Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NMOCD
Artesia

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. NMNM121474

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other _____

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No. NMNM136878

2. Name of Operator COG PRODUCTION LLC
Contact: STORMI DAVIS
E-Mail: sdavis@concho.com

8. Lease Name and Well No. COPPERHEAD 31 FEDERAL COM 3H

3. Address 2208 W MAIN STREET ARTESIA, NM 88210

3a. Phone No. (include area code) Ph: 575-748-6946

9. API Well No. 30-015-43924-00-S1

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
At surface Sec 30 T26S R29E Mer NMP NENE 349FNL 773FEL 32.019787 N Lat, 104.017212 W Lon
At top prod interval reported below Sec 31 T26S R29E Mer NMP 50FSL 660FEL 32.000107 N Lat, 104.016960 W Lon
At total depth Sec 31 T26S R29E Mer NMP Lot 7 1980FNL 656FEL

10. Field and Pool, or Exploratory PURPLE SAGE-WOLFCAMP (GAS)

11. Sec., T., R., M., or Block and Survey or Area Sec 30 T26S R29E Mer NMP

12. County or Parish EDDY

13. State NM

14. Date Spudded 11/03/2016

15. Date T.D. Reached 11/29/2016

16. Date Completed ☐ D & A ☒ Ready to Prod. 02/17/2017

17. Elevations (DF, KB, RT, GL)* 2942 GL

18. Total Depth: MD 17495 TVD 10758

19. Plug Back T.D.: MD 17340 TVD 10758

20. Depth Bridge Plug Set: MD 17340 TVD 10758

21. Type Electric & Other Mechanical Logs Run (Submit copy of each) NONE

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? ☐ No ☒ Yes (Submit analysis)

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

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
S 18.125	16.000 J-55	75.0	0	414		C 400		0	
I 13.500	10.750 N-80	45.5	0	2801		C 1250		0	
P 6.750	5.500 P-110	23.0	0	9443				0	
12 9.875	7.625 P-110	29.7	0	10015		H 1325		2580	
P 6.750	5.000 P110	18.0	9443	17445		H 1500		9443	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.875	9561							

25. Producing Intervals / 26. Perforation Record

	Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A)	WOLFCAMP	10916	17324	10916 TO 17324	0.430	1848	OPEN - Wolfcamp
B)				17370 TO 17380		60	UNDER CBP
C)							
D)							

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

Depth Interval	Amount and Type of Material
10916 TO 17324	SEE ATTACHED

NM OIL CONSERVATION
ARTESIA DISTRICT
AUG 29 2017
RECEIVED

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
02/17/2017	02/20/2017	24	→	81.0	1641.0	2990.0			ELECTRIC PUMP SUB-SURFACE

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
23/64	3300	3600.0	→	81	1641	2990		POW

28a. 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. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

ACCEPTED FOR RECORD
(ORIG. SGD.) DAVID R. GLASS
AUG 08 2017

(See Instructions and spaces for additional data on reverse side)
ELECTRONIC SUBMISSION #370323 VERIFIED BY THE BLM WELL INFORMATION SYSTEM
**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

DAVID R. GLASS
PETROLEUM ENGINEER

RECLAMATION DUE:
AUG 17 2017

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
LAMAR	2734	2772		RUSTLER	840
BELL CANYON	2773	3621		TOP SALT	1050
CHERRY CANYON	3622	4964		BASE OF SALT	2512
BRUSHY CANYON	4965	6481		LAMAR	2734
BONE SPRING LIME	6482	7397		BELL CANYON	2773
BONE SPRING 1ST	7398	8779		CHERRY CANYON	3622
BONE SPRING 2ND	8780	9259		BRUSHY CANYON	4965
BONE SPRING 3RD	9260	9621		BONE SPRING LIME	6482
WOLFCAMP	10916	17324	OIL/GAS/WATER	WOLFCAMP	9622

32. Additional remarks (include plugging procedure):
Surveys & perfs/stimulation are attached.

Additional Tops:
Wolfcamp 9622'

33. Circle enclosed attachments:

1. Electrical/Mechanical Logs (1 full set req'd.)
2. Geologic Report
3. DST Report
4. Directional Survey
5. Sundry Notice for plugging and cement verification
6. Core Analysis
7 Other:

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

Electronic Submission #370323 Verified by the BLM Well Information System.
For COG PRODUCTION LLC, sent to the Carlsbad
Committed to AFMSS for processing by DEBORAH HAM on 03/24/2017 (17DMH0092SE)

Name *(please print)* STORMI DAVIS Title PREPARER

Signature (Electronic Submission) Date 03/20/2017

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 fradulent statements or representations as to any matter within its jurisdiction.

**** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ****

COPPERHEAD 31 FEDERAL COM #3H (30-015-43924)

Perfs	7 1/2% Acid (Gal)	Sand (#)	Fluid (Gal)
1	1470	239920	505722
2	3012	301800	382692
3	2982	299930	366618
4	2940	303200	376446
5	3012	304780	378156
6	3024	300140	378084
7	2940	299550	373044
8	2982	293840	369558
9	3234	294620	375102
10	3024	302440	379092
11	2940	299690	369516
12	2940	300590	387954
13	3024	307960	375774
14	3012	302380	375216
15	3024	300750	374094
16	2940	300300	372582
17	2940	299290	370482
18	3012	301540	374754
19	3012	298730	378576
20	2970	300170	371834
21	2940	300270	371322
22	3012	299740	372696
23	3012	299750	372570
24	2982	292470	365190
25	2940	300180	368046
26	2982	299240	373044
27	3012	300710	394788
28	2940	300350	371784
29	3024	300470	372918
30	3024	294650	363216
31	3024	303070	371910
32	3024	302610	370944
33	3024	304490	371910
34	3024	298280	372582
35	3024	296470	366744
36	3024	300600	363342
37	3012	305720	372948
38	3024	303530	374430
39	3024	300330	361746
40	3024	298520	363846
41	3024	300600	360780
42	3024	301990	377202
Totals	**124,576**	**12,555,660**	**15,789,252**

COPPERHEAD 31 FEDERAL COM #3H
30-015-43924

	Stage 1	Distance Between Perfs	Shots	Stage 2	Distance Between Perfs	Shots	Stage 3	Distance Between Perfs	Shots	Stage 4	Distance Between Perfs	Shots	Stage 5	Distance Between Perfs	Shots
From Bottom to Top	17,324	42	14	17,120	65	14	17,010	42	14	16,855	43	14	16,706	36	14
	17,282	39	12	17,100	7	12	16,975	38	12	16,821	38	12	16,668	38	12
	17,243	38	10	17,093	41	10	16,937	39	10	16,783	41	10	16,630	39	10
	17,205		8	17,052		8	16,898		8	16,742		8	16,591		8
	Plug to Plug	135	44	Plug to Plug	88	44	Plug to Plug	134	44	Plug to Plug	128	44	Plug to Plug	135	44
	Frac Plug	17,340	Total Shots	Frac Plug	17,140	Total Shots	Frac Plug	17,032	Total Shots	Frac Plug	16,870	Total Shots	Frac Plug	16,726	Total Shots

	Stage 6	Distance Between Perfs	Shots	Stage 7	Distance Between Perfs	Shots	Stage 8	Distance Between Perfs	Shots	Stage 9	Distance Between Perfs	Shots	Stage 10	Distance Between Perfs	Shots
From Bottom to Top	16,553	38	14	16,400	38	14	16,246	39	14	16,093	38	14	15,941	34	14
	16,515	35	12	16,361	38	12	16,209	39	12	16,055	39	12	15,901	38	12
	16,480	42	10	16,323	38	10	16,170	39	10	16,016	41	10	15,863	39	10
	16,438		8	16,285		8	16,131		8	15,975		8	15,824		8
	Plug to Plug	134	44	Plug to Plug	134	44	Plug to Plug	134	44	Plug to Plug	131	44	Plug to Plug	135	44
	Frac Plug	16,572	Total Shots	Frac Plug	16,419	Total Shots	Frac Plug	16,265	Total Shots	Frac Plug	16,106	Total Shots	Frac Plug	15,959	Total Shots

	Stage 11	Distance Between Perfs	Shots	Stage 12	Distance Between Perfs	Shots	Stage 13	Distance Between Perfs	Shots	Stage 14	Distance Between Perfs	Shots	Stage 15	Distance Between Perfs	Shots
From Bottom to Top	15,780	44	14	15,633	38	14	15,479	39	14	15,326	38	14	15,173	38	14
	15,748	43	12	15,594	39	12	15,440	36	12	15,288	39	12	15,137	41	12
	15,705	34	10	15,556	38	10	15,404	40	10	15,249	38	10	15,096	38	10
	15,671		8	15,518		8	15,364		8	15,211		8	15,058		8
	Plug to Plug	121	44	Plug to Plug	134	44	Plug to Plug	135	44	Plug to Plug	132	44	Plug to Plug	134	44
	Frac Plug	15,792	Total Shots	Frac Plug	15,652	Total Shots	Frac Plug	15,499	Total Shots	Frac Plug	15,343	Total Shots	Frac Plug	15,192	Total Shots

	Stage 16	Distance Between Perfs	Shots	Stage 17	Distance Between Perfs	Shots	Stage 18	Distance Between Perfs	Shots	Stage 19	Distance Between Perfs	Shots	Stage 20	Distance Between Perfs	Shots
From Bottom to Top	15,019	39	14	14,861	43	14	14,687	64	14	14,559	42	14	14,406	38	14
	14,981	39	12	14,827	38	12	14,674	38	12	14,521	39	12	14,367	36	12
	14,942	38	10	14,789	38	10	14,636	35	10	14,482	38	10	14,331	40	10
	14,904		8	14,751		8	14,601		8	14,444		8	14,291		8
	Plug to Plug	129	44	Plug to Plug	134	44	Plug to Plug	119	44	Plug to Plug	134	44	Plug to Plug	135	44
	Frac Plug	15,033	Total Shots	Frac Plug	14,885	Total Shots	Frac Plug	14,720	Total Shots	Frac Plug	14,578	Total Shots	Frac Plug	14,426	Total Shots

