



NIGHTHAWK PRODUCTION LLC

Monarch 10-15
NW SE Sec 15, T8S, R55W
LINCOLN COUNTY, COLORADO
API No. 05-73-06699-00

Prepared By: Harold Mayland
Date: 11/2/2015

ELEVATION
R.B. 5,576
G.L. 5,561
KB 15'
BHT 204 °
BHP 2660
Spud date: 09/19/15
TD date: 09/30/15
Completion

Surface location
Lat: 39.350320
Long: -103.536920
1805' FSL 2410' FEL

Top of Cement @ 4,097'

Production Tubing

Not to scale

| | | | |
|------------------|------|----------|------|
| Geological tops: | | | |
| Niobrara | 3651 | Cherokee | 7608 |
| Dakota | 4729 | Atoka | 7825 |
| Stone Correl | 6128 | Morrow | 8024 |
| Wolfcamp | 6273 | St Louis | 8130 |
| LKC | 7164 | Spergen | 8233 |
| Marmaton | 7328 | Simpson | 8314 |

Drilled hole 12 1/4"
SURFACE CSG: 8 5/8" 24# J55 ST&C @ 471'
Cmt: 167 sks class "A" , 14.2# 1.54 yield
7 bbls cmt to surface

Drilled hole 7 7/8"
Production Casing: 5 1/2" 17# N80 LT&C @ 8,592'
Cmt: Lead: 1054 sks 12 TXI. 12 PPG, 1.80 yield
Cmt: Tail: 315 sks 13TXI. 13 PPG 1.89 yield

| | |
|----------------|--------|
| 5 1/2" 17# N80 | |
| I.D. | 4.892 |
| Drift | 4.767 |
| Burst | 7,740 |
| 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 |

| TUBING | Qty | Length | Depth in hole |
|-------------------------------|---------------------------------|-----------|---------------|
| Avg Jt length | | | |
| KB difference | | 12.00' | 12.00' |
| Stretch | | 2.50' | 14.50' |
| 2 7/8" EU 8RD J55 tbg | 241 | 7,818.89' | 7,833.39' |
| TAC | | 2.67' | 7,836.06' |
| 2 7/8" EU 8RD J55 tbg | 6 | 194.52' | 8,030.58' |
| Seating Nipple | | 1.10' | 8,031.68' |
| 2 7/8" X 4' Perforated pup jt | | 4.10' | 8,035.78' |
| 2 7/8" EU 8RD J55 tbg | 1 | 32.36' | 8,068.14' |
| 2 3/8" tap bull plug. | | 0.50' | 8,068.64' |
| | | | 8,068.64' |
| Total Jts | 248 | | |
| Rods | | | |
| Polish Rod | 1 1/2" x 30' w/1 3/4" x 16' Lir | 1 | |
| Pony rod | 7/8" X 8' MMS | 1 | |
| Pony rod | 7/8" X 6' MMS | 1 | |
| Pony rod | 7/8" X 4' MMS | 1 | |
| 7/8" Rods | MMS | 128 | |
| 3/4" Rods | MMS | 186 | |
| K-Bars | | 6 | |
| Pony rod | 1" x 2' | 1 | |
| Pump | 2 1/2" x 1 1/2" x 20' RWBC | | |

NOTE:
10/14/15 Perf 7,930'-7,950' 6 SPF
10/17/15 Perf 7,958'-7,984' 6 SPF
10/20/15 SI f/BHP

Atoka
7,930'-7,950'
7,958'-7,984'

PBTD @ 8,506'
Collar @ 8,503'

Shoe @ 8,592'

TD 8,640'