Form 3160-5 (November 1994)

UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

OCD-HOBBS

FORM APPROVED OMB No. 1004-0135

Expires July 31, 1996

Lease Serial No.

LC-069276

| SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals. |
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| N TRIPLICATE - Other instructions on reverse side |

| Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals. | | | | ± | an, Allottee or Tril | t, Name and/or No |
|---|--|-----------------------------|---------------------------|---|--------------------------------|--------------------|
| SUBMIT IN TRI | PLICATE - Other instructio | ns on reverse side | | 7. 11 01110 | or CA/Agreemen | it, Name and/or No |
| . Type of Well Oil Well Gas Well | Other | | | 8. Well N | lame and No. | |
| Name of Operator | | | ······· | Hudso | n 31 Federal | No. 4 |
| Cimarex Energy Co. of Colorado |) Y | | | 9. API W | eli No. | / |
| a. Address | | 3b. Phone No. (includ | e area code) | 30-025 | 5-34301 Y | / |
| 5215 N. O'Connor Blvd., Ste. 15 | d., Ste. 1500; Irving, TX 75039 972-401-3111 | | | 10. Field and Pool, or Exploratory Area | | |
| Location of Well (Footage, Sec., T., R., M., | or Survey Description) | | | Corbin | ; Wolfcamp, | South |
| 735 FNL & 660 FWL 30-18S-33E | P \ | | | | y or Parish, State unty, NM | / |
| 12. CHECK APPI | ROPRIATE BOX(ES) TO | O INDICATE NATI | JRE OF NOTIC | E, REPOR | T, OR OTH | ER DATA |
| TYPE OF SUBMISSION | | T | PE OF ACTION | | | |
| Notice of Intent | Acidize | Deepen | Production (Start/I | Resume) | Water Shut | -Off |
| | Alter Casing | Fracture Treat | Reclamation | | Well Integri | ty |
| Subsequent Report | Casing Repair | New Construction | Recomplete to I | Bone Spring | Other RO | to Bone Spring |
| | Change Plans | Plug and Abandon | Temporarily Aban | don | & DHC w/ c | urrent |
| Final Abandonment Notice | Convert to Injection | Plug Back | Water Disposal | | Wolfcamp p | perfs |
| Describe Proposed or Completed Operatio | | | | | | |
| If the proposal is to deepen directionally or | | | | | | ones. |
| Attach the bond under which the work will be | | | | | , | |
| following completion of the involved operatesting has been completed. Final Abando | • | · · | • | • | | |
| determined that the site is ready for final in | | ner an requirements, includ | ing recialitation, have b | een completed, | and the operator | IIas |

The Hudson 31 Federal No. 4 is currently producing from Wolfcamp perfs @ 10616-76' -- 10941-77' -- 11001-26' -- 11070-80' -- 11088-108.' Cimarex would like to set a CIBP over the Wolfcamp w/ 2 sx sand, perf, acidize, and frac the Bone Spring, obtain Bone Spring

Please see attached recompletion procedure and C-102s.

production test, and possibly remove CIBP over Wolfcamp and DHC the two zones.

Please see attached recompletion procedure and C-102s.

DHC authority will be obtained for the well from the NMOCD once Bone Spring production has been evaluated.

| * DAC is Subject to | like Approval | from | it to | 62 m | |
|---|--------------------------------------|---------------------|-----------------------------|---|----------------------|
| 14. I hereby certify that the foregoing is true and correct | | | | | |
| Name (Printed/Typed) | Tτ | tle | Oil Conservation | on Division | |
| Natalie Krueger | R | egulatory | Conditions of appro | oval: Approval for drilling/\ roduce Downhole Commin | vorkove gled unti |
| Signature | Di | ate | DHC is approved in | Santa Fe. | |
| Natali frueze | برا | une 10, 2009 | | - · · · · · · · · · · · · · · · · · · · | |
| | THIS SPACE FOR FEDERA | AL OR STATE O | OFFICE USE | AFFRUVEU | 干 |
| Approved by | | PETR | LEUM ENGINEER | Date 2 1 2000 | |
| Conditions of Approval, if any, are attached. Approval certify that the applicant holds legal or equitable title which would entitle the applicant to conduct operation | to those rights in the subject lease | Off | ice | JUN 2 1 2003 | \top |
| Title 18 U.S.C. Section 1001, makes it a crime for an fraudulent statements or representations as to any m | | nake to any departr | nent or agency of the Unite | JAMES A. AMOS ed States 同识相談的同时证明 日 | |

