



Well Name: Sup & Shep Fed 25-11M  
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)  
Northing 1521848.19 Easting 2370565.43 Latitude 39° 14' 42.216 N Longitude 107° 43' 21.900 W

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

+N/-S +E/-W  
0.0 0.0

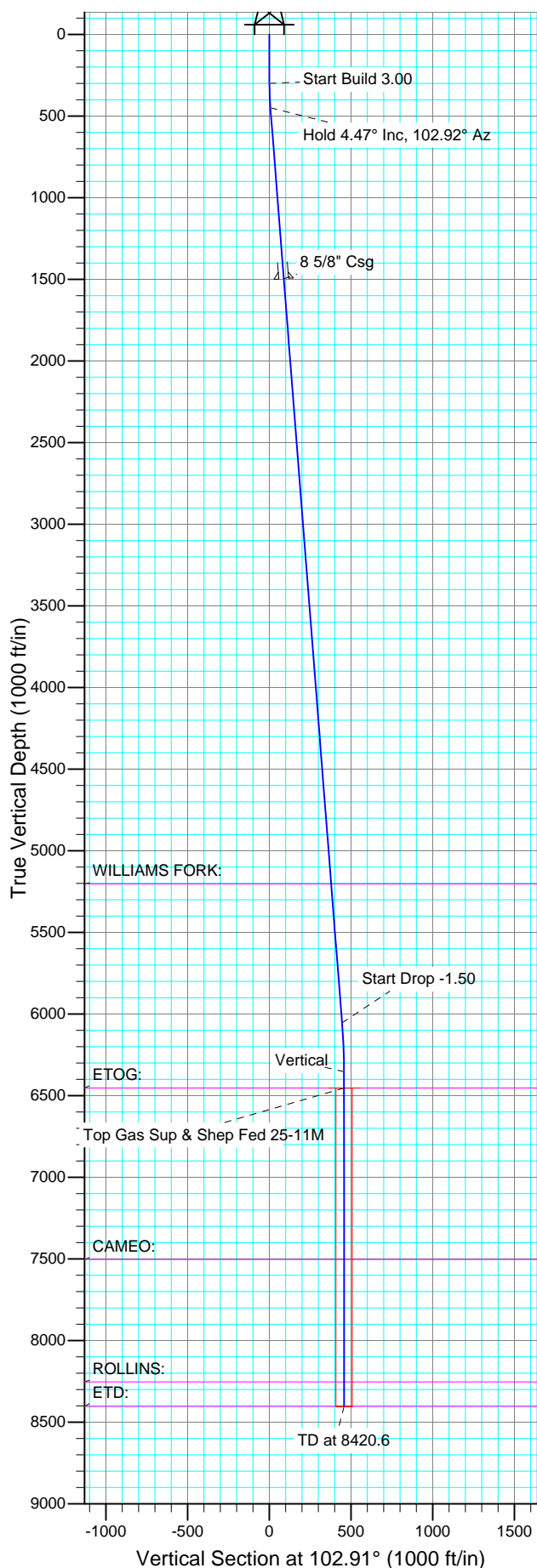
Northing  
1521848.19

Easting  
2370565.43

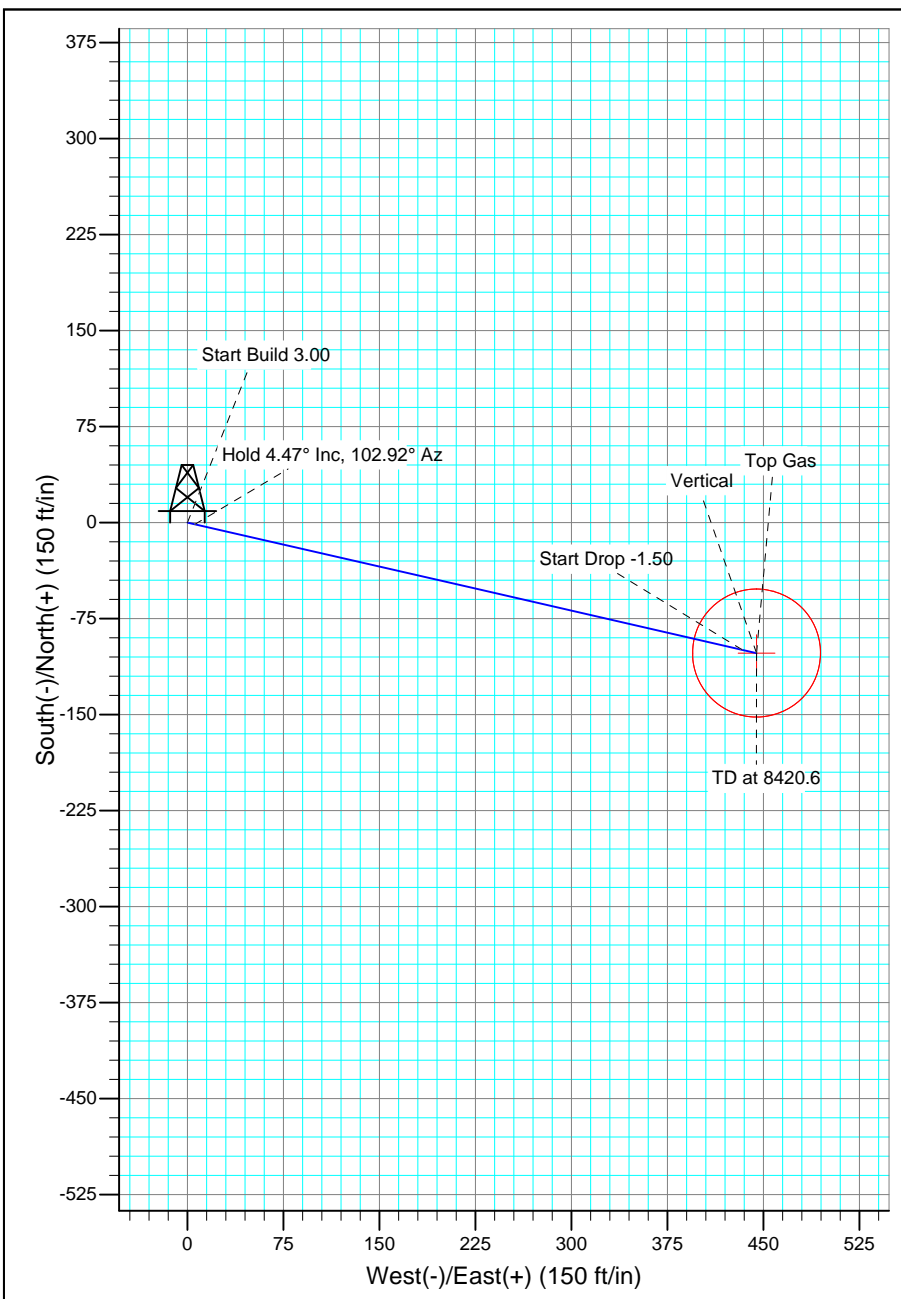
Latitude  
39° 14' 42.216 N

Longitude  
107° 43' 21.900 W

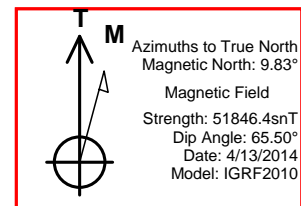
Slot



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	449.2	4.47	102.91	449.0	-1.3	5.7	3.00	102.91	5.8	
4	6072.3	4.47	102.91	6055.0	-99.4	433.3	0.00	0.00	444.5	
5	6370.6	0.00	0.00	6353.0	-102.0	444.6	1.50	180.00	456.2	
6	6470.6	0.00	0.00	6453.0	-102.0	444.6	0.00	0.00	456.2	Top Gas
7	8420.6	0.00	0.00	8403.0	-102.0	444.6	0.00	0.00	456.2	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
5203.0	5217.7	WILLIAMS FORK:
6453.0	6470.6	ETOG:
7503.0	7520.6	CAMEO:
8253.0	8270.6	ROLLINS:
8403.0	8420.6	ETD:



# **Piceance Energy, LLC**

**Mesa County, CO**

**Sup & Shep Federal Pad**

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

**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 25-11M
<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 25-11M	<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:		Northing:	1,521,823.28 ft	Latitude:	39° 14' 41.964 N
From:	Lat/Long	Easting:	2,370,542.15 ft	Longitude:	107° 43' 22.188 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	-1.40 °

Well	Sup & Shep Fed 25-11M					
Well Position	+N/-S	0.0 ft	Northing:	1,521,848.19 ft	Latitude:	39° 14' 42.216 N
	+E/-W	0.0 ft	Easting:	2,370,565.43 ft	Longitude:	107° 43' 21.900 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</b>
			(°)	(°)	(nT)
	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)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	102.91	

<b>Plan Sections</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	<b>TFO</b>	<b>Target</b>
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
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	
449.2	4.47	102.91	449.0	-1.3	5.7	3.00	3.00	0.00	102.91	
6,072.3	4.47	102.91	6,055.0	-99.4	433.3	0.00	0.00	0.00	0.00	
6,370.6	0.00	0.00	6,353.0	-102.0	444.6	1.50	-1.50	0.00	180.00	
6,470.6	0.00	0.00	6,453.0	-102.0	444.6	0.00	0.00	0.00	0.00	Top Gas Sup & Shep
8,420.6	0.00	0.00	8,403.0	-102.0	444.6	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 25-11M
<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 25-11M	<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
Start Build 3.00									
400.0	3.00	102.91	400.0	-0.6	2.6	2.6	3.00	3.00	0.00
449.2	4.47	102.91	449.0	-1.3	5.7	5.8	3.00	3.00	0.00
Hold 4.47° Inc, 102.92° Az									
600.0	4.47	102.91	599.4	-3.9	17.1	17.6	0.00	0.00	0.00
800.0	4.47	102.91	798.8	-7.4	32.4	33.2	0.00	0.00	0.00
1,000.0	4.47	102.91	998.2	-10.9	47.6	48.8	0.00	0.00	0.00
1,200.0	4.47	102.91	1,197.6	-14.4	62.8	64.4	0.00	0.00	0.00
1,400.0	4.47	102.91	1,397.0	-17.9	78.0	80.0	0.00	0.00	0.00
1,500.0	4.47	102.91	1,496.6	-19.6	85.6	87.8	0.00	0.00	0.00
8 5/8" Csg									
1,600.0	4.47	102.91	1,596.3	-21.4	93.2	95.6	0.00	0.00	0.00
1,800.0	4.47	102.91	1,795.7	-24.9	108.4	111.2	0.00	0.00	0.00
2,000.0	4.47	102.91	1,995.1	-28.3	123.6	126.8	0.00	0.00	0.00
2,200.0	4.47	102.91	2,194.5	-31.8	138.8	142.4	0.00	0.00	0.00
2,400.0	4.47	102.91	2,393.9	-35.3	154.0	158.0	0.00	0.00	0.00
2,600.0	4.47	102.91	2,593.3	-38.8	169.2	173.6	0.00	0.00	0.00
2,800.0	4.47	102.91	2,792.7	-42.3	184.4	189.2	0.00	0.00	0.00
3,000.0	4.47	102.91	2,992.1	-45.8	199.7	204.8	0.00	0.00	0.00
3,200.0	4.47	102.91	3,191.5	-49.3	214.9	220.4	0.00	0.00	0.00
3,400.0	4.47	102.91	3,390.9	-52.8	230.1	236.0	0.00	0.00	0.00
3,600.0	4.47	102.91	3,590.2	-56.2	245.3	251.6	0.00	0.00	0.00
3,800.0	4.47	102.91	3,789.6	-59.7	260.5	267.3	0.00	0.00	0.00
4,000.0	4.47	102.91	3,989.0	-63.2	275.7	282.9	0.00	0.00	0.00
4,200.0	4.47	102.91	4,188.4	-66.7	290.9	298.5	0.00	0.00	0.00
4,400.0	4.47	102.91	4,387.8	-70.2	306.1	314.1	0.00	0.00	0.00
4,600.0	4.47	102.91	4,587.2	-73.7	321.3	329.7	0.00	0.00	0.00
4,800.0	4.47	102.91	4,786.6	-77.2	336.5	345.3	0.00	0.00	0.00
5,000.0	4.47	102.91	4,986.0	-80.7	351.7	360.9	0.00	0.00	0.00
5,200.0	4.47	102.91	5,185.4	-84.1	367.0	376.5	0.00	0.00	0.00
5,217.7	4.47	102.91	5,203.0	-84.5	368.3	377.9	0.00	0.00	0.00
WILLIAMS FORK:									
5,400.0	4.47	102.91	5,384.8	-87.6	382.2	392.1	0.00	0.00	0.00
5,600.0	4.47	102.91	5,584.1	-91.1	397.4	407.7	0.00	0.00	0.00
5,800.0	4.47	102.91	5,783.5	-94.6	412.6	423.3	0.00	0.00	0.00
6,000.0	4.47	102.91	5,982.9	-98.1	427.8	438.9	0.00	0.00	0.00
6,072.3	4.47	102.91	6,055.0	-99.4	433.3	444.5	0.00	0.00	0.00
Start Drop -1.50									
6,200.0	2.56	102.91	6,182.5	-101.1	440.9	452.4	1.50	-1.50	0.00
6,370.6	0.00	0.00	6,353.0	-102.0	444.6	456.2	1.50	-1.50	0.00
Vertical									
6,400.0	0.00	0.00	6,382.4	-102.0	444.6	456.2	0.00	0.00	0.00
6,470.6	0.00	0.00	6,453.0	-102.0	444.6	456.2	0.00	0.00	0.00
Top Gas - ETOG: - Top Gas Sup & Shep Fed 25-11M									
6,600.0	0.00	0.00	6,582.4	-102.0	444.6	456.2	0.00	0.00	0.00
6,800.0	0.00	0.00	6,782.4	-102.0	444.6	456.2	0.00	0.00	0.00
7,000.0	0.00	0.00	6,982.4	-102.0	444.6	456.2	0.00	0.00	0.00
7,200.0	0.00	0.00	7,182.4	-102.0	444.6	456.2	0.00	0.00	0.00
7,400.0	0.00	0.00	7,382.4	-102.0	444.6	456.2	0.00	0.00	0.00
7,520.6	0.00	0.00	7,503.0	-102.0	444.6	456.2	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 25-11M
<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 25-11M	<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)
<b>CAMEO:</b>									
7,600.0	0.00	0.00	7,582.4	-102.0	444.6	456.2	0.00	0.00	0.00
7,800.0	0.00	0.00	7,782.4	-102.0	444.6	456.2	0.00	0.00	0.00
8,000.0	0.00	0.00	7,982.4	-102.0	444.6	456.2	0.00	0.00	0.00
8,200.0	0.00	0.00	8,182.4	-102.0	444.6	456.2	0.00	0.00	0.00
8,270.6	0.00	0.00	8,253.0	-102.0	444.6	456.2	0.00	0.00	0.00
<b>ROLLINS:</b>									
8,400.0	0.00	0.00	8,382.4	-102.0	444.6	456.2	0.00	0.00	0.00
8,420.6	0.00	0.00	8,403.0	-102.0	444.6	456.2	0.00	0.00	0.00
<b>ETD:</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	6,453.0	-102.0	444.6	1,521,735.39	2,371,007.44	39° 14' 41.208 N	107° 43' 16.248 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name		Casing Diameter (")	Hole Diameter (")
1,500.0	1,496.6	8 5/8" Csg		0	0

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,520.6	7,503.0	CAMEO:			
8,420.6	8,403.0	ETD:			
6,470.6	6,453.0	ETOG:			
5,217.7	5,203.0	WILLIAMS FORK:			
8,270.6	8,253.0	ROLLINS:			

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 3.00
449.2	449.0	-1.3	5.7	Hold 4.47° Inc, 102.92° Az
6,072.3	6,055.0	-99.4	433.3	Start Drop -1.50
6,370.6	6,353.0	-102.0	444.6	Vertical
6,470.6	6,453.0	-102.0	444.6	Top Gas
8,420.6	8,403.0	-102.0	444.6	TD at 8420.6

# **Piceance Energy, LLC**

**Mesa County, CO**

**Sup & Shep Federal Pad**

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

**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 25-11M
<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 25-11M	<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	8,420.6	Plan #1 13Apr14 kjs (Wellbore #1)	MWD	MWD - Standard

<b>Summary</b>						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
Sup & Shep Federal Pad						
Sup & Shep Fed 25-18W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	44.8	43.7	41.574 CC, ES	
Sup & Shep Fed 25-18W - Wellbore #1 - Plan #1 13Apr1	449.2	444.6	54.6	52.9	31.740 SF	
Sup & Shep Fed 25-11W - Wellbore #1 - Plan #1 13Apr1	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	12.3	11.2	11.428 CC, ES	
Sup & Shep Fed 25-12M - Wellbore #1 - Plan #1 13Apr14	8,420.6	8,425.5	266.0	226.2	6.695 SF	
Sup & Shep Fed 25-12W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	13.5	12.4	12.507 CC, ES	
Sup & Shep Fed 25-12W - Wellbore #1 - Plan #1 13Apr1	400.0	399.4	17.1	15.5	11.286 SF	
Sup & Shep Fed 25-13M - Wellbore #1 - Plan #1 13Apr14	300.0	300.0	14.9	13.8	13.793 CC, ES	
Sup & Shep Fed 25-13M - Wellbore #1 - Plan #1 13Apr14	449.2	448.3	18.6	16.9	10.940 SF	
Sup & Shep Fed 25-13W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	22.6	21.6	21.021 CC, ES	
Sup & Shep Fed 25-13W - Wellbore #1 - Plan #1 13Apr1	400.0	399.1	26.4	24.9	17.486 SF	
Sup & Shep Fed 25-14M - Wellbore #1 - Plan #1 13Apr14	300.0	300.0	20.1	19.0	18.657 CC, ES	
Sup & Shep Fed 25-14M - Wellbore #1 - Plan #1 13Apr14	449.2	448.0	24.9	23.2	14.588 SF	
Sup & Shep Fed 25-14W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	45.3	44.2	42.046 CC, ES	
Sup & Shep Fed 25-14W - Wellbore #1 - Plan #1 13Apr1	449.2	444.3	56.3	54.6	32.452 SF	
Sup & Shep Fed 25-15M - Wellbore #1 - Plan #1 13Apr14	300.0	300.0	26.0	25.0	24.179 CC, ES	
Sup & Shep Fed 25-15M - Wellbore #1 - Plan #1 13Apr14	500.0	498.0	35.3	33.4	18.299 SF	
Sup & Shep Fed 25-15W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	38.6	37.5	35.808 CC, ES	
Sup & Shep Fed 25-15W - Wellbore #1 - Plan #1 13Apr1	449.2	445.6	48.6	46.9	28.142 SF	
Sup & Shep Fed 25-16W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	29.4	28.3	27.265 CC, ES	
Sup & Shep Fed 25-16W - Wellbore #1 - Plan #1 13Apr1	400.0	398.6	33.4	31.9	22.203 SF	
Sup & Shep Fed 25-17W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	53.7	52.6	49.833 CC, ES	
Sup & Shep Fed 25-17W - Wellbore #1 - Plan #1 13Apr1	600.0	590.3	83.7	81.3	35.098 SF	
Sup & Shep Fed 25-19W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	38.1	37.0	35.388 CC, ES	
Sup & Shep Fed 25-19W - Wellbore #1 - Plan #1 13Apr1	449.2	445.0	48.2	46.5	27.978 SF	
Sup & Shep Fed 25-20W - Wellbore #1 - Plan #1 13Apr1	300.0	300.0	34.1	33.0	31.664 CC, ES	
Sup & Shep Fed 25-20W - Wellbore #1 - Plan #1 13Apr1	449.2	445.0	44.3	42.6	25.707 SF	

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11M
<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 25-11M	<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	Risked Separation Factor	Probability of Collision	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-130.60	44.8						
100.0	100.0	100.0	100.0	0.1	0.1	-130.60	44.8	44.6	0.18	252.074			
200.0	200.0	200.0	200.0	0.3	0.3	-130.60	44.8	44.1	0.63	71.376			
300.0	300.0	300.0	300.0	0.5	0.5	-130.60	44.8	43.7	1.08	41.574			CC, ES
400.0	400.0	397.2	397.2	0.8	0.7	127.82	49.2	47.7	1.50	32.796			
449.2	449.0	444.6	444.5	0.9	0.8	129.15	54.6	52.9	1.72	31.740			SF
500.0	499.7	493.3	492.8	1.0	1.0	130.36	62.1	60.1	1.95	31.878			
600.0	599.4	587.7	586.2	1.2	1.2	130.92	80.8	78.4	2.42	33.381			
700.0	699.1	679.9	676.5	1.5	1.6	130.18	104.8	101.8	2.92	35.932			
800.0	798.8	769.4	763.0	1.7	2.0	128.96	133.8	130.3	3.43	39.033			
900.0	898.5	855.9	845.3	2.0	2.5	127.63	167.7	163.7	3.95	42.467			
1,000.0	998.2	940.1	923.9	2.2	3.0	126.36	206.2	201.7	4.49	45.970			
1,100.0	1,097.9	1,031.5	1,008.6	2.5	3.6	125.28	246.6	241.6	5.01	49.209			
1,200.0	1,197.6	1,122.9	1,093.4	2.8	4.3	124.50	287.1	281.5	5.54	51.843			
1,300.0	1,297.3	1,214.3	1,178.1	3.0	5.0	123.91	327.5	321.5	6.07	53.928			
1,400.0	1,397.0	1,305.7	1,262.8	3.3	5.6	123.45	368.0	361.4	6.61	55.641			
1,500.0	1,496.6	1,397.1	1,347.5	3.6	6.3	123.09	408.6	401.4	7.16	57.053			
1,600.0	1,596.3	1,488.5	1,432.2	3.8	7.0	122.79	449.1	441.4	7.71	58.237			
1,700.0	1,696.0	1,579.9	1,516.9	4.1	7.7	122.53	489.6	481.4	8.26	59.243			
1,800.0	1,795.7	1,671.3	1,601.6	4.4	8.4	122.32	530.2	521.4	8.82	60.108			
1,900.0	1,895.4	1,762.7	1,686.3	4.6	9.0	122.14	570.7	561.4	9.38	60.858			
2,000.0	1,995.1	1,854.1	1,771.0	4.9	9.7	121.98	611.3	601.3	9.94	61.515			
2,100.0	2,094.8	1,945.4	1,855.8	5.2	10.4	121.84	651.8	641.3	10.50	62.093			
2,200.0	2,194.5	2,036.8	1,940.5	5.4	11.1	121.72	692.4	681.3	11.06	62.606			
2,300.0	2,294.2	2,128.2	2,025.2	5.7	11.8	121.61	733.0	721.3	11.62	63.064			
2,400.0	2,393.9	2,219.6	2,109.9	6.0	12.5	121.51	773.5	761.3	12.19	63.476			
2,500.0	2,493.6	2,311.0	2,194.6	6.2	13.1	121.42	814.1	801.4	12.75	63.847			
2,600.0	2,593.3	2,402.4	2,279.3	6.5	13.8	121.35	854.7	841.4	13.32	64.184			
2,700.0	2,693.0	2,493.8	2,364.0	6.8	14.5	121.27	895.2	881.4	13.88	64.490			
2,800.0	2,792.7	2,585.2	2,448.7	7.0	15.2	121.21	935.8	921.4	14.45	64.770			
2,900.0	2,892.4	2,676.6	2,533.4	7.3	15.9	121.15	976.4	961.4	15.02	65.026			
3,000.0	2,992.1	2,768.0	2,618.2	7.6	16.6	121.09	1,017.0	1,001.4	15.58	65.262			
3,100.0	3,091.8	2,859.4	2,702.9	7.8	17.3	121.04	1,057.5	1,041.4	16.15	65.481			
3,200.0	3,191.5	2,950.8	2,787.6	8.1	18.0	120.99	1,098.1	1,081.4	16.72	65.682			
3,300.0	3,291.2	3,042.2	2,872.3	8.4	18.6	120.95	1,138.7	1,121.4	17.29	65.870			
3,400.0	3,390.9	3,133.6	2,957.0	8.6	19.3	120.91	1,179.3	1,161.4	17.86	66.044			
3,500.0	3,490.5	3,225.0	3,041.7	8.9	20.0	120.87	1,219.8	1,201.4	18.42	66.207			
3,600.0	3,590.2	3,316.4	3,126.4	9.2	20.7	120.83	1,260.4	1,241.4	18.99	66.359			
3,700.0	3,689.9	3,407.8	3,211.1	9.4	21.4	120.80	1,301.0	1,281.4	19.56	66.501			
3,800.0	3,789.6	3,499.2	3,295.9	9.7	22.1	120.77	1,341.6	1,321.4	20.13	66.634			
3,900.0	3,889.3	3,590.6	3,380.6	10.0	22.8	120.74	1,382.1	1,361.4	20.70	66.759			
4,000.0	3,989.0	3,682.0	3,465.3	10.2	23.5	120.71	1,422.7	1,401.4	21.27	66.877			
4,100.0	4,088.7	3,773.3	3,550.0	10.5	24.1	120.68	1,463.3	1,441.5	21.84	66.988			
4,200.0	4,188.4	3,864.7	3,634.7	10.8	24.8	120.66	1,503.9	1,481.5	22.41	67.093			
4,300.0	4,288.1	3,956.1	3,719.4	11.1	25.5	120.63	1,544.5	1,521.5	22.99	67.192			
4,400.0	4,387.8	4,047.5	3,804.1	11.3	26.2	120.61	1,585.0	1,561.5	23.56	67.286			
4,500.0	4,487.5	4,138.9	3,888.8	11.6	26.9	120.59	1,625.6	1,601.5	24.13	67.375			
4,600.0	4,587.2	4,230.3	3,973.5	11.9	27.6	120.57	1,666.2	1,641.5	24.70	67.459			
4,700.0	4,686.9	4,321.7	4,058.3	12.1	28.3	120.55	1,706.8	1,681.5	25.27	67.539			
4,800.0	4,786.6	4,413.1	4,143.0	12.4	29.0	120.53	1,747.4	1,721.5	25.84	67.615			
4,900.0	4,886.3	4,504.5	4,227.7	12.7	29.7	120.51	1,787.9	1,761.5	26.41	67.688			
5,000.0	4,986.0	4,595.9	4,312.4	12.9	30.3	120.50	1,828.5	1,801.5	26.99	67.757			
5,100.0	5,085.7	4,687.3	4,397.1	13.2	31.0	120.48	1,869.1	1,841.5	27.56	67.822			

