



NIGHTHAWK PRODUCTION LLC

Big Sky 14-11  
SE SW Sec 11, T6S, R54W  
LINCOLN COUNTY, COLORADO  
API No. 05-73-06559-00

Prepared By: Bill McKnab  
Date: 2/27/2014

ELEVATION  
R.B. 5229'  
G.L. 5214'  
KB 15'  
BHT  
BHP  
Spud date: 11/07/13  
TD date: 11/26/13  
Completion 01/29/14

Lat: 39.537660  
Long: -103.409260  
658' FSL 2127' FWL

Production Tubing

Top of Cement @

Not to scale

Geological tops:			
Niobrara	3687	Cherokee	7405
Dakota	4577	Atoka	7613
Stone Correl	5974	Morrow	7860
Wolfcamp	6185	Spergen	8075
LKC	6888	Simpson	8190
Marmaton	7216	Granit Was	8305

Drilled hole 12 1/4"  
SURFACE CSG: 8 5/8" 24# J55 ST&C @ 330'  
Cmt: 122 sks class "G" , 14# 1.54 yield

Drilled hole 7 7/8"  
Production Casing: 5 1/2" 17# N80 LT&C @ 8,376'  
Cmt: Lead: 1015 sks. 12 PPG, 1.80 yield  
Cmt: Tail: 300 sks. 13 PPG 1.89 yield

5 1/2" 17# J55		2 7/8" J55 EU 8RD		2 7/8" X 5 1/2"	
I.D.	4.892	I.D.	2.441		
Drift	4.767	Drift	2.347		
Burst		Burst	7,260		
Lin ft/bbl	43.01	Lin ft/bbl	172.7500	Lin ft/bbl	65.71
BBL/linft	0.0232	BBL/linft	0.00579	BBL/linft	0.0152

TUBING	Qty	Length	Depth in hole
Avg Jt length		32.50'	
KB difference		14.00'	14.00'
Stretch		2.20'	16.20'
2 7/8" EU 8RD J55 tbg	243	7,896.73'	7,912.93'
TAC		2.70'	7,915.63'
2 7/8" EU 8RD J55 tbg	6	194.94'	8,110.57'
Seating Nipple		1.10'	8,111.67'
2 7/8" X 3' Perforated pup jt			8,111.67'
2 7/8" EU 8RD J55 tbg	1	32.50'	8,144.17'
2 7/8" X 6' Perforated pup jt		6.20'	8,150.37'
2 7/8" X 2 3/8" X over		0.70'	8,151.07'
2 3/8" TXN nipple 1.875" 1.791 No go		1.10'	8,152.17'
2 3/8" X 8' pup jt		7.73'	8,159.90'
2 3/8" tap bull plug.		0.70'	8,160.60'
Total Jts	250		
Rods			
Polish Rod	1 1/2" x 30' w/1 3/4" x 16' Liner		1
Pony rod	1" x 4'		1
Pony rod	1" x 6'		1
Pony rod	1" x 8'		1
1" Rods	108 EL		108
3/8" Rods	118 MMS		118
3/4" Rods	83 S-88		83
1 1/2" K-Bars			12
Pony rod	1" x 2'		1
Pump	2 1/2" x 2" x 26" RHWBC BNC 2 Stg		

NOTE:  
12/02/13 Run GR-CBL, PBTD: 8,288', BHT: 210°F  
12/16/13 Perf Spergen 8,113' - 8,134'  
12/20/13 Acidize w/50 bbls water w/BC-1 Asphaltine Solvent,  
3000 gals 7 1/2% Acetic Acid  
12/28/13 Squeeze perms w/50 sx Class H cement  
01/03/14 Drill out, test squeeze to 1000 psig - okay  
01/04/14 Perf Spergen 8,114' - 8,124'  
01/08/14 Acidize w/15 bbls 7 1/2% Acetic followed by 15 bbls  
2% KCl w/BC-1 Asphalteen Solvent  
01/23/14 Pump 114 bbls heated lease crude displace w/prod water

Cheyenne  
4,872'-4,876'

Morrison  
4,902'-4,924'

Shawnee  
6,770'-6,774'

LKC  
6,893'-6,900'  
6,904'-6,908'

Marmaton  
7,244'-7,248'  
7,254'-7,257'

Mississipan  
8,028'-8,032'

Spergen  
8,114'-8,124' Reperforated  
8,113'-8,134' squeezed off

PBTD @ 8,288'  
Collar @ 8,289'

Shoe @ 8,376'

TD 8,400'