



NIGHTHAWK PRODUCTION LLC  
Jolly Ranch 4-13  
NW NW Sec 13, T12S, R56W  
LINCOLN COUNTY, COLORADO  
API No. 05-73-06324

ELEVATION  
R.B. 17'  
G.L. 5,317'  
KB 5,334'  
BHT 165 °  
Spud date: 0/8/13/08  
Comp date: 11/20/08  
640' FNL 660' FWL  
Lat: 39.00899  
Long: 103.62530

Not to scale

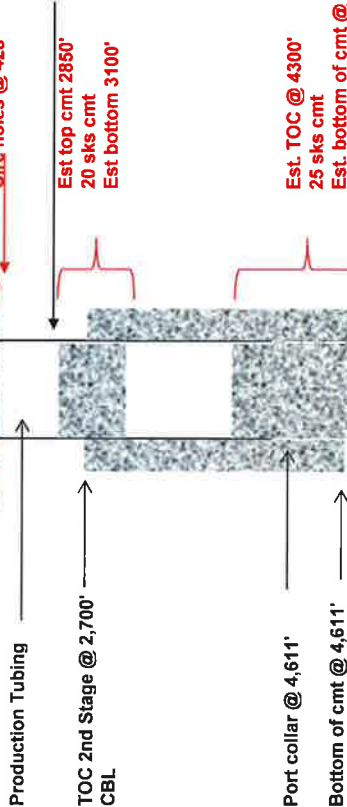
Prepared By: Harold Mayland  
Date: 1/3/2013

Geological tops:  
Dakota 2946'  
Stone Corral 5356'  
Wolfcamp 5618'  
Virgil 6303'  
Shawnee 6384'  
LKC 6489'

Marmaton 6874'  
Cherokee 7140'  
Atoka 7353'  
Morrow 7770'  
St. Louis 8049'

17 1/2" hole  
SURFACE CSG: 13 3/8" 54.5# H40 ST&C @ 365"  
Cmt: 350 sks  
Cmt to surface

7 7/8" hole  
Production Casing: 4 1/2" 11.6# N80 LT&C @ 8,255'  
1st stage: 300 sks did not circ to surface  
2nd stage 265 sks



4 1/2" 11.6# N80	2 3/8" J55 EU 8RD	2 3/8" X 4 1/2"
I.D. 4.000	I.D. 1.995	
Drift 3.875	Drift 1.901	
Burst 7,780	Burst 7,700	
Lin ft/bbl 64.34	Lin ft/bbl 258.7	Lin ft/bbl 99.37
BBL/linft 0.0155	BBL/linft 0.004	BBL/linft 0.0101

TOC 6,105' 1st stage

NOTE:  
10/17/08 Lower Atoka, Acidize w/1000 gal 15% HCL  
11/05/08 Frac Lower Atoka 52,000# 40/70 sand, 5,625#  
20/40 resin coated sand, 6,512 bbls slick wtr.  
05/12/09 Set Flow thru Composite BP @ 7540' (drilled out)  
Perf 7,338-7,500  
05/13/09 Acidize w/1500 gal HCL, 7338-7500'  
Frac w/29,410# 20/40 sand  
06/09/09 Set Composite BP @ 7,330' (drilled out 2-27-10),  
Perf 7,216-7,317'  
06/12/09 Acidize w/1000 gal 15% HCL 7216-7317'  
06/18/09 Frac 7216' - 7,317' w/67,500# sand  
02/24/10 Cmt squeeze perfs 7216-7310' w/150 sks.  
03/31/10 Perf 7566-7670' & 7610-26' & 7566-96'.  
4/2/2010 Acidize 7566-7670' w/1000 gal 15% HCL  
04/03/10 Communications between Lower Atoka and  
squeezed Upper Atoka.  
04/12/10 Acidize perfs 7566-70' w/10,000 gal 15% HCL  
and 370 bbls wtr.  
08/31/10 Set CIBP @ 7,330'  
09/01/10 Squeeze w/150 sks cmt 7,216-7,317'  
09/08/10 Set CIBP @ 7,270', Perf 7,223'-32', 8 SPF, stim  
w/gas gun.  
09/13/10 Acidize 7,223-32' w/1500 gal 15% HCL.  
09/15/10 Perf 7,145'-49', stim w/gas gun.  
09/20/10 Set Composite BP @ 7130'. Marmanton "B" Perf  
7070'-72' & 7,064'-66'  
09/22/10 Set Composite BP @ 7,060', Perf Marmaton 7,046'-48'  
09/25/10 Acidize 7,046'-48' w/500 gal 15% HCL  
06/09/11 Try to drill plugs, lost circ, Pumped 1675# Magna fiber.  
Unable to circ, lost 400 bbls wtr.  
05/17/12 Drilled out CBP @ 7,060', 7,130', 7,210'  
05/29/12 Ran RST log

Marmaton "B" reperf  
7046-7048'  
Marmaton "B"  
7064-7066' No treatment  
7070-7072' (Gas Gun)

Cherokee "A"  
7145-7149'  
No treatment (gas gun)

Cherokee "C"  
7223-7232'

Tobo  
7216-7234'  
7240-7244'  
7272-7282'  
7310-7317'

U Atoka  
7338-7345' 7434-7442'  
7388-7396' 7468-7475'  
7403-7413' 7492-7500'  
L Atoka  
7566-7572' 7638-7642'  
7610-7613' 7648-7650'  
7623-7626' 7654-7656'  
7629-7633' 7666-7670'

Open Atoka Perfs  
7556-7559' 7608-7610'  
7576-7579' 7620-7623'  
7592-7593' 3 SPF

Est. TOC @ 6980'  
5 sks cmt

Cement  
Retainer @ 7025'

Estimate cmt  
bottom 7232'  
25 sks cmt

CIBP @ 7,270'

CIBP @ 7,330'

PBTD 8,215'  
Collar @ 8,215'  
Shoe @ 8,254'

TD 8,343'