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 25-11M
<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 25-11M	<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 25-18W - 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				
5,200.0	5,185.4	4,778.7	4,481.8	13.5	31.7	120.46	1,909.7	1,881.5	28.13	67.885				
5,300.0	5,285.1	4,870.1	4,566.5	13.7	32.4	120.45	1,950.3	1,921.6	28.70	67.945				
5,400.0	5,384.8	4,961.5	4,651.2	14.0	33.1	120.44	1,990.8	1,961.6	29.28	68.002				
5,500.0	5,484.5	5,052.9	4,736.0	14.3	33.8	120.42	2,031.4	2,001.6	29.85	68.057				
5,600.0	5,584.1	5,144.3	4,820.7	14.5	34.5	120.41	2,072.0	2,041.6	30.42	68.109				
5,700.0	5,683.8	5,243.6	4,912.7	14.8	35.2	120.40	2,112.6	2,081.5	31.02	68.107				
5,800.0	5,783.5	5,448.3	5,104.7	15.1	36.3	120.40	2,150.4	2,118.5	31.88	67.450				
5,900.0	5,883.2	5,661.5	5,308.4	15.3	37.3	120.47	2,183.2	2,150.5	32.72	66.717				
6,000.0	5,982.9	5,882.3	5,522.7	15.6	38.1	120.60	2,210.7	2,177.1	33.54	65.905				
6,072.3	6,055.0	6,045.9	5,683.3	15.8	38.6	120.74	2,227.1	2,193.0	34.11	65.285				
6,100.0	6,082.6	6,109.5	5,746.0	15.9	38.8	120.86	2,232.6	2,198.2	34.35	64.987				
6,200.0	6,182.5	6,342.2	5,977.0	16.1	39.3	121.21	2,247.6	2,212.5	35.11	64.013				
6,300.0	6,282.4	6,578.6	6,212.8	16.2	39.7	121.40	2,255.4	2,219.7	35.75	63.082				
6,370.6	6,353.0	6,718.8	6,353.0	16.3	39.8	-135.65	2,256.5	2,220.4	36.12	62.476				
6,400.0	6,382.4	6,748.2	6,382.4	16.4	39.8	-135.65	2,256.5	2,220.3	36.20	62.327				
6,470.6	6,453.0	6,818.8	6,453.0	16.5	39.9	-135.65	2,256.5	2,220.1	36.41	61.972				
6,500.0	6,482.4	6,848.2	6,482.4	16.6	39.9	-135.65	2,256.5	2,220.0	36.50	61.825				
6,600.0	6,582.4	6,948.2	6,582.4	16.7	39.9	-135.65	2,256.5	2,219.7	36.80	61.325				
6,700.0	6,682.4	7,048.2	6,682.4	16.9	40.0	-135.65	2,256.5	2,219.4	37.10	60.829				
6,800.0	6,782.4	7,148.2	6,782.4	17.1	40.1	-135.65	2,256.5	2,219.1	37.40	60.337				
6,900.0	6,882.4	7,248.2	6,882.4	17.2	40.1	-135.65	2,256.5	2,218.8	37.70	59.847				
7,000.0	6,982.4	7,348.2	6,982.4	17.4	40.2	-135.65	2,256.5	2,218.5	38.01	59.362				
7,100.0	7,082.4	7,448.2	7,082.4	17.6	40.3	-135.65	2,256.5	2,218.2	38.32	58.880				
7,200.0	7,182.4	7,548.2	7,182.4	17.8	40.4	-135.65	2,256.5	2,217.9	38.64	58.401				
7,300.0	7,282.4	7,648.2	7,282.4	18.0	40.4	-135.65	2,256.5	2,217.6	38.95	57.927				
7,400.0	7,382.4	7,748.2	7,382.4	18.1	40.5	-135.65	2,256.5	2,217.3	39.27	57.457				
7,500.0	7,482.4	7,848.2	7,482.4	18.3	40.6	-135.65	2,256.5	2,216.9	39.59	56.991				
7,600.0	7,582.4	7,948.2	7,582.4	18.5	40.6	-135.65	2,256.5	2,216.6	39.92	56.529				
7,700.0	7,682.4	8,048.2	7,682.4	18.7	40.7	-135.65	2,256.5	2,216.3	40.24	56.071				
7,800.0	7,782.4	8,148.2	7,782.4	18.9	40.8	-135.65	2,256.5	2,216.0	40.57	55.617				
7,900.0	7,882.4	8,248.2	7,882.4	19.0	40.9	-135.65	2,256.5	2,215.6	40.90	55.168				
8,000.0	7,982.4	8,348.2	7,982.4	19.2	41.0	-135.65	2,256.5	2,215.3	41.24	54.723				
8,100.0	8,082.4	8,448.2	8,082.4	19.4	41.0	-135.65	2,256.5	2,215.0	41.57	54.282				
8,200.0	8,182.4	8,548.2	8,182.4	19.6	41.1	-135.65	2,256.5	2,214.6	41.91	53.846				
8,300.0	8,282.4	8,648.2	8,282.4	19.8	41.2	-135.65	2,256.5	2,214.3	42.25	53.414				
8,400.0	8,382.4	8,748.2	8,382.4	20.0	41.3	-135.65	2,256.5	2,213.9	42.59	52.987				
8,420.6	8,403.0	8,748.8	8,383.0	20.0	41.3	-135.65	2,256.6	2,214.0	42.63	52.939				

# New Tech

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<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 25-11M	<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 25-11W - 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	-122.68	6.7						
100.0	100.0	100.0	100.0	0.1	0.1	-122.68	6.7	6.6	0.18	37.897			
178.9	178.9	178.9	178.9	0.3	0.3	-122.68	6.7	6.2	0.53	12.647			
200.0	200.0	200.0	200.0	0.3	0.3	-122.68	6.7	6.1	0.63	10.731			
278.9	278.9	278.9	278.9	0.5	0.5	-122.68	6.7	5.7	0.98	6.855			
300.0	300.0	300.0	300.0	0.5	0.5	-122.68	6.7	5.7	1.08	6.250			CC, ES, SF
400.0	400.0	399.6	399.6	0.8	0.8	151.05	10.3	8.8	1.52	6.821			
449.2	449.0	448.3	448.2	0.9	0.9	159.91	15.3	13.5	1.74	8.782			
500.0	499.7	498.3	498.2	1.0	1.0	165.35	22.1	20.1	1.96	11.256			
600.0	599.4	596.0	595.5	1.2	1.2	170.19	38.2	35.8	2.40	15.908			
700.0	699.1	692.4	691.2	1.5	1.5	172.25	57.8	55.0	2.85	20.278			
800.0	798.8	787.5	785.1	1.7	1.8	173.29	80.7	77.4	3.31	24.426			
900.0	898.5	880.9	877.0	2.0	2.1	173.87	106.8	103.1	3.76	28.397			
1,000.0	998.2	976.4	970.4	2.2	2.5	174.23	135.0	130.7	4.22	31.966			
1,100.0	1,097.9	1,072.3	1,064.2	2.5	2.9	174.47	163.1	158.4	4.67	34.902			
1,200.0	1,197.6	1,168.3	1,158.1	2.8	3.3	174.63	191.3	186.1	5.13	37.283			
1,300.0	1,297.3	1,264.2	1,252.0	3.0	3.7	174.76	219.4	213.8	5.59	39.250			
1,400.0	1,397.0	1,360.2	1,345.9	3.3	4.2	174.85	247.6	241.5	6.06	40.880			
1,500.0	1,496.6	1,456.1	1,439.8	3.6	4.6	174.93	275.7	269.2	6.52	42.282			
1,600.0	1,596.3	1,552.1	1,533.7	3.8	5.0	174.99	303.9	296.9	6.99	43.480			
1,700.0	1,696.0	1,648.1	1,627.6	4.1	5.4	175.04	332.0	324.6	7.46	44.517			
1,800.0	1,795.7	1,744.0	1,721.5	4.4	5.9	175.09	360.2	352.2	7.93	45.423			
1,900.0	1,895.4	1,840.0	1,815.4	4.6	6.3	175.12	388.3	379.9	8.40	46.222			
2,000.0	1,995.1	1,935.9	1,909.3	4.9	6.7	175.16	416.5	407.6	8.87	46.930			
2,100.0	2,094.8	2,031.9	2,003.2	5.2	7.2	175.18	444.6	435.3	9.35	47.564			
2,200.0	2,194.5	2,127.8	2,097.1	5.4	7.6	175.21	472.8	463.0	9.82	48.132			
2,300.0	2,294.2	2,223.8	2,191.0	5.7	8.0	175.23	500.9	490.6	10.30	48.646			
2,400.0	2,393.9	2,319.7	2,284.9	6.0	8.5	175.25	529.1	518.3	10.77	49.111			
2,500.0	2,493.6	2,415.7	2,378.8	6.2	8.9	175.27	557.2	546.0	11.25	49.536			
2,600.0	2,593.3	2,511.6	2,472.7	6.5	9.3	175.28	585.4	573.7	11.73	49.924			
2,700.0	2,693.0	2,607.6	2,566.6	6.8	9.8	175.30	613.5	601.3	12.20	50.280			
2,800.0	2,792.7	2,703.6	2,660.4	7.0	10.2	175.31	641.7	629.0	12.68	50.608			
2,900.0	2,892.4	2,799.5	2,754.3	7.3	10.6	175.32	669.9	656.7	13.16	50.912			
3,000.0	2,992.1	2,895.5	2,848.2	7.6	11.1	175.33	698.0	684.4	13.63	51.193			
3,100.0	3,091.8	2,991.4	2,942.1	7.8	11.5	175.34	726.2	712.1	14.11	51.454			
3,200.0	3,191.5	3,087.4	3,036.0	8.1	11.9	175.35	754.3	739.7	14.59	51.697			
3,300.0	3,291.2	3,183.3	3,129.9	8.4	12.4	175.36	782.5	767.4	15.07	51.924			
3,400.0	3,390.9	3,279.3	3,223.8	8.6	12.8	175.37	810.6	795.1	15.55	52.136			
3,500.0	3,490.5	3,375.2	3,317.7	8.9	13.2	175.38	838.8	822.8	16.03	52.335			
3,600.0	3,590.2	3,471.2	3,411.6	9.2	13.7	175.39	866.9	850.4	16.51	52.522			
3,700.0	3,689.9	3,567.1	3,505.5	9.4	14.1	175.39	895.1	878.1	16.99	52.698			
3,800.0	3,789.6	3,663.1	3,599.4	9.7	14.6	175.40	923.2	905.8	17.46	52.864			
3,900.0	3,889.3	3,759.1	3,693.3	10.0	15.0	175.41	951.4	933.5	17.94	53.020			
4,000.0	3,989.0	3,855.0	3,787.2	10.2	15.4	175.41	979.6	961.1	18.42	53.168			
4,100.0	4,088.7	3,951.0	3,881.1	10.5	15.9	175.42	1,007.7	988.8	18.90	53.308			
4,200.0	4,188.4	4,046.9	3,975.0	10.8	16.3	175.42	1,035.9	1,016.5	19.38	53.440			
4,300.0	4,288.1	4,142.9	4,068.9	11.1	16.7	175.43	1,064.0	1,044.1	19.86	53.566			
4,400.0	4,387.8	4,238.8	4,162.8	11.3	17.2	175.43	1,092.2	1,071.8	20.34	53.686			
4,500.0	4,487.5	4,334.8	4,256.7	11.6	17.6	175.43	1,120.3	1,099.5	20.82	53.800			
4,600.0	4,587.2	4,430.7	4,350.5	11.9	18.0	175.44	1,148.5	1,127.2	21.30	53.908			
4,700.0	4,686.9	4,526.7	4,444.4	12.1	18.5	175.44	1,176.6	1,154.8	21.78	54.011			
4,800.0	4,786.6	4,622.7	4,538.3	12.4	18.9	175.45	1,204.8	1,182.5	22.27	54.110			
4,900.0	4,886.3	4,718.6	4,632.2	12.7	19.3	175.45	1,232.9	1,210.2	22.75	54.204			
5,000.0	4,986.0	4,814.6	4,726.1	12.9	19.8	175.45	1,261.1	1,237.9	23.23	54.294			

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 25-11M
<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 25-11M	<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 25-11W - 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	
5,100.0	5,085.7	4,910.5	4,820.0	13.2	20.2	175.46	1,289.2	1,265.5	23.71	54.380			
5,200.0	5,185.4	5,006.5	4,913.9	13.5	20.7	175.46	1,317.4	1,293.2	24.19	54.462			
5,300.0	5,285.1	5,102.4	5,007.8	13.7	21.1	175.46	1,345.6	1,320.9	24.67	54.541			
5,400.0	5,384.8	5,198.4	5,101.7	14.0	21.5	175.46	1,373.7	1,348.6	25.15	54.617			
5,500.0	5,484.5	5,294.3	5,195.6	14.3	22.0	175.47	1,401.9	1,376.2	25.63	54.689			
5,600.0	5,584.1	5,390.3	5,289.5	14.5	22.4	175.47	1,430.0	1,403.9	26.11	54.759			
5,700.0	5,683.8	5,486.2	5,383.4	14.8	22.8	175.47	1,458.2	1,431.6	26.60	54.826			
5,800.0	5,783.5	5,582.2	5,477.3	15.1	23.3	175.47	1,486.3	1,459.2	27.08	54.890			
5,900.0	5,883.2	5,678.2	5,571.2	15.3	23.7	175.48	1,514.5	1,486.9	27.56	54.952			
6,000.0	5,982.9	5,774.1	5,665.1	15.6	24.2	175.48	1,542.6	1,514.6	28.04	55.011			
6,072.3	6,055.0	5,843.5	5,732.9	15.8	24.5	175.48	1,563.0	1,534.6	28.39	55.053			
6,100.0	6,082.6	5,870.1	5,759.0	15.9	24.6	175.49	1,570.7	1,542.1	28.54	55.033			
6,200.0	6,182.5	6,064.0	5,949.8	16.1	25.2	175.52	1,594.5	1,565.3	29.20	54.600			
6,300.0	6,282.4	6,288.6	6,172.9	16.2	25.7	175.53	1,608.4	1,578.5	29.85	53.874			
6,370.6	6,353.0	6,449.5	6,333.7	16.3	25.9	-81.55	1,611.8	1,581.6	30.29	53.222			
6,400.0	6,382.4	6,498.2	6,382.4	16.4	26.0	-81.55	1,611.9	1,581.5	30.42	52.985			
6,470.6	6,453.0	6,568.8	6,453.0	16.5	26.1	-81.55	1,611.9	1,581.3	30.68	52.544			
6,500.0	6,482.4	6,598.2	6,482.4	16.6	26.1	-81.55	1,611.9	1,581.1	30.78	52.362			
6,600.0	6,582.4	6,698.2	6,582.4	16.7	26.2	-81.55	1,611.9	1,580.8	31.15	51.750			
6,700.0	6,682.4	6,798.2	6,682.4	16.9	26.3	-81.55	1,611.9	1,580.4	31.52	51.148			
6,800.0	6,782.4	6,898.2	6,782.4	17.1	26.5	-81.55	1,611.9	1,580.0	31.88	50.556			
6,900.0	6,882.4	6,998.2	6,882.4	17.2	26.6	-81.55	1,611.9	1,579.7	32.25	49.975			
7,000.0	6,982.4	7,098.2	6,982.4	17.4	26.7	-81.55	1,611.9	1,579.3	32.63	49.404			
7,100.0	7,082.4	7,198.2	7,082.4	17.6	26.8	-81.55	1,611.9	1,578.9	33.00	48.844			
7,200.0	7,182.4	7,298.2	7,182.4	17.8	26.9	-81.55	1,611.9	1,578.6	33.38	48.293			
7,300.0	7,282.4	7,398.2	7,282.4	18.0	27.1	-81.55	1,611.9	1,578.2	33.76	47.752			
7,400.0	7,382.4	7,498.2	7,382.4	18.1	27.2	-81.55	1,611.9	1,577.8	34.14	47.220			
7,500.0	7,482.4	7,598.2	7,482.4	18.3	27.3	-81.55	1,611.9	1,577.4	34.52	46.698			
7,600.0	7,582.4	7,698.2	7,582.4	18.5	27.5	-81.55	1,611.9	1,577.0	34.90	46.186			
7,700.0	7,682.4	7,798.2	7,682.4	18.7	27.6	-81.55	1,611.9	1,576.6	35.29	45.682			
7,800.0	7,782.4	7,898.2	7,782.4	18.9	27.7	-81.55	1,611.9	1,576.3	35.67	45.188			
7,900.0	7,882.4	7,998.2	7,882.4	19.0	27.9	-81.55	1,611.9	1,575.9	36.06	44.702			
8,000.0	7,982.4	8,098.2	7,982.4	19.2	28.0	-81.55	1,611.9	1,575.5	36.45	44.225			
8,100.0	8,082.4	8,198.2	8,082.4	19.4	28.1	-81.55	1,611.9	1,575.1	36.84	43.756			
8,200.0	8,182.4	8,298.2	8,182.4	19.6	28.3	-81.55	1,611.9	1,574.7	37.23	43.295			
8,300.0	8,282.4	8,398.2	8,282.4	19.8	28.4	-81.55	1,611.9	1,574.3	37.62	42.843			
8,400.0	8,382.4	8,498.2	8,382.4	20.0	28.5	-81.55	1,611.9	1,573.9	38.02	42.399			
8,420.6	8,403.0	8,518.8	8,403.0	20.0	28.6	-81.55	1,611.9	1,573.8	38.10	42.308			