HUDSON 31 FEDERAL #4 BONE SPRING RECOMPLETION

API # 30-025-34301 735' FNL & 660' FWL Section 30, T18S, R33E Lea County, New Mexico

RKB: 3795' KB: 20' TD DRILLER: 11500' PBTD: 11455'

SURF CSG: 13-3/8" OD 48#/FT H-40 @ 396' Cmtd W/115 SX.(CIRC)
INTER CSG: 8-5/8" OD 32#/FT J-55 @ 2893' Cmtd W/800 SX. (CIRC)

PROD CSG: 5-1/2" 17# L-80 & J-55 @ 11500' Cmtd W/650 SX

Bottom of J-55 @ 5500'

17# J-55 burst @ 5320 PSI, 17# L-80 burst @ 7740 PSI.

TUBING: 356 jts of 2-7/8" N-80 @ 11176'

WOLFCAMP PERFS: 10616'-76', 10941'-77', 11001'-26', 11070'-80', 11088'-108'

BONE SPRING

1. MIRU PULLING UNIT. PERFORM PRE-JOB SAFETY MEETING. POOH W/ RODS. ND WELLHEAD NU BOPS. TOOH WITH TUBING. SCAN TUBING COMING OUT OF HOLE.

- 2. RIH W/ 4-3/4" BIT AND SCRAPER ON 2-7/8" TUBING TO 11120'. TOOH W/ BIT, SCRAPER, AND TUBING.
- 3. RIH W/ 5-1/2" CIBP ON WIRELINE AND SET AT 10,580'. LOAD CSG W/ 2% KCL WATER AND TEST TO 500#. DUMP BAIL 2 SX OF SAND.
- RIH W/ SCHLUMBERGER LOGGING TOOLS AND LOG CBL FROM 10,000' TO 7000'.
 REPORT TOC BY CBL TO MIDLAND ENGINEERING.
- 5. RIH W/ 4" PERFORATING GUNS. PERFORATE BONE SPRING INTERVALS FROM 8578'-82', 8591'-8612', 8625'-27', 8644'-8651', 8432'-78', 8515'-22' USING 1 SPF W/ 120 DEG. PHASING 91 HOLES. CORRELATE TO OPEN HOLE SCHLUMBERGER NEUTRON-DENSITY LOG DATED 3/13/1998. MONITOR FLUID LEVEL IN AND OUT OF HOLE.
- 6. RIH W/ 5-1/2" TREATING PACKER AND 5-1/2" RBP W/ BALL CATCHER ON 2-7/8" TUBING. SET 5-1/2" RBP W/ BALL CATCHER AT 8700'. SET TREATING PACKER AT 8555'.
- 7. RU BJ STIMULATION. BREAKDOWN PERFORATIONS FROM (8578'-8651') USING 2000 GALLONS 7.5% NEFE ACID BLEND AND 58 BALL SEALERS MAX RATE 8 BPM MAX PRESSURE = 5000 PSI. RECORD 1 SECOND FALLOFF DATA FOR 1 HOUR.
- 8. RELEASE 5-1/2" TREATING PACKER @ 8560'. GO DOWN AND PU 5-1/2" RBP W/ BALL CATCHER AT 8700'. SET-5-1/2" RBP W/ BALL CATCHER AT 8555'. SET 5-1/2" TREATING PACKER AT 8545'. PRESSURE TEST 5-1/2" RBP TO 1500#. RELEASE 5-1/2" TREATING PACKER AT 8545'. SET 5-1/2" TREATING PACKER AT 8400'.
- BREAKDOWN PERFORATIONS FROM (8432'-8522') USING 3000 GALLONS 7.5% NEFE ACID BLEND AND 83 BALL SEALERS MAX RATE 8 BPM MAX PRESSURE = 5000 PSI. RECORD 1 SECOND FALLOFF DATA FOR 1 HOUR.
- 10. RELEASE 5-1/2" TREATING PACKER @ 8400'. GO DOWN AND PU 5-1/2" RBP W/ BALL CATCHER AT 8545'. SET 5-1/2" RBP W/ BALL CATCHER AT 8690'. SET 5-1/2" TREATING

