

Piceance Energy, LLC  
Piceance Federal 28-18E  
Slot A-8  
Patterson 306 (22-ft KB)

API #: 05-077-10258-00  
NE/4 SW/4 S28/T9S/R93W/6th PM  
Mesa County, CO  
Date of diagram : 10/29/2015

Vertical datum

----- 7701' RKB Elevation

----- 7679' Pad Elevation

16" OD Conductor 82 -ft MD RKB  
(in 26" hole, grouted to ground level)

8-5/8" Shoe 1637 -ft MD RKB  
11" Hole 1647 -ft MD RKB

Formation	Prognosis
'G' Sand	3159 -ft MD RKB
Williams Fork	5212 -ft MD RKB
Top of Gas	6450 -ft MD RKB
Cameo	7550 -ft MD RKB
Base Cameo Coal	8208 -ft MD RKB
Rollins	8250 -ft MD RKB

Top of 20'  
Marker Joint 6423 -ft MD RKB

Top of 20'  
Marker Joint 7534 -ft MD RKB

4-1/2" Float Collar (PBSD)  
4-1/2" Float Shoe 8351 -ft MD RKB  
7-7/8" Hole TD 8437 -ft MD RKB  
8447 -ft MD RKB

Cementing details

8-5/8" 24# J55 STC Surface Csg	Lead	Tail
Density (ppg)	12.3	12.8
Volume (sx)	192	114
Yield (cf/sx)	2.45	2.17
Top (ft RKB)	Surface	1000
Bottom (ft RKB)	1000	1637
Returns (full or partial)	Full	Full

4-1/2" 11.6# I80 LTC Production Csg	Lead	Tail	Displacement
Density (ppg)	12.7	13.5	8.3 ppg
Volume (sx)	1068	446	130 bbls
Yield (cf/sx)	1.64	1.75	N/A
Est Top (ft RKB)	1022	6250	N/A
Est Bottom (ft RKB)	6250	8437	N/A
Returns (full or partial)	Full	Full	Full

Other Remarks : Surface - 21 Bbls of cement to surface.  
Production - 20 Bbls of Tuned Spacer