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11M
<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 25-11M	<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	152.59	12.3					CC, ES	
100.0	100.0	100.0	100.0	0.1	0.1	152.59	12.3	12.1	0.18	69.289			
200.0	200.0	200.0	200.0	0.3	0.3	152.59	12.3	11.7	0.63	19.620			
300.0	300.0	300.0	300.0	0.5	0.5	152.59	12.3	11.2	1.08	11.428			
400.0	400.0	399.4	399.4	0.8	0.7	53.82	13.0	11.5	1.49	8.715			
449.2	449.0	448.2	448.1	0.9	0.9	58.28	14.0	12.3	1.70	8.226			
500.0	499.7	498.8	498.4	1.0	1.0	61.62	15.8	13.9	1.93	8.209			
600.0	599.4	598.7	597.9	1.2	1.2	64.90	20.1	17.7	2.39	8.420			
700.0	699.1	698.6	697.3	1.5	1.5	67.01	24.5	21.6	2.87	8.509			
800.0	798.8	798.5	796.7	1.7	1.7	68.49	28.8	25.4	3.37	8.543			
900.0	898.5	898.4	896.1	2.0	2.0	69.58	33.2	29.3	3.88	8.552			
1,000.0	998.2	998.3	995.5	2.2	2.3	70.41	37.6	33.2	4.40	8.550			
1,100.0	1,097.9	1,098.2	1,095.0	2.5	2.6	71.07	42.0	37.1	4.91	8.543			
1,200.0	1,197.6	1,198.1	1,194.4	2.8	2.9	71.60	46.4	40.9	5.44	8.533			
1,300.0	1,297.3	1,298.0	1,293.8	3.0	3.2	72.05	50.8	44.8	5.96	8.522			
1,400.0	1,397.0	1,397.9	1,393.2	3.3	3.5	72.42	55.2	48.7	6.48	8.511			
1,500.0	1,496.6	1,497.8	1,492.6	3.6	3.8	72.73	59.6	52.6	7.01	8.500			
1,600.0	1,596.3	1,597.7	1,592.1	3.8	4.0	73.01	64.0	56.5	7.54	8.490			
1,700.0	1,696.0	1,697.6	1,691.5	4.1	4.3	73.24	68.4	60.3	8.07	8.481			
1,800.0	1,795.7	1,797.5	1,790.9	4.4	4.6	73.45	72.8	64.2	8.60	8.472			
1,900.0	1,895.4	1,897.4	1,890.3	4.6	4.9	73.64	77.2	68.1	9.13	8.464			
2,000.0	1,995.1	1,997.3	1,989.8	4.9	5.2	73.80	81.7	72.0	9.66	8.456			
2,100.0	2,094.8	2,097.2	2,089.2	5.2	5.5	73.95	86.1	75.9	10.19	8.449			
2,200.0	2,194.5	2,197.1	2,188.6	5.4	5.8	74.08	90.5	79.8	10.72	8.442			
2,300.0	2,294.2	2,297.0	2,288.0	5.7	6.1	74.21	94.9	83.6	11.25	8.436			
2,400.0	2,393.9	2,396.9	2,387.4	6.0	6.4	74.32	99.3	87.5	11.78	8.430			
2,500.0	2,493.6	2,496.8	2,486.9	6.2	6.7	74.42	103.7	91.4	12.31	8.425			
2,600.0	2,593.3	2,596.7	2,586.3	6.5	7.0	74.51	108.1	95.3	12.84	8.420			
2,700.0	2,693.0	2,696.6	2,685.7	6.8	7.2	74.60	112.6	99.2	13.38	8.415			
2,800.0	2,792.7	2,796.5	2,785.1	7.0	7.5	74.67	117.0	103.1	13.91	8.411			
2,900.0	2,892.4	2,896.4	2,884.5	7.3	7.8	74.75	121.4	106.9	14.44	8.407			
3,000.0	2,992.1	2,996.3	2,984.0	7.6	8.1	74.82	125.8	110.8	14.97	8.403			
3,100.0	3,091.8	3,096.3	3,083.4	7.8	8.4	74.88	130.2	114.7	15.50	8.399			
3,200.0	3,191.5	3,196.2	3,182.8	8.1	8.7	74.94	134.6	118.6	16.04	8.395			
3,300.0	3,291.2	3,296.1	3,282.2	8.4	9.0	74.99	139.1	122.5	16.57	8.392			
3,400.0	3,390.9	3,396.0	3,381.7	8.6	9.3	75.05	143.5	126.4	17.10	8.389			
3,500.0	3,490.5	3,495.9	3,481.1	8.9	9.6	75.10	147.9	130.3	17.64	8.386			
3,600.0	3,590.2	3,595.8	3,580.5	9.2	9.9	75.14	152.3	134.1	18.17	8.383			
3,700.0	3,689.9	3,695.7	3,679.9	9.4	10.2	75.19	156.7	138.0	18.70	8.380			
3,800.0	3,789.6	3,795.6	3,779.3	9.7	10.5	75.23	161.1	141.9	19.23	8.378			
3,900.0	3,889.3	3,895.5	3,878.8	10.0	10.8	75.27	165.6	145.8	19.77	8.375			
4,000.0	3,989.0	3,995.4	3,978.2	10.2	11.0	75.30	170.0	149.7	20.30	8.373			
4,100.0	4,088.7	4,095.3	4,077.6	10.5	11.3	75.34	174.4	153.6	20.83	8.371			
4,200.0	4,188.4	4,195.2	4,177.0	10.8	11.6	75.37	178.8	157.4	21.37	8.369			
4,300.0	4,288.1	4,295.1	4,276.4	11.1	11.9	75.40	183.2	161.3	21.90	8.366			
4,400.0	4,387.8	4,395.0	4,375.9	11.3	12.2	75.43	187.6	165.2	22.43	8.364			
4,500.0	4,487.5	4,494.9	4,475.3	11.6	12.5	75.46	192.1	169.1	22.97	8.363			
4,600.0	4,587.2	4,594.8	4,574.7	11.9	12.8	75.49	196.5	173.0	23.50	8.361			
4,700.0	4,686.9	4,694.7	4,674.1	12.1	13.1	75.52	200.9	176.9	24.03	8.359			
4,800.0	4,786.6	4,794.6	4,773.5	12.4	13.4	75.54	205.3	180.7	24.57	8.357			
4,900.0	4,886.3	4,894.5	4,873.0	12.7	13.7	75.57	209.7	184.6	25.10	8.356			
5,000.0	4,986.0	4,994.4	4,972.4	12.9	14.0	75.59	214.1	188.5	25.63	8.354			
5,100.0	5,085.7	5,094.3	5,071.8	13.2	14.3	75.61	218.6	192.4	26.17	8.353			
5,200.0	5,185.4	5,194.2	5,171.2	13.5	14.6	75.63	223.0	196.3	26.70	8.351			

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 25-11M
<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 25-11M	<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 25-12M - 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
5,300.0	5,285.1	5,294.1	5,270.7	13.7	14.9	75.65	227.4	200.2	27.23	8.350			
5,400.0	5,384.8	5,394.0	5,370.1	14.0	15.1	75.67	231.8	204.1	27.77	8.349			
5,500.0	5,484.5	5,493.9	5,469.5	14.3	15.4	75.69	236.2	207.9	28.30	8.347			
5,600.0	5,584.1	5,593.8	5,568.9	14.5	15.7	75.71	240.7	211.8	28.83	8.346			
5,700.0	5,683.8	5,693.7	5,668.3	14.8	16.0	75.73	245.1	215.7	29.37	8.345			
5,800.0	5,783.5	5,793.6	5,767.8	15.1	16.3	75.74	249.5	219.6	29.90	8.344			
5,900.0	5,883.2	5,893.5	5,867.2	15.3	16.6	75.76	253.9	223.5	30.44	8.343			
6,000.0	5,982.9	5,993.4	5,966.6	15.6	16.9	75.78	258.3	227.4	30.97	8.341			
6,072.3	6,055.0	6,068.6	6,041.5	15.8	17.1	75.89	261.1	229.8	31.34	8.332			
6,100.0	6,082.6	6,097.6	6,070.4	15.9	17.2	75.99	262.0	230.5	31.48	8.323			
6,200.0	6,182.5	6,202.2	6,174.8	16.1	17.3	76.27	264.4	232.5	31.88	8.295			
6,300.0	6,282.4	6,306.8	6,279.4	16.2	17.5	76.43	265.7	233.5	32.23	8.244			
6,370.6	6,353.0	6,380.5	6,353.0	16.3	17.6	179.39	265.9	233.4	32.47	8.189			
6,400.0	6,382.4	6,409.9	6,382.4	16.4	17.7	179.39	265.9	233.3	32.57	8.164			
6,470.6	6,453.0	6,480.5	6,453.0	16.5	17.8	179.39	265.9	233.1	32.80	8.106			
6,500.0	6,482.4	6,509.9	6,482.4	16.6	17.8	179.39	265.9	233.0	32.90	8.082			
6,600.0	6,582.4	6,609.9	6,582.4	16.7	18.0	179.39	265.9	232.7	33.24	8.000			
6,700.0	6,682.4	6,709.9	6,682.4	16.9	18.1	179.39	265.9	232.3	33.58	7.920			
6,800.0	6,782.4	6,809.9	6,782.4	17.1	18.3	179.39	265.9	232.0	33.92	7.840			
6,900.0	6,882.4	6,909.9	6,882.4	17.2	18.4	179.39	265.9	231.7	34.26	7.762			
7,000.0	6,982.4	7,009.9	6,982.4	17.4	18.6	179.39	265.9	231.3	34.60	7.685			
7,100.0	7,082.4	7,109.9	7,082.4	17.6	18.7	179.39	265.9	231.0	34.95	7.608			
7,200.0	7,182.4	7,209.9	7,182.4	17.8	18.9	179.39	265.9	230.6	35.30	7.533			
7,300.0	7,282.4	7,309.9	7,282.4	18.0	19.1	179.39	265.9	230.3	35.65	7.458			
7,400.0	7,382.4	7,409.9	7,382.4	18.1	19.2	179.39	265.9	229.9	36.01	7.385			
7,500.0	7,482.4	7,509.9	7,482.4	18.3	19.4	179.39	265.9	229.5	36.36	7.313			
7,600.0	7,582.4	7,609.9	7,582.4	18.5	19.5	179.39	265.9	229.2	36.72	7.241			
7,700.0	7,682.4	7,709.9	7,682.4	18.7	19.7	179.39	265.9	228.8	37.08	7.171			
7,800.0	7,782.4	7,809.9	7,782.4	18.9	19.9	179.39	265.9	228.5	37.44	7.102			
7,900.0	7,882.4	7,909.9	7,882.4	19.0	20.0	179.39	265.9	228.1	37.81	7.033			
8,000.0	7,982.4	8,009.9	7,982.4	19.2	20.2	179.39	265.9	227.7	38.17	6.966			
8,100.0	8,082.4	8,109.9	8,082.4	19.4	20.4	179.39	265.9	227.4	38.54	6.899			
8,200.0	8,182.4	8,209.9	8,182.4	19.6	20.5	179.39	265.9	227.0	38.91	6.834			
8,300.0	8,282.4	8,309.9	8,282.4	19.8	20.7	179.39	265.9	226.6	39.28	6.769			
8,400.0	8,382.4	8,409.9	8,382.4	20.0	20.9	179.39	265.9	226.3	39.65	6.706			
8,406.5	8,388.9	8,416.4	8,388.9	20.0	20.9	179.39	265.9	226.2	39.68	6.702			
8,420.6	8,403.0	8,425.5	8,398.0	20.0	20.9	179.39	266.0	226.2	39.72	6.695		SF	

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11M
<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 25-11M	<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	-122.73	13.5					CC, ES SF	
100.0	100.0	100.0	100.0	0.1	0.1	-122.73	13.5	13.3	0.18	75.835			
200.0	200.0	200.0	200.0	0.3	0.3	-122.73	13.5	12.8	0.63	21.473			
300.0	300.0	300.0	300.0	0.5	0.5	-122.73	13.5	12.4	1.08	12.507			
400.0	400.0	399.4	399.4	0.8	0.7	143.18	17.1	15.5	1.51	11.286			
449.2	449.0	448.0	447.9	0.9	0.9	149.81	21.8	20.1	1.73	12.576			
500.0	499.7	497.9	497.7	1.0	1.0	154.98	28.3	26.4	1.95	14.506			
600.0	599.4	595.4	594.8	1.2	1.2	160.34	44.1	41.7	2.40	18.412			
700.0	699.1	691.7	690.4	1.5	1.5	162.74	63.4	60.6	2.85	22.282			
800.0	798.8	786.6	784.3	1.7	1.8	163.90	86.0	82.7	3.30	26.060			
900.0	898.5	880.0	876.0	2.0	2.1	164.46	111.8	108.1	3.76	29.733			
1,000.0	998.2	975.6	969.6	2.2	2.5	164.77	139.6	135.3	4.22	33.046			
1,100.0	1,097.9	1,071.7	1,063.7	2.5	2.9	164.97	167.3	162.6	4.68	35.761			
1,200.0	1,197.6	1,167.7	1,157.7	2.8	3.3	165.12	195.1	189.9	5.14	37.955			
1,300.0	1,297.3	1,263.8	1,251.7	3.0	3.7	165.23	222.9	217.2	5.61	39.759			
1,400.0	1,397.0	1,359.9	1,345.7	3.3	4.2	165.31	250.6	244.5	6.08	41.248			
1,500.0	1,496.6	1,455.9	1,439.8	3.6	4.6	165.38	278.4	271.8	6.55	42.530			
1,600.0	1,596.3	1,552.0	1,533.8	3.8	5.0	165.44	306.2	299.1	7.02	43.619			
1,700.0	1,696.0	1,648.1	1,627.8	4.1	5.4	165.48	333.9	326.4	7.49	44.561			
1,800.0	1,795.7	1,744.2	1,721.8	4.4	5.9	165.52	361.7	353.7	7.97	45.383			
1,900.0	1,895.4	1,840.2	1,815.9	4.6	6.3	165.56	389.5	381.0	8.45	46.106			
2,000.0	1,995.1	1,936.3	1,909.9	4.9	6.7	165.58	417.2	408.3	8.93	46.746			
2,100.0	2,094.8	2,032.4	2,003.9	5.2	7.2	165.61	445.0	435.6	9.40	47.318			
2,200.0	2,194.5	2,128.4	2,098.0	5.4	7.6	165.63	472.8	462.9	9.88	47.830			
2,300.0	2,294.2	2,224.5	2,192.0	5.7	8.0	165.65	500.5	490.2	10.36	48.292			
2,400.0	2,393.9	2,320.6	2,286.0	6.0	8.5	165.67	528.3	517.5	10.85	48.711			
2,500.0	2,493.6	2,416.6	2,380.0	6.2	8.9	165.69	556.1	544.7	11.33	49.092			
2,600.0	2,593.3	2,512.7	2,474.1	6.5	9.3	165.70	583.8	572.0	11.81	49.441			
2,700.0	2,693.0	2,608.8	2,568.1	6.8	9.8	165.72	611.6	599.3	12.29	49.760			
2,800.0	2,792.7	2,704.8	2,662.1	7.0	10.2	165.73	639.4	626.6	12.77	50.055			
2,900.0	2,892.4	2,800.9	2,756.1	7.3	10.6	165.74	667.1	653.9	13.26	50.326			
3,000.0	2,992.1	2,897.0	2,850.2	7.6	11.1	165.75	694.9	681.2	13.74	50.578			
3,100.0	3,091.8	2,993.0	2,944.2	7.8	11.5	165.76	722.7	708.5	14.22	50.811			
3,200.0	3,191.5	3,089.1	3,038.2	8.1	11.9	165.77	750.5	735.8	14.71	51.028			
3,300.0	3,291.2	3,185.2	3,132.3	8.4	12.4	165.78	778.2	763.0	15.19	51.231			
3,400.0	3,390.9	3,281.2	3,226.3	8.6	12.8	165.78	806.0	790.3	15.67	51.421			
3,500.0	3,490.5	3,377.3	3,320.3	8.9	13.3	165.79	833.8	817.6	16.16	51.598			
3,600.0	3,590.2	3,473.4	3,414.3	9.2	13.7	165.80	861.5	844.9	16.64	51.765			
3,700.0	3,689.9	3,569.4	3,508.4	9.4	14.1	165.80	889.3	872.2	17.13	51.922			
3,800.0	3,789.6	3,665.5	3,602.4	9.7	14.6	165.81	917.1	899.5	17.61	52.070			
3,900.0	3,889.3	3,761.6	3,696.4	10.0	15.0	165.81	944.8	926.7	18.10	52.209			
4,000.0	3,989.0	3,857.6	3,790.4	10.2	15.4	165.82	972.6	954.0	18.58	52.341			
4,100.0	4,088.7	3,953.7	3,884.5	10.5	15.9	165.82	1,000.4	981.3	19.07	52.465			
4,200.0	4,188.4	4,049.8	3,978.5	10.8	16.3	165.83	1,028.1	1,008.6	19.55	52.583			
4,300.0	4,288.1	4,145.8	4,072.5	11.1	16.7	165.83	1,055.9	1,035.9	20.04	52.695			
4,400.0	4,387.8	4,241.9	4,166.5	11.3	17.2	165.84	1,083.7	1,063.2	20.52	52.801			
4,500.0	4,487.5	4,338.0	4,260.6	11.6	17.6	165.84	1,111.5	1,090.4	21.01	52.903			
4,600.0	4,587.2	4,434.0	4,354.6	11.9	18.1	165.85	1,139.2	1,117.7	21.50	52.999			
4,700.0	4,686.9	4,530.1	4,448.6	12.1	18.5	165.85	1,167.0	1,145.0	21.98	53.091			
4,800.0	4,786.6	4,626.2	4,542.7	12.4	18.9	165.85	1,194.8	1,172.3	22.47	53.178			
4,900.0	4,886.3	4,722.2	4,636.7	12.7	19.4	165.86	1,222.5	1,199.6	22.95	53.262			
5,000.0	4,986.0	4,818.3	4,730.7	12.9	19.8	165.86	1,250.3	1,226.9	23.44	53.341			
5,100.0	5,085.7	4,914.4	4,824.7	13.2	20.2	165.86	1,278.1	1,254.1	23.93	53.418			
5,200.0	5,185.4	5,010.4	4,918.8	13.5	20.7	165.86	1,305.8	1,281.4	24.41	53.491			

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 25-11M
<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 25-11M	<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				
5,300.0	5,285.1	5,106.5	5,012.8	13.7	21.1	165.87	1,333.6	1,308.7	24.90	53.561				
5,400.0	5,384.8	5,202.6	5,106.8	14.0	21.6	165.87	1,361.4	1,336.0	25.39	53.628				
5,500.0	5,484.5	5,298.6	5,200.8	14.3	22.0	165.87	1,389.1	1,363.3	25.87	53.692				
5,600.0	5,584.1	5,394.7	5,294.9	14.5	22.4	165.87	1,416.9	1,390.6	26.36	53.754				
5,700.0	5,683.8	5,490.8	5,388.9	14.8	22.9	165.88	1,444.7	1,417.8	26.85	53.813				
5,800.0	5,783.5	5,586.8	5,482.9	15.1	23.3	165.88	1,472.5	1,445.1	27.33	53.870				
5,900.0	5,883.2	5,682.9	5,576.9	15.3	23.7	165.88	1,500.2	1,472.4	27.82	53.924				
6,000.0	5,982.9	5,779.0	5,671.0	15.6	24.2	165.88	1,528.0	1,499.7	28.31	53.977				
6,072.3	6,055.0	5,848.4	5,738.9	15.8	24.5	165.88	1,548.1	1,519.4	28.66	54.014				
6,100.0	6,082.6	5,880.2	5,770.1	15.9	24.6	165.91	1,555.7	1,526.8	28.82	53.973				
6,200.0	6,182.5	6,094.5	5,981.4	16.1	25.3	165.99	1,577.6	1,548.1	29.51	53.459				
6,300.0	6,282.4	6,315.5	6,201.4	16.2	25.7	166.03	1,589.6	1,559.5	30.14	52.746				
6,370.6	6,353.0	6,467.1	6,353.0	16.3	25.9	-91.05	1,591.9	1,561.3	30.55	52.116				
6,400.0	6,382.4	6,496.5	6,382.4	16.4	25.9	-91.05	1,591.9	1,561.2	30.65	51.936				
6,470.6	6,453.0	6,567.1	6,453.0	16.5	26.0	-91.05	1,591.9	1,561.0	30.90	51.516				
6,500.0	6,482.4	6,596.5	6,482.4	16.6	26.0	-91.05	1,591.9	1,560.9	31.01	51.342				
6,600.0	6,582.4	6,696.5	6,582.4	16.7	26.1	-91.05	1,591.9	1,560.5	31.36	50.757				
6,700.0	6,682.4	6,796.5	6,682.4	16.9	26.3	-91.05	1,591.9	1,560.2	31.72	50.182				
6,800.0	6,782.4	6,896.5	6,782.4	17.1	26.4	-91.05	1,591.9	1,559.8	32.08	49.616				
6,900.0	6,882.4	6,996.5	6,882.4	17.2	26.5	-91.05	1,591.9	1,559.4	32.45	49.060				
7,000.0	6,982.4	7,096.5	6,982.4	17.4	26.6	-91.05	1,591.9	1,559.1	32.81	48.513				
7,100.0	7,082.4	7,196.5	7,082.4	17.6	26.7	-91.05	1,591.9	1,558.7	33.18	47.975				
7,200.0	7,182.4	7,296.5	7,182.4	17.8	26.9	-91.05	1,591.9	1,558.3	33.55	47.445				
7,300.0	7,282.4	7,396.5	7,282.4	18.0	27.0	-91.05	1,591.9	1,558.0	33.92	46.925				
7,400.0	7,382.4	7,496.5	7,382.4	18.1	27.1	-91.05	1,591.9	1,557.6	34.30	46.414				
7,500.0	7,482.4	7,596.5	7,482.4	18.3	27.2	-91.05	1,591.9	1,557.2	34.67	45.911				
7,600.0	7,582.4	7,696.5	7,582.4	18.5	27.4	-91.05	1,591.9	1,556.8	35.05	45.417				
7,700.0	7,682.4	7,796.5	7,682.4	18.7	27.5	-91.05	1,591.9	1,556.5	35.43	44.931				
7,800.0	7,782.4	7,896.5	7,782.4	18.9	27.6	-91.05	1,591.9	1,556.1	35.81	44.454				
7,900.0	7,882.4	7,996.5	7,882.4	19.0	27.7	-91.05	1,591.9	1,555.7	36.19	43.985				
8,000.0	7,982.4	8,096.5	7,982.4	19.2	27.9	-91.05	1,591.9	1,555.3	36.58	43.523				
8,100.0	8,082.4	8,196.5	8,082.4	19.4	28.0	-91.05	1,591.9	1,554.9	36.96	43.070				
8,200.0	8,182.4	8,296.5	8,182.4	19.6	28.1	-91.05	1,591.9	1,554.5	37.35	42.624				
8,300.0	8,282.4	8,396.5	8,282.4	19.8	28.3	-91.05	1,591.9	1,554.2	37.74	42.186				
8,400.0	8,382.4	8,496.5	8,382.4	20.0	28.4	-91.05	1,591.9	1,553.8	38.12	41.755				
8,406.5	8,388.9	8,503.1	8,388.9	20.0	28.4	-91.05	1,591.9	1,553.7	38.15	41.727				
8,420.6	8,403.0	8,512.1	8,398.0	20.0	28.4	-91.05	1,591.9	1,553.7	38.20	41.678				

