

Coachman / Cynosure Energy, LLC

Well Bore Schematic

No scale

Well Pad **Federal 21B**
 Well Name **Federal 14/15-8-21**
 Diagram Date **3-Jul-15** **KEO**
 Additions/Revisions
 Surface Location **SENE - 2348' FNL & 705' FEL**
 Sec-T-R **Section 21-T6S-R91W**
 Field **Kokopelli**
 County **Garfield**
 State **Colorado**

API No. **05-045-22451**
 Lease No.
 Unit No.
 G.L. Elevation **6932'**
 K.B. Elevation **6,955'**
 BHT **161 F**
 Spud **12-Dec-14**
 TD **18-Dec-14**
 Rig Release **20-Dec-14**
 Conductor **120' of 20"**

Surface Casing: **9-5/8", 36#, J-55, ST&C set @ 1512', ___ jts.,**

- Cement Job: Spacer 8.34 lbs./gal (20 bbls); Lead Slurry 12.3 lbs./gal, 2.45 Yield, 260 sacks Varicem neat, followed by 160 sxs Varicem Tail Slurry, 12.8 ppg, 2.18 Yield .
- TOC: Cement to Surface, circ., 20 Bbls. Cement with Halliburton on 12-14-14

Marker Joints:

on Pipe Tally **CBL**
1) 5468-5490' **5464-5486'**

Production Casing: **4-1/2", 11.60#, I-80, LT&C set @ 7969' KB, FC at 7925'**

- Cement 12-20-14 w/ Halliburton - 20 Bbls spacer, 11.5 ppg, Yield 2.28, 300 Sacks Scavenger Slur. 1.83 yield Versacem Lead cement and 900 sxs, Expandacem Tail, 13.1 ppg, 1.67 yield.
- Bumped Plug w/ 3970 to 4316 psi, Design TOC was 1500', Lost Returns while cementing, had lo:
- TOC: 5690' from Halliburton 2-14-15 CBL. Temp. recorded was 220F

WF @4540'

TO6@5073'

4-1/2" 11.60#/ft, I-80, LTC Casing Mechanical Properties &	ID: 4.000" Drift = 3.875"	
Pipe Yield Load 267,000 lbs. at 100%		
Connection Yield Load 201,000 lbs. at 100%		
Pipe/Connection Burst 7,780 psi at 100%		
Pipe/Connection Collapse 6,350 psi at 100%		
	0.6528 GAL/LF	
	0.0155 BBL/LF	
	0.0872 CF/LF	

TOC @ 5690'

Stage 2 -

Stage 1 -

PBTD
 FLOAT COL.
 SHOE
 TD

7826' KB (Tagged w/ WL on 2-14-15)
 7935'
 7969'
 8033' with 8-3/4" hole

13-1/2"
 surface hole

LC Zones
 5580-6059'