Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO 1004-0135
Expires July 31, 2010

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.

OCD Artesia

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No
NMLC067132

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
NMNM72123

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No (21500)
EMPIRE A FEDERAL COM 001

2. Name of Operator
CIMAREX ENERGY CO. OF COLORADO
Contact: NATALIE E KRUEGER
E-Mail: nkrueger@cimarex.com
(162683)

9. API Well No
30-015-23266

3a. Address
600 N. MARIENFELD ST., STE. 600
MIDLAND, TX 79701

3b. Phone No. (include area code)
Ph: 432-620-1936
Fx: 432-620-1940

10. Field and Pool, or Exploratory
~~TURKEY TRACK, ATOKA~~
Santo Nino Bone Spring

4. Location of Well (*Footage, Sec., T., R., M., or Survey Description*)
Sec 27 T18S R29E Mer NMP NENW 660FNL 1980FWL
Unit C

11. County or Parish, and State
EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☒ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection)

Cimarex plans to recomplete this well from Atoka (perfs @ 10752-10778) to Bone Spring oil as shown below and on the attached procedure.

1. PREPARE C-103 TO RECOMPLETE TO BONE SPRING. OBTAIN SBHP OF ATOKA AND ATTEMPT TO SWAB IN (AFTER PERFORATING TUBING AND EVACUATING BACKSIDE. REPORT RESULTS TO MIDLAND ENGINEERING.

2. MIRU PU. DELIVER 500 OF RENTAL 2-38 inch L-80 TUBING TO LOCATION. ND WELLHEAD AND NU 3K MANUAL BOPS. RELEASE PACKER. LOWER PACKER TO 11,100. TOH WITH TUBING AND PACKER. LD PACKER.

3. IF UNABLE TO GET TO 11,100 IN STEP 2, RIW W 3.75 inch BIT & 4.5 inch 13.5# CASING SCRAPER ON 2 38 inch L-80 TBG TO 11100 ft +-, CLEANING OUT WITH FOAM AIR. POOW W 2 38 inch TBG, 4.5 inch CSG SCRAPER & 3.75 inch BIT. OTHERWISE, RIG UP WIRELINE. RUN GAUGE RING TO 11,100. SET CIBP AT

14. I hereby certify that the foregoing is true and correct.
Electronic Submission #108636 verified by the BLM Well Information System
For CIMAREX ENERGY CO. OF COLORADO, sent to the Carlsbad

RECEIVED
AUG 24 2011
NMOCD ARTESIA

Name (*Printed/Typed*) NATALIE E KRUEGER — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 05/19/2011

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By /s/ Don Mayan — Title PETROLEUM ENGINEER — Date AUG 22 2011

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon

Office BLM-CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

Additional data for EC transaction #108636 that would not fit on the form

32. Additional remarks, continued

+-11,100 (TOP OF MORROW) AND DUMP BAIL 35 OF CEMENT ON TOP. SET CIBP AT +-10700 (ABOVE ATOKA PERFS) AND DUMP BAIL 35 OF CEMENT ON TOP. RUN GAUGE RING TO 8200. RUN GRCCLCBL LOG ? 0 PSI REPEAT AND 500# ON MAIN PASS - TO DETERMINE TOC (ABOVE TOC OR MINIMUM FOOTAGE). CORRELATE TO DRESSER ATLAS DLLMLL DATED 61880 ACROSS INTERVAL 7600-7800. SET CIBP AT +- 8000 IF BOND GOOD AT THAT DEPTH. IF CASING HELD IN STEP 1, CONTINUE. OTHERWISE LOAD CASING AND RETEST. IF CASING DOESNT HOLD, RIH WITH PACKER AND RBP TO LOCATE LEAK (WILL NEED TO DISCUSS MODIFICATION OF PROCEDURE WITH MIDLAND OFFICE).