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11M
<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 25-11M	<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 25-13M - 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	-169.01	14.9						
100.0	100.0	100.0	100.0	0.1	0.1	-169.01	14.9	14.7	0.18	83.632			
200.0	200.0	200.0	200.0	0.3	0.3	-169.01	14.9	14.2	0.63	23.681			
300.0	300.0	300.0	300.0	0.5	0.5	-169.01	14.9	13.8	1.08	13.793			CC, ES
400.0	400.0	399.4	399.4	0.8	0.7	90.45	16.5	15.0	1.49	11.080			
449.2	449.0	448.3	448.1	0.9	0.8	92.75	18.6	16.9	1.70	10.940			SF
500.0	499.7	498.7	498.3	1.0	1.0	93.59	21.7	19.7	1.93	11.231			
600.0	599.4	597.9	596.8	1.2	1.2	89.33	29.8	27.4	2.42	12.309			
700.0	699.1	697.5	695.5	1.5	1.5	85.95	38.6	35.7	2.92	13.212			
800.0	798.8	797.1	794.1	1.7	1.8	83.82	47.5	44.1	3.44	13.829			
900.0	898.5	896.7	892.8	2.0	2.1	82.37	56.5	52.5	3.96	14.273			
1,000.0	998.2	996.3	991.5	2.2	2.5	81.32	65.5	61.0	4.48	14.605			
1,100.0	1,097.9	1,095.8	1,090.2	2.5	2.8	80.52	74.5	69.5	5.01	14.862			
1,200.0	1,197.6	1,195.4	1,188.9	2.8	3.1	79.90	83.5	78.0	5.54	15.066			
1,300.0	1,297.3	1,295.0	1,287.6	3.0	3.5	79.39	92.5	86.4	6.07	15.232			
1,400.0	1,397.0	1,394.6	1,386.3	3.3	3.8	78.98	101.5	94.9	6.61	15.370			
1,500.0	1,496.6	1,494.2	1,485.0	3.6	4.1	78.63	110.6	103.4	7.14	15.486			
1,600.0	1,596.3	1,593.8	1,583.7	3.8	4.5	78.34	119.6	111.9	7.68	15.584			
1,700.0	1,696.0	1,693.4	1,682.4	4.1	4.8	78.08	128.7	120.4	8.21	15.670			
1,800.0	1,795.7	1,793.0	1,781.1	4.4	5.2	77.86	137.7	128.9	8.75	15.744			
1,900.0	1,895.4	1,892.6	1,879.8	4.6	5.5	77.67	146.7	137.5	9.28	15.809			
2,000.0	1,995.1	1,992.2	1,978.5	4.9	5.8	77.50	155.8	146.0	9.82	15.866			
2,100.0	2,094.8	2,091.7	2,077.1	5.2	6.2	77.35	164.8	154.5	10.35	15.918			
2,200.0	2,194.5	2,191.3	2,175.8	5.4	6.5	77.21	173.9	163.0	10.89	15.964			
2,300.0	2,294.2	2,290.9	2,274.5	5.7	6.8	77.09	182.9	171.5	11.43	16.005			
2,400.0	2,393.9	2,390.5	2,373.2	6.0	7.2	76.98	192.0	180.0	11.97	16.043			
2,500.0	2,493.6	2,490.1	2,471.9	6.2	7.5	76.88	201.0	188.5	12.50	16.077			
2,600.0	2,593.3	2,589.7	2,570.6	6.5	7.9	76.79	210.1	197.0	13.04	16.108			
2,700.0	2,693.0	2,689.3	2,669.3	6.8	8.2	76.70	219.1	205.5	13.58	16.137			
2,800.0	2,792.7	2,788.9	2,768.0	7.0	8.5	76.62	228.2	214.0	14.12	16.163			
2,900.0	2,892.4	2,888.5	2,866.7	7.3	8.9	76.55	237.2	222.5	14.65	16.188			
3,000.0	2,992.1	2,988.0	2,965.4	7.6	9.2	76.48	246.3	231.1	15.19	16.210			
3,100.0	3,091.8	3,087.6	3,064.1	7.8	9.6	76.42	255.3	239.6	15.73	16.231			
3,200.0	3,191.5	3,187.2	3,162.8	8.1	9.9	76.37	264.4	248.1	16.27	16.251			
3,300.0	3,291.2	3,286.8	3,261.5	8.4	10.2	76.31	273.4	256.6	16.81	16.269			
3,400.0	3,390.9	3,386.4	3,360.2	8.6	10.6	76.26	282.5	265.1	17.34	16.286			
3,500.0	3,490.5	3,486.0	3,458.8	8.9	10.9	76.21	291.5	273.6	17.88	16.302			
3,600.0	3,590.2	3,585.6	3,557.5	9.2	11.3	76.17	300.6	282.1	18.42	16.317			
3,700.0	3,689.9	3,685.2	3,656.2	9.4	11.6	76.13	309.6	290.6	18.96	16.331			
3,800.0	3,789.6	3,784.8	3,754.9	9.7	11.9	76.09	318.7	299.2	19.50	16.345			
3,900.0	3,889.3	3,884.3	3,853.6	10.0	12.3	76.05	327.7	307.7	20.03	16.357			
4,000.0	3,989.0	3,983.9	3,952.3	10.2	12.6	76.02	336.8	316.2	20.57	16.369			
4,100.0	4,088.7	4,083.5	4,051.0	10.5	13.0	75.98	345.8	324.7	21.11	16.381			
4,200.0	4,188.4	4,183.1	4,149.7	10.8	13.3	75.95	354.9	333.2	21.65	16.391			
4,300.0	4,288.1	4,282.7	4,248.4	11.1	13.7	75.92	363.9	341.7	22.19	16.402			
4,400.0	4,387.8	4,382.3	4,347.1	11.3	14.0	75.89	373.0	350.2	22.73	16.411			
4,500.0	4,487.5	4,481.9	4,445.8	11.6	14.3	75.86	382.0	358.8	23.27	16.420			
4,600.0	4,587.2	4,581.5	4,544.5	11.9	14.7	75.84	391.1	367.3	23.80	16.429			
4,700.0	4,686.9	4,681.1	4,643.2	12.1	15.0	75.81	400.1	375.8	24.34	16.438			
4,800.0	4,786.6	4,780.7	4,741.9	12.4	15.4	75.79	409.2	384.3	24.88	16.446			
4,900.0	4,886.3	4,880.2	4,840.5	12.7	15.7	75.77	418.2	392.8	25.42	16.453			
5,000.0	4,986.0	4,979.8	4,939.2	12.9	16.0	75.74	427.3	401.3	25.96	16.461			
5,100.0	5,085.7	5,079.4	5,037.9	13.2	16.4	75.72	436.3	409.8	26.50	16.468			
5,200.0	5,185.4	5,179.0	5,136.6	13.5	16.7	75.70	445.4	418.4	27.04	16.474			

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 25-11M
<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 25-11M	<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		
5,300.0	5,285.1	5,278.6	5,235.3	13.7	17.1	75.68	454.4	426.9	27.57	16.481			
5,400.0	5,384.8	5,378.2	5,334.0	14.0	17.4	75.67	463.5	435.4	28.11	16.487			
5,500.0	5,484.5	5,477.8	5,432.7	14.3	17.7	75.65	472.5	443.9	28.65	16.493			
5,600.0	5,584.1	5,577.4	5,531.4	14.5	18.1	75.63	481.6	452.4	29.19	16.499			
5,700.0	5,683.8	5,677.0	5,630.1	14.8	18.4	75.61	490.7	460.9	29.73	16.504			
5,800.0	5,783.5	5,776.5	5,728.8	15.1	18.8	75.60	499.7	469.4	30.27	16.509			
5,900.0	5,883.2	5,876.1	5,827.5	15.3	19.1	75.58	508.8	478.0	30.81	16.515			
6,000.0	5,982.9	5,987.6	5,938.1	15.6	19.4	75.66	516.7	485.4	31.32	16.497			
6,072.3	6,055.0	6,068.8	6,018.9	15.8	19.5	75.85	521.0	489.3	31.69	16.439			
6,100.0	6,082.6	6,099.9	6,050.0	15.9	19.6	75.96	522.3	490.5	31.83	16.411			
6,200.0	6,182.5	6,212.4	6,162.2	16.1	19.8	76.26	526.0	493.7	32.24	16.315			
6,300.0	6,282.4	6,325.0	6,274.8	16.2	20.0	76.43	527.9	495.3	32.61	16.188			
6,370.6	6,353.0	6,403.2	6,353.0	16.3	20.1	179.38	528.2	495.3	32.86	16.075			
6,400.0	6,382.4	6,432.6	6,382.4	16.4	20.1	179.38	528.2	495.2	32.95	16.029			
6,470.6	6,453.0	6,503.2	6,453.0	16.5	20.2	179.38	528.2	495.0	33.18	15.918			
6,500.0	6,482.4	6,532.6	6,482.4	16.6	20.2	179.38	528.2	494.9	33.28	15.872			
6,600.0	6,582.4	6,632.6	6,582.4	16.7	20.4	179.38	528.2	494.6	33.60	15.718			
6,700.0	6,682.4	6,732.6	6,682.4	16.9	20.5	179.38	528.2	494.2	33.93	15.565			
6,800.0	6,782.4	6,832.6	6,782.4	17.1	20.6	179.38	528.2	493.9	34.27	15.413			
6,900.0	6,882.4	6,932.6	6,882.4	17.2	20.8	179.38	528.2	493.6	34.60	15.264			
7,000.0	6,982.4	7,032.6	6,982.4	17.4	20.9	179.38	528.2	493.2	34.94	15.116			
7,100.0	7,082.4	7,132.6	7,082.4	17.6	21.0	179.38	528.2	492.9	35.28	14.970			
7,200.0	7,182.4	7,232.6	7,182.4	17.8	21.2	179.38	528.2	492.5	35.63	14.826			
7,300.0	7,282.4	7,332.6	7,282.4	18.0	21.3	179.38	528.2	492.2	35.97	14.683			
7,400.0	7,382.4	7,432.6	7,382.4	18.1	21.4	179.38	528.2	491.9	36.32	14.543			
7,500.0	7,482.4	7,532.6	7,482.4	18.3	21.6	179.38	528.2	491.5	36.67	14.404			
7,600.0	7,582.4	7,632.6	7,582.4	18.5	21.7	179.38	528.2	491.2	37.02	14.267			
7,700.0	7,682.4	7,732.6	7,682.4	18.7	21.9	179.38	528.2	490.8	37.38	14.132			
7,800.0	7,782.4	7,832.6	7,782.4	18.9	22.0	179.38	528.2	490.4	37.73	13.998			
7,900.0	7,882.4	7,932.6	7,882.4	19.0	22.2	179.38	528.2	490.1	38.09	13.867			
8,000.0	7,982.4	8,032.6	7,982.4	19.2	22.3	179.38	528.2	489.7	38.45	13.737			
8,100.0	8,082.4	8,132.6	8,082.4	19.4	22.5	179.38	528.2	489.4	38.81	13.609			
8,200.0	8,182.4	8,232.6	8,182.4	19.6	22.6	179.38	528.2	489.0	39.18	13.482			
8,300.0	8,282.4	8,332.6	8,282.4	19.8	22.8	179.38	528.2	488.6	39.54	13.358			
8,400.0	8,382.4	8,432.6	8,382.4	20.0	22.9	179.38	528.2	488.3	39.91	13.235			
8,402.2	8,384.7	8,434.9	8,384.7	20.0	22.9	179.38	528.2	488.3	39.92	13.232			
8,420.6	8,403.0	8,443.2	8,393.0	20.0	22.9	179.38	528.3	488.3	39.97	13.218			

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11M
<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 25-11M	<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	-118.84	22.6						
100.0	100.0	100.0	100.0	0.1	0.1	-118.84	22.6	22.5	0.18	127.457			
200.0	200.0	200.0	200.0	0.3	0.3	-118.84	22.6	22.0	0.63	36.090			
300.0	300.0	300.0	300.0	0.5	0.5	-118.84	22.6	21.6	1.08	21.021			CC, ES
400.0	400.0	399.1	399.0	0.8	0.7	142.59	26.4	24.9	1.51	17.486			SF
449.2	449.0	447.5	447.4	0.9	0.8	146.45	31.1	29.4	1.73	18.007			
500.0	499.7	497.3	497.1	1.0	1.0	149.90	37.5	35.6	1.95	19.281			
600.0	599.4	594.5	594.0	1.2	1.2	153.81	52.9	50.5	2.39	22.162			
700.0	699.1	690.6	689.4	1.5	1.5	155.59	71.8	68.9	2.84	25.274			
800.0	798.8	785.4	783.1	1.7	1.8	156.33	93.9	90.6	3.30	28.461			
900.0	898.5	878.8	874.8	2.0	2.1	156.56	119.1	115.4	3.76	31.661			
1,000.0	998.2	973.2	967.1	2.2	2.5	156.56	147.0	142.7	4.24	34.693			
1,100.0	1,097.9	1,069.2	1,060.9	2.5	2.9	156.55	175.0	170.3	4.70	37.240			
1,200.0	1,197.6	1,165.1	1,154.6	2.8	3.3	156.54	203.1	198.0	5.17	39.289			
1,300.0	1,297.3	1,261.1	1,248.4	3.0	3.8	156.53	231.2	225.6	5.64	40.965			
1,400.0	1,397.0	1,357.1	1,342.2	3.3	4.2	156.52	259.3	253.2	6.12	42.339			
1,500.0	1,496.6	1,453.1	1,435.9	3.6	4.6	156.52	287.4	280.8	6.60	43.516			
1,600.0	1,596.3	1,549.0	1,529.7	3.8	5.1	156.51	315.5	308.4	7.09	44.513			
1,700.0	1,696.0	1,645.0	1,623.4	4.1	5.5	156.51	343.5	336.0	7.57	45.372			
1,800.0	1,795.7	1,741.0	1,717.2	4.4	6.0	156.51	371.6	363.6	8.06	46.118			
1,900.0	1,895.4	1,837.0	1,811.0	4.6	6.4	156.51	399.7	391.2	8.55	46.773			
2,000.0	1,995.1	1,932.9	1,904.7	4.9	6.9	156.50	427.8	418.8	9.03	47.351			
2,100.0	2,094.8	2,028.9	1,998.5	5.2	7.3	156.50	455.9	446.3	9.52	47.866			
2,200.0	2,194.5	2,124.9	2,092.3	5.4	7.8	156.50	484.0	473.9	10.01	48.326			
2,300.0	2,294.2	2,220.9	2,186.0	5.7	8.2	156.50	512.0	501.5	10.51	48.741			
2,400.0	2,393.9	2,316.8	2,279.8	6.0	8.7	156.50	540.1	529.1	11.00	49.116			
2,500.0	2,493.6	2,412.8	2,373.5	6.2	9.1	156.50	568.2	556.7	11.49	49.457			
2,600.0	2,593.3	2,508.8	2,467.3	6.5	9.6	156.50	596.3	584.3	11.98	49.768			
2,700.0	2,693.0	2,604.8	2,561.1	6.8	10.0	156.49	624.4	611.9	12.47	50.052			
2,800.0	2,792.7	2,700.7	2,654.8	7.0	10.5	156.49	652.4	639.5	12.97	50.314			
2,900.0	2,892.4	2,796.7	2,748.6	7.3	10.9	156.49	680.5	667.1	13.46	50.555			
3,000.0	2,992.1	2,892.7	2,842.3	7.6	11.4	156.49	708.6	694.7	13.96	50.778			
3,100.0	3,091.8	2,988.7	2,936.1	7.8	11.8	156.49	736.7	722.2	14.45	50.985			
3,200.0	3,191.5	3,084.6	3,029.9	8.1	12.3	156.49	764.8	749.8	14.94	51.178			
3,300.0	3,291.2	3,180.6	3,123.6	8.4	12.7	156.49	792.9	777.4	15.44	51.357			
3,400.0	3,390.9	3,276.6	3,217.4	8.6	13.2	156.49	820.9	805.0	15.93	51.524			
3,500.0	3,490.5	3,372.6	3,311.1	8.9	13.6	156.49	849.0	832.6	16.43	51.681			
3,600.0	3,590.2	3,468.5	3,404.9	9.2	14.1	156.49	877.1	860.2	16.92	51.828			
3,700.0	3,689.9	3,564.5	3,498.7	9.4	14.5	156.49	905.2	887.8	17.42	51.966			
3,800.0	3,789.6	3,660.5	3,592.4	9.7	15.0	156.49	933.3	915.4	17.91	52.096			
3,900.0	3,889.3	3,756.5	3,686.2	10.0	15.4	156.49	961.4	942.9	18.41	52.219			
4,000.0	3,989.0	3,852.5	3,779.9	10.2	15.9	156.49	989.4	970.5	18.91	52.335			
4,100.0	4,088.7	3,948.4	3,873.7	10.5	16.3	156.49	1,017.5	998.1	19.40	52.444			
4,200.0	4,188.4	4,044.4	3,967.5	10.8	16.8	156.49	1,045.6	1,025.7	19.90	52.548			
4,300.0	4,288.1	4,140.4	4,061.2	11.1	17.2	156.49	1,073.7	1,053.3	20.39	52.646			
4,400.0	4,387.8	4,236.4	4,155.0	11.3	17.7	156.49	1,101.8	1,080.9	20.89	52.739			
4,500.0	4,487.5	4,332.3	4,248.8	11.6	18.1	156.49	1,129.9	1,108.5	21.39	52.828			
4,600.0	4,587.2	4,428.3	4,342.5	11.9	18.6	156.49	1,157.9	1,136.1	21.88	52.912			
4,700.0	4,686.9	4,524.3	4,436.3	12.1	19.0	156.49	1,186.0	1,163.6	22.38	52.992			
4,800.0	4,786.6	4,620.3	4,530.0	12.4	19.5	156.48	1,214.1	1,191.2	22.88	53.069			
4,900.0	4,886.3	4,716.2	4,623.8	12.7	19.9	156.48	1,242.2	1,218.8	23.38	53.141			
5,000.0	4,986.0	4,812.2	4,717.6	12.9	20.4	156.48	1,270.3	1,246.4	23.87	53.211			
5,100.0	5,085.7	4,908.2	4,811.3	13.2	20.8	156.48	1,298.3	1,274.0	24.37	53.278			
5,200.0	5,185.4	5,004.2	4,905.1	13.5	21.3	156.48	1,326.4	1,301.6	24.87	53.341			

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 25-11M
<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 25-11M	<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 25-13W - 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	
5,300.0	5,285.1	5,100.1	4,998.8	13.7	21.7	156.48	1,354.5	1,329.1	25.36	53.402			
5,400.0	5,384.8	5,196.1	5,092.6	14.0	22.2	156.48	1,382.6	1,356.7	25.86	53.461			
5,500.0	5,484.5	5,292.1	5,186.4	14.3	22.7	156.48	1,410.7	1,384.3	26.36	53.517			
5,600.0	5,584.1	5,388.1	5,280.1	14.5	23.1	156.48	1,438.8	1,411.9	26.86	53.570			
5,700.0	5,683.8	5,484.0	5,373.9	14.8	23.6	156.48	1,466.8	1,439.5	27.36	53.622			
5,800.0	5,783.5	5,580.0	5,467.6	15.1	24.0	156.48	1,494.9	1,467.1	27.85	53.671			
5,900.0	5,883.2	5,676.0	5,561.4	15.3	24.5	156.48	1,523.0	1,494.7	28.35	53.719			
6,000.0	5,982.9	5,772.0	5,655.2	15.6	24.9	156.48	1,551.1	1,522.2	28.85	53.764			
6,072.3	6,055.0	5,841.3	5,722.9	15.8	25.2	156.48	1,571.4	1,542.2	29.21	53.796			
6,100.0	6,082.6	5,868.0	5,749.0	15.9	25.4	156.53	1,579.1	1,549.7	29.36	53.775			
6,200.0	6,182.5	6,081.4	5,958.9	16.1	26.0	156.64	1,601.9	1,571.9	30.07	53.277			
6,300.0	6,282.4	6,304.5	6,180.8	16.2	26.5	156.70	1,615.0	1,584.2	30.71	52.592			
6,370.6	6,353.0	6,464.2	6,340.3	16.3	26.7	-100.37	1,618.0	1,586.9	31.13	51.979			
6,400.0	6,382.4	6,506.2	6,382.4	16.4	26.8	-100.37	1,618.1	1,586.8	31.25	51.774			
6,470.6	6,453.0	6,576.8	6,453.0	16.5	26.8	-100.37	1,618.1	1,586.6	31.49	51.376			
6,500.0	6,482.4	6,606.2	6,482.4	16.6	26.9	-100.37	1,618.1	1,586.5	31.60	51.211			
6,600.0	6,582.4	6,706.2	6,582.4	16.7	27.0	-100.37	1,618.1	1,586.1	31.94	50.656			
6,700.0	6,682.4	6,806.2	6,682.4	16.9	27.1	-100.37	1,618.1	1,585.8	32.29	50.110			
6,800.0	6,782.4	6,906.2	6,782.4	17.1	27.2	-100.37	1,618.1	1,585.4	32.64	49.571			
6,900.0	6,882.4	7,006.2	6,882.4	17.2	27.3	-100.37	1,618.1	1,585.1	33.00	49.040			
7,000.0	6,982.4	7,106.2	6,982.4	17.4	27.4	-100.37	1,618.1	1,584.7	33.35	48.517			
7,100.0	7,082.4	7,206.2	7,082.4	17.6	27.5	-100.37	1,618.1	1,584.4	33.71	48.002			
7,200.0	7,182.4	7,306.2	7,182.4	17.8	27.6	-100.37	1,618.1	1,584.0	34.07	47.494			
7,300.0	7,282.4	7,406.2	7,282.4	18.0	27.8	-100.37	1,618.1	1,583.7	34.43	46.995			
7,400.0	7,382.4	7,506.2	7,382.4	18.1	27.9	-100.37	1,618.1	1,583.3	34.80	46.503			
7,500.0	7,482.4	7,606.2	7,482.4	18.3	28.0	-100.37	1,618.1	1,582.9	35.16	46.019			
7,600.0	7,582.4	7,706.2	7,582.4	18.5	28.1	-100.37	1,618.1	1,582.6	35.53	45.542			
7,700.0	7,682.4	7,806.2	7,682.4	18.7	28.2	-100.37	1,618.1	1,582.2	35.90	45.073			
7,800.0	7,782.4	7,906.2	7,782.4	18.9	28.4	-100.37	1,618.1	1,581.8	36.27	44.611			
7,900.0	7,882.4	8,006.2	7,882.4	19.0	28.5	-100.37	1,618.1	1,581.4	36.64	44.157			
8,000.0	7,982.4	8,106.2	7,982.4	19.2	28.6	-100.37	1,618.1	1,581.1	37.02	43.710			
8,100.0	8,082.4	8,206.2	8,082.4	19.4	28.7	-100.37	1,618.1	1,580.7	37.40	43.269			
8,200.0	8,182.4	8,306.2	8,182.4	19.6	28.9	-100.37	1,618.1	1,580.3	37.77	42.836			
8,300.0	8,282.4	8,406.2	8,282.4	19.8	29.0	-100.37	1,618.1	1,579.9	38.15	42.410			
8,400.0	8,382.4	8,506.2	8,382.4	20.0	29.1	-100.37	1,618.1	1,579.6	38.53	41.990			
8,420.6	8,403.0	8,526.8	8,403.0	20.0	29.1	-100.37	1,618.1	1,579.5	38.61	41.905			

