



NIGHTHAWK PRODUCTION LLC

Craig 15-34  
SW SE Sec 34, T13S, R55W  
LINCOLN COUNTY, COLORADO  
API No. 05-73-06316

ELEVATION  
R.B. 17'  
G.L. 5,064'  
KB 5,081'  
BHT 175 °  
Spud date: 10/18/08  
Completion 12/04/08

Lat: 38.86828  
Long: 103.54032  
1,086' FSL 2,566' FEL

Not to scale

Prepared By: Harold Mayland  
Date: 8/14/2013

Geological tops:			
D Sand	3210	Marmaton	6153
Morrison	3602	Cherokee	6396
Baine	4380	Atoka	6643
Stone Corra	4665	Morrow	7037
Wolfcamp	4842	Mississppia	7274
LKC	5750	Arbuckle	7543

Drilled hole 17 1/2"  
**SURFACE CSG: 13 3/8" 54.5# K55 ST&C @ 363'**  
Cmt: 325 sks, circ to surface.

Drilled hole 12 1/2"  
**Intermediate CSG: 8 5/8" 32# J55 @ 2,715'**  
Cmt: 375 sks, circ to surface.

Drilled hole 7 7/8"  
**Production Casing: 4 1/2" 11.6# N80 LT&C @ 7,396'**  
1st Stage - 435 sks, did not circ to surface.  
2nd Stage - 115 sks, 60/40 POZ

Production Tubing  
TOC 2nd stage @2,650 (CBL)  
Very ratty

Port Collar @ 3,493'

4 1/2" 11.6# N80	
I.D.	4.000
Drift	3.875
Burst	7,780
Lin ft/bbl	64.34
BBL/linft	0.0155

2 3/8" J55 EU 8RD	
I.D.	1.995
Drift	1.901
Burst	7,700
Lin ft/bbl	258.65
BBL/linft	0.0039

2 3/8" X 4 1/2"	
I.D.	1.995
Drift	1.901
Burst	7,700
Lin ft/bbl	99.37
BBL/linft	0.0101

Avg jr length 32.74

	Qty	Length	Depth in hole
Tubing			
Estimated			
KB		17.00	17.00
			17.00
2 3/8" EU 8RD J55 tbg	218	6,356.10	6,373.10
TAC			6,373.10
2 3/8" EU 8RD J55 tbg			6,373.10
Seating Nipple		1.10	6,374.20
Mud anchor			6,374.20
			6,374.20
			6,374.20
Total Joints	218		
Rods			
Polish rod 1 1/2" x 22'	1		0.00
Pony rod 2' x 7/8"	1	2.00	2.00
Pony rod 4' x 7/8"			2.00
Pony rod 6' x 7/8"			2.00
Pony rod 8' x 7/8"			2.00
7/8" rods	73		1,825.00
3/4" rods	180		4,500.00
1 1/2 K bars			0.00
Stabiizer pony rod 7/8" x 2'	1	3	3.00
2 1/2" x 1 1/2" x 20' RWBC pump	1		6,336.00

TOC 5,570' (CBL)

Reperforated Cherokee "A"  
6404-6410' 3 SPF  
  
Cherokee "A", "B", Tebo  
6392-6402' 2 SPF 180 degrees  
6437-6464'  
6504-6518'  
6546-6554' #####  
6564-6574'

U and L Atoka  
6795-6930' 1 shot every 3'  
45 holes

Keyes  
7214-7222' 3 SPF  
7262-7268'

CIBP @6,432'

PBTD  
Collar @ 7,355'  
Shoe @ 7,396'

TD 7,616'

NOTE:  
12/23/12 Acid frac L Atoka 6795-6930' w/10,000 gal 15% HCL and 540 bbla slick wtr.  
03/20/09 Frac 6795-6930' w/61,440# 20/40 sand, 1150 bbls Dyna-Aqua-1 gelled wtr.  
05/12/09 Frac 6392- 6574' w/100,089# 20/40 sand, 1795 bbls Dyna-Aqua-1 gelled wtr.  
05/07/09 Set Composite BP @6780', perf Cherokee 6392-6574'  
06/05/09 Acidize 6392-6574' w/1000 gal 15% HCL  
12/04/09 Set CR @ 6350'  
12/10/09 Perf 3775', Squeeze 6392'-74' w/ 150 sks cmt.  
Set CR @ 3750'  
12/14/09 Pumped 100 sks cmt, squeezed 3775'  
12/15/09 Drill out CR @ 3750'  
12/17/09 Drill out CR @ 6350'  
06/23/11 Perf Keyes 7262-68', 6/27/11 perf Keyes 7214-22'  
06/28/11 Set CIBP @ 6432' w/ 1 sk cmt.  
06/28/11 Perf Cherokee "A" 6404-10'