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.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMNM025559

6. If Indian, Allottee or Tribe Name

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

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

8. Well Name and No.
IRWIN 13 FEDERAL 4

2. Name of Operator
CIMAREX ENERGY COMPANY OF CO
Contact: TERRI STATHEM
E-Mail: tstathem@cimarex.com

9. API Well No
30-015-38101-00-X1

3a. Address
600 NORTH MARIENFELD STREET SUITE 600
MIDLAND, TX 79701

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

10. Field and Pool, or Exploratory
HACKBERRY

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 13 T19S R30E SESE 1300FSL 480FEL

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 Drilling Operations
	☐ 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.)

While drilling well lost circuation @ 2441'. BLM approval is respectfully requested to set DV tool @2000' and cement according to the following procedure:
1. RIH & set DV tool @ 2000'
2. Mix and pump lead cement of 710 sx and pump 200 sx tail cement.
3. Open DV Tool & set external csg pkr.
4. Mix and pump lead cement of 655 sx and pump 100 sx tail cement to bring cement to surface.

Accepted for record
NMOCD 12/16/2011

RECEIVED
DEC 14 2011
NMOCD ARTESIA

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #125133 verified by the BLM Well Information System
For CIMAREX ENERGY COMPANY OF CO, sent to the Carlsbad
Committed to AFMSS for processing by KURT SIMMONS on 12/08/2011 (12KMS0468SE)

Name *(Printed/Typed)* TERRI STATHEM — Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission) — Date 12/08/2011

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CHRISTOPHER WALLS — Title PETROLEUM ENGINEER — Date 12/09/2011

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 Carlsbad

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

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Well Name: Irwin 13 Federal	Well #: 4H
Surface Casing	0 - 500 ft (MD)
Outer Diameter	13.375 in
Inner Diameter	12.715 in
Linear Weight	48 lbm/ft
Thread	STC
Casing Grade	H-40
12-1/4" Hole	500 - 4000 ft (MD)
Inner Diameter	12.250 in
Job Excess	150 %
DV Tool / ECP	2000 ft (MD)
Intermediate Casing	0 - 4000 ft (MD)
Outer Diameter	9.625 in
Inner Diameter	8.835 in
Linear Weight	40 lbm/ft
Thread	LTC
Casing Grade	J-55
1st Stage TOC	2000 ft (MD)
2nd Stage TOC	Surface

Stage 1

Cement : (1703.32 ft fill)

1703.32 ft * 0.3132 ft^3/ft * 150 %	= 1333.65 ft^3
Total First Stage Lead Cement	= 1333.65 ft^3
	= 237.53 bbl
Sacks of Cement	= 710 sks

Cement : (296.68 ft fill)

296.68 ft * 0.3132 ft^3/ft * 150 %	= 232.29 ft^3
First Stage Tail Cement	= 232.29 ft^3
	= 41.37 bbl

Shoe Joint Volume: (82.00 ft fill)

82.00 ft * 0.4257 ft^3/ft	= 34.91 ft^3
	= 6.22 bbl
Tail plus shoe joint	= 267.20 ft^3
	= 47.59 bbl
Total Tail	= 200 sks

Stage 2

Cement : (1830.64 ft fill)

500.00 ft * 0.3765 ft^3/ft * 0 %	= 188.25 ft^3
1330.64 ft * 0.3132 ft^3/ft * 150 %	= 1041.85 ft^3
Total Second Stage Lead Cement	= 1230.11 ft^3
	= 219.09 bbl
Sacks of Cement	= 655 sks

Cement : (169.36 ft fill)

169.36 ft * 0.3132 ft^3/ft * 150 %	= 132.60 ft^3
Second Stage Tail Cement	= 132.60 ft^3
	= 23.62 bbl
Total Tail	= 100 sks

Install floating equipment, run casing to bottom, and circulate a minimum of 2-3 hole volumes prior to cementing as follows:

Fluid Instructions

Stage 1

Fluid 1: Pump 20 bbl
Gel Spacer

		Fluid Volume:	20 bbl
40 lbm/Mgal	WG-19 (Gelling Agent)		

Fluid 2: Lead with 710 sks
EconoCem - HLC

		Fluid Weight	12.90 lbm/gal
5 %	Salt (Salt)	Slurry Yield:	1.88 ft^3/sk
5 lbm/sk	Kol-Seal (Lost Circulation Additive)	Total Mixing Fluid:	9.61 Gal/sk
		Top of Fluid:	2000 ft
		Calculated Fill:	1703.32 ft
		Volume:	237.53 bbl
		Calculated Sacks:	709.77 sks
		Proposed Sacks:	710 sks

Fluid 3: Tail-in with 200 sks
HalCem - C

		Fluid Weight	14.80 lbm/gal
1 %	Calcium Chloride - Flake (Accelerator)	Slurry Yield:	1.34 ft^3/sk
		Total Mixing Fluid:	6.36 Gal/sk
		Top of Fluid:	3703.32 ft
		Calculated Fill:	296.68 ft
		Volume:	47.59 bbl
		Calculated Sacks:	200 sks
		Proposed Sacks:	200 sks

DV Tool / ECP @ 2000 ft (MD)

Fluid Instructions

Stage 2

Fluid 1: Pump 20 bbl
Gel Spacer

		Fluid Volume:	20 bbl

40 lbm/Mgal WG-19 (Gelling Agent)

Fluid 2: Lead with 655 sks
EconoCem - HLC

5 %	Salt (Salt)	Fluid Weight	12.90 lbm/gal
5 lbm/sk	Kol-Seal (Lost Circulation Additive)	Slurry Yield:	1.88 ft^3/sk
		Total Mixing Fluid:	9.61 Gal/sk
		Top of Fluid:	0 ft
		Calculated Fill:	1830.64 ft
		Volume:	219.09 bbl
		Calculated Sacks:	654.66 sks
		Proposed Sacks:	655 sks

Fluid 3: Tail-in with 100 sks
HalCem - C

		Fluid Weight	14.80 lbm/gal
		Slurry Yield:	1.33 ft^3/sk
		Total Mixing Fluid:	6.34 Gal/sk
		Top of Fluid:	1830.64 ft
		Calculated Fill:	169.36 ft
		Volume:	23.62 bbl
		Calculated Sacks:	100 sks
		Proposed Sacks:	100 sks