	36.63	42.729			
4,700.0	4,614.0	4,358.2	4,022.9	19.3	31.4	-93.84	1,604.2	1,566.7	37.53	42.749			
4,800.0	4,711.9	4,450.3	4,106.5	19.7	32.1	-93.85	1,643.2	1,604.7	38.42	42.767			
4,900.0	4,809.7	4,542.4	4,190.0	20.2	32.9	-93.87	1,682.1	1,642.8	39.32	42.784			
5,000.0	4,907.6	4,634.5	4,273.6	20.6	33.7	-93.88	1,721.1	1,680.9	40.21	42.800			
5,100.0	5,005.4	4,726.6	4,357.1	21.1	34.4	-93.89	1,760.0	1,718.9	41.11	42.815			
5,200.0	5,103.3	4,818.7	4,440.7	21.5	35.2	-93.90	1,799.0	1,757.0	42.00	42.830			

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



# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance				Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)						
5,300.0	5,201.1	4,910.8	4,524.3	22.0	36.0	-93.91	1,837.9	1,795.0		42.90	42.844			
5,400.0	5,299.0	5,002.9	4,607.8	22.4	36.8	-93.92	1,876.9	1,833.1		43.79	42.857			
5,500.0	5,396.8	5,095.0	4,691.4	22.9	37.5	-93.93	1,915.9	1,871.2		44.69	42.869			
5,600.0	5,494.7	5,238.9	4,822.7	23.4	38.5	-93.97	1,954.0	1,908.2		45.76	42.696			
5,700.0	5,592.5	5,409.9	4,981.4	23.8	39.5	-94.11	1,988.6	1,941.8		46.89	42.415			
5,800.0	5,690.4	5,585.4	5,147.1	24.3	40.3	-94.37	2,019.6	1,971.6		48.02	42.061			
5,889.0	5,777.5	5,745.0	5,299.9	24.7	41.0	-94.69	2,043.9	1,994.9		49.02	41.693			
5,900.0	5,788.3	5,764.9	5,319.1	24.7	41.1	-94.79	2,046.7	1,997.5		49.16	41.630			
6,000.0	5,886.5	5,947.9	5,496.8	25.0	41.8	-95.62	2,069.6	2,019.3		50.31	41.136			
6,100.0	5,985.4	6,134.3	5,679.6	25.3	42.4	-96.29	2,088.1	2,036.8		51.31	40.697			
6,200.0	6,084.7	6,323.3	5,866.6	25.5	42.9	-96.80	2,102.0	2,049.9		52.14	40.311			
6,300.0	6,184.3	6,514.2	6,056.6	25.7	43.3	-97.16	2,111.2	2,058.4		52.81	39.977			
6,400.0	6,284.2	6,706.2	6,248.4	25.9	43.5	-97.38	2,115.7	2,062.4		53.30	39.692			
6,483.8	6,368.0	6,825.7	6,368.0	26.0	43.6	179.47	2,116.2	2,062.6		53.55	39.516			
6,500.0	6,384.2	6,842.0	6,384.2	26.0	43.6	179.47	2,116.2	2,062.6		53.58	39.493			
6,583.8	6,468.0	6,925.7	6,468.0	26.1	43.6	179.47	2,116.2	2,062.4		53.76	39.365			
6,600.0	6,484.2	6,942.0	6,484.2	26.1	43.6	179.47	2,116.2	2,062.4		53.79	39.340			
6,700.0	6,584.2	7,042.0	6,584.2	26.2	43.7	179.47	2,116.2	2,062.2		54.00	39.186			
6,800.0	6,684.2	7,142.0	6,684.2	26.3	43.8	179.47	2,116.2	2,062.0		54.22	39.031			
6,900.0	6,784.2	7,242.0	6,784.2	26.5	43.8	179.47	2,116.2	2,061.8		54.43	38.876			