	Stage 21	Distance Between Perfs	Shots	Stage 22	Distance Between Perfs	Shots	Stage 23	Distance Between Perfs	Shots	Stage 24	Distance Between Perfs	Shots	Stage 25	Distance Between Perfs	Shots
From Bottom to Top	14,252	39	14	14,099	38	14	13,945	39	14	13,786	44	14	13,630	47	14
	14,214	38	12	14,065	43	12	13,907	38	12	13,754	39	12	13,600	39	12
	14,176	39	10	14,022	38	10	13,869	39	10	13,715	39	10	13,561	34	10
	14,137		8	13,984		8	13,830		8	13,677		8	13,527		8
	Plug to Plug	134	44	Plug to Plug	134	44	Plug to Plug	129	44	Plug to Plug	134	44	Plug to Plug	121	44
	Frac Plug	14,271	Total Shots	Frac Plug	14,118	Total Shots	Frac Plug	13,959	Total Shots	Frac Plug	13,811	Total Shots	Frac Plug	13,648	Total Shots

	Stage 26	Distance Between Perfs	Shots	Stage 27	Distance Between Perfs	Shots	Stage 28	Distance Between Perfs	Shots	Stage 29	Distance Between Perfs	Shots	Stage 30	Distance Between Perfs	Shots
From Bottom to Top	13,485	42	14	13,332	38	14	13,179	38	14	13,021	42	14	12,872	38	14
	13,447	38	12	13,294	37	12	13,140	38	12	12,989	41	12	12,833	38	12
	13,409	39	10	13,257	40	10	13,102	39	10	12,948	38	10	12,795	41	10
	13,370		8	13,217		8	13,063		8	12,910		8	12,754		8
	Plug to Plug	134	44	Plug to Plug	134	44	Plug to Plug	135	44	Plug to Plug	134	44	Plug to Plug	130	44
	Frac Plug	13,504	Total Shots	Frac Plug	13,351	Total Shots	Frac Plug	13,198	Total Shots	Frac Plug	13,044	Total Shots	Frac Plug	12,884	Total Shots

	Stage 31	Distance Between Perfs	Shots	Stage 32	Distance Between Perfs	Shots	Stage 33	Distance Between Perfs	Shots	Stage 34	Distance Between Perfs	Shots	Stage 35	Distance Between Perfs	Shots
From Bottom to Top	12,719	35	14	12,565	38	14	12,412	38	14	12,258	39	14	12,105	38	14
	12,680	38	12	12,527	42	12	12,373	38	12	12,218	33	12	12,066	38	12
	12,642	39	10	12,485	35	10	12,335	38	10	12,185	42	10	12,028	38	10
	12,603		8	12,450		8	12,297		8	12,143		8	11,990		8
	Plug to Plug	135	44	Plug to Plug	128	44	Plug to Plug	134	44	Plug to Plug	136	44	Plug to Plug	134	44
	Frac Plug	12,738	Total Shots	Frac Plug	12,579	Total Shots	Frac Plug	12,431	Total Shots	Frac Plug	12,279	Total Shots	Frac Plug	12,124	Total Shots

	Stage 36	Distance Between Perfs	Shots	Stage 37	Distance Between Perfs	Shots	Stage 38	Distance Between Perfs	Shots	Stage 39	Distance Between Perfs	Shots	Stage 40	Distance Between Perfs	Shots
From Bottom to Top	11,951	39	14	11,798	38	14	11,647	36	14	11,491	39	14	11,338	41	14
	11,909	34	12	11,760	39	12	11,606	38	12	11,453	40	12	11,300	39	12
	11,875	39	10	11,721	38	10	11,568	38	10	11,413	34	10	11,261	38	10
	11,836		8	11,683		8	11,530		8	11,379		8	11,223		8
	Plug to Plug	135	44	Plug to Plug	128	44	Plug to Plug	134	44	Plug to Plug	121	44	Plug to Plug	134	44
	Frac Plug	11,971	Total Shots	Frac Plug	11,811	Total Shots	Frac Plug	11,664	Total Shots	Frac Plug	11,508	Total Shots	Frac Plug	11,357	Total Shots

	Stage 41	Distance Between Perfs	Shots	Stage 42	Distance Between Perfs	Shots	Stage 43	Distance Between Perfs	Shots	Stage 44	Distance Between Perfs	Shots	Stage 45	Distance Between Perfs	Shots
From Bottom to Top	11,184	39	14	11,031	38			10916			0			0	
	11,146	38	12	10,993	39										
	11,108	39	10	10,954	38										
	11,069		8	10,916											
	Plug to Plug	135	44	Plug to Plug	134	0	Plug to Plug	0	0	Plug to Plug	0	0	Plug to Plug	0	0
	Frac Plug	11,294	Total Shots	Frac Plug	11,050	Total Shots	Frac Plug		Total Shots	Frac Plug		Total Shots	Frac Plug		Total Shots