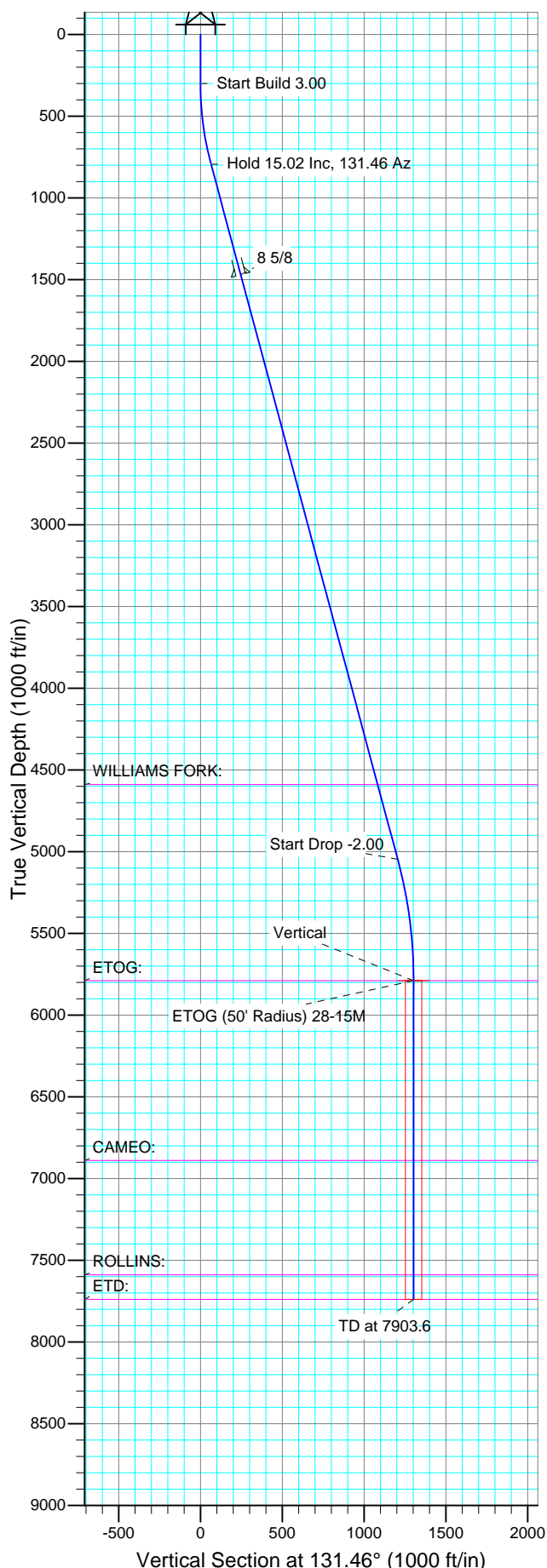




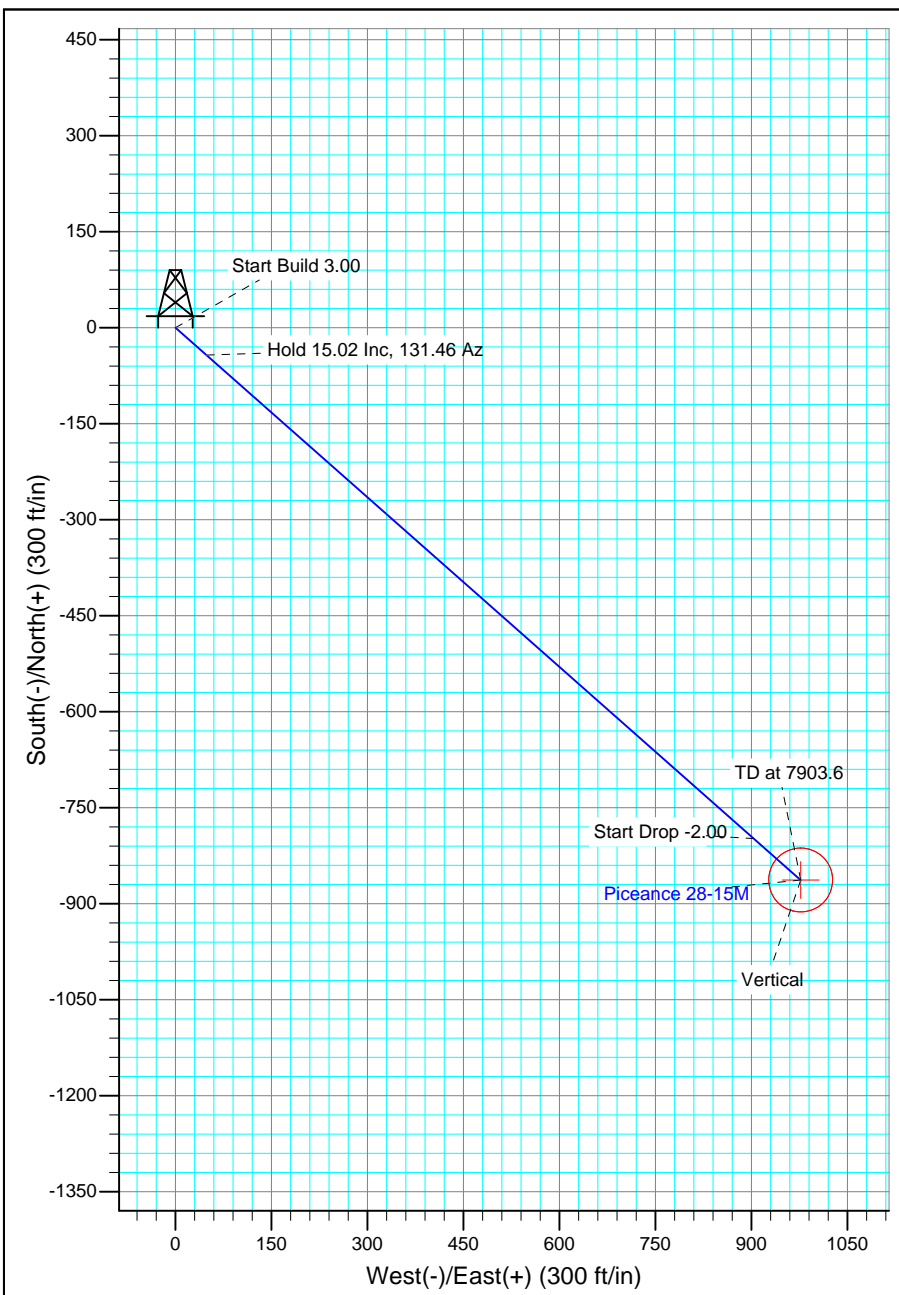
Well Name: Piceance 28-15M
Surface Location: Piceance 28-11 Pad
North American Datum 1983
US State Plane 1983 , Colorado Central Zone
Ground Elevation: 7580.0
WELL @ 7604.0ft (Original Well Elev)

Project: Mesa County, CO
Site: Piceance 28-11 Pad
Well: Piceance 28-15M
Wellbore: Wellbore #1
Design: Plan #1 10May14 kjs

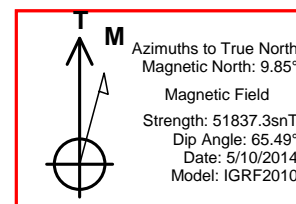
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1523208.50	2354924.80	39° 14' 51.828 N	107° 46' 41.088 W	



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	800.6	15.02	131.46	794.9	-43.2	48.9	3.00	131.46	65.2	
4	5202.8	15.02	131.46	5046.7	-798.4	903.7	0.00	0.00	1205.9	
5	5953.6	0.00	0.00	5789.0	-863.2	977.1	2.00	180.00	1303.7	ETOG (50' Radius) 28-15M
6	7903.6	0.00	0.00	7739.0	-863.2	977.1	0.00	0.00	1303.7	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4589.0	4728.9	WILLIAMS FORK:
5789.0	5953.6	ETOG:
6889.0	7053.6	CAMEO:
7589.0	7753.6	ROLLINS:
7739.0	7903.6	ETD:



Piceance Energy, LLC

Mesa County, CO

Piceance 28-11 Pad

Piceance 28-15M

Wellbore #1

Plan: Plan #1 10May14 kjs

Standard Planning Report - Geographic

11 May, 2014

New Tech

Planning Report - Geographic

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well Piceance 28-15M
Company:	Piceance Energy, LLC	TVD Reference:	WELL @ 7604.0ft (Original Well Elev)
Project:	Mesa County, CO	MD Reference:	WELL @ 7604.0ft (Original Well Elev)
Site:	Piceance 28-11 Pad	North Reference:	True
Well:	Piceance 28-15M	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 10May14 kjs		

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

Site		Piceance 28-11 Pad			
Site Position:		Northing:	1,523,237.48 ft	Latitude:	39° 14' 52.116 N
From:	Lat/Long	Easting:	2,354,931.19 ft	Longitude:	107° 46' 41.016 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	-1.44 °

Well	Piceance 28-15M					
Well Position	+N/-S	0.0 ft	Northing:	1,523,208.50 ft	Latitude:	39° 14' 51.828 N
	+E/-W	0.0 ft	Easting:	2,354,924.80 ft	Longitude:	107° 46' 41.088 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,580.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/10/2014	9.85	65.50	51,837

Design	Plan #1 10May14 kjs			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	131.46

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
800.6	15.02	131.46	794.9	-43.2	48.9	3.00	3.00	0.00	131.46	
5,202.8	15.02	131.46	5,046.7	-798.4	903.7	0.00	0.00	0.00	0.00	
5,953.6	0.00	0.00	5,789.0	-863.2	977.1	2.00	-2.00	0.00	180.00	ETOG (50' Radius) 2%
7,903.6	0.00	0.00	7,739.0	-863.2	977.1	0.00	0.00	0.00	0.00	