7,000.0	6,884.2	7,342.0	6,884.2	26.6	43.9	179.47	2,116.2	2,061.5		54.65	38.720			
7,100.0	6,984.2	7,442.0	6,984.2	26.7	43.9	179.47	2,116.2	2,061.3		54.88	38.563			
7,200.0	7,084.2	7,542.0	7,084.2	26.8	44.0	179.47	2,116.2	2,061.1		55.10	38.405			
7,300.0	7,184.2	7,642.0	7,184.2	27.0	44.1	179.47	2,116.2	2,060.9		55.33	38.247			
7,400.0	7,284.2	7,742.0	7,284.2	27.1	44.1	179.47	2,116.2	2,060.6		55.56	38.088			
7,500.0	7,384.2	7,842.0	7,384.2	27.2	44.2	179.47	2,116.2	2,060.4		55.79	37.929			
7,600.0	7,484.2	7,942.0	7,484.2	27.3	44.3	179.47	2,116.2	2,060.2		56.03	37.770			
7,700.0	7,584.2	8,042.0	7,584.2	27.5	44.3	179.47	2,116.2	2,059.9		56.27	37.610			
7,800.0	7,684.2	8,142.0	7,684.2	27.6	44.4	179.47	2,116.2	2,059.7		56.51	37.449			
7,900.0	7,784.2	8,242.0	7,784.2	27.7	44.5	179.47	2,116.2	2,059.4		56.75	37.288			
8,000.0	7,884.2	8,342.0	7,884.2	27.9	44.6	179.47	2,116.2	2,059.2		57.00	37.128			
8,100.0	7,984.2	8,442.0	7,984.2	28.0	44.6	179.47	2,116.2	2,058.9		57.25	36.966			
8,200.0	8,084.2	8,542.0	8,084.2	28.1	44.7	179.47	2,116.2	2,058.7		57.50	36.805			
8,300.0	8,184.2	8,642.0	8,184.2	28.3	44.8	179.47	2,116.2	2,058.4		57.75	36.644			
8,400.0	8,284.2	8,742.0	8,284.2	28.4	44.8	179.47	2,116.2	2,058.2		58.01	36.482			
8,462.5	8,346.7	8,804.4	8,346.7	28.5	44.9	179.47	2,116.2	2,058.0		58.17	36.381			
8,500.0	8,384.2	8,830.7	8,373.0	28.5	44.9	179.47	2,116.2	2,058.0		58.25	36.330			
8,533.8	8,418.0	8,830.7	8,373.0	28.6	44.9	179.47	2,116.7	2,058.4		58.30	36.308			

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	
0.0	0.0	0.0	0.0	0.0	0.0	-142.12	27.7						
100.0	100.0	100.0	100.0	0.1	0.1	-142.12	27.7	27.5	0.18	155.838			
200.0	200.0	200.0	200.0	0.3	0.3	-142.12	27.7	27.0	0.63	44.126			
300.0	300.0	300.0	300.0	0.5	0.5	-142.12	27.7	26.6	1.08	25.702			CC, ES
400.0	400.0	398.0	397.9	0.8	0.7	-62.86	30.2	28.7	1.49	20.228			
500.0	499.8	495.2	494.6	1.0	1.0	-71.12	38.4	36.5	1.93	19.900			SF
600.0	599.5	590.9	588.9	1.2	1.2	-78.81	53.1	50.6	2.42	21.908			
700.0	698.7	684.4	679.8	1.5	1.6	-84.19	74.2	71.2	2.97	24.943			
800.0	797.5	775.2	766.5	1.8	2.1	-87.60	101.5	97.9	3.60	28.192			
894.8	890.5	858.3	844.2	2.2	2.6	-89.60	132.7	128.4	4.27	31.109			
900.0	895.6	862.7	848.4	2.2	2.7	-89.72	134.5	130.2	4.30	31.261			
1,000.0	993.5	946.8	925.1	2.6	3.3	-91.14	172.9	167.8	5.07	34.136			
1,100.0	1,091.3	1,031.8	1,000.6	3.0	4.0	-91.51	215.6	209.8	5.86	36.768			