- PACKER AT 8390'. SWAB WELL DOWN TO SN ON DAY OF ACID JOB. RECORD CUT AND FLUID ENTRY THE NEXT MORNING AND REPORT TO ENGINEERING IN MIDLAND.
- 11. RELEASE 5-1/2" TREATING PACKER @ 8390'. GO DOWN AND PU 5-1/2" RBP W/ BALL CATCHER AT 8690'. TOOH W/ 5-1/2" RBP W/ BALL CATCHER AND 5-1/2" TREATING PACKER ON 2-7/8" TUBING.
- 12. PICK UP 3-1/2" P-110 FRAC STRING W/ LOWER AND UPPER 5-1/2" TREATING PACKERS ON DUAL FRAC PACKER ASSEMBLY. TEST TUBING GOING INTO HOLE TO 9000#. SET LOWER DUAL FRAC PACKER AT 8550'.
- 13. NU FRAC VALVE. RIG UP FLOWBACK MANIFOLD. FRACTURE STIMULATE WITH 12K# 14/40 LITEPROP 108 WITH RESIN COATED TAIL-IN DOWN 3-1/2" FRAC STRING. INCLUDE SCALE INHIBITOR IN FRAC FLUIDS.
- 14. PULL OUT OF LOWER FRAC PACKER. SET TOP DUAL FRAC PACKER AT 8350'.
- 15. FRACTURE STIMULATE WITH 14K# 14/40 LITEPROP 108 WITH RESIN COATED TAIL-IN DOWN 3-1/2" FRAC STRING CASING. INCLUDE SCALE INHIBITOR IN FRAC FLUIDS. FLOWBACK IMMEDIATELY BEGINNING AT 1.5 BPM UNTIL WELL DIES. REPORT FLOW RESULTS OF BONE SPRING ZONE AND REPORT TO ENGINEERING.
- 16. RELEASE UPPER DUAL FRAC PACKER AT 8350'. TOOH W/ 3-1/2" FRAC STRING LAYING DOWN TUBING AND UPPER FRAC PACKER.
- 17. RIH WITH 2-7/8" TUBING W/ ON/OFF TOOL. LATCH ONTO LOWER DUAL FRAC PACKER AT 8550'. RELEASE LOWER DUAL FRAC PACKER. BLEED OFF ANY PRESSURE FROM BELOW PACKER. TOOH W/ 2-7/8" TUBING AND LOWER DUAL FRAC PACKER.
- 18. RIH W/ 2-7/8" TUBING AND BHA CONFIGURED FOR PUMPING. SET EOT @ 8750'.
- 19. INSTALL PUMPING EQUIPMENT AND OBTAIN PRODUCTION TEST FROM BONE SPRING PAY.
- 20. HAVE CHEMICAL COMPANY MONITOR SCALE INHIBITOR RESIDUALS MONTHLY. OBTAIN DYNO CARD AND FLUID LEVEL AFTER WELL HAS BEEN PUMPING FOR 10 DAYS.
- 21. EVALUATE BONE SPRING PRODUCTION AND DETERMINE TIMELINE FOR DRILLING OUT CIBP OVER WOLFCAMP AND COMINGLING PRODUCTION.