New Tech

Planning Report - Geographic

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well Piceance 28-15M
Company:	Piceance Energy, LLC	TVD Reference:	WELL @ 7604.0ft (Original Well Elev)
Project:	Mesa County, CO	MD Reference:	WELL @ 7604.0ft (Original Well Elev)
Site:	Piceance 28-11 Pad	North Reference:	True
Well:	Piceance 28-15M	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 10May14 kjs		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	1,523,208.50	2,354,924.80	39° 14' 51.828 N	107° 46' 41.088 W
200.0	0.00	0.00	200.0	0.0	0.0	1,523,208.50	2,354,924.80	39° 14' 51.828 N	107° 46' 41.088 W
300.0	0.00	0.00	300.0	0.0	0.0	1,523,208.50	2,354,924.80	39° 14' 51.828 N	107° 46' 41.088 W
Start Build 3.00									
400.0	3.00	131.46	400.0	-1.7	2.0	1,523,206.71	2,354,926.72	39° 14' 51.811 N	107° 46' 41.063 W
600.0	9.00	131.46	598.8	-15.6	17.6	1,523,192.49	2,354,942.03	39° 14' 51.674 N	107° 46' 40.864 W
800.0	15.00	131.46	794.3	-43.1	48.8	1,523,164.20	2,354,972.48	39° 14' 51.402 N	107° 46' 40.468 W
800.6	15.02	131.46	794.9	-43.2	48.9	1,523,164.10	2,354,972.59	39° 14' 51.401 N	107° 46' 40.467 W
Hold 15.02 Inclination									
1,000.0	15.02	131.46	987.5	-77.4	87.6	1,523,128.93	2,355,010.44	39° 14' 51.063 N	107° 46' 39.974 W
1,200.0	15.02	131.46	1,180.6	-111.7	126.4	1,523,093.65	2,355,048.41	39° 14' 50.724 N	107° 46' 39.481 W
1,400.0	15.02	131.46	1,373.8	-146.0	165.3	1,523,058.38	2,355,086.37	39° 14' 50.385 N	107° 46' 38.987 W
1,500.0	15.02	131.46	1,470.4	-163.2	184.7	1,523,040.74	2,355,105.35	39° 14' 50.215 N	107° 46' 38.740 W
8 5/8									
1,600.0	15.02	131.46	1,567.0	-180.3	204.1	1,523,023.10	2,355,124.34	39° 14' 50.046 N	107° 46' 38.493 W
1,800.0	15.02	131.46	1,760.2	-214.6	243.0	1,522,987.83	2,355,162.30	39° 14' 49.706 N	107° 46' 38.000 W
2,000.0	15.02	131.46	1,953.3	-249.0	281.8	1,522,952.56	2,355,200.27	39° 14' 49.367 N	107° 46' 37.506 W
2,200.0	15.02	131.46	2,146.5	-283.3	320.6	1,522,917.28	2,355,238.23	39° 14' 49.028 N	107° 46' 37.012 W
2,400.0	15.02	131.46	2,339.7	-317.6	359.5	1,522,882.01	2,355,276.20	39° 14' 48.689 N	107° 46' 36.518 W
2,600.0	15.02	131.46	2,532.8	-351.9	398.3	1,522,846.74	2,355,314.16	39° 14' 48.350 N	107° 46' 36.025 W
2,800.0	15.02	131.46	2,726.0	-386.2	437.1	1,522,811.46	2,355,352.13	39° 14' 48.011 N	107° 46' 35.531 W
3,000.0	15.02	131.46	2,919.2	-420.5	476.0	1,522,776.19	2,355,390.09	39° 14' 47.672 N	107° 46' 35.037 W
3,200.0	15.02	131.46	3,112.3	-454.8	514.8	1,522,740.91	2,355,428.06	39° 14' 47.332 N	107° 46' 34.544 W
3,400.0	15.02	131.46	3,305.5	-489.1	553.7	1,522,705.64	2,355,466.02	39° 14' 46.993 N	107° 46' 34.050 W