1,200.0	1,189.2	1,121.8	1,080.3	3.5	4.8	-91.69	259.1	252.5	6.66	38.887			
1,300.0	1,287.0	1,211.8	1,160.0	3.9	5.6	-91.82	302.7	295.2	7.48	40.435			
1,400.0	1,384.9	1,301.9	1,239.6	4.3	6.4	-91.91	346.2	337.8	8.32	41.604			
1,500.0	1,482.7	1,391.9	1,319.3	4.8	7.2	-91.99	389.7	380.5	9.17	42.506			
1,600.0	1,580.6	1,481.9	1,399.0	5.2	8.0	-92.05	433.2	423.2	10.02	43.222			
1,700.0	1,678.4	1,572.0	1,478.7	5.7	8.9	-92.09	476.7	465.8	10.88	43.801			
1,800.0	1,776.3	1,662.0	1,558.4	6.1	9.7	-92.13	520.2	508.5	11.75	44.278			
1,900.0	1,874.1	1,752.1	1,638.1	6.6	10.5	-92.17	563.7	551.1	12.62	44.675			
2,000.0	1,972.0	1,842.1	1,717.8	7.0	11.3	-92.20	607.2	593.7	13.49	45.012			
2,100.0	2,069.9	1,932.1	1,797.5	7.5	12.1	-92.22	650.7	636.4	14.37	45.299			
2,200.0	2,167.7	2,022.2	1,877.2	7.9	12.9	-92.25	694.3	679.0	15.24	45.548			
2,300.0	2,265.6	2,112.2	1,956.8	8.4	13.8	-92.26	737.8	721.6	16.12	45.764			
2,400.0	2,363.4	2,202.2	2,036.5	8.8	14.6	-92.28	781.3	764.3	17.00	45.954			
2,500.0	2,461.3	2,292.3	2,116.2	9.3	15.4	-92.30	824.8	806.9	17.88	46.122			
2,600.0	2,559.1	2,382.3	2,195.9	9.7	16.2	-92.31	868.3	849.5	18.77	46.271			
2,700.0	2,657.0	2,472.3	2,275.6	10.2	17.1	-92.32	911.8	892.2	19.65	46.405			
2,800.0	2,754.8	2,562.4	2,355.3	10.6	17.9	-92.34	955.3	934.8	20.53	46.525			
2,900.0	2,852.7	2,652.4	2,435.0	11.1	18.7	-92.35	998.8	977.4	21.42	46.634			
3,000.0	2,950.5	2,742.5	2,514.7	11.5	19.5	-92.36	1,042.4	1,020.1	22.30	46.733			
3,100.0	3,048.4	2,832.5	2,594.4	12.0	20.3	-92.37	1,085.9	1,062.7	23.19	46.823			
3,200.0	3,146.2	2,922.5	2,674.0	12.4	21.2	-92.37	1,129.4	1,105.3	24.08	46.906			
3,300.0	3,244.1	3,012.6	2,753.7	12.9	22.0	-92.38	1,172.9	1,147.9	24.96	46.982			
3,400.0	3,341.9	3,102.6	2,833.4	13.4	22.8	-92.39	1,216.4	1,190.6	25.85	47.051			
3,500.0	3,439.8	3,192.6	2,913.1	13.8	23.6	-92.39	1,259.9	1,233.2	26.74	47.116			
3,600.0	3,537.6	3,282.7	2,992.8	14.3	24.5	-92.40	1,303.4	1,275.8	27.63	47.175			
3,700.0	3,635.5	3,372.7	3,072.5	14.7	25.3	-92.41	1,346.9	1,318.4	28.52	47.231			
3,800.0	3,733.3	3,462.8	3,152.2	15.2	26.1	-92.41	1,390.5	1,361.0	29.41	47.282			
3,900.0	3,831.2	3,552.8	3,231.9	15.6	26.9	-92.42	1,434.0	1,403.7	30.30	47.330			
4,000.0	3,929.1	3,642.8	3,311.6	16.1	27.8	-92.42	1,477.5	1,446.3	31.19	47.375			
4,100.0	4,026.9	3,732.9	3,391.2	16.5	28.6	-92.43	1,521.0	1,488.9	32.08	47.417			