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11M
<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 25-11M	<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	-154.98	20.1						
100.0	100.0	100.0	100.0	0.1	0.1	-154.98	20.1	19.9	0.18	113.125			
200.0	200.0	200.0	200.0	0.3	0.3	-154.98	20.1	19.5	0.63	32.032			
300.0	300.0	300.0	300.0	0.5	0.5	-154.98	20.1	19.0	1.08	18.657			CC, ES
400.0	400.0	399.3	399.3	0.8	0.7	103.33	22.2	20.7	1.49	14.892			
449.2	449.0	448.0	447.9	0.9	0.8	104.52	24.9	23.2	1.70	14.588			SF
500.0	499.7	498.4	498.0	1.0	1.0	104.67	28.5	26.6	1.93	14.780			
600.0	599.4	596.8	595.6	1.2	1.2	100.07	38.0	35.6	2.42	15.711			
700.0	699.1	695.2	692.5	1.5	1.5	93.63	50.8	47.8	2.95	17.205			
800.0	798.8	794.2	789.9	1.7	1.9	89.43	64.3	60.9	3.48	18.502			
900.0	898.5	893.2	887.3	2.0	2.3	86.70	78.1	74.1	4.01	19.491			
1,000.0	998.2	992.2	984.7	2.2	2.7	84.79	92.1	87.5	4.54	20.261			
1,100.0	1,097.9	1,091.2	1,082.1	2.5	3.1	83.38	106.0	101.0	5.08	20.873			
1,200.0	1,197.6	1,190.2	1,179.5	2.8	3.5	82.30	120.1	114.5	5.62	21.370			
1,300.0	1,297.3	1,289.2	1,276.9	3.0	3.9	81.45	134.2	128.0	6.16	21.780			
1,400.0	1,397.0	1,388.1	1,374.3	3.3	4.3	80.76	148.3	141.6	6.70	22.124			
1,500.0	1,496.6	1,487.1	1,471.7	3.6	4.7	80.19	162.4	155.1	7.24	22.416			
1,600.0	1,596.3	1,586.1	1,569.0	3.8	5.1	79.71	176.5	168.7	7.79	22.667			
1,700.0	1,696.0	1,685.1	1,666.4	4.1	5.5	79.30	190.6	182.3	8.33	22.884			
1,800.0	1,795.7	1,784.1	1,763.8	4.4	5.9	78.95	204.8	195.9	8.87	23.075			
1,900.0	1,895.4	1,883.1	1,861.2	4.6	6.3	78.64	218.9	209.5	9.42	23.244			
2,000.0	1,995.1	1,982.1	1,958.6	4.9	6.7	78.37	233.1	223.1	9.96	23.394			
2,100.0	2,094.8	2,081.1	2,056.0	5.2	7.1	78.13	247.2	236.7	10.51	23.528			
2,200.0	2,194.5	2,180.0	2,153.4	5.4	7.5	77.92	261.4	250.4	11.05	23.649			
2,300.0	2,294.2	2,279.0	2,250.8	5.7	7.9	77.73	275.6	264.0	11.60	23.758			
2,400.0	2,393.9	2,378.0	2,348.1	6.0	8.3	77.56	289.8	277.6	12.15	23.857			
2,500.0	2,493.6	2,477.0	2,445.5	6.2	8.7	77.40	303.9	291.2	12.69	23.947			
2,600.0	2,593.3	2,576.0	2,542.9	6.5	9.1	77.26	318.1	304.9	13.24	24.030			
2,700.0	2,693.0	2,675.0	2,640.3	6.8	9.5	77.13	332.3	318.5	13.78	24.107			
2,800.0	2,792.7	2,774.0	2,737.7	7.0	9.9	77.01	346.5	332.1	14.33	24.177			
2,900.0	2,892.4	2,873.0	2,835.1	7.3	10.3	76.90	360.6	345.8	14.88	24.242			
3,000.0	2,992.1	2,971.9	2,932.5	7.6	10.7	76.80	374.8	359.4	15.42	24.302			
3,100.0	3,091.8	3,070.9	3,029.9	7.8	11.1	76.71	389.0	373.0	15.97	24.359			
3,200.0	3,191.5	3,169.9	3,127.2	8.1	11.5	76.62	403.2	386.7	16.52	24.411			
3,300.0	3,291.2	3,268.9	3,224.6	8.4	11.9	76.54	417.4	400.3	17.06	24.460			
3,400.0	3,390.9	3,367.9	3,322.0	8.6	12.4	76.46	431.6	413.9	17.61	24.506			
3,500.0	3,490.5	3,466.9	3,419.4	8.9	12.8	76.39	445.7	427.6	18.16	24.549			
3,600.0	3,590.2	3,565.9	3,516.8	9.2	13.2	76.32	459.9	441.2	18.70	24.589			
3,700.0	3,689.9	3,664.9	3,614.2	9.4	13.6	76.26	474.1	454.9	19.25	24.628			
3,800.0	3,789.6	3,763.8	3,711.6	9.7	14.0	76.20	488.3	468.5	19.80	24.664			
3,900.0	3,889.3	3,862.8	3,809.0	10.0	14.4	76.14	502.5	482.1	20.35	24.698			
4,000.0	3,989.0	3,961.8	3,906.3	10.2	14.8	76.09	516.7	495.8	20.89	24.730			
4,100.0	4,088.7	4,060.8	4,003.7	10.5	15.2	76.04	530.9	509.4	21.44	24.760			
4,200.0	4,188.4	4,159.8	4,101.1	10.8	15.6	75.99	545.1	523.1	21.99	24.789			
4,300.0	4,288.1	4,258.8	4,198.5	11.1	16.0	75.95	559.2	536.7	22.53	24.817			
4,400.0	4,387.8	4,357.8	4,295.9	11.3	16.4	75.90	573.4	550.3	23.08	24.843			
4,500.0	4,487.5	4,456.7	4,393.3	11.6	16.8	75.86	587.6	564.0	23.63	24.868			
4,600.0	4,587.2	4,555.7	4,490.7	11.9	17.2	75.83	601.8	577.6	24.18	24.892			
4,700.0	4,686.9	4,654.7	4,588.1	12.1	17.6	75.79	616.0	591.3	24.72	24.915			
4,800.0	4,786.6	4,753.7	4,685.5	12.4	18.0	75.75	630.2	604.9	25.27	24.936			
4,900.0	4,886.3	4,852.7	4,782.8	12.7	18.5	75.72	644.4	618.6	25.82	24.957			
5,000.0	4,986.0	4,951.7	4,880.2	12.9	18.9	75.69	658.6	632.2	26.37	24.977			
5,100.0	5,085.7	5,050.7	4,977.6	13.2	19.3	75.66	672.8	645.8	26.91	24.996			
5,200.0	5,185.4	5,149.7	5,075.0	13.5	19.7	75.63	687.0	659.5	27.46	25.014			

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 25-11M
<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 25-11M	<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							
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	5,285.1	5,248.6	5,172.4	13.7	20.1	75.60	701.1	673.1	28.01	25.032			
5,400.0	5,384.8	5,347.6	5,269.8	14.0	20.5	75.57	715.3	686.8	28.56	25.049			
5,500.0	5,484.5	5,446.6	5,367.2	14.3	20.9	75.54	729.5	700.4	29.11	25.065			
5,600.0	5,584.1	5,545.6	5,464.6	14.5	21.3	75.52	743.7	714.1	29.65	25.080			
5,700.0	5,683.8	5,644.6	5,561.9	14.8	21.7	75.49	757.9	727.7	30.20	25.095			
5,800.0	5,783.5	5,744.8	5,660.5	15.1	22.1	75.47	772.1	741.4	30.75	25.108			
5,900.0	5,883.2	5,866.2	5,780.3	15.3	22.5	75.51	784.7	753.4	31.31	25.066			
6,000.0	5,982.9	5,988.4	5,901.5	15.6	22.8	75.68	794.5	762.7	31.85	24.946			
6,072.3	6,055.0	6,077.0	5,989.6	15.8	23.0	75.87	799.8	767.6	32.24	24.807			
6,100.0	6,082.6	6,111.1	6,023.5	15.9	23.0	75.98	801.5	769.1	32.38	24.751			
6,200.0	6,182.5	6,234.1	6,146.3	16.1	23.2	76.27	806.0	773.2	32.81	24.563			
6,300.0	6,282.4	6,357.3	6,269.5	16.2	23.4	76.44	808.3	775.1	33.19	24.352			
6,370.6	6,353.0	6,440.9	6,353.0	16.3	23.5	179.40	808.6	775.2	33.44	24.183			
6,400.0	6,382.4	6,470.3	6,382.4	16.4	23.5	179.40	808.6	775.1	33.53	24.113			
6,470.6	6,453.0	6,540.9	6,453.0	16.5	23.6	179.40	808.6	774.9	33.76	23.950			
6,500.0	6,482.4	6,570.3	6,482.4	16.6	23.7	179.40	808.6	774.8	33.86	23.884			
6,600.0	6,582.4	6,670.3	6,582.4	16.7	23.8	179.40	808.6	774.4	34.18	23.659			
6,700.0	6,682.4	6,770.3	6,682.4	16.9	23.9	179.40	808.6	774.1	34.50	23.437			
6,800.0	6,782.4	6,870.3	6,782.4	17.1	24.0	179.40	808.6	773.8	34.83	23.218			
6,900.0	6,882.4	6,970.3	6,882.4	17.2	24.1	179.40	808.6	773.5	35.16	23.000			
7,000.0	6,982.4	7,070.3	6,982.4	17.4	24.2	179.40	808.6	773.1	35.49	22.785			
7,100.0	7,082.4	7,170.3	7,082.4	17.6	24.3	179.40	808.6	772.8	35.82	22.573			
7,200.0	7,182.4	7,270.3	7,182.4	17.8	24.4	179.40	808.6	772.5	36.16	22.363			
7,300.0	7,282.4	7,370.3	7,282.4	18.0	24.6	179.40	808.6	772.1	36.50	22.155			
7,400.0	7,382.4	7,470.3	7,382.4	18.1	24.7	179.40	808.6	771.8	36.84	21.949			
7,500.0	7,482.4	7,570.3	7,482.4	18.3	24.8	179.40	808.6	771.4	37.18	21.747			
7,600.0	7,582.4	7,670.3	7,582.4	18.5	24.9	179.40	808.6	771.1	37.53	21.546			
7,700.0	7,682.4	7,770.3	7,682.4	18.7	25.0	179.40	808.6	770.7	37.88	21.348			
7,800.0	7,782.4	7,870.3	7,782.4	18.9	25.2	179.40	808.6	770.4	38.23	21.152			
7,900.0	7,882.4	7,970.3	7,882.4	19.0	25.3	179.40	808.6	770.0	38.58	20.959			
8,000.0	7,982.4	8,070.3	7,982.4	19.2	25.4	179.40	808.6	769.7	38.93	20.769			
8,100.0	8,082.4	8,170.3	8,082.4	19.4	25.5	179.40	808.6	769.3	39.29	20.580			
8,200.0	8,182.4	8,270.3	8,182.4	19.6	25.7	179.40	808.6	769.0	39.65	20.394			
8,300.0	8,282.4	8,370.3	8,282.4	19.8	25.8	179.40	808.6	768.6	40.01	20.211			
8,400.0	8,382.4	8,470.3	8,382.4	20.0	25.9	179.40	808.6	768.2	40.37	20.030			
8,420.6	8,403.0	8,475.9	8,388.0	20.0	25.9	179.40	808.8	768.3	40.42	20.009			

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11M
<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 25-11M	<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 25-14W - 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	-118.85	45.3						
100.0	100.0	100.0	100.0	0.1	0.1	-118.85	45.3	45.1	0.18	254.938			
200.0	200.0	200.0	200.0	0.3	0.3	-118.85	45.3	44.6	0.63	72.187			
300.0	300.0	300.0	300.0	0.5	0.5	-118.85	45.3	44.2	1.08	42.046			CC, ES
400.0	400.0	397.0	397.0	0.8	0.7	140.01	50.2	48.7	1.51	33.296			
449.2	449.0	444.3	444.1	0.9	0.9	141.74	56.3	54.6	1.73	32.452			SF
500.0	499.7	492.6	492.2	1.0	1.0	143.47	64.6	62.7	1.96	32.927			
600.0	599.4	586.2	584.7	1.2	1.2	145.38	85.4	82.9	2.43	35.150			
700.0	699.1	677.9	674.6	1.5	1.6	146.07	111.5	108.6	2.91	38.344			
800.0	798.8	773.0	767.1	1.7	2.0	146.33	140.4	137.0	3.38	41.545			
900.0	898.5	868.7	860.3	2.0	2.4	146.51	169.3	165.4	3.84	44.081			
1,000.0	998.2	964.5	953.5	2.2	2.9	146.63	198.1	193.8	4.31	45.949			
1,100.0	1,097.9	1,060.2	1,046.7	2.5	3.3	146.72	227.0	222.2	4.79	47.369			
1,200.0	1,197.6	1,155.9	1,139.9	2.8	3.8	146.79	255.9	250.6	5.28	48.480			
1,300.0	1,297.3	1,251.7	1,233.1	3.0	4.3	146.85	284.7	279.0	5.77	49.344			
1,400.0	1,397.0	1,347.4	1,326.3	3.3	4.7	146.89	313.6	307.3	6.26	50.071			
1,500.0	1,496.6	1,443.2	1,419.5	3.6	5.2	146.93	342.5	335.7	6.76	50.666			
1,600.0	1,596.3	1,538.9	1,512.7	3.8	5.7	146.96	371.3	364.1	7.26	51.164			
1,700.0	1,696.0	1,634.7	1,605.9	4.1	6.1	146.99	400.2	392.4	7.76	51.587			
1,800.0	1,795.7	1,730.4	1,699.1	4.4	6.6	147.01	429.1	420.8	8.26	51.950			
1,900.0	1,895.4	1,826.1	1,792.3	4.6	7.1	147.04	457.9	449.2	8.76	52.265			
2,000.0	1,995.1	1,921.9	1,885.5	4.9	7.6	147.05	486.8	477.5	9.27	52.540			
2,100.0	2,094.8	2,017.6	1,978.7	5.2	8.0	147.07	515.7	505.9	9.77	52.783			
2,200.0	2,194.5	2,113.4	2,071.9	5.4	8.5	147.08	544.5	534.3	10.27	52.998			
2,300.0	2,294.2	2,209.1	2,165.1	5.7	9.0	147.10	573.4	562.6	10.78	53.189			
2,400.0	2,393.9	2,304.9	2,258.3	6.0	9.5	147.11	602.3	591.0	11.29	53.362			
2,500.0	2,493.6	2,400.6	2,351.5	6.2	9.9	147.12	631.1	619.4	11.79	53.517			
2,600.0	2,593.3	2,496.3	2,444.7	6.5	10.4	147.13	660.0	647.7	12.30	53.658			
2,700.0	2,693.0	2,592.1	2,538.0	6.8	10.9	147.14	688.9	676.1	12.81	53.785			
2,800.0	2,792.7	2,687.8	2,631.2	7.0	11.4	147.15	717.8	704.4	13.32	53.902			
2,900.0	2,892.4	2,783.6	2,724.4	7.3	11.8	147.16	746.6	732.8	13.82	54.010			
3,000.0	2,992.1	2,879.3	2,817.6	7.6	12.3	147.16	775.5	761.2	14.33	54.108			
3,100.0	3,091.8	2,975.1	2,910.8	7.8	12.8	147.17	804.4	789.5	14.84	54.199			
3,200.0	3,191.5	3,070.8	3,004.0	8.1	13.3	147.18	833.2	817.9	15.35	54.283			
3,300.0	3,291.2	3,166.5	3,097.2	8.4	13.7	147.18	862.1	846.2	15.86	54.361			
3,400.0	3,390.9	3,262.3	3,190.4	8.6	14.2	147.19	891.0	874.6	16.37	54.433			
3,500.0	3,490.5	3,358.0	3,283.6	8.9	14.7	147.19	919.8	903.0	16.88	54.501			
3,600.0	3,590.2	3,453.8	3,376.8	9.2	15.2	147.20	948.7	931.3	17.39	54.564			
3,700.0	3,689.9	3,549.5	3,470.0	9.4	15.6	147.20	977.6	959.7	17.90	54.623			
3,800.0	3,789.6	3,645.3	3,563.2	9.7	16.1	147.20	1,006.4	988.0	18.41	54.678			
3,900.0	3,889.3	3,741.0	3,656.4	10.0	16.6	147.21	1,035.3	1,016.4	18.92	54.730			
4,000.0	3,989.0	3,836.7	3,749.6	10.2	17.1	147.21	1,064.2	1,044.7	19.43	54.778			
4,100.0	4,088.7	3,932.5	3,842.8	10.5	17.6	147.22	1,093.0	1,073.1	19.94	54.824			
4,200.0	4,188.4	4,028.2	3,936.0	10.8	18.0	147.22	1,121.9	1,101.5	20.45	54.867			
4,300.0	4,288.1	4,124.0	4,029.2	11.1	18.5	147.22	1,150.8	1,129.8	20.96	54.908			
4,400.0	4,387.8	4,219.7	4,122.4	11.3	19.0	147.23	1,179.6	1,158.2	21.47	54.946			
4,500.0	4,487.5	4,315.4	4,215.6	11.6	19.5	147.23	1,208.5	1,186.5	21.98	54.983			
4,600.0	4,587.2	4,411.2	4,308.8	11.9	19.9	147.23	1,237.4	1,214.9	22.49	55.017			
4,700.0	4,686.9	4,506.9	4,402.0	12.1	20.4	147.23	1,266.2	1,243.2	23.00	55.050			
4,800.0	4,786.6	4,602.7	4,495.2	12.4	20.9	147.24	1,295.1	1,271.6	23.51	55.080			
4,900.0	4,886.3	4,698.4	4,588.4	12.7	21.4	147.24	1,324.0	1,300.0	24.02	55.110			
5,000.0	4,986.0	4,794.2	4,681.6	12.9	21.8	147.24	1,352.9	1,328.3	24.54	55.138			
5,100.0	5,085.7	4,889.9	4,774.8	13.2	22.3	147.24	1,381.7	1,356.7	25.05	55.164			
5,200.0	5,185.4	4,985.6	4,868.0	13.5	22.8	147.25	1,410.6	1,385.0	25.56	55.189			

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 25-11M
<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 25-11M	<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	5,285.1	5,081.4	4,961.2	13.7	23.3	147.25	1,439.5	1,413.4	26.07	55.213			
5,400.0	5,384.8	5,177.1	5,054.4	14.0	23.7	147.25	1,468.3	1,441.7	26.58	55.236			
5,500.0	5,484.5	5,272.9	5,147.6	14.3	24.2	147.25	1,497.2	1,470.1	27.09	55.258			
5,600.0	5,584.1	5,368.6	5,240.8	14.5	24.7	147.25	1,526.1	1,498.5	27.61	55.279			
5,700.0	5,683.8	5,464.4	5,334.0	14.8	25.2	147.25	1,554.9	1,526.8	28.12	55.298			
5,800.0	5,783.5	5,560.1	5,427.2	15.1	25.7	147.26	1,583.8	1,555.2	28.63	55.317			
5,900.0	5,883.2	5,682.4	5,546.4	15.3	26.2	147.26	1,612.4	1,583.2	29.20	55.220			
6,000.0	5,982.9	5,848.8	5,709.7	15.6	26.8	147.31	1,637.6	1,607.8	29.81	54.942			
6,072.3	6,055.0	5,971.2	5,830.6	15.8	27.1	147.37	1,653.2	1,623.0	30.23	54.682			
6,100.0	6,082.6	6,018.6	5,877.6	15.9	27.2	147.44	1,658.5	1,628.1	30.41	54.536			
6,200.0	6,182.5	6,191.6	6,049.7	16.1	27.6	147.63	1,673.5	1,642.5	30.99	53.998			
6,300.0	6,282.4	6,367.0	6,224.7	16.2	27.8	147.74	1,681.9	1,650.3	31.52	53.360			
6,370.6	6,353.0	6,491.4	6,349.2	16.3	28.0	-109.33	1,683.7	1,651.8	31.88	52.813			
6,400.0	6,382.4	6,524.6	6,382.4	16.4	28.0	-109.33	1,683.7	1,651.7	31.99	52.636			
6,470.6	6,453.0	6,595.2	6,453.0	16.5	28.1	-109.33	1,683.7	1,651.5	32.23	52.242			
6,500.0	6,482.4	6,624.6	6,482.4	16.6	28.1	-109.33	1,683.7	1,651.4	32.33	52.083			
6,600.0	6,582.4	6,724.6	6,582.4	16.7	28.2	-109.33	1,683.7	1,651.0	32.66	51.548			
6,700.0	6,682.4	6,824.6	6,682.4	16.9	28.3	-109.33	1,683.7	1,650.7	33.00	51.021			
6,800.0	6,782.4	6,924.6	6,782.4	17.1	28.4	-109.33	1,683.7	1,650.4	33.34	50.500			
6,900.0	6,882.4	7,024.6	6,882.4	17.2	28.5	-109.33	1,683.7	1,650.0	33.68	49.985			
7,000.0	6,982.4	7,124.6	6,982.4	17.4	28.6	-109.33	1,683.7	1,649.7	34.03	49.478			
7,100.0	7,082.4	7,224.6	7,082.4	17.6	28.7	-109.33	1,683.7	1,649.3	34.38	48.977			
7,200.0	7,182.4	7,324.6	7,182.4	17.8	28.8	-109.33	1,683.7	1,649.0	34.73	48.483			
7,300.0	7,282.4	7,424.6	7,282.4	18.0	28.9	-109.33	1,683.7	1,648.6	35.08	47.996			
7,400.0	7,382.4	7,524.6	7,382.4	18.1	29.0	-109.33	1,683.7	1,648.3	35.43	47.516			
7,500.0	7,482.4	7,624.6	7,482.4	18.3	29.2	-109.33	1,683.7	1,647.9	35.79	47.043			
7,600.0	7,582.4	7,724.6	7,582.4	18.5	29.3	-109.33	1,683.7	1,647.6	36.15	46.576			
7,700.0	7,682.4	7,824.6	7,682.4	18.7	29.4	-109.33	1,683.7	1,647.2	36.51	46.116			
7,800.0	7,782.4	7,924.6	7,782.4	18.9	29.5	-109.33	1,683.7	1,646.8	36.87	45.663			
7,900.0	7,882.4	8,024.6	7,882.4	19.0	29.6	-109.33	1,683.7	1,646.5	37.24	45.216			
8,000.0	7,982.4	8,124.6	7,982.4	19.2	29.7	-109.33	1,683.7	1,646.1	37.60	44.775			
8,100.0	8,082.4	8,224.6	8,082.4	19.4	29.8	-109.33	1,683.7	1,645.7	37.97	44.341			
8,200.0	8,182.4	8,324.6	8,182.4	19.6	30.0	-109.33	1,683.7	1,645.4	38.34	43.914			
8,300.0	8,282.4	8,424.6	8,282.4	19.8	30.1	-109.33	1,683.7	1,645.0	38.71	43.493			
8,400.0	8,382.4	8,524.6	8,382.4	20.0	30.2	-109.33	1,683.7	1,644.6	39.09	43.078			
8,420.6	8,403.0	8,545.2	8,403.0	20.0	30.2	-109.33	1,683.7	1,644.5	39.16	42.993			