4. IF TOC BELOW 7600, WILL NEED TO SHOOT HOLES ABOVE TOC. OPEN INTERMEDIATE CASING VALVE AND ATTEMPT TO BREAK CIRCULATION. IF CIRCULATION ESTABLISHED, DESIGN CEMENT JOB TO BRING CEMENT UP TO 3000. (FOR DESIGN PURPOSES, ASSUME WE WILL CEMENT FROM 8250 TO 3000 ? (PERF QUALITY FROM 8250-7250). RIH W CICR ON TUBING 50 ABOVE SQUEEZE HOLES. SET CICR. STING IN AND BREAK CIRCULATION WITH WATER. PUMP CEMENT JOB AND DISPLACE. LEAVE CEMENT ON TOP OF CICR FOR DRILLOUT PURPOSES. PULL UPHOLE AND REVERSE TUBING CLEAR. WOC.

5. RIH W 3-34 inch BIT, DRILL COLLARS, AND TUBING TO TOC INSIDE 4-12 inch. DRILL OUT CEMENT AND RIH TO PBTD AT ~8000. CIRCULATE HOLE WITH CLEAN 2% KCL. TOH.

6. RU WIRELINE. PERFORATE BONE SPRING 3 SPF USING 3-18 inch CASING GUNS AT THE FOLLOWING DEPTHS:

7642-7664 67 holes 3 spf
7690-7704 43 holes 3 spf
7713-7731 55 holes 3 spf
7742-7762 61 holes 3 spf
7822-7840 55 holes 3 spf

MONITOR FLUID LEVEL AFTER PERFORATING AND INCLUDE IN REPORT.

7. RIH WRU TBG TESTERS. RIW W 4.5 inch 11.6# PKR AND PLUG, 2 38 inch SN & 2 38 inch TBG TESTING TBG TO 8000 PSIG BELOW THE SLIPS. ACID JOB WILL CONSIST OF 9200 GAL 15% DI NEFI HCL. SET THE RBP AT +-7860. SET PACKER AT +-7780. ACIDIZE BONE SPRING PERFS 7822-7840 USING 1800 GAL 15% HCL DI NEFE AT 4-6 BPM USING RATE TO DIVERT THE ACID. MAX BREAKDOWN PRESSURE 6000. OBTAIN ISIP, 5, 10 AND 15 MIN PRESSURES. BLEED PRESSURE AND MOVE RBP TO +-7780. SET PACKER AT +-7675. ACIDIZE BONE SPRING PERFS 7690-7762 USING 5200 GAL 15% HCL DI NEFE AT 4-6 BPM USING RATE TO DIVERT THE ACID. MAX BREAKDOWN PRESSURE 6000. OBTAIN ISIP, 5, 10 AND 15 MIN PRESSURES. BLEED PRESSURE AND MOVE RBP TO +-7675. SET PACKER AT +-7540. ACIDIZE BONE SPRING PERFS 7642-7664 USING 2200 GAL 15% HCL DI NEFE AT 4-6 BPM USING RATE TO DIVERT THE ACID. MAX BREAKDOWN PRESSURE 6000. OBTAIN ISIP, 5, 10 AND 15 MIN PRESSURES. RELEASE PACKER AND LATCH RBP. LOWER RBP BELOW ALL PERFS AND MOVE PACKER BACK UP TO 7540 AND SET. SWAB BACK LOAD.

8. RELEASE PACKER. LATCH RBP AND TOH. RIH W TUBING CONFIGURED FOR PUMPING. INSTALL RODS AND PUMP BASED ON ESTIMATED FLUID PRODUCTION DURING SWAB TESTING. ND BOPS AND NU WELLHEAD. RDMO.