4,200.0	4,124.8	3,822.9	3,470.9	17.0	29.4	-92.43	1,564.5	1,531.5	32.97	47.457			
4,300.0	4,222.6	3,912.9	3,550.6	17.4	30.2	-92.43	1,608.0	1,574.2	33.86	47.494			
4,400.0	4,320.5	4,003.0	3,630.3	17.9	31.0	-92.44	1,651.5	1,616.8	34.75	47.529			
4,500.0	4,418.3	4,093.0	3,710.0	18.4	31.9	-92.44	1,695.0	1,659.4	35.64	47.562			
4,600.0	4,516.2	4,183.0	3,789.7	18.8	32.7	-92.44	1,738.6	1,702.0	36.53	47.593			
4,700.0	4,614.0	4,273.1	3,869.4	19.3	33.5	-92.45	1,782.1	1,744.6	37.42	47.622			
4,800.0	4,711.9	4,363.1	3,949.1	19.7	34.3	-92.45	1,825.6	1,787.3	38.31	47.650			
4,900.0	4,809.7	4,453.2	4,028.7	20.2	35.2	-92.45	1,869.1	1,829.9	39.20	47.676			
5,000.0	4,907.6	4,543.2	4,108.4	20.6	36.0	-92.46	1,912.6	1,872.5	40.10	47.701			
5,100.0	5,005.4	4,633.2	4,188.1	21.1	36.8	-92.46	1,956.1	1,915.1	40.99	47.725			
5,200.0	5,103.3	4,723.3	4,267.8	21.5	37.6	-92.46	1,999.6	1,957.8	41.88	47.747			

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

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11W
<b>Project:</b>	Mesa County, CO	<b>TVD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Reference Site:</b>	Sup & Shep Federal Pad	<b>MD Reference:</b>	WELL @ 8098.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Sup & Shep Fed 25-11W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	EDM 2003.16 Single User Db
<b>Reference Design:</b>	Plan #1 13Apr14 kjs	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Sup & Shep Federal Pad - Sup & Shep Fed 25-20W - Wellbore #1 - Plan #1 13Apr14 kjs												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Riskd Separation Factor	Probability of Collision	Warning
5,300.0	5,201.1	4,813.3	4,347.5	22.0	38.5	-92.46	2,043.1	2,000.4	42.77	47.769			
5,400.0	5,299.0	4,903.3	4,427.2	22.4	39.3	-92.47	2,086.7	2,043.0	43.66	47.789			
5,500.0	5,396.8	4,993.4	4,506.9	22.9	40.1	-92.47	2,130.2	2,085.6	44.56	47.808			
5,600.0	5,494.7	5,144.1	4,641.2	23.4	41.3	-92.50	2,172.9	2,127.2	45.67	47.573			
5,700.0	5,592.5	5,334.0	4,813.9	23.8	42.4	-92.63	2,211.8	2,164.9	46.89	47.168			
5,800.0	5,690.4	5,530.5	4,996.5	24.3	43.5	-92.88	2,246.6	2,198.4	48.13	46.676			
5,889.0	5,777.5	5,710.4	5,166.8	24.7	44.4	-93.20	2,273.8	2,224.5	49.24	46.176			
5,900.0	5,788.3	5,732.9	5,188.3	24.7	44.5	-93.30	2,276.9	2,227.5	49.40	46.092			
6,000.0	5,886.5	5,940.8	5,388.5	25.0	45.4	-94.20	2,302.5	2,251.8	50.69	45.419			
