

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTOCD-ARTESIA  
SEP - 8 2009FORM APPROVED  
OMB NO. 1004-0137  
Expires March 31, 2007

## WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other  
b. Type of Completion. ☐ New Well ☐ Work Over ☐ Deepen ☒ Plug Back ☐ Diff. Resvr.  
Other Plug back and drill horizontal Bone Spring

2. Name of Operator  
Cimarex Energy Co. of Colorado

3. Address  
5215 N. O'Connor Blvd., Ste. 1500; Irving, TX 75039

3a. Phone No. (include area code)  
972-443-6489

4. Location of Well (Report Location clearly and in accordance with Federal requirements)\*

At surface 1780 FSL & 1650 FWL

At top prod. interval reported below 1780 FSL & 1650 FWL

At total depth 352 FSL & 837 FEL

14. Date Spudded  
04.23.01

15. Date T.D. Reached  
05.28.09

16. Date Completed 07.03.09  
☐ D & A ☒ Ready to Prod

5. Lease Serial No.  
NMNM-99038

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

8. Lease Name and Well No.  
West Shugart 31 Federal Com No. 1

9. API Well No.  
30-015-31647

10. Field and Pool, or Exploratory  
~~Hockley~~ Shugart Bone Spring, North

11. Sec., T., R., M., on Block and  
Survey or Area  
31-18S-31E

12. County or Parish Eddy  
13. State NM

17. Elevations (DF, RKB, RT, GL)\*  
3528' GR

18. Total Depth MD 11751'  
TVD 8772'

19. Plug Back TD. MD 11751'  
TVD 8772'

20. Depth Bridge Plug Set. MD 8625' (in original wellbore)  
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)

22. Was well cored? ☒ No ☐ Yes (Submit analysis)

Was DST run? ☒ No ☐ Yes (Submit report)

Directional Survey ☐ No ☒ Yes (Submit copy)

Logs run on initial completion

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cement Depth	No. of Sks & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17 1/2"	13 3/4" H-40	48#	0'	755'		450 sx, 200 sx		0'	
12 1/4"	9 5/8" J-55	40#	0'	3205'		1100 sx, 200 sx		0'	
7 7/8"	5 1/2" N-80	17#	0'	12526'		1260 sx, 1100 sx, 100 sx		1050'	
4 3/4" *	3 1/2" N-80	9.3# UFJ	8511'	9206'		No cmt, PEAK liner			
4 3/4" *	2 7/8" L-80	6.5# EUE	9206'	11550'		No cmt, PEAK liner			
* horizontal section									

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2 7/8"	8195'							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf Status
A) Bone Spring	8519'	11751'	No perms, frac'd through PEAK completion liner			
B)						
C)						
D)						

26. Perforation Record

27. Acid, Fracture, Treatment, Cement Squeeze, etc

Depth Interval	Amount and Type of Material
	Please see attachment for the 2 multi-stage frac jobs (first 6-stage job only frac'd the toe, so second multi-stage frac job was performed)

28. Production - Interval A -

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
07.03.09	07.09.09	24	→	122	100	332	36.9	btu 1.301	Pumping
Choke Size	Tbg. Press Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
20/64	SI 410	75	→				820		

ACCEPTED FOR RECORD  
Producing

28. Production - Interval B -

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
	SI		→						

SEP 2 2009  
Is/ Myles Kristof  
BUREAU OF LAND MANAGEMENT  
CARLSBAD FIELD OFFICE

\* (See instructions and spaces for additional data on page 2)

## 28b Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg Press Flwg SI	Csg Press	24 Hr Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

## 28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg Press Flwg SI	Csg Press	24 Hr Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

29. Disposition of Gas (*Sold, used for fuel, vented, etc.*)

Sold

30 Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
				San Andres	3205'
				Delaware	3820'
				Bone Spring	4000'
				FBSS	7663'
				SBSS	8604'
				Wolfcamp	9882'
				Strawn	10940'
				Atoka	11136'
				Morrow Carbonate	11434'
				Morrow Clastics	11800'
				Lower Morrow	12080'
				Miss-Chester-Lime	12244'

32. Additional remarks (include plugging procedure):

06.16.09 Performed 6 stage frac job...realized later that due to a frac ball blockage, only the toe was frac'd.

06.20.09 Re-frac'd everything but the toe.

07.01.09 Installed Rod Pump - 2½" x 1¾" x 24' Quinn Frac Pump HHBC.

33. Indicate which items have been attached by placing a check in the appropriate boxes:

☐ Electrical/Mechanical Logs (1 full set req'd.)     
 ☐ Geologic Report     
 ☐ DST Report     
 ☒ Directional Survey  
☐ Sundry Notice for plugging and cement verification     
 ☐ Core Analysis     
 ☐ Other.

