



AFE No:

**Procedure Sheet – Hobbs District**  
PLEASE COMMENCE WITH WORK PER PROCEDURE

**Quail Ridge 32 State 2**

Recomplete Well in 1<sup>st</sup> Bone Spring

**HOBBS OCD**  
**MAR 15 2017**  
**RECEIVED**

Current Well Data:

KB 25' above GL  
TVD/PBTD 13,682'/13,633'  
KOP N/A Vertical Well  
Perfs Morrow (13,205' - 13,566')

Casing

Size	Weight	Grade	Thread	Set at	Cmt	Remarks
13-3/8"	48#	H-40	ST&C	437'	390 sx	cmt circ
9-5/8"	40#	H-40	ST&C	3225'	980 sx	cmt circ
5-1/2"	17#	P-110	ST&C	13675'	3045sx	TOC 3000'

Tubing

Quantity	Description	Length	Setting Depth
1	KB	25.00	25.00
1	2-3/8" L-80 Tubing	31.74	56.74
1	2-3/8" L-80 Tubing Sub	2.00	58.74
413	2-3/8" L-80 Tubing	13379.68	13438.42
1	On/Off Tool	1.58	13440.00
1	AS-1 X Re-settable packer	7.62	13447.62
1	API SN	1.10	13448.72

Packer AS-1X Resettable Packer @ 13,447'

Procedure:

**Max Treating Pressure = 8,500 psi**

1. Hold operational safety meeting on location; discuss all risk and potential dangers.
2. MIRU Pulling unit.
3. Release 5-1/2" AS1X Packer and TOH.
4. LD Packer. PU 4-3/4" bit and 5-1/2" casing scraper. RIH to 13,200'.
5. TOOH, LD bit and scraper. PU 5-1/2" CIBP.
6. TIH to 13,195' and set CIBP.
7. Release from the CIBP and PU 1 joint and circulate well w/ 375 bbls of 2% KCL.



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8. RIH to 13,194' and spot balanced plug w/ 50 sxs of class H cement on top of CIBP also covering the top of the Morrow formation. **Abandoning Morrow.**
9. PU tbg to  $\pm$  12,450'. Reverse Circulate 9 bbls of mud-laden fluids. Flush with 217 bbls of 2% KCL, leaving mud fluids at EOT in the wellbore.
10. Allow proper time for cement to set up.
11. TIH and tag cement plug @  $\pm$  12,549'.
12. PU tbg to 12,178' and spot balanced plug w/ 50 sxs of class H cement across the top of the Strawn formation.
13. PU tbg to  $\pm$  11,500'. Reverse circulate 14 bbls of mud-laden fluids. Flush w/ 194 bbls of 2% KCL, leaving mud fluids at EOT in the wellbore.
14. Allow proper time for cement to set up.
15. TIH and tag cement plug @  $\pm$  11,532'.
16. PU tbg to 10,944' and spot balanced plug w/ 35 sxs of class H cement across the top of the Wolfcamp formation. **Abandoning Wolfcamp.**
17. PU tbg to  $\pm$  10,300'. Reverse circulate 61 bbls of 2% KCL.
18. TOOH w/ 2-3/8" tbg and LD.
19. Pressure test casing to **Max Treating Pressure: 8,500 psi**. Hold for 30 minutes.
  - a. Bleed off pressure after 30 minutes.
20. RU WL. RIH w/ Select fire perforating guns and a gamma ray gun.
  - a. Correlate gamma ray back to Halliburton "Cement Bond, Gamma Ray, Collar Log" dated 05-12-06 @ 1500
21. Perforate 9,473' – 9,572' w/ 3 SPF, 0.41" EH, and 120-degree phasing.
22. RD WL. RU Frac Crew and pressure test lines to **MTP: 8,500 psi**.
23. Frac the perforated interval w/ 300,000 lbs of proppant and 170,500 gals of slickwater with 17# Linear Gel and 17# XL Borate.
24. RU flowback equipment in such a way that production can be turned to the battery once hydrocarbons are detected.
25. Flowback well until it dies (if at all).
26. Set pumping unit. RIH w/ tbg and rods.
27. Return to production.



13-3/8" 48# H-40 STC @ 437'; cmt  
w/390 sx in 2 stages (240 + 150) to  
surface

9-5/8" 40# H-40 STC @ 3,225'; cmt  
w/980 sx in 2 stages (780 + 200) to  
surface

TOC @ 3,000' CBL

415 jts 2-3/8" 4.7# L-80 Tbg

DV Tool @ 9,017'

5-1/2" 17# P-110 STC to 13,675'; cmt  
w/3,045 sx in 2 stages (1,980 + 1,065);  
TOC @ 3,000' TS

PBTD @ 13,633' (CIBP)  
TD @ 13,682'

Cimarex Energy Co. of Colorado  
Quail Ridge 32 State 2

API: 30-025-37703 Property: 309617-110.01

1,980' FSL & 1,980' FWL

Sec. 32, T-19S, R-34E, Lea Co., NM

GL: 3,651' KB: 3,676' (25') Field: Quail Ridge  
S.Hanford 1/13/2017

# Current

Morrow Perfs: 13,205'-224'

Morrow Perfs: 13,276'-338' 87 holes

Morrow Perfs: 13,502'-566' 67 holes

AS-1 X Re-settable Pkr @ 13,447'

CIBP @ 13,633