3,600.0	15.02	131.46	3,498.7	-523.4	592.5	1,522,670.37	2,355,503.99	39° 14' 46.654 N	107° 46' 33.556 W
3,800.0	15.02	131.46	3,691.8	-557.7	631.3	1,522,635.09	2,355,541.95	39° 14' 46.315 N	107° 46' 33.063 W
4,000.0	15.02	131.46	3,885.0	-592.1	670.2	1,522,599.82	2,355,579.92	39° 14' 45.976 N	107° 46' 32.569 W
4,200.0	15.02	131.46	4,078.2	-626.4	709.0	1,522,564.55	2,355,617.88	39° 14' 45.637 N	107° 46' 32.075 W
4,400.0	15.02	131.46	4,271.4	-660.7	747.8	1,522,529.27	2,355,655.85	39° 14' 45.298 N	107° 46' 31.582 W
4,600.0	15.02	131.46	4,464.5	-695.0	786.7	1,522,494.00	2,355,693.81	39° 14' 44.958 N	107° 46' 31.088 W
4,728.9	15.02	131.46	4,589.0	-717.1	811.7	1,522,471.27	2,355,718.28	39° 14' 44.740 N	107° 46' 30.770 W
WILLIAMS FORK:									
4,800.0	15.02	131.46	4,657.7	-729.3	825.5	1,522,458.72	2,355,731.78	39° 14' 44.619 N	107° 46' 30.594 W
5,000.0	15.02	131.46	4,850.9	-763.6	864.4	1,522,423.45	2,355,769.74	39° 14' 44.280 N	107° 46' 30.101 W
5,200.0	15.02	131.46	5,044.0	-797.9	903.2	1,522,388.18	2,355,807.71	39° 14' 43.941 N	107° 46' 29.607 W
5,202.8	15.02	131.46	5,046.7	-798.4	903.7	1,522,387.69	2,355,808.23	39° 14' 43.936 N	107° 46' 29.600 W
Start Drop -2.00									
5,400.0	11.07	131.46	5,238.8	-827.9	937.1	1,522,357.39	2,355,840.84	39° 14' 43.645 N	107° 46' 29.176 W
5,600.0	7.07	131.46	5,436.3	-848.7	960.7	1,522,335.93	2,355,863.94	39° 14' 43.439 N	107° 46' 28.876 W
5,800.0	3.07	131.46	5,635.4	-860.4	974.0	1,522,323.90	2,355,876.89	39° 14' 43.323 N	107° 46' 28.707 W
5,953.6	0.00	0.00	5,789.0	-863.2	977.1	1,522,321.09	2,355,879.91	39° 14' 43.296 N	107° 46' 28.668 W
Vertical @ ETOG - ETOG: - ETOG (50' Radius) 28-15M									
6,000.0	0.00	0.00	5,835.4	-863.2	977.1	1,522,321.09	2,355,879.91	39° 14' 43.296 N	107° 46' 28.668 W
6,200.0	0.00	0.00	6,035.4	-863.2	977.1	1,522,321.09	2,355,879.91	39° 14' 43.296 N	107° 46' 28.668 W
6,400.0	0.00	0.00	6,235.4	-863.2	977.1	1,522,321.09	2,355,879.91	39° 14' 43.296 N	107° 46' 28.668 W
6,600.0	0.00	0.00	6,435.4	-863.2	977.1	1,522,321.09	2,355,879.91	39° 14' 43.296 N	107° 46' 28.668 W
6,800.0	0.00	0.00	6,635.4	-863.2	977.1	1,522,321.09	2,355,879.91	39° 14' 43.296 N	107° 46' 28.668 W
7,000.0	0.00	0.00	6,835.4	-863.2	977.1	1,522,321.09	2,355,879.91	39° 14' 43.296 N	107° 46' 28.668 W
7,053.6	0.00	0.00	6,889.0	-863.2	977.1	1,522,321.09	2,355,879.91	39° 14' 43.296 N	107° 46' 28.668 W
CAMEO:									
7,200.0	0.00	0.00	7,035.4	-863.2	977.1	1,522,321.09	2,355,879.91	39° 14' 43.296 N	107° 46' 28.668 W
7,400.0	0.00	0.00	7,235.4	-863.2	977.1	1,522,321.09	2,355,879.91	39° 14' 43.296 N	107° 46' 28.668 W
7,600.0	0.00	0.00	7,435.4	-863.2	977.1	1,522,321.09	2,355,879.91	39° 14' 43.296 N	107° 46' 28.668 W