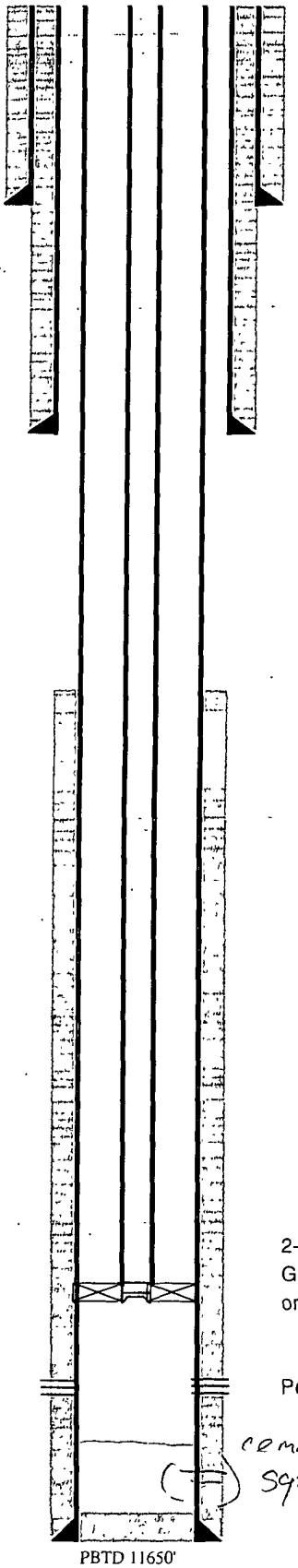
9. SET PUMPING UNIT AND BEGIN PRODUCING. AFTER LOAD RECOVERY, OBTAIN WATER ANALYSIS AND REVIEW FOR SCALE. IF SCALING TENDENCIES HIGH, DESIGN SCALE SQUEEZE AND EXECUTE.

Please see attached WBD and C102. Additional plugs will be addressed at final abandonment.

CIMAREX

Current

Cimarex Energy Co. of Colorado
Empire A Federal Com No. 001
API # 30-015-23266
660' FNL & 1980' FWL UL C Sec 27 T18S R29E
McGehee 09/09



11 3/4" H-40 42# @ 350' w/275 sx cmt
circ to surf.

8 5/8" 24/28# K-55 S-80 @ 3200'
w/1100sx cmt circ to surface

2-3/8" 4.7# N-80 tubing
Guiberson Uni VI @ 10607'
on/off tool & 1.875 profile nipple

Perfs: Atoka
10752'-10778' w/2spf

cement retainer at 11100'
Sqz'd perfs 11172'-11260'

4-1/2" 11.6# 13.5# K-55 N-80 S-95 @ 11747'
w/935 sx cmt TOC @ 8280'

0'-3782' 11.6# N-80
3782'-6653' 11.6# K-55
6653'-9724' 11.6# N-80
9724'-9764' 11.6# S-95
9764'-TD 13.5# N-80

PBTD 11650'
TD 11750'

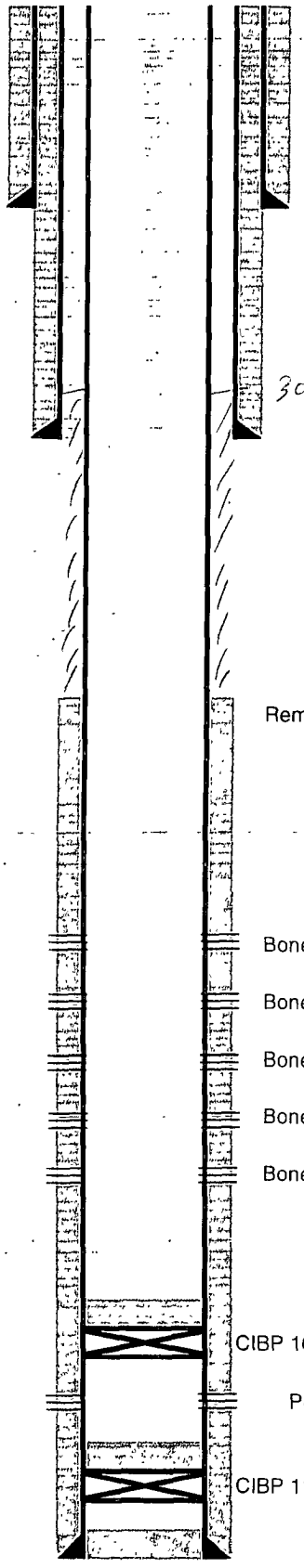
TMA

Printed 5/19/2011

CIMAREX

Proposed

Cimarex Energy Co. of Colorado
Empire A Federal Com No. 001
API # 30-015-23266
660' FNL & 1980' FWL UL C Sec 27 T18S R29E
McGehee 09/09



11 3/4" H-40 42# @ 350' w/275 sx cmt
circ to surf.

