

# NIGHTHAWK PRODUCTION LLC

Big Sky 13-11  
SW SW Sec 11, T6S, R54W  
LINCOLN COUNTY, COLORADO  
API No. 05-73-06560-00

Prepared By: Harold Mayland  
Date: 2/27/2014

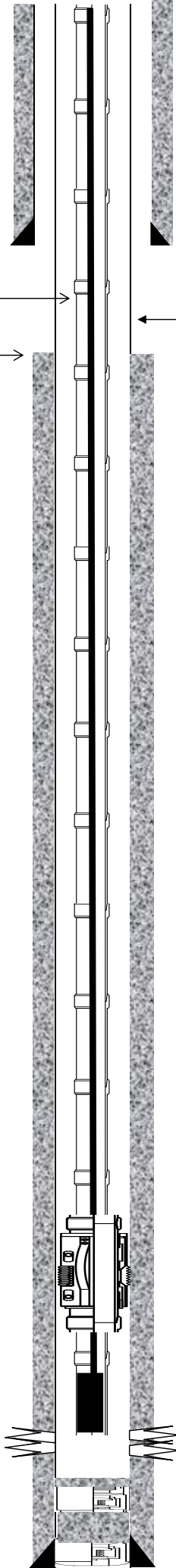
**ELEVATION**  
R.B. 5,235  
G.L. 5,220  
KB 15'  
BHT  
BHP  
Spud date: 12/17/13  
TD date: 01/22/14  
Completion 02/10/14

Lat: 39.537930  
Long: -103.41470  
774' FSL 657' FWL

Production Tubing

Top of Cement @

Not to scale



**Geological tops:**

Niobrara	3651	Cherokee	7412
Dakota	4599	Atoka	7619
Stone Correl	5979	Morrow	7853
Wolfcamp	6190	Spergen	8063
LKC	6894	Simpson	8181
Marmaton	7230	Granite Wa	8288

Drilled hole 12 1/4"

**SURFACE CSG: 8 5/8" 24# J55 ST&C @ 338'**

Cmt: 120 sks class "G", 14# 1.54 yield  
Cmt to surface.

Drilled hole 7 7/8"

**Production Casing: 5 1/2" 17# N80 LT&C @**

Cmt: Lead: 979 sks. TXI 12 PPG, 1.80 yield  
Cmt: Tail: 273 sks. TXI 13 PPG 1.89 yield  
100 bbls Cmt to surface

**5 1/2" 17# J55**

I.D.	4.892
Drift	4.767
Burst	
Lin ft/bbl	43.01
BBL/linft	0.0232

**2 7/8" J55 EU 8RD**

I.D.	2.441
Drift	2.347
Burst	7,260
Lin ft/bbl	172.7500
BBL/linft	0.00579

**2 7/8" X 5 1/2"**

Lin ft/bbl	65.71
BBL/linft	0.0152

	Qty	Length	Depth in hole
<b>Tubing</b>		<b>Avg Jt length</b>	<b>32.53</b>
KB difference		14.00	14.00
Stretch		2.20	16.20
2 7/8" EU 8RD J55 tbg	242	7,872.22	7,888.42
TAC		2.70	7,891.12
2 7/8" EU 8RD J55 tbg	6	195.19	8,086.31
Seating Nipple		1.10	8,087.41
2 7/8" EU 8RD J55 tbg	1	32.50	8,119.91
2 7/8" X 6' perf pup jt		6.20	8,126.11
			8,126.11
2 7/8" X 2 3/8" X over		0.70	8,126.81
2 3/8" TXN nipple 1.875" 1.791 No go		1.10	8,127.91
2 3/8" X 8' pup jt		7.73	8,135.64
2 3/8" tap bull plug.		0.70	8,136.34
<b>Total Jts</b>	<b>249</b>		
<b>Rods</b>			
Polish rod 1 1/2" x 30'	1		
Pony rod 4' x 1"	1		
Pony rod 6' x 1"	1		
Pony rod 8' x 1"	1		
7/8" rods MMS	125		
3/4" rods MMS	183		
1 12" wt bars Grade C	12		
1" X2' pony rod	1		
2 1/2" x 2" X 26" RWBC Brass Nicarb barrel 230" Max stroke			
2 stage			

**NOTE:**

01/31/14 Perforate 8,123'-8,043'

Spergen  
8,103'-8,124'

PBTD @  
Collar @

Shoe @

TD 8,290'