New Tech
Planning Report - Geographic

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well Piceance 28-15M
Company:	Piceance Energy, LLC	TVD Reference:	WELL @ 7604.0ft (Original Well Elev)
Project:	Mesa County, CO	MD Reference:	WELL @ 7604.0ft (Original Well Elev)
Site:	Piceance 28-11 Pad	North Reference:	True
Well:	Piceance 28-15M	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 10May14 kjs		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
7,753.6	0.00	0.00	7,589.0	-863.2	977.1	1,522,321.09	2,355,879.91	39° 14' 43.296 N	107° 46' 28.668 W
ROLLINS:									
7,800.0	0.00	0.00	7,635.4	-863.2	977.1	1,522,321.09	2,355,879.91	39° 14' 43.296 N	107° 46' 28.668 W
7,903.6	0.00	0.00	7,739.0	-863.2	977.1	1,522,321.09	2,355,879.91	39° 14' 43.296 N	107° 46' 28.668 W
TD at 7903.6 - ETD:									

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
ETOG (50' Radius) 28-1 - plan hits target - Circle (radius 50.0)	0.00	0.00	5,789.0	-863.2	977.1	1,522,321.09	2,355,879.91	39° 14' 43.296 N	107° 46' 28.668 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
1,500.0	1,470.4	8 5/8	8-5/8	8-5/8

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,053.6	6,889.0	CAMEO:			
4,728.9	4,589.0	WILLIAMS FORK:			
7,753.6	7,589.0	ROLLINS:			
7,903.6	7,739.0	ETD:			
5,953.6	5,789.0	ETOG:			

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
800.6	794.9	-43.2	48.9	Hold 15.02 Inclination
5,202.8	5,046.7	-798.4	903.7	Start Drop -2.00
5,953.6	5,789.0	-863.2	977.1	Vertical @ ETOG
7,903.6	7,739.0	-863.2	977.1	TD at 7903.6