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11M
<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 25-11M	<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	-147.05	26.0					CC, ES	
100.0	100.0	100.0	100.0	0.1	0.1	-147.05	26.0	25.9	0.18	146.606			
200.0	200.0	200.0	200.0	0.3	0.3	-147.05	26.0	25.4	0.63	41.512			
300.0	300.0	300.0	300.0	0.5	0.5	-147.05	26.0	25.0	1.08	24.179			
400.0	400.0	399.2	399.1	0.8	0.7	110.62	28.4	26.9	1.49	19.029			
449.2	449.0	447.8	447.7	0.9	0.8	111.20	31.3	29.6	1.70	18.371		SF	
500.0	499.7	498.0	497.7	1.0	1.0	110.97	35.3	33.4	1.93	18.299			
600.0	599.4	596.3	595.1	1.2	1.2	106.61	45.4	42.9	2.42	18.753			
700.0	699.1	693.4	690.6	1.5	1.5	100.15	59.0	56.1	2.95	19.988			
800.0	798.8	790.8	785.6	1.7	1.9	94.08	76.3	72.8	3.51	21.735			
900.0	898.5	889.0	881.3	2.0	2.4	90.10	94.3	90.3	4.05	23.276			
1,000.0	998.2	987.2	977.0	2.2	2.8	87.41	112.7	108.1	4.60	24.515			
1,100.0	1,097.9	1,085.3	1,072.7	2.5	3.3	85.47	131.2	126.1	5.14	25.516			
1,200.0	1,197.6	1,183.5	1,168.4	2.8	3.7	84.01	149.9	144.2	5.69	26.338			
1,300.0	1,297.3	1,281.7	1,264.1	3.0	4.2	82.87	168.6	162.4	6.24	27.022			
1,400.0	1,397.0	1,379.9	1,359.8	3.3	4.7	81.96	187.4	180.6	6.79	27.598			
1,500.0	1,496.6	1,478.1	1,455.5	3.6	5.1	81.22	206.2	198.9	7.34	28.088			
1,600.0	1,596.3	1,576.2	1,551.2	3.8	5.6	80.60	225.0	217.1	7.89	28.511			
1,700.0	1,696.0	1,674.4	1,646.9	4.1	6.1	80.08	243.9	235.5	8.45	28.880			
1,800.0	1,795.7	1,772.6	1,742.6	4.4	6.5	79.63	262.8	253.8	9.00	29.202			
1,900.0	1,895.4	1,870.8	1,838.3	4.6	7.0	79.24	281.7	272.1	9.55	29.488			
2,000.0	1,995.1	1,969.0	1,934.0	4.9	7.5	78.90	300.6	290.5	10.11	29.742			
2,100.0	2,094.8	2,067.2	2,029.7	5.2	8.0	78.60	319.5	308.8	10.66	29.969			
2,200.0	2,194.5	2,165.3	2,125.4	5.4	8.4	78.34	338.4	327.2	11.21	30.174			
2,300.0	2,294.2	2,263.5	2,221.1	5.7	8.9	78.10	357.3	345.6	11.77	30.359			
2,400.0	2,393.9	2,361.7	2,316.8	6.0	9.4	77.89	376.2	363.9	12.32	30.527			
2,500.0	2,493.6	2,459.9	2,412.5	6.2	9.9	77.69	395.2	382.3	12.88	30.681			
2,600.0	2,593.3	2,558.1	2,508.2	6.5	10.3	77.52	414.1	400.7	13.44	30.822			
2,700.0	2,693.0	2,656.3	2,603.9	6.8	10.8	77.36	433.1	419.1	13.99	30.951			
2,800.0	2,792.7	2,754.4	2,699.6	7.0	11.3	77.21	452.0	437.5	14.55	31.071			
2,900.0	2,892.4	2,852.6	2,795.3	7.3	11.7	77.08	471.0	455.8	15.10	31.181			
3,000.0	2,992.1	2,950.8	2,891.0	7.6	12.2	76.95	489.9	474.2	15.66	31.284			
3,100.0	3,091.8	3,049.0	2,986.7	7.8	12.7	76.84	508.9	492.6	16.22	31.380			
3,200.0	3,191.5	3,147.2	3,082.5	8.1	13.2	76.73	527.8	511.0	16.77	31.469			
3,300.0	3,291.2	3,245.4	3,178.2	8.4	13.6	76.63	546.8	529.4	17.33	31.552			
3,400.0	3,390.9	3,343.5	3,273.9	8.6	14.1	76.54	565.7	547.8	17.89	31.630			
3,500.0	3,490.5	3,441.7	3,369.6	8.9	14.6	76.45	584.7	566.2	18.44	31.703			
3,600.0	3,590.2	3,539.9	3,465.3	9.2	15.1	76.37	603.6	584.6	19.00	31.772			
3,700.0	3,689.9	3,638.1	3,561.0	9.4	15.5	76.29	622.6	603.0	19.56	31.836			
3,800.0	3,789.6	3,736.3	3,656.7	9.7	16.0	76.22	641.5	621.4	20.11	31.898			
3,900.0	3,889.3	3,834.5	3,752.4	10.0	16.5	76.15	660.5	639.8	20.67	31.955			
4,000.0	3,989.0	3,932.6	3,848.1	10.2	17.0	76.09	679.5	658.2	21.23	32.010			
4,100.0	4,088.7	4,030.8	3,943.8	10.5	17.4	76.03	698.4	676.7	21.78	32.062			
4,200.0	4,188.4	4,129.0	4,039.5	10.8	17.9	75.97	717.4	695.1	22.34	32.111			
4,300.0	4,288.1	4,227.2	4,135.2	11.1	18.4	75.92	736.4	713.5	22.90	32.158			
4,400.0	4,387.8	4,325.4	4,230.9	11.3	18.9	75.87	755.3	731.9	23.46	32.202			
4,500.0	4,487.5	4,423.6	4,326.6	11.6	19.4	75.82	774.3	750.3	24.01	32.244			
4,600.0	4,587.2	4,521.7	4,422.3	11.9	19.8	75.77	793.3	768.7	24.57	32.285			
4,700.0	4,686.9	4,619.9	4,518.0	12.1	20.3	75.72	812.2	787.1	25.13	32.323			
4,800.0	4,786.6	4,718.1	4,613.7	12.4	20.8	75.68	831.2	805.5	25.69	32.360			
4,900.0	4,886.3	4,816.3	4,709.4	12.7	21.3	75.64	850.2	823.9	26.24	32.395			
5,000.0	4,986.0	4,914.5	4,805.1	12.9	21.7	75.60	869.1	842.3	26.80	32.429			
5,100.0	5,085.7	5,012.7	4,900.8	13.2	22.2	75.57	888.1	860.7	27.36	32.461			
5,200.0	5,185.4	5,110.8	4,996.5	13.5	22.7	75.53	907.1	879.1	27.92	32.492			

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 25-11M
<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 25-11M	<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	5,285.1	5,209.0	5,092.2	13.7	23.2	75.50	926.0	897.6	28.47	32.522			
5,400.0	5,384.8	5,307.2	5,187.9	14.0	23.6	75.46	945.0	916.0	29.03	32.550			
5,500.0	5,484.5	5,405.4	5,283.6	14.3	24.1	75.43	964.0	934.4	29.59	32.577			
5,600.0	5,584.1	5,503.6	5,379.3	14.5	24.6	75.40	982.9	952.8	30.15	32.604			
5,700.0	5,683.8	5,601.9	5,475.1	14.8	25.1	75.37	1,001.9	971.2	30.71	32.629			
5,800.0	5,783.5	5,732.6	5,603.0	15.1	25.5	75.38	1,019.3	988.0	31.31	32.552			
5,900.0	5,883.2	5,864.7	5,733.1	15.3	25.9	75.48	1,033.5	1,001.6	31.89	32.408			
6,000.0	5,982.9	5,997.8	5,865.0	15.6	26.3	75.67	1,044.5	1,012.1	32.47	32.173			
6,072.3	6,055.0	6,094.5	5,961.1	15.8	26.5	75.86	1,050.5	1,017.6	32.88	31.952			
6,100.0	6,082.6	6,131.7	5,998.1	15.9	26.5	75.97	1,052.3	1,019.3	33.02	31.869			
6,200.0	6,182.5	6,266.0	6,132.1	16.1	26.8	76.27	1,057.4	1,023.9	33.47	31.587			
6,300.0	6,282.4	6,400.6	6,266.6	16.2	26.9	76.43	1,059.8	1,025.9	33.87	31.292			
6,370.6	6,353.0	6,487.0	6,353.0	16.3	27.0	179.39	1,059.9	1,025.8	34.11	31.072			
6,400.0	6,382.4	6,516.4	6,382.4	16.4	27.1	179.39	1,059.9	1,025.7	34.21	30.988			
6,470.6	6,453.0	6,587.0	6,453.0	16.5	27.1	179.39	1,059.9	1,025.5	34.42	30.790			
6,500.0	6,482.4	6,616.4	6,482.4	16.6	27.2	179.39	1,059.9	1,025.4	34.52	30.708			
6,600.0	6,582.4	6,716.4	6,582.4	16.7	27.2	179.39	1,059.9	1,025.1	34.83	30.430			
6,700.0	6,682.4	6,816.4	6,682.4	16.9	27.3	179.39	1,059.9	1,024.8	35.15	30.155			
6,800.0	6,782.4	6,916.4	6,782.4	17.1	27.4	179.39	1,059.9	1,024.5	35.47	29.883			
6,900.0	6,882.4	7,016.4	6,882.4	17.2	27.5	179.39	1,059.9	1,024.2	35.79	29.613			
7,000.0	6,982.4	7,116.4	6,982.4	17.4	27.6	179.39	1,059.9	1,023.8	36.12	29.346			
7,100.0	7,082.4	7,216.4	7,082.4	17.6	27.7	179.39	1,059.9	1,023.5	36.45	29.082			
7,200.0	7,182.4	7,316.4	7,182.4	17.8	27.8	179.39	1,059.9	1,023.2	36.78	28.820			
7,300.0	7,282.4	7,416.4	7,282.4	18.0	27.9	179.39	1,059.9	1,022.8	37.11	28.561			
7,400.0	7,382.4	7,516.4	7,382.4	18.1	28.0	179.39	1,059.9	1,022.5	37.45	28.305			
7,500.0	7,482.4	7,616.4	7,482.4	18.3	28.1	179.39	1,059.9	1,022.2	37.79	28.052			
7,600.0	7,582.4	7,716.4	7,582.4	18.5	28.2	179.39	1,059.9	1,021.8	38.13	27.801			
7,700.0	7,682.4	7,816.4	7,682.4	18.7	28.4	179.39	1,059.9	1,021.5	38.47	27.554			
7,800.0	7,782.4	7,916.4	7,782.4	18.9	28.5	179.39	1,059.9	1,021.1	38.81	27.309			
7,900.0	7,882.4	8,016.4	7,882.4	19.0	28.6	179.39	1,059.9	1,020.8	39.16	27.067			
8,000.0	7,982.4	8,116.4	7,982.4	19.2	28.7	179.39	1,059.9	1,020.4	39.51	26.828			
8,100.0	8,082.4	8,216.4	8,082.4	19.4	28.8	179.39	1,059.9	1,020.1	39.86	26.592			
8,200.0	8,182.4	8,316.4	8,182.4	19.6	28.9	179.39	1,059.9	1,019.7	40.21	26.358			
8,300.0	8,282.4	8,416.4	8,282.4	19.8	29.0	179.39	1,059.9	1,019.4	40.57	26.128			
8,365.1	8,347.5	8,481.6	8,347.5	19.9	29.1	179.39	1,059.9	1,019.1	40.80	25.979			
8,400.0	8,382.4	8,512.0	8,378.0	20.0	29.1	179.39	1,060.0	1,019.0	40.92	25.905			
8,420.6	8,403.0	8,512.0	8,378.0	20.0	29.1	179.39	1,060.2	1,019.3	40.96	25.887			

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11M
<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 25-11M	<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	-118.17	38.6						
100.0	100.0	100.0	100.0	0.1	0.1	-118.17	38.6	38.4	0.18	217.116			
200.0	200.0	200.0	200.0	0.3	0.3	-118.17	38.6	37.9	0.63	61.477			
300.0	300.0	300.0	300.0	0.5	0.5	-118.17	38.6	37.5	1.08	35.808			CC, ES
400.0	400.0	397.8	397.8	0.8	0.7	140.43	43.1	41.6	1.51	28.608			
449.2	449.0	445.6	445.4	0.9	0.8	141.89	48.6	46.9	1.73	28.142			SF
500.0	499.7	494.5	494.2	1.0	1.0	143.23	56.1	54.2	1.95	28.775			
600.0	599.4	589.7	588.6	1.2	1.2	144.18	74.5	72.1	2.41	30.930			
700.0	699.1	683.0	680.4	1.5	1.5	143.93	97.5	94.6	2.88	33.828			
800.0	798.8	774.0	769.2	1.7	1.9	143.19	125.0	121.7	3.37	37.100			
900.0	898.5	867.2	859.2	2.0	2.3	142.35	156.0	152.1	3.86	40.365			
1,000.0	998.2	962.2	950.9	2.2	2.8	141.76	187.1	182.8	4.35	42.981			
1,100.0	1,097.9	1,057.2	1,042.6	2.5	3.3	141.33	218.3	213.5	4.85	45.055			
1,200.0	1,197.6	1,152.2	1,134.3	2.8	3.8	141.01	249.5	244.2	5.34	46.686			
1,300.0	1,297.3	1,247.2	1,226.0	3.0	4.3	140.77	280.7	274.9	5.85	47.986			
1,400.0	1,397.0	1,342.2	1,317.8	3.3	4.9	140.57	311.9	305.6	6.36	49.056			
1,500.0	1,496.6	1,437.2	1,409.5	3.6	5.4	140.41	343.1	336.3	6.87	49.946			
1,600.0	1,596.3	1,532.2	1,501.2	3.8	5.9	140.27	374.4	367.0	7.38	50.696			
1,700.0	1,696.0	1,627.2	1,592.9	4.1	6.4	140.16	405.6	397.7	7.90	51.335			
1,800.0	1,795.7	1,722.2	1,684.6	4.4	6.9	140.06	436.8	428.4	8.42	51.886			
1,900.0	1,895.4	1,817.2	1,776.3	4.6	7.5	139.97	468.0	459.1	8.94	52.365			
2,000.0	1,995.1	1,912.2	1,868.1	4.9	8.0	139.90	499.2	489.8	9.46	52.786			
2,100.0	2,094.8	2,007.2	1,959.8	5.2	8.5	139.83	530.4	520.5	9.98	53.158			
2,200.0	2,194.5	2,102.2	2,051.5	5.4	9.0	139.78	561.7	551.2	10.50	53.489			
2,300.0	2,294.2	2,197.2	2,143.2	5.7	9.5	139.72	592.9	581.9	11.02	53.785			
2,400.0	2,393.9	2,292.2	2,234.9	6.0	10.1	139.68	624.1	612.6	11.55	54.051			
2,500.0	2,493.6	2,387.2	2,326.6	6.2	10.6	139.63	655.3	643.3	12.07	54.292			
2,600.0	2,593.3	2,482.2	2,418.4	6.5	11.1	139.60	686.5	673.9	12.59	54.511			
2,700.0	2,693.0	2,577.2	2,510.1	6.8	11.6	139.56	717.8	704.6	13.12	54.711			
2,800.0	2,792.7	2,672.2	2,601.8	7.0	12.2	139.53	749.0	735.3	13.64	54.894			
2,900.0	2,892.4	2,767.2	2,693.5	7.3	12.7	139.50	780.2	766.0	14.17	55.062			
3,000.0	2,992.1	2,862.2	2,785.2	7.6	13.2	139.47	811.4	796.7	14.70	55.217			
3,100.0	3,091.8	2,957.2	2,876.9	7.8	13.7	139.45	842.6	827.4	15.22	55.360			
3,200.0	3,191.5	3,052.2	2,968.7	8.1	14.3	139.42	873.9	858.1	15.75	55.492			
3,300.0	3,291.2	3,147.2	3,060.4	8.4	14.8	139.40	905.1	888.8	16.27	55.616			
3,400.0	3,390.9	3,242.2	3,152.1	8.6	15.3	139.38	936.3	919.5	16.80	55.731			
3,500.0	3,490.5	3,337.2	3,243.8	8.9	15.8	139.36	967.5	950.2	17.33	55.838			
3,600.0	3,590.2	3,432.2	3,335.5	9.2	16.4	139.34	998.8	980.9	17.85	55.938			
3,700.0	3,689.9	3,527.2	3,427.2	9.4	16.9	139.33	1,030.0	1,011.6	18.38	56.032			
3,800.0	3,789.6	3,622.2	3,519.0	9.7	17.4	139.31	1,061.2	1,042.3	18.91	56.120			
3,900.0	3,889.3	3,717.2	3,610.7	10.0	17.9	139.30	1,092.4	1,073.0	19.44	56.203			
4,000.0	3,989.0	3,812.2	3,702.4	10.2	18.5	139.28	1,123.6	1,103.7	19.96	56.281			
4,100.0	4,088.7	3,907.2	3,794.1	10.5	19.0	139.27	1,154.9	1,134.4	20.49	56.355			
4,200.0	4,188.4	4,002.2	3,885.8	10.8	19.5	139.26	1,186.1	1,165.1	21.02	56.425			
4,300.0	4,288.1	4,097.2	3,977.5	11.1	20.0	139.24	1,217.3	1,195.8	21.55	56.491			
4,400.0	4,387.8	4,192.2	4,069.3	11.3	20.6	139.23	1,248.5	1,226.5	22.08	56.553			
4,500.0	4,487.5	4,287.2	4,161.0	11.6	21.1	139.22	1,279.8	1,257.1	22.61	56.612			
4,600.0	4,587.2	4,382.2	4,252.7	11.9	21.6	139.21	1,311.0	1,287.8	23.13	56.668			
4,700.0	4,686.9	4,477.2	4,344.4	12.1	22.1	139.20	1,342.2	1,318.5	23.66	56.721			
4,800.0	4,786.6	4,572.2	4,436.1	12.4	22.7	139.19	1,373.4	1,349.2	24.19	56.772			
4,900.0	4,886.3	4,667.2	4,527.8	12.7	23.2	139.18	1,404.6	1,379.9	24.72	56.820			
5,000.0	4,986.0	4,762.2	4,619.6	12.9	23.7	139.17	1,435.9	1,410.6	25.25	56.866			
5,100.0	5,085.7	4,857.2	4,711.3	13.2	24.2	139.17	1,467.1	1,441.3	25.78	56.910			
5,200.0	5,185.4	4,952.2	4,803.0	13.5	24.8	139.16	1,498.3	1,472.0	26.31	56.951			

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 25-11M
<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 25-11M	<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 25-15W - 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
5,300.0	5,285.1	5,047.2	4,894.7	13.7	25.3	139.15	1,529.5	1,502.7	26.84	56.991			
5,400.0	5,384.8	5,142.2	4,986.4	14.0	25.8	139.14	1,560.8	1,533.4	27.37	57.029			
5,500.0	5,484.5	5,237.2	5,078.1	14.3	26.3	139.14	1,592.0	1,564.1	27.90	57.066			
5,600.0	5,584.1	5,332.2	5,169.9	14.5	26.9	139.13	1,623.2	1,594.8	28.43	57.101			
5,700.0	5,683.8	5,427.2	5,261.6	14.8	27.4	139.12	1,654.4	1,625.5	28.96	57.134			
5,800.0	5,783.5	5,522.2	5,353.3	15.1	27.9	139.12	1,685.6	1,656.2	29.49	57.166			
5,900.0	5,883.2	5,688.4	5,514.6	15.3	28.6	139.13	1,715.0	1,684.8	30.15	56.880			
6,000.0	5,982.9	5,862.2	5,685.0	15.6	29.2	139.20	1,740.1	1,709.3	30.79	56.519			
6,072.3	6,055.0	5,990.1	5,811.2	15.8	29.5	139.28	1,755.5	1,724.3	31.24	56.197			
6,100.0	6,082.6	6,039.6	5,860.3	15.9	29.6	139.36	1,760.8	1,729.3	31.43	56.028			
6,200.0	6,182.5	6,220.5	6,040.1	16.1	30.0	139.60	1,775.4	1,743.4	32.04	55.422			
6,300.0	6,282.4	6,403.7	6,223.0	16.2	30.3	139.73	1,783.5	1,750.9	32.58	54.743			
6,370.6	6,353.0	6,533.7	6,353.0	16.3	30.4	-117.33	1,785.2	1,752.3	32.94	54.201			
6,400.0	6,382.4	6,563.1	6,382.4	16.4	30.5	-117.33	1,785.2	1,752.2	33.03	54.040			
6,470.6	6,453.0	6,633.7	6,453.0	16.5	30.5	-117.33	1,785.2	1,751.9	33.26	53.667			
6,500.0	6,482.4	6,663.1	6,482.4	16.6	30.5	-117.33	1,785.2	1,751.8	33.36	53.514			
6,600.0	6,582.4	6,763.1	6,582.4	16.7	30.6	-117.33	1,785.2	1,751.5	33.68	53.000			
6,700.0	6,682.4	6,863.1	6,682.4	16.9	30.7	-117.33	1,785.2	1,751.2	34.01	52.491			
6,800.0	6,782.4	6,963.1	6,782.4	17.1	30.8	-117.33	1,785.2	1,750.9	34.34	51.988			
6,900.0	6,882.4	7,063.1	6,882.4	17.2	30.9	-117.33	1,785.2	1,750.5	34.67	51.490			
7,000.0	6,982.4	7,163.1	6,982.4	17.4	31.0	-117.33	1,785.2	1,750.2	35.01	50.998			
7,100.0	7,082.4	7,263.1	7,082.4	17.6	31.1	-117.33	1,785.2	1,749.9	35.34	50.512			
7,200.0	7,182.4	7,363.1	7,182.4	17.8	31.2	-117.33	1,785.2	1,749.5	35.68	50.032			
7,300.0	7,282.4	7,463.1	7,282.4	18.0	31.3	-117.33	1,785.2	1,749.2	36.02	49.557			
7,400.0	7,382.4	7,563.1	7,382.4	18.1	31.4	-117.33	1,785.2	1,748.8	36.37	49.088			
7,500.0	7,482.4	7,663.1	7,482.4	18.3	31.5	-117.33	1,785.2	1,748.5	36.71	48.625			
7,600.0	7,582.4	7,763.1	7,582.4	18.5	31.6	-117.33	1,785.2	1,748.1	37.06	48.168			
7,700.0	7,682.4	7,863.1	7,682.4	18.7	31.7	-117.33	1,785.2	1,747.8	37.41	47.717			
7,800.0	7,782.4	7,963.1	7,782.4	18.9	31.8	-117.33	1,785.2	1,747.4	37.76	47.271			
7,900.0	7,882.4	8,063.1	7,882.4	19.0	31.9	-117.33	1,785.2	1,747.1	38.12	46.832			
8,000.0	7,982.4	8,163.1	7,982.4	19.2	32.0	-117.33	1,785.2	1,746.7	38.48	46.398			
8,100.0	8,082.4	8,263.1	8,082.4	19.4	32.1	-117.33	1,785.2	1,746.4	38.83	45.970			
8,200.0	8,182.4	8,363.1	8,182.4	19.6	32.2	-117.33	1,785.2	1,746.0	39.19	45.547			
8,300.0	8,282.4	8,463.1	8,282.4	19.8	32.3	-117.33	1,785.2	1,745.6	39.56	45.130			
8,400.0	8,382.4	8,563.1	8,382.4	20.0	32.4	-117.33	1,785.2	1,745.3	39.87	44.779			
8,420.6	8,403.0	8,583.7	8,403.0	20.0	32.4	-117.33	1,785.2	1,745.3	39.92	44.714			

