

Wellname:	PA 431-27
Surface Casing Setting Depth:	2,944 ft
Bit Size:	8.75 in
Approximate Top of Mesaverde Formation:	5,438 ft
Casing Setting Depth	9,089 ft
Planned Top of Cement:	5,138 ft
Length of Cemented Annulus:	3,951 ft

Lead Production Cement Blend:

Density:	12.7 ppg
Yield:	1.66 ft ³ /sk
Water Requirement:	8.51 gal/sk

Tail Production Cement Blend:

Density:	13.5 ppg
Yield:	1.74 ft ³ /sk
Water Requirement:	13.01 gal/sk

Open Hole Capacity Factor:	0.054703 bbl/ft
-----------------------------------	-----------------

Annular Capacity to Planned	216.1 bbls lead
	bbls tail
	216.1 bbls total
	1213.5 ft ³ total
	731 sacks

	127.1 bbls lead
	207.6 bbls tail
	334.7 bbls total
Actual Cement Volumes Pumped	1879.2 ft ³ total
	skts lead
	skts tail
	1132 skts total

Percent of Excess Cement Pumped		
(Gauge Hole Calculated Volume Vs.	54.9	%
Actual Pumped Volume)		