3000'

8 5/8" 24/28# K-55 S-80 @ 3200'
w/1100sx cmt circ to surface

Remediate TOC with Squeeze job after CBL is run

Bone Spring 7642-7664, acidize

Bone Spring 7690-7704, acidize

Bone Spring 7713-7731, acidize

Bone Spring 7742-7762, acidize

Bone Spring 7822-7840, acidize

4-1/2" 11.6# 13.5# K-55 N-80 S-95 @ 11747'
w/935 sx cmt TOC @ 8280'

0'-3782' 11.6# N-80
3782'-6653' 11.6# K-55
6653'-9724' 11.6# N-80
9724'-9764' 11.6# S-95
9764'-TD 13.5# N-80

CIBP 10700 over Atoka w/ 35' cmt

Perfs: Atoka
10752'-10778' w/2spf

CIBP 11100 over Morrow w/ 35' cmt

PBTD 11650'
TD 11750'

Printed 5/19/2011

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-015-23266		SANTO NINO; Bone Spring ~~Wildcat~~

4 Property Code	5 Property Name	6 Well Number
21500	Empire A Federal Com	001

7 OGRID No.	8 Operator Name	9 Elevation
162683	Cimarex Energy Co. of Colorado	3558.2' GR

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	27	18S	29E		660	North	1980	West	Eddy

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
40			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

16

NMLC-067132

Empire A Fed Com 1
660 FNL & 1980 FWL

RECEIVED
AUG 24 2011
NMOCD ARTESIA

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief; and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Natalie Krueger 5/19/2011
Signature Date

Natalie Krueger
Printed Name

18 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number

EMPIRE A FED COM #1
RECOMPLETE TO BONE SPRING

API # 30-015-23266
660 FNL & 1980 FWL
Section 27, 18S, R-29E
Eddy County, New Mexico

GL : 3558 **KB :** 3572
TD : 11750 **PBTD:** 11650
SURF CSG : 11-34 inch OD 42#FT H-40 AT 350 TOC 0 (CIRC)
INTER CSG: 8-58 inch OD 2428 #FT K-55S-80 @ 3200 TOC 0 (CIRC)
PROD CSG : 4-12 inch OD 11.613.5# K-55N-80S-95 @ 11750 W 935 SX TOC 8280 (TS)
NOTE: SEE WBD FOR CASING BREAKDOWN
TUBING: 2-38 inch 4.7# N-80 W GUIBERSON UNI-VI PKR A 10607
PERFS: *ATOKA* 10752-10778 2 SPF (780)

NOTE TO FOREMAN: PLEASE DO NOT BEGIN FACILITY CONSTRUCTION OR ARTIFICIAL LIFT INSTALLATION UNTIL WELL IS TESTED IN STEP 7.

1. PREPARE C-103 TO RECOMPLETE TO BONE SPRING. OBTAIN SBHP OF ATOKA AND ATTEMPT TO SWAB IN (AFTER PERFORATING TUBING AND EVACUATING BACKSIDE. *REPORT RESULTS TO MIDLAND ENGINEERING.*

2. MIRU PU. DELIVER 500 OF RENTAL 2-38 inch L-80 TUBING TO LOCATION. ND WELLHEAD AND NU 3K MANUAL BOPS. RELEASE PACKER. LOWER PACKER TO 11,100. TOH WITH TUBING AND PACKER. LD PACKER.