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11M
<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 25-11M	<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							
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	-119.74	29.4						
100.0	100.0	100.0	100.0	0.1	0.1	-119.74	29.4	29.2	0.18	165.313			
200.0	200.0	200.0	200.0	0.3	0.3	-119.74	29.4	28.7	0.63	46.809			
300.0	300.0	300.0	300.0	0.5	0.5	-119.74	29.4	28.3	1.08	27.265			
400.0	400.0	398.6	398.6	0.8	0.7	139.23	33.4	31.9	1.50	22.203			CC, ES
449.2	449.0	446.8	446.7	0.9	0.8	140.98	38.3	36.6	1.72	22.272			SF
500.0	499.7	496.4	496.1	1.0	0.9	142.44	44.9	43.0	1.94	23.188			
600.0	599.4	593.0	592.2	1.2	1.2	143.13	61.0	58.6	2.39	25.509			
700.0	699.1	688.3	686.5	1.5	1.5	142.40	80.8	78.0	2.86	28.244			
800.0	798.8	781.9	778.4	1.7	1.8	141.15	104.4	101.1	3.35	31.188			
900.0	898.5	873.7	867.7	2.0	2.2	139.78	131.7	127.9	3.85	34.250			
1,000.0	998.2	963.2	954.0	2.2	2.7	138.47	162.7	158.3	4.35	37.379			
1,100.0	1,097.9	1,054.3	1,041.0	2.5	3.2	137.26	196.7	191.8	4.87	40.431			
1,200.0	1,197.6	1,148.2	1,130.4	2.8	3.7	136.36	231.2	225.8	5.38	42.954			
1,300.0	1,297.3	1,242.0	1,219.8	3.0	4.3	135.69	265.6	259.7	5.90	45.058			
1,400.0	1,397.0	1,335.8	1,309.3	3.3	4.8	135.17	300.1	293.7	6.42	46.762			
1,500.0	1,496.6	1,429.6	1,398.7	3.6	5.4	134.76	334.7	327.7	6.94	48.207			
1,600.0	1,596.3	1,523.5	1,488.1	3.8	6.0	134.42	369.2	361.7	7.47	49.424			
1,700.0	1,696.0	1,617.3	1,577.6	4.1	6.6	134.15	403.7	395.7	8.00	50.466			
1,800.0	1,795.7	1,711.1	1,667.0	4.4	7.1	133.91	438.3	429.8	8.53	51.366			
1,900.0	1,895.4	1,804.9	1,756.4	4.6	7.7	133.71	472.8	463.8	9.07	52.150			
2,000.0	1,995.1	1,898.8	1,845.9	4.9	8.3	133.54	507.4	497.8	9.60	52.840			
2,100.0	2,094.8	1,992.6	1,935.3	5.2	8.9	133.39	542.0	531.8	10.14	53.450			
2,200.0	2,194.5	2,086.4	2,024.7	5.4	9.5	133.26	576.5	565.9	10.68	53.994			
2,300.0	2,294.2	2,180.3	2,114.2	5.7	10.1	133.14	611.1	599.9	11.22	54.482			
2,400.0	2,393.9	2,274.1	2,203.6	6.0	10.6	133.04	645.7	633.9	11.76	54.922			
2,500.0	2,493.6	2,367.9	2,293.1	6.2	11.2	132.94	680.3	668.0	12.30	55.320			
2,600.0	2,593.3	2,461.7	2,382.5	6.5	11.8	132.86	714.8	702.0	12.84	55.682			
2,700.0	2,693.0	2,555.6	2,471.9	6.8	12.4	132.78	749.4	736.0	13.38	56.013			
2,800.0	2,792.7	2,649.4	2,561.4	7.0	13.0	132.71	784.0	770.1	13.92	56.316			
2,900.0	2,892.4	2,743.2	2,650.8	7.3	13.6	132.65	818.6	804.1	14.46	56.595			
3,000.0	2,992.1	2,837.1	2,740.2	7.6	14.2	132.59	853.1	838.1	15.01	56.853			
3,100.0	3,091.8	2,930.9	2,829.7	7.8	14.7	132.53	887.7	872.2	15.55	57.091			
3,200.0	3,191.5	3,024.7	2,919.1	8.1	15.3	132.48	922.3	906.2	16.09	57.312			
3,300.0	3,291.2	3,118.5	3,008.5	8.4	15.9	132.44	956.9	940.2	16.64	57.517			
3,400.0	3,390.9	3,212.4	3,098.0	8.6	16.5	132.39	991.5	974.3	17.18	57.709			
3,500.0	3,490.5	3,306.2	3,187.4	8.9	17.1	132.35	1,026.0	1,008.3	17.72	57.888			
3,600.0	3,590.2	3,400.0	3,276.8	9.2	17.7	132.31	1,060.6	1,042.4	18.27	58.056			
3,700.0	3,689.9	3,493.8	3,366.3	9.4	18.3	132.28	1,095.2	1,076.4	18.81	58.213			
3,800.0	3,789.6	3,587.7	3,455.7	9.7	18.8	132.24	1,129.8	1,110.4	19.36	58.361			
3,900.0	3,889.3	3,681.5	3,545.1	10.0	19.4	132.21	1,164.4	1,144.5	19.90	58.500			
4,000.0	3,989.0	3,775.3	3,634.6	10.2	20.0	132.18	1,199.0	1,178.5	20.45	58.631			
4,100.0	4,088.7	3,869.2	3,724.0	10.5	20.6	132.16	1,233.5	1,212.5	20.99	58.755			
4,200.0	4,188.4	3,963.0	3,813.5	10.8	21.2	132.13	1,268.1	1,246.6	21.54	58.872			
4,300.0	4,288.1	4,056.8	3,902.9	11.1	21.8	132.10	1,302.7	1,280.6	22.09	58.983			
4,400.0	4,387.8	4,150.6	3,992.3	11.3	22.4	132.08	1,337.3	1,314.7	22.63	59.088			
4,500.0	4,487.5	4,244.5	4,081.8	11.6	23.0	132.06	1,371.9	1,348.7	23.18	59.188			
4,600.0	4,587.2	4,338.3	4,171.2	11.9	23.5	132.04	1,406.5	1,382.7	23.72	59.282			
4,700.0	4,686.9	4,432.1	4,260.6	12.1	24.1	132.02	1,441.0	1,416.8	24.27	59.373			
4,800.0	4,786.6	4,526.0	4,350.1	12.4	24.7	132.00	1,475.6	1,450.8	24.82	59.458			
4,900.0	4,886.3	4,619.8	4,439.5	12.7	25.3	131.98	1,510.2	1,484.9	25.36	59.540			
5,000.0	4,986.0	4,713.6	4,528.9	12.9	25.9	131.96	1,544.8	1,518.9	25.91	59.618			
5,100.0	5,085.7	4,807.4	4,618.4	13.2	26.5	131.94	1,579.4	1,552.9	26.46	59.693			
5,200.0	5,185.4	4,901.3	4,707.8	13.5	27.1	131.93	1,614.0	1,587.0	27.01	59.764			

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 25-11M
<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 25-11M	<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 25-16W - 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	5,285.1	4,995.1	4,797.2	13.7	27.7	131.91	1,648.6	1,621.0	27.55	59.832				
5,400.0	5,384.8	5,088.9	4,886.7	14.0	28.2	131.90	1,683.1	1,655.0	28.10	59.897				
5,500.0	5,484.5	5,182.8	4,976.1	14.3	28.8	131.88	1,717.7	1,689.1	28.65	59.960				
5,600.0	5,584.1	5,276.6	5,065.6	14.5	29.4	131.87	1,752.3	1,723.1	29.20	60.019				
5,700.0	5,683.8	5,370.4	5,155.0	14.8	30.0	131.86	1,786.9	1,757.2	29.74	60.077				
5,800.0	5,783.5	5,516.0	5,294.3	15.1	30.8	131.85	1,820.6	1,790.2	30.42	59.859				
5,900.0	5,883.2	5,696.3	5,468.7	15.3	31.5	131.89	1,850.4	1,819.2	31.12	59.468				
6,000.0	5,982.9	5,881.4	5,649.9	15.6	32.1	131.98	1,875.6	1,843.8	31.80	58.984				
6,072.3	6,055.0	6,017.9	5,784.5	15.8	32.5	132.09	1,890.9	1,858.6	32.28	58.581				
6,100.0	6,082.6	6,070.7	5,836.8	15.9	32.6	132.19	1,896.1	1,863.6	32.48	58.377				
6,200.0	6,182.5	6,263.8	6,028.7	16.1	33.0	132.47	1,910.4	1,877.3	33.13	57.672				
6,300.0	6,282.4	6,459.3	6,223.9	16.2	33.3	132.62	1,918.1	1,884.4	33.69	56.930				
6,370.6	6,353.0	6,588.4	6,353.0	16.3	33.4	-124.43	1,919.5	1,885.4	34.05	56.370				
6,400.0	6,382.4	6,617.8	6,382.4	16.4	33.5	-124.43	1,919.5	1,885.3	34.14	56.217				
6,470.6	6,453.0	6,688.4	6,453.0	16.5	33.5	-124.43	1,919.5	1,885.1	34.36	55.859				
6,500.0	6,482.4	6,717.8	6,482.4	16.6	33.5	-124.43	1,919.5	1,885.0	34.45	55.710				
6,600.0	6,582.4	6,817.8	6,582.4	16.7	33.6	-124.43	1,919.5	1,884.7	34.77	55.208				
6,700.0	6,682.4	6,917.8	6,682.4	16.9	33.7	-124.43	1,919.5	1,884.4	35.08	54.711				
6,800.0	6,782.4	7,017.8	6,782.4	17.1	33.8	-124.43	1,919.5	1,884.1	35.40	54.218				
6,900.0	6,882.4	7,117.8	6,882.4	17.2	33.9	-124.43	1,919.5	1,883.8	35.72	53.730				
7,000.0	6,982.4	7,217.8	6,982.4	17.4	34.0	-124.43	1,919.5	1,883.4	36.05	53.247				
7,100.0	7,082.4	7,317.8	7,082.4	17.6	34.0	-124.43	1,919.5	1,883.1	36.38	52.768				
7,200.0	7,182.4	7,417.8	7,182.4	17.8	34.1	-124.43	1,919.5	1,882.8	36.71	52.295				
7,300.0	7,282.4	7,517.8	7,282.4	18.0	34.2	-124.43	1,919.5	1,882.5	37.04	51.826				
7,400.0	7,382.4	7,617.8	7,382.4	18.1	34.3	-124.43	1,919.5	1,882.1	37.37	51.363				
7,500.0	7,482.4	7,717.8	7,482.4	18.3	34.4	-124.43	1,919.5	1,881.8	37.71	50.904				
7,600.0	7,582.4	7,817.8	7,582.4	18.5	34.5	-124.43	1,919.5	1,881.4	38.05	50.451				
7,700.0	7,682.4	7,917.8	7,682.4	18.7	34.6	-124.43	1,919.5	1,881.1	38.39	50.003				
7,800.0	7,782.4	8,017.8	7,782.4	18.9	34.7	-124.43	1,919.5	1,880.8	38.73	49.560				
7,900.0	7,882.4	8,117.8	7,882.4	19.0	34.8	-124.43	1,919.5	1,880.4	39.08	49.122				
8,000.0	7,982.4	8,217.8	7,982.4	19.2	34.9	-124.43	1,919.5	1,880.1	39.42	48.689				
8,100.0	8,082.4	8,317.8	8,082.4	19.4	35.0	-124.43	1,919.5	1,879.7	39.77	48.261				
8,200.0	8,182.4	8,417.8	8,182.4	19.6	35.1	-124.43	1,919.5	1,879.4	40.12	47.839				
8,300.0	8,282.4	8,517.8	8,282.4	19.8	35.2	-124.43	1,919.5	1,879.0	40.48	47.422				
8,400.0	8,382.4	8,617.8	8,382.4	20.0	35.3	-124.43	1,919.5	1,878.7	40.83	47.009				
8,402.3	8,384.7	8,620.1	8,384.7	20.0	35.3	-124.43	1,919.5	1,878.7	40.84	47.000				
8,420.6	8,403.0	8,628.4	8,393.0	20.0	35.3	-124.43	1,919.5	1,878.6	40.89	46.944				

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11M
<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 25-11M	<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	-127.65	53.7						
100.0	100.0	100.0	100.0	0.1	0.1	-127.65	53.7	53.5	0.18	302.154			
200.0	200.0	200.0	200.0	0.3	0.3	-127.65	53.7	53.0	0.63	85.556			
300.0	300.0	300.0	300.0	0.5	0.5	-127.65	53.7	52.6	1.08	49.833			CC, ES
400.0	400.0	397.6	397.6	0.8	0.7	130.80	57.4	55.9	1.50	38.327			
449.2	449.0	445.4	445.3	0.9	0.8	132.23	62.0	60.3	1.71	36.232			
500.0	499.7	494.5	494.2	1.0	0.9	133.70	68.3	66.4	1.93	35.374			
600.0	599.4	590.3	589.5	1.2	1.2	135.14	83.7	81.3	2.38	35.098			SF
700.0	699.1	684.8	683.0	1.5	1.5	135.31	102.9	100.0	2.85	36.038			
800.0	798.8	777.8	774.4	1.7	1.8	134.79	125.8	122.5	3.34	37.657			
900.0	898.5	869.0	863.2	2.0	2.2	133.93	152.5	148.6	3.84	39.694			
1,000.0	998.2	958.1	949.1	2.2	2.6	132.96	182.7	178.3	4.35	42.005			
1,100.0	1,097.9	1,045.0	1,031.9	2.5	3.1	131.98	216.4	211.6	4.86	44.499			
1,200.0	1,197.6	1,133.5	1,115.4	2.8	3.7	131.02	253.2	247.8	5.39	46.940			
1,300.0	1,297.3	1,226.2	1,202.6	3.0	4.3	130.23	290.6	284.7	5.92	49.116			
1,400.0	1,397.0	1,318.9	1,289.8	3.3	4.9	129.62	328.0	321.5	6.45	50.870			
1,500.0	1,496.6	1,411.6	1,377.0	3.6	5.5	129.14	365.4	358.4	6.98	52.339			
1,600.0	1,596.3	1,504.3	1,464.2	3.8	6.1	128.75	402.8	395.3	7.52	53.571			
1,700.0	1,696.0	1,597.0	1,551.4	4.1	6.7	128.42	440.3	432.2	8.06	54.617			
1,800.0	1,795.7	1,689.7	1,638.7	4.4	7.4	128.15	477.7	469.1	8.60	55.516			
1,900.0	1,895.4	1,782.4	1,725.9	4.6	8.0	127.91	515.2	506.0	9.15	56.296			
2,000.0	1,995.1	1,875.1	1,813.1	4.9	8.6	127.71	552.6	542.9	9.70	56.980			
2,100.0	2,094.8	1,967.7	1,900.3	5.2	9.3	127.53	590.1	579.9	10.25	57.582			
2,200.0	2,194.5	2,060.4	1,987.5	5.4	9.9	127.38	627.6	616.8	10.80	58.118			
2,300.0	2,294.2	2,153.1	2,074.8	5.7	10.5	127.24	665.1	653.7	11.35	58.596			
2,400.0	2,393.9	2,245.8	2,162.0	6.0	11.2	127.11	702.6	690.7	11.90	59.026			
2,500.0	2,493.6	2,338.5	2,249.2	6.2	11.8	127.00	740.1	727.6	12.46	59.414			
2,600.0	2,593.3	2,431.2	2,336.4	6.5	12.4	126.90	777.6	764.5	13.01	59.767			
2,700.0	2,693.0	2,523.9	2,423.6	6.8	13.1	126.81	815.1	801.5	13.56	60.087			
2,800.0	2,792.7	2,616.6	2,510.9	7.0	13.7	126.73	852.5	838.4	14.12	60.381			
2,900.0	2,892.4	2,709.3	2,598.1	7.3	14.4	126.65	890.0	875.4	14.68	60.650			
3,000.0	2,992.1	2,802.0	2,685.3	7.6	15.0	126.58	927.5	912.3	15.23	60.898			
3,100.0	3,091.8	2,894.7	2,772.5	7.8	15.6	126.52	965.0	949.3	15.79	61.126			
3,200.0	3,191.5	2,987.4	2,859.7	8.1	16.3	126.46	1,002.5	986.2	16.34	61.338			
3,300.0	3,291.2	3,080.1	2,947.0	8.4	16.9	126.40	1,040.0	1,023.1	16.90	61.535			
3,400.0	3,390.9	3,172.8	3,034.2	8.6	17.5	126.35	1,077.5	1,060.1	17.46	61.718			
3,500.0	3,490.5	3,265.5	3,121.4	8.9	18.2	126.30	1,115.0	1,097.0	18.02	61.889			
3,600.0	3,590.2	3,358.2	3,208.6	9.2	18.8	126.26	1,152.6	1,134.0	18.58	62.048			
3,700.0	3,689.9	3,450.9	3,295.8	9.4	19.5	126.21	1,190.1	1,170.9	19.13	62.198			
3,800.0	3,789.6	3,543.6	3,383.0	9.7	20.1	126.17	1,227.6	1,207.9	19.69	62.338			
3,900.0	3,889.3	3,636.3	3,470.3	10.0	20.7	126.14	1,265.1	1,244.8	20.25	62.470			
4,000.0	3,989.0	3,729.0	3,557.5	10.2	21.4	126.10	1,302.6	1,281.8	20.81	62.594			
4,100.0	4,088.7	3,821.7	3,644.7	10.5	22.0	126.07	1,340.1	1,318.7	21.37	62.712			
4,200.0	4,188.4	3,914.4	3,731.9	10.8	22.6	126.04	1,377.6	1,355.7	21.93	62.822			
4,300.0	4,288.1	4,007.1	3,819.1	11.1	23.3	126.01	1,415.1	1,392.6	22.49	62.927			
4,400.0	4,387.8	4,099.8	3,906.4	11.3	23.9	125.98	1,452.6	1,429.5	23.05	63.026			
4,500.0	4,487.5	4,192.5	3,993.6	11.6	24.6	125.95	1,490.1	1,466.5	23.61	63.120			
4,600.0	4,587.2	4,285.2	4,080.8	11.9	25.2	125.93	1,527.6	1,503.4	24.17	63.209			
4,700.0	4,686.9	4,377.9	4,168.0	12.1	25.8	125.90	1,565.1	1,540.4	24.73	63.293			
4,800.0	4,786.6	4,470.6	4,255.2	12.4	26.5	125.88	1,602.6	1,577.3	25.29	63.374			
4,900.0	4,886.3	4,563.3	4,342.5	12.7	27.1	125.86	1,640.1	1,614.3	25.85	63.451			
5,000.0	4,986.0	4,656.0	4,429.7	12.9	27.8	125.84	1,677.6	1,651.2	26.41	63.524			
5,100.0	5,085.7	4,748.7	4,516.9	13.2	28.4	125.82	1,715.1	1,688.2	26.97	63.593			
5,200.0	5,185.4	4,841.4	4,604.1	13.5	29.0	125.80	1,752.7	1,725.1	27.53	63.660			

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 25-11M
<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 25-11M	<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	
5,300.0	5,285.1	4,934.1	4,691.3	13.7	29.7	125.78	1,790.2	1,762.1	28.09	63.723				
5,400.0	5,384.8	5,026.8	4,778.6	14.0	30.3	125.76	1,827.7	1,799.0	28.65	63.784				
5,500.0	5,484.5	5,119.5	4,865.8	14.3	30.9	125.74	1,865.2	1,836.0	29.22	63.842				
5,600.0	5,584.1	5,212.2	4,953.0	14.5	31.6	125.73	1,902.7	1,872.9	29.78	63.897				
5,700.0	5,683.8	5,304.9	5,040.2	14.8	32.2	125.71	1,940.2	1,909.9	30.34	63.951				
5,800.0	5,783.5	5,488.3	5,214.2	15.1	33.2	125.71	1,975.7	1,944.6	31.12	63.484				
5,900.0	5,883.2	5,682.7	5,401.3	15.3	34.0	125.76	2,006.5	1,974.7	31.88	62.938				
6,000.0	5,982.9	5,882.9	5,596.6	15.6	34.7	125.88	2,032.6	1,999.9	32.62	62.305				
6,072.3	6,055.0	6,030.8	5,742.2	15.8	35.1	126.00	2,048.2	2,015.1	33.14	61.804				
6,100.0	6,082.6	6,088.1	5,798.9	15.9	35.3	126.11	2,053.5	2,020.1	33.36	61.556				
6,200.0	6,182.5	6,297.7	6,007.2	16.1	35.7	126.43	2,068.0	2,034.0	34.05	60.728				
6,300.0	6,282.4	6,510.3	6,219.3	16.2	36.0	126.60	2,075.7	2,041.0	34.65	59.902				
6,370.6	6,353.0	6,644.0	6,353.0	16.3	36.2	-130.45	2,076.9	2,041.9	35.01	59.330				
6,400.0	6,382.4	6,673.4	6,382.4	16.4	36.2	-130.45	2,076.9	2,041.8	35.10	59.175				
6,470.6	6,453.0	6,744.0	6,453.0	16.5	36.2	-130.45	2,076.9	2,041.6	35.31	58.813				
6,500.0	6,482.4	6,773.4	6,482.4	16.6	36.3	-130.45	2,076.9	2,041.5	35.40	58.665				
6,600.0	6,582.4	6,873.4	6,582.4	16.7	36.3	-130.45	2,076.9	2,041.2	35.71	58.164				
6,700.0	6,682.4	6,973.4	6,682.4	16.9	36.4	-130.45	2,076.9	2,040.9	36.02	57.666				
6,800.0	6,782.4	7,073.4	6,782.4	17.1	36.5	-130.45	2,076.9	2,040.6	36.33	57.172				
6,900.0	6,882.4	7,173.4	6,882.4	17.2	36.6	-130.45	2,076.9	2,040.3	36.64	56.683				
7,000.0	6,982.4	7,273.4	6,982.4	17.4	36.6	-130.45	2,076.9	2,039.9	36.96	56.197				
7,100.0	7,082.4	7,373.4	7,082.4	17.6	36.7	-130.45	2,076.9	2,039.6	37.28	55.716				
7,200.0	7,182.4	7,473.4	7,182.4	17.8	36.8	-130.45	2,076.9	2,039.3	37.60	55.240				
7,300.0	7,282.4	7,573.4	7,282.4	18.0	36.9	-130.45	2,076.9	2,039.0	37.92	54.767				
7,400.0	7,382.4	7,673.4	7,382.4	18.1	36.9	-130.45	2,076.9	2,038.7	38.25	54.300				
7,500.0	7,482.4	7,773.4	7,482.4	18.3	37.0	-130.45	2,076.9	2,038.3	38.58	53.837				
7,600.0	7,582.4	7,873.4	7,582.4	18.5	37.1	-130.45	2,076.9	2,038.0	38.91	53.378				
7,700.0	7,682.4	7,973.4	7,682.4	18.7	37.2	-130.45	2,076.9	2,037.7	39.24	52.924				
7,800.0	7,782.4	8,073.4	7,782.4	18.9	37.3	-130.45	2,076.9	2,037.3	39.58	52.475				
7,900.0	7,882.4	8,173.4	7,882.4	19.0	37.4	-130.45	2,076.9	2,037.0	39.92	52.031				
8,000.0	7,982.4	8,273.4	7,982.4	19.2	37.5	-130.45	2,076.9	2,036.6	40.26	51.591				
8,100.0	8,082.4	8,373.4	8,082.4	19.4	37.6	-130.45	2,076.9	2,036.3	40.60	51.156				
8,200.0	8,182.4	8,473.4	8,182.4	19.6	37.6	-130.45	2,076.9	2,036.0	40.94	50.726				
8,300.0	8,282.4	8,573.4	8,282.4	19.8	37.7	-130.45	2,076.9	2,035.6	41.29	50.301				
8,400.0	8,382.4	8,673.4	8,382.4	20.0	37.8	-130.45	2,076.9	2,035.3	41.64	49.881				
8,420.6	8,403.0	8,679.0	8,388.0	20.0	37.8	-130.45	2,077.0	2,035.3	41.69	49.824				