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)\*

Name (please print) Natalie Krueger Title RegulatorySignature Natalie Krueger Date August 10, 2009

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.

Acid, Fracture, Treatment, Cement Squeeze, etc. Attachment

**West Shugart 31 Federal Com No. 1**

31-18S-31E

Eddy County, NM

**Frac Job #1 06-16-09** (meant for whole well, ended up only fracing toe)

Depth Interval	Amount and Type of Material Used
<u>Stage 1</u> 11250' to 11751'	Pump 83 bbl acid & 83 bbl acid flush. Pump 600 bbl Pad. Start 00.5# 20/40 Sweep followed by 617 bbl Pad. Start Sand. Ramp 101849# of 20/40 Econosand. 121 bbl flush. Drop 1¼" Ball.
<u>Stage 2</u> 10756' to 11250'	Pump 39 bbl acid & 33 bbl acid flush. Start 00.5# 20/40 Sweep followed by 600 bbl Pad. Start sand. Ramp 98741# of 20/40 Econosand. 99 bbl flush. Drop 1½" Ball.
<u>Stage 3</u> 10262' to 10576'	Pump 29 bbl acid & 37 bbl acid flush. Pump 600 bbl Pad. Start 00.5# 20/40 Sweep followed by 600 bbl Pad. Start sand. Ramp 100268# of 20/40 Econosand. 108 bbl flush. Drop 1¾" Ball.
<u>Stage 4</u> 9767' to 10262'	Pump 26 bbl acid & 36 bbl acid flush. Pump 600 bbl Pad. Start 00.5# 20/40 Sweep followed by 600 bbl Pad. Start Sand. Ramp 9937# of 20/40 Econosand. 88 bbl flush. Drop 2" Ball.
<u>Stage 5</u> 9705' to 9767'	Pump 25 bbl acid & 31 bbl acid flush. Pump 609 bbl Pad. Start 00.5# 20/40 Sweep followed by 600 bbl Pad. Start sand. Ramp 99005# of 20/40 Econosand. 82 bbl flush. Drop 2¼" Ball.
<u>Stage 6</u> 8519' to 9205'	Pump 22 bbl acid, & 30 bbl acid flush. Pump 640 bbl Pad. Start 00.5# of 20/40 Sweep followed by 600 bbl Pad. Start sand. Ramp 100437# of 20/40 Econosand. 77 bbl flushwith 77 bbl 20# DB XL.

**Frac Job #2 06-20-09** (Stages 2 through 6 only)

Depth Interval	Amount and Type of Material Used
<u>Stage 2</u> 10756' to 11250'	Break down with 24 bbl Jell water. Drop 1¼" Ball. Pump 29 bbl Acid. Pump 616 bbl Pad. Start 0.5# 20/40 Sweep, followed by 600 bbl Pad. Start sand. Ramp 100715# of 20/40 Econosand. 176 bbl Flush. Drop 1½" Ball.
<u>Stage 3</u> 10262' to 10576'	Pump 27 bbl Acid. Pump 618 bbl Pad. Start 0.5# 20/40 Sweep, followed by 627 bbl Pad. Start sand. Ramp 84082# of 20/40 Econosand. 160 bbl Flush. Drop 1¾" Ball.
<u>Stage 4</u> 9767' to 10262'	Pump 29 bbl Acid. Pump 618 bbl Pad. Start 0.5# 20/40 Econosand sweep followed by 608 bbl Pad. Start Sand. Ramp 101158# Econosand. 150 bbl flush. Drop 2" Ball.
<u>Stage 5</u> 9705' to 9767'	Pump 21 bbl acid. Pump 615 bbl Pad. Start 0.5# 20/40 Sweep, followed by 612 bbl Pad. Start sand. Ramp 101075# of 20/40 Econosand. 130 bbl flush. Drop 2¼" Ball.
<u>Stage 6</u> 8519' to 9205'	Pump 130 bbl Pad. Pump 50 bbl Acid followed by 602 bbl Pad. Start 0.5# sand sweep (68 bbl), followed by 603 bbl Pad. Ramp 115215# of 20/40 Econosand. 77 bbl flush.