3. IF UNABLE TO GET TO 11,100 IN STEP 2, RIW W 3.75 inch BIT & 4.5 inch 13.5# CASING SCRAPER ON 2 38 inch L-80 TBG TO 11100 ft +-, CLEANING OUT WITH FOAM AIR. POOW W 2 38 inch TBG, 4.5 inch CSG SCRAPER & 3.75 inch BIT. OTHERWISE, RIG UP WIRELINE. RUN GAUGE RING TO 11,100. SET CIBP AT +-11,100 (TOP OF MORROW) AND DUMP BAIL 35 OF CEMENT ON TOP. SET CIBP AT +-10700 (ABOVE ATOKA PERFS) AND DUMP BAIL 35 OF CEMENT ON TOP. RUN GAUGE RING TO 8200. RUN GRCCLCBL LOG – 0 PSI REPEAT AND 500# ON MAIN PASS - TO DETERMINE TOC (ABOVE TOC OR MINIMUM FOOTAGE). ***CORRELATE TO DRESSER ATLAS DLLMLL DATED 61880 ACROSS INTERVAL 7600-7800.*** SET CIBP AT +- 8000 IF BOND GOOD AT THAT DEPTH. IF CASING HELD IN STEP 1, CONTINUE. OTHERWISE LOAD CASING AND RETEST. IF CASING DOESNT HOLD, RIH WITH PACKER AND RBP TO LOCATE LEAK (WILL NEED TO DISCUSS MODIFICATION OF PROCEDURE WITH MIDLAND OFFICE).

4. IF TOC BELOW 7600, WILL NEED TO SHOOT HOLES ABOVE TOC. OPEN INTERMEDIATE CASING VALVE AND ATTEMPT TO BREAK CIRCULATION. IF CIRCULATION ESTABLISHED, DESIGN CEMENT JOB TO BRING CEMENT UP TO 3000. (FOR DESIGN PURPOSES, ASSUME WE WILL CEMENT FROM 8250 TO 3000 – (PERF QUALITY FROM 8250-7250). RIH W CICR ON TUBING 50 ABOVE SQUEEZE HOLES. SET CICR. STING IN AND BREAK CIRCULATION WITH WATER. PUMP CEMENT JOB AND DISPLACE. LEAVE CEMENT ON TOP OF CICR FOR DRILLOUT PURPOSES. PULL UPHOLE AND REVERSE TUBING CLEAR. WOC.

5. RIH W 3-34 inch BIT, DRILL COLLARS, AND TUBING TO TOC INSIDE 4-12 inch. DRILL OUT CEMENT AND RIH TO PBTD AT ~8000. CIRCULATE HOLE WITH CLEAN 2% KCL. TOH.

6. RU WIRELINE. PERFORATE BONE SPRING 3 SPF USING 3-18 inch CASING GUNS AT THE FOLLOWING DEPTHS:

ZONE	INTERVAL		FOOTAGE	HOLES	ACID (gal)
	TOP	BOTTOM			
Bone Sp	7642	7664	22	67	2200
Bone Sp	7690	7704	14	43	1400
Bone Sp	7713	7731	18	55	1800
Bone Sp	7742	7762	20	61	2000
Bone Sp	7822	7840	18	55	1800
TOTAL			94	281	9200

MONITOR FLUID LEVEL AFTER PERFORATING AND INCLUDE IN REPORT.