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11M
<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 25-11M	<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	-131.98	38.1						
100.0	100.0	100.0	100.0	0.1	0.1	-131.98	38.1	37.9	0.18	214.569			
200.0	200.0	200.0	200.0	0.3	0.3	-131.98	38.1	37.5	0.63	60.756			
300.0	300.0	300.0	300.0	0.5	0.5	-131.98	38.1	37.0	1.08	35.388			CC, ES
400.0	400.0	397.5	397.4	0.8	0.7	126.47	42.6	41.1	1.50	28.422			
449.2	449.0	445.0	444.8	0.9	0.8	127.77	48.2	46.5	1.72	27.978			SF
500.0	499.7	493.7	493.2	1.0	1.0	128.84	55.9	53.9	1.95	28.625			
600.0	599.4	588.1	586.4	1.2	1.2	128.85	75.2	72.8	2.43	30.919			
700.0	699.1	680.0	676.1	1.5	1.6	127.57	100.1	97.2	2.94	34.078			
800.0	798.8	769.0	761.7	1.7	2.0	125.94	130.3	126.9	3.46	37.688			
900.0	898.5	854.6	842.5	2.0	2.5	124.33	165.8	161.8	3.99	41.567			
1,000.0	998.2	936.5	918.2	2.2	3.1	122.89	206.1	201.6	4.52	45.587			
1,100.0	1,097.9	1,022.6	996.5	2.5	3.8	121.60	250.2	245.1	5.07	49.353			
1,200.0	1,197.6	1,112.1	1,077.7	2.8	4.5	120.63	294.5	288.9	5.60	52.621			
1,300.0	1,297.3	1,201.6	1,158.9	3.0	5.2	119.92	338.9	332.8	6.14	55.228			
1,400.0	1,397.0	1,291.2	1,240.1	3.3	5.9	119.37	383.4	376.7	6.68	57.355			
1,500.0	1,496.6	1,380.7	1,321.4	3.6	6.7	118.94	427.9	420.6	7.24	59.124			
1,600.0	1,596.3	1,470.2	1,402.6	3.8	7.4	118.58	472.4	464.6	7.79	60.612			
1,700.0	1,696.0	1,559.7	1,483.8	4.1	8.1	118.29	516.9	508.5	8.35	61.879			
1,800.0	1,795.7	1,649.3	1,565.0	4.4	8.9	118.05	561.4	552.5	8.92	62.968			
1,900.0	1,895.4	1,738.8	1,646.3	4.6	9.6	117.84	605.9	596.4	9.48	63.912			
2,000.0	1,995.1	1,828.3	1,727.5	4.9	10.3	117.66	650.4	640.4	10.05	64.739			
2,100.0	2,094.8	1,917.8	1,808.7	5.2	11.1	117.50	694.9	684.3	10.61	65.468			
2,200.0	2,194.5	2,007.4	1,890.0	5.4	11.8	117.36	739.5	728.3	11.18	66.114			
2,300.0	2,294.2	2,096.9	1,971.2	5.7	12.6	117.24	784.0	772.2	11.76	66.691			
2,400.0	2,393.9	2,186.4	2,052.4	6.0	13.3	117.13	828.5	816.2	12.33	67.209			
2,500.0	2,493.6	2,275.9	2,133.6	6.2	14.1	117.03	873.1	860.2	12.90	67.677			
2,600.0	2,593.3	2,365.5	2,214.9	6.5	14.8	116.94	917.6	904.1	13.47	68.100			
2,700.0	2,693.0	2,455.0	2,296.1	6.8	15.5	116.86	962.2	948.1	14.05	68.486			
2,800.0	2,792.7	2,544.5	2,377.3	7.0	16.3	116.79	1,006.7	992.1	14.62	68.839			
2,900.0	2,892.4	2,634.0	2,458.5	7.3	17.0	116.72	1,051.2	1,036.0	15.20	69.163			
3,000.0	2,992.1	2,723.6	2,539.8	7.6	17.8	116.66	1,095.8	1,080.0	15.78	69.461			
3,100.0	3,091.8	2,813.1	2,621.0	7.8	18.5	116.60	1,140.3	1,124.0	16.35	69.736			
3,200.0	3,191.5	2,902.6	2,702.2	8.1	19.3	116.55	1,184.9	1,168.0	16.93	69.991			
3,300.0	3,291.2	2,992.1	2,783.5	8.4	20.0	116.50	1,229.4	1,211.9	17.51	70.227			
3,400.0	3,390.9	3,081.7	2,864.7	8.6	20.8	116.45	1,274.0	1,255.9	18.08	70.447			
3,500.0	3,490.5	3,171.2	2,945.9	8.9	21.5	116.41	1,318.5	1,299.9	18.66	70.652			
3,600.0	3,590.2	3,260.7	3,027.1	9.2	22.2	116.37	1,363.1	1,343.8	19.24	70.843			
3,700.0	3,689.9	3,350.2	3,108.4	9.4	23.0	116.33	1,407.6	1,387.8	19.82	71.023			
3,800.0	3,789.6	3,439.8	3,189.6	9.7	23.7	116.30	1,452.2	1,431.8	20.40	71.191			
3,900.0	3,889.3	3,529.3	3,270.8	10.0	24.5	116.27	1,496.7	1,475.8	20.98	71.349			
4,000.0	3,989.0	3,618.8	3,352.0	10.2	25.2	116.23	1,541.3	1,519.7	21.56	71.498			
4,100.0	4,088.7	3,708.3	3,433.3	10.5	26.0	116.21	1,585.8	1,563.7	22.14	71.638			
4,200.0	4,188.4	3,797.9	3,514.5	10.8	26.7	116.18	1,630.4	1,607.7	22.72	71.771			
4,300.0	4,288.1	3,887.4	3,595.7	11.1	27.5	116.15	1,674.9	1,651.6	23.30	71.896			
4,400.0	4,387.8	3,976.9	3,676.9	11.3	28.2	116.13	1,719.5	1,695.6	23.88	72.015			
4,500.0	4,487.5	4,066.4	3,758.2	11.6	29.0	116.10	1,764.0	1,739.6	24.46	72.127			
4,600.0	4,587.2	4,156.0	3,839.4	11.9	29.7	116.08	1,808.6	1,783.6	25.04	72.234			
4,700.0	4,686.9	4,245.5	3,920.6	12.1	30.4	116.06	1,853.1	1,827.5	25.62	72.335			
4,800.0	4,786.6	4,335.0	4,001.9	12.4	31.2	116.04	1,897.7	1,871.5	26.20	72.431			
4,900.0	4,886.3	4,424.5	4,083.1	12.7	31.9	116.02	1,942.3	1,915.5	26.78	72.523			
5,000.0	4,986.0	4,514.1	4,164.3	12.9	32.7	116.00	1,986.8	1,959.4	27.36	72.610			
5,100.0	5,085.7	4,603.6	4,245.5	13.2	33.4	115.98	2,031.4	2,003.4	27.94	72.693			
5,200.0	5,185.4	4,693.1	4,326.8	13.5	34.2	115.97	2,075.9	2,047.4	28.53	72.773			

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 25-11M
<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 25-11M	<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	5,285.1	4,782.6	4,408.0	13.7	34.9	115.95	2,120.5	2,091.4		29.11	72.849			
5,400.0	5,384.8	4,872.1	4,489.2	14.0	35.7	115.94	2,165.0	2,135.3		29.69	72.921			
5,500.0	5,484.5	4,961.7	4,570.4	14.3	36.4	115.92	2,209.6	2,179.3		30.27	72.990			
5,600.0	5,584.1	5,051.2	4,651.7	14.5	37.2	115.91	2,254.1	2,223.3		30.85	73.057			
5,700.0	5,683.8	5,166.2	4,756.1	14.8	38.1	115.89	2,298.6	2,267.1		31.52	72.930			
5,800.0	5,783.5	5,392.8	4,965.4	15.1	39.4	115.90	2,339.5	2,307.0		32.48	72.029			
5,900.0	5,883.2	5,630.9	5,190.5	15.3	40.5	115.98	2,374.9	2,341.5		33.43	71.044			
6,000.0	5,982.9	5,879.4	5,430.0	15.6	41.6	116.12	2,404.4	2,370.0		34.35	69.989			
6,072.3	6,055.0	6,064.6	5,611.1	15.8	42.2	116.27	2,421.8	2,386.8		34.99	69.205			
6,100.0	6,082.6	6,136.7	5,682.0	15.9	42.4	116.41	2,427.6	2,392.3		35.26	68.843			
6,200.0	6,182.5	6,401.4	5,944.3	16.1	43.1	116.80	2,443.3	2,407.2		36.11	67.666			
6,300.0	6,282.4	6,670.8	6,213.1	16.2	43.5	117.01	2,451.0	2,414.2		36.80	66.601			
6,370.6	6,353.0	6,810.7	6,353.0	16.3	43.6	-140.04	2,451.9	2,414.7		37.16	65.984			
6,400.0	6,382.4	6,840.1	6,382.4	16.4	43.6	-140.04	2,451.9	2,414.6		37.24	65.834			
6,470.6	6,453.0	6,910.7	6,453.0	16.5	43.6	-140.04	2,451.9	2,414.4		37.45	65.478			
6,500.0	6,482.4	6,940.1	6,482.4	16.6	43.6	-140.04	2,451.9	2,414.3		37.53	65.330			
6,600.0	6,582.4	7,040.1	6,582.4	16.7	43.7	-140.04	2,451.9	2,414.1		37.82	64.829			
6,700.0	6,682.4	7,140.1	6,682.4	16.9	43.8	-140.04	2,451.9	2,413.8		38.11	64.330			
6,800.0	6,782.4	7,240.1	6,782.4	17.1	43.8	-140.04	2,451.9	2,413.5		38.41	63.834			
6,900.0	6,882.4	7,340.1	6,882.4	17.2	43.9	-140.04	2,451.9	2,413.2		38.71	63.341			
7,000.0	6,982.4	7,440.1	6,982.4	17.4	43.9	-140.04	2,451.9	2,412.9		39.01	62.851			
7,100.0	7,082.4	7,540.1	7,082.4	17.6	44.0	-140.04	2,451.9	2,412.6		39.32	62.364			
7,200.0	7,182.4	7,640.1	7,182.4	17.8	44.1	-140.04	2,451.9	2,412.3		39.62	61.881			
7,300.0	7,282.4	7,740.1	7,282.4	18.0	44.1	-140.04	2,451.9	2,411.9		39.93	61.401			
7,400.0	7,382.4	7,840.1	7,382.4	18.1	44.2	-140.04	2,451.9	2,411.6		40.24	60.925			
7,500.0	7,482.4	7,940.1	7,482.4	18.3	44.3	-140.04	2,451.9	2,411.3		40.56	60.453			
7,600.0	7,582.4	8,040.1	7,582.4	18.5	44.3	-140.04	2,451.9	2,411.0		40.88	59.984			
7,700.0	7,682.4	8,140.1	7,682.4	18.7	44.4	-140.04	2,451.9	2,410.7		41.19	59.519			
7,800.0	7,782.4	8,240.1	7,782.4	18.9	44.5	-140.04	2,451.9	2,410.4		41.52	59.058			
7,900.0	7,882.4	8,340.1	7,882.4	19.0	44.6	-140.04	2,451.9	2,410.0		41.84	58.601			
8,000.0	7,982.4	8,440.1	7,982.4	19.2	44.6	-140.04	2,451.9	2,409.7		42.17	58.147			
8,100.0	8,082.4	8,540.1	8,082.4	19.4	44.7	-140.04	2,451.9	2,409.4		42.49	57.698			
8,200.0	8,182.4	8,640.1	8,182.4	19.6	44.8	-140.04	2,451.9	2,409.0		42.83	57.253			
8,300.0	8,282.4	8,740.1	8,282.4	19.8	44.8	-140.04	2,451.9	2,408.7		43.16	56.812			
8,363.2	8,345.6	8,803.3	8,345.6	19.9	44.9	-140.04	2,451.9	2,408.5		43.37	56.536			
8,400.0	8,382.4	8,830.7	8,373.0	20.0	44.9	-140.04	2,451.9	2,408.4		43.48	56.394			
8,420.6	8,403.0	8,830.7	8,373.0	20.0	44.9	-140.04	2,452.1	2,408.5		43.52	56.347			

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11M
<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 25-11M	<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						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	Risk of Collision		
0.0	0.0	0.0	0.0	0.0	0.0	-138.35	34.1						
100.0	100.0	100.0	100.0	0.1	0.1	-138.35	34.1	33.9	0.18	191.990			
200.0	200.0	200.0	200.0	0.3	0.3	-138.35	34.1	33.5	0.63	54.363			
300.0	300.0	300.0	300.0	0.5	0.5	-138.35	34.1	33.0	1.08	31.664		CC, ES	
400.0	400.0	397.5	397.4	0.8	0.7	120.77	38.7	37.2	1.50	25.784			
449.2	449.0	445.0	444.7	0.9	0.9	122.65	44.3	42.6	1.72	25.707		SF	
500.0	499.7	493.7	493.1	1.0	1.0	124.24	52.2	50.2	1.96	26.675			
600.0	599.4	587.8	585.9	1.2	1.2	124.87	72.3	69.9	2.44	29.586			
700.0	699.1	679.2	674.8	1.5	1.6	123.95	98.4	95.4	2.95	33.303			
800.0	798.8	767.4	759.1	1.7	2.1	122.58	130.1	126.6	3.48	37.406			
900.0	898.5	851.8	838.2	2.0	2.6	121.19	167.3	163.3	4.01	41.725			
1,000.0	998.2	932.1	911.8	2.2	3.2	119.92	209.7	205.2	4.54	46.166			
1,100.0	1,097.9	1,010.7	982.0	2.5	3.8	118.79	256.8	251.7	5.10	50.379			
1,200.0	1,197.6	1,098.0	1,059.2	2.8	4.6	117.83	305.4	299.7	5.62	54.317			
1,300.0	1,297.3	1,185.3	1,136.5	3.0	5.4	117.13	354.0	347.8	6.16	57.465			
1,400.0	1,397.0	1,272.6	1,213.8	3.3	6.2	116.60	402.7	396.0	6.71	60.051			
1,500.0	1,496.6	1,359.9	1,291.1	3.6	6.9	116.19	451.4	444.1	7.26	62.203			
1,600.0	1,596.3	1,447.2	1,368.3	3.8	7.7	115.85	500.1	492.3	7.81	64.010			
1,700.0	1,696.0	1,534.5	1,445.6	4.1	8.5	115.58	548.8	540.4	8.37	65.547			
1,800.0	1,795.7	1,621.8	1,522.9	4.4	9.3	115.35	597.5	588.6	8.94	66.866			
1,900.0	1,895.4	1,709.1	1,600.1	4.6	10.1	115.15	646.3	636.8	9.50	68.010			
2,000.0	1,995.1	1,796.4	1,677.4	4.9	10.9	114.98	695.0	684.9	10.07	69.008			
2,100.0	2,094.8	1,883.8	1,754.7	5.2	11.7	114.84	743.8	733.1	10.64	69.886			
2,200.0	2,194.5	1,971.1	1,831.9	5.4	12.5	114.71	792.5	781.3	11.21	70.665			
2,300.0	2,294.2	2,058.4	1,909.2	5.7	13.3	114.60	841.3	829.5	11.79	71.360			
2,400.0	2,393.9	2,145.7	1,986.5	6.0	14.1	114.50	890.0	877.6	12.36	71.984			
2,500.0	2,493.6	2,233.0	2,063.7	6.2	14.9	114.41	938.8	925.8	12.94	72.547			
2,600.0	2,593.3	2,320.3	2,141.0	6.5	15.7	114.32	987.5	974.0	13.52	73.057			
2,700.0	2,693.0	2,407.6	2,218.3	6.8	16.5	114.25	1,036.3	1,022.2	14.09	73.522			
2,800.0	2,792.7	2,494.9	2,295.5	7.0	17.3	114.18	1,085.0	1,070.4	14.67	73.945			
2,900.0	2,892.4	2,582.2	2,372.8	7.3	18.1	114.12	1,133.8	1,118.5	15.25	74.334			
3,000.0	2,992.1	2,669.5	2,450.1	7.6	18.9	114.07	1,182.6	1,166.7	15.83	74.691			
3,100.0	3,091.8	2,756.8	2,527.3	7.8	19.7	114.01	1,231.3	1,214.9	16.41	75.020			
3,200.0	3,191.5	2,844.1	2,604.6	8.1	20.4	113.97	1,280.1	1,263.1	16.99	75.325			
3,300.0	3,291.2	2,931.4	2,681.9	8.4	21.2	113.92	1,328.8	1,311.3	17.58	75.609			
3,400.0	3,390.9	3,018.7	2,759.1	8.6	22.0	113.88	1,377.6	1,359.4	18.16	75.872			
3,500.0	3,490.5	3,106.0	2,836.4	8.9	22.8	113.84	1,426.4	1,407.6	18.74	76.117			
3,600.0	3,590.2	3,193.3	2,913.7	9.2	23.6	113.81	1,475.1	1,455.8	19.32	76.346			
3,700.0	3,689.9	3,280.6	2,990.9	9.4	24.4	113.77	1,523.9	1,504.0	19.90	76.561			
3,800.0	3,789.6	3,367.9	3,068.2	9.7	25.2	113.74	1,572.7	1,552.2	20.49	76.762			
3,900.0	3,889.3	3,455.2	3,145.5	10.0	26.0	113.71	1,621.4	1,600.4	21.07	76.951			
4,000.0	3,989.0	3,542.5	3,222.7	10.2	26.8	113.68	1,670.2	1,648.5	21.65	77.129			
4,100.0	4,088.7	3,629.8	3,300.0	10.5	27.6	113.66	1,719.0	1,696.7	22.24	77.297			
4,200.0	4,188.4	3,717.1	3,377.3	10.8	28.4	113.63	1,767.7	1,744.9	22.82	77.455			
4,300.0	4,288.1	3,804.4	3,454.5	11.1	29.2	113.61	1,816.5	1,793.1	23.41	77.604			
4,400.0	4,387.8	3,891.7	3,531.8	11.3	30.0	113.59	1,865.3	1,841.3	23.99	77.746			
4,500.0	4,487.5	3,979.0	3,609.1	11.6	30.8	113.57	1,914.0	1,889.4	24.58	77.880			
4,600.0	4,587.2	4,066.3	3,686.3	11.9	31.6	113.55	1,962.8	1,937.6	25.16	78.007			
4,700.0	4,686.9	4,153.6	3,763.6	12.1	32.4	113.53	2,011.6	1,985.8	25.75	78.128			
4,800.0	4,786.6	4,240.9	3,840.9	12.4	33.2	113.51	2,060.3	2,034.0	26.33	78.243			
4,900.0	4,886.3	4,328.2	3,918.1	12.7	34.0	113.49	2,109.1	2,082.2	26.92	78.352			
5,000.0	4,986.0	4,415.5	3,995.4	12.9	34.8	113.47	2,157.9	2,130.4	27.50	78.457			
5,100.0	5,085.7	4,502.8	4,072.7	13.2	35.6	113.46	2,206.6	2,178.5	28.09	78.556			
5,200.0	5,185.4	4,590.1	4,149.9	13.5	36.4	113.44	2,255.4	2,226.7	28.68	78.651			

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 25-11M
<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 25-11M	<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 25-20W - 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	5,285.1	4,677.4	4,227.2	13.7	37.2	113.43	2,304.2	2,274.9	29.26	78.741					
5,400.0	5,384.8	4,764.7	4,304.5	14.0	38.0	113.42	2,352.9	2,323.1	29.85	78.828					
5,500.0	5,484.5	4,852.0	4,381.7	14.3	38.8	113.40	2,401.7	2,371.3	30.44	78.910					
5,600.0	5,584.1	4,939.3	4,459.0	14.5	39.6	113.39	2,450.5	2,419.4	31.02	78.989					
5,700.0	5,683.8	5,029.1	4,538.5	14.8	40.4	113.38	2,499.2	2,467.6	31.62	79.044					
5,800.0	5,783.5	5,284.1	4,768.1	15.1	42.1	113.38	2,545.0	2,512.3	32.72	77.772					
5,900.0	5,883.2	5,556.1	5,020.6	15.3	43.6	113.45	2,584.7	2,550.9	33.82	76.414					
6,000.0	5,982.9	5,843.7	5,294.6	15.6	45.0	113.61	2,617.6	2,582.7	34.90	74.995					
6,072.3	6,055.0	6,060.2	5,504.8	15.8	45.8	113.77	2,636.9	2,601.3	35.65	73.963					
6,100.0	6,082.6	6,144.9	5,587.8	15.9	46.1	113.92	2,643.2	2,607.3	35.96	73.501					
6,200.0	6,182.5	6,457.1	5,896.4	16.1	46.9	114.35	2,660.3	2,623.4	36.94	72.024					
6,300.0	6,282.4	6,776.3	6,214.8	16.2	47.4	114.58	2,668.3	2,630.6	37.72	70.746					
6,370.6	6,353.0	6,914.6	6,353.0	16.3	47.5	-142.47	2,669.0	2,630.9	38.07	70.112					
6,400.0	6,382.4	6,944.0	6,382.4	16.4	47.5	-142.47	2,669.0	2,630.8	38.15	69.959					
6,470.6	6,453.0	7,014.6	6,453.0	16.5	47.6	-142.47	2,669.0	2,630.6	38.35	69.597					
6,500.0	6,482.4	7,044.0	6,482.4	16.6	47.6	-142.47	2,669.0	2,630.5	38.43	69.446					
6,600.0	6,582.4	7,144.0	6,582.4	16.7	47.6	-142.47	2,669.0	2,630.2	38.72	68.935					
6,700.0	6,682.4	7,244.0	6,682.4	16.9	47.7	-142.47	2,669.0	2,630.0	39.00	68.426					
6,800.0	6,782.4	7,344.0	6,782.4	17.1	47.7	-142.47	2,669.0	2,629.7	39.30	67.920					
6,900.0	6,882.4	7,444.0	6,882.4	17.2	47.8	-142.47	2,669.0	2,629.4	39.59	67.416					
7,000.0	6,982.4	7,544.0	6,982.4	17.4	47.8	-142.47	2,669.0	2,629.1	39.89	66.915					
7,100.0	7,082.4	7,644.0	7,082.4	17.6	47.9	-142.47	2,669.0	2,628.8	40.18	66.418					
7,200.0	7,182.4	7,744.0	7,182.4	17.8	48.0	-142.47	2,669.0	2,628.5	40.49	65.923					
7,300.0	7,282.4	7,844.0	7,282.4	18.0	48.0	-142.47	2,669.0	2,628.2	40.79	65.431					
7,400.0	7,382.4	7,944.0	7,382.4	18.1	48.1	-142.47	2,669.0	2,627.9	41.10	64.943					
7,500.0	7,482.4	8,044.0	7,482.4	18.3	48.1	-142.47	2,669.0	2,627.6	41.41	64.458					
7,600.0	7,582.4	8,144.0	7,582.4	18.5	48.2	-142.47	2,669.0	2,627.2	41.72	63.976					
7,700.0	7,682.4	8,244.0	7,682.4	18.7	48.3	-142.47	2,669.0	2,626.9	42.03	63.498					
7,800.0	7,782.4	8,344.0	7,782.4	18.9	48.3	-142.47	2,669.0	2,626.6	42.35	63.024					
7,900.0	7,882.4	8,444.0	7,882.4	19.0	48.4	-142.47	2,669.0	2,626.3	42.67	62.554					
8,000.0	7,982.4	8,544.0	7,982.4	19.2	48.5	-142.47	2,669.0	2,626.0	42.99	62.087					
8,100.0	8,082.4	8,644.0	8,082.4	19.4	48.5	-142.47	2,669.0	2,625.7	43.31	61.624					
8,200.0	8,182.4	8,744.0	8,182.4	19.6	48.6	-142.47	2,669.0	2,625.3	43.64	61.165					
8,300.0	8,282.4	8,844.0	8,282.4	19.8	48.7	-142.47	2,669.0	2,625.0	43.96	60.710					
8,358.6	8,341.0	8,902.6	8,341.0	19.9	48.7	-142.47	2,669.0	2,624.8	44.16	60.445					
8,400.0	8,382.4	8,924.6	8,363.0	20.0	48.7	-142.47	2,669.0	2,624.8	44.26	60.297					
8,420.6	8,403.0	8,924.6	8,363.0	20.0	48.7	-142.47	2,669.3	2,625.0	44.30	60.249					

# New Tech

## Anticollision Risk Report

<b>Company:</b>	Piceance Energy, LLC	<b>Local Co-ordinate Reference:</b>	Well Sup & Shep Fed 25-11M
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<b>Reference Well:</b>	Sup & Shep Fed 25-11M	<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

Reference Depths are relative to WELL @ 8098.0ft (Original Well Elev)  
Offset Depths are relative to Offset Datum  
Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: Sup & Shep Fed 25-11M  
Coordinate System is US State Plane 1983, Colorado Central Zone  
Grid Convergence at Surface is: -1.40°