6,100.0	5,985.4	6,153.6	5,596.3	25.3	46.2	-94.91	2,323.1	2,271.3	51.83	44.826			
6,200.0	6,084.7	6,370.3	5,810.2	25.5	46.7	-95.46	2,338.5	2,285.7	52.77	44.314			
6,300.0	6,184.3	6,589.8	6,028.5	25.7	47.2	-95.85	2,348.5	2,295.0	53.52	43.883			
6,400.0	6,284.2	6,810.8	6,249.3	25.9	47.4	-96.08	2,353.1	2,299.0	54.06	43.529			
6,483.8	6,368.0	6,929.6	6,368.0	26.0	47.5	-179.23	2,353.4	2,299.1	54.30	43.339			
6,500.0	6,384.2	6,945.8	6,384.2	26.0	47.5	-179.23	2,353.4	2,299.1	54.33	43.314			
6,583.8	6,468.0	7,029.6	6,468.0	26.1	47.6	-179.23	2,353.4	2,298.9	54.51	43.177			
6,600.0	6,484.2	7,045.8	6,484.2	26.1	47.6	-179.23	2,353.4	2,298.9	54.54	43.151			
6,700.0	6,584.2	7,145.8	6,584.2	26.2	47.6	-179.23	2,353.4	2,298.7	54.75	42.987			
6,800.0	6,684.2	7,245.8	6,684.2	26.3	47.7	-179.23	2,353.4	2,298.5	54.96	42.822			
6,900.0	6,784.2	7,345.8	6,784.2	26.5	47.7	-179.23	2,353.4	2,298.3	55.17	42.656			
7,000.0	6,884.2	7,445.8	6,884.2	26.6	47.8	-179.23	2,353.4	2,298.1	55.39	42.489			
7,100.0	6,984.2	7,545.8	6,984.2	26.7	47.8	-179.23	2,353.4	2,297.8	55.61	42.322			
7,200.0	7,084.2	7,645.8	7,084.2	26.8	47.9	-179.23	2,353.4	2,297.6	55.83	42.154			
7,300.0	7,184.2	7,745.8	7,184.2	27.0	48.0	-179.23	2,353.4	2,297.4	56.05	41.985			
7,400.0	7,284.2	7,845.8	7,284.2	27.1	48.0	-179.23	2,353.4	2,297.2	56.28	41.815			
7,500.0	7,384.2	7,945.8	7,384.2	27.2	48.1	-179.23	2,353.4	2,296.9	56.51	41.645			
7,600.0	7,484.2	8,045.8	7,484.2	27.3	48.2	-179.23	2,353.4	2,296.7	56.74	41.474			
7,700.0	7,584.2	8,145.8	7,584.2	27.5	48.2	-179.23	2,353.4	2,296.5	56.98	41.303			
7,800.0	7,684.2	8,245.8	7,684.2	27.6	48.3	-179.23	2,353.4	2,296.2	57.22	41.131			
7,900.0	7,784.2	8,345.8	7,784.2	27.7	48.3	-179.23	2,353.4	2,296.0	57.46	40.959			
8,000.0	7,884.2	8,445.8	7,884.2	27.9	48.4	-179.23	2,353.4	2,295.7	57.70	40.787			
8,100.0	7,984.2	8,545.8	7,984.2	28.0	48.5	-179.23	2,353.4	2,295.5	57.95	40.614			
8,200.0	8,084.2	8,645.8	8,084.2	28.1	48.5	-179.23	2,353.4	2,295.2	58.19	40.441			
8,300.0	8,184.2	8,745.8	8,184.2	28.3	48.6	-179.23	2,353.4	2,295.0	58.44	40.268			
8,400.0	8,284.2	8,845.8	8,284.2	28.4	48.7	-179.23	2,353.4	2,294.7	58.70	40.095			
8,457.7	8,341.9	8,903.5	8,341.9	28.5	48.7	-179.23	2,353.4	2,294.6	58.84	39.995			
8,500.0	8,384.2	8,924.6	8,363.0	28.5	48.7	-179.23	2,353.5	2,294.6	58.93	39.940			
8,533.8	8,418.0	8,924.6	8,363.0	28.6	48.7	-179.23	2,354.1	2,295.1	58.97	39.917			