7. RIH WRU TBG TESTERS. RIW W 4.5 inch 11.6# PKR AND PLUG, 2 38 inch SN & 2 38 inch TBG TESTING TBG TO 8000 PSIG BELOW THE SLIPS. ACID JOB WILL CONSIST OF **9200 GAL 15% DI NEFI HCL**. SET THE RBP AT +- 7860. SET PACKER AT +-7780. ACIDIZE BONE SPRING PERFS 7822-7840 USING 1800 GAL 15% HCL DI NEFE AT 4-6 BPM USING RATE TO DIVERT THE ACID. MAX BREAKDOWN PRESSURE 6000. OBTAIN ISIP, 5, 10 AND 15 MIN PRESSURES. BLEED PRESSURE AND MOVE RBP TO +-7780. SET PACKER AT +-7675. ACIDIZE BONE SPRING PERFS 7690-7762 USING 5200 GAL 15% HCL DI NEFE AT 4-6 BPM USING RATE TO DIVERT THE ACID. MAX BREAKDOWN PRESSURE 6000. OBTAIN ISIP, 5, 10 AND 15 MIN PRESSURES. BLEED PRESSURE AND MOVE RBP TO +-7675. SET PACKER AT +-7540. ACIDIZE BONE SPRING PERFS 7642-7664 USING 2200 GAL 15% HCL DI NEFE AT 4-6 BPM USING RATE TO DIVERT THE ACID. MAX BREAKDOWN PRESSURE 6000. OBTAIN ISIP, 5, 10 AND 15 MIN PRESSURES. RELEASE PACKER AND LATCH RBP. LOWER RBP BELOW ALL PERFS AND MOVE PACKER BACK UP TO 7540 AND SET. SWAB BACK LOAD.

8. RELEASE PACKER. LATCH RBP AND TOH. RIH W TUBING CONFIGURED FOR PUMPING. INSTALL RODS AND PUMP BASED ON ESTIMATED FLUID PRODUCTION DURING SWAB TESTING. ND BOPS AND NU WELLHEAD. RDMO.

9. SET PUMPING UNIT AND BEGIN PRODUCING. AFTER LOAD RECOVERY, OBTAIN WATER ANALYSIS AND REVIEW FOR SCALE. IF SCALING TENDENCIES HIGH, DESIGN SCALE SQUEEZE AND EXECUTE.

Empire A Federal Com 001
Cimarex Energy Company of Colorado
30-015-23266
August 1, 2011
Conditions of Approval

Current Well Status:

- Completed in the Atoka Formation. Not producing.

Requests (three):

1. For approval of abandonment of the Morrow Formation and Atoka Perforations.
2. Confirm and, if necessary, restore wellbore integrity.
3. Recomplete into the Bone Springs Formation, and install pumping unit.

Conditions of Approval:

A Hydrogen Sulfide (H2S) Drilling Plan should be activated for this workover. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.
Surface disturbance not to exceed originally approved pad without prior approval.
Closed Loop system shall be used for all workover, acidizing, and frac'ing operations.
Step 1 OK.
Step 2 OK.
Step 3 Revisions required:

- Each of the intervals below and between plugs shall be filled with a mud laden fluid with minimum density of 9 lbs/gal.
- Revise Top Morrow to be 11021' and Top Atoka to be 10560' per wellfile records.
- A Solid plug is required for isolation of the Top Morrow and shall be placed 50' below to 50' above 11021'. All abandonment cement plugs, except the surface plug, shall have sufficient slurry volume to fill 100' of hole, plus an additional 10% of slurry for each 1000' of depth. Therefore the bottom of the plug for isolation of the Top Morrow will be at 11071' and the slurry volume pumped will be equal to 210' in length. Note: There are squeezed perforations in the Morrow at 11172'-11260'. Also, previous recompletion operations indicate current PBTD is retainer 11100', used to squeeze Morrow perfs.
- CIBP and cement proposed to isolate Atoka perforations 10752'-10778' are ok. CIBP is proposed for approximately 10700' with 35' of cement to 10665'.
- BLM to witness tag of perforation isolation plug and new PBTD.

Operator has the option to include additional cement in the isolation plug for the top of the Top Morrow to also isolate the Atoka perforations from 10652'-10702'. This would result in TOC of 10602' or higher. The existing Cement Retainer at 11100', if confirmed, is acceptable as the base of the isolation plug. BLM to only witness tag of TOC at 10602' or higher if this option is utilized. Witness by BLM is required for current PBTD and for new PBTD. For **Eddy County** Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822 .
Steps 4 -9 OK

When the work is completed, a subsequent sundry is required listing all details of the work done, and to include the new production test information.
TMM 07/03/2011