NM OIL CONSERVATION
ARTESIA DISTRICT
SEP 14 2017
RECEIVED

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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.

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 21H

3. Address: 2208 WEST MAIN, ARTESIA, NM 88210

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

9. API Well No.: 30-015-44118

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
At surface: Sec 30 T26S R29E Mer NMP NWNE 210FNL 1650FEL
At top prod interval reported below: Sec 31 T26S R29E Mer NMP
At total depth: SWSE Lot 6 212FSL 2002FEL

10. Field and Pool, or Exploratory: PURPLE SAGE; WOLFCAMP

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: 05/05/2017
15. Date T.D. Reached: 05/29/2017
16. Date Completed: ☐ D & A ☒ Ready to Prod. 08/14/2017
17. Elevations (DF, KB, RT, GL)*: 2929 GL

18. Total Depth: MD 17865 (17860) TVD 10759
19. Plug Back T.D.: MD 17685 (17660) TVD 10760 (10759)
20. Depth Bridge Plug Set: MD 17685 TVD 10760

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
CNL, DLL, SONIC, TCOM

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 20.000	16.000 J55	75.0	0	339		C 890		0	
I 13.500	10.750 L80	45.5	0	2689		C 1250		0	
P 6.750	5.500 P110	23.0	0	9301		H 1600		600	
I2 9.875	7.625 P110	29.7	0	9848		H 1000		0	
D 6.750	5.000 P110	18.0	9301	17860					

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	9418	9410						

25. Producing Intervals / 26. Perforation Record

	Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A)	WOLFCAMP	10981	17660	10981 TO 17660	0.430	1980	OPEN
B)				17715 TO		6	UNDER CBP
C)							
D)							

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

Depth Interval	Amount and Type of Material
10981 TO 17660	SEE ATTACHED

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
08/15/2017	08/20/2017	24	→	100.0	2074.0	1183.0			FLOWS FROM WELL

Choke Size	Tbg. Press. Flwg. 4000 SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→	100	2074	1183		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
			→					

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #388100 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

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	2719	2760		BOTTOM OF SALT	2530
BELL CANYON	2761	3604		LAMAR	2719
CHERRY CANYON	3605	4861		BELL CANYON	2761
BRUSHY CANYON	4862	6462		CHERRY CANYON	3605
BONE SPRING LM	6463	7371		BRUSHY CANYON	4862
1ST BONE SPRING	7372	8175		BONE SPRING LM	6463
2ND BONE SPRING	8176	9222		1ST BONE SPRING	7372
3RD BONE SPRING	9223	9571		2ND BONE SPRING	8176

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

Additional Tops:
Wolfcamp 9572'
TVD = 10797'

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 #388100 Verified by the BLM Well Information System.
For COG PRODUCTION LLC, sent to the Carlsbad

Name *(please print)* STORMI DAVIS Title PREPARER

Signature (Electronic Submission) Date 09/12/2017

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.

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

COPPERHEAD 31 FEDERAL COM #21H (30-015-44118)

Perfs	7 1/2% Acid (Gal)	15% Acid (Gal)	Sand (#)	Fluid (Gal)
1	0	798	270027	317604
2	1512	1554	215463	545328
3	0	2268	256606	600978
4	0	2394	237715	458556
5	0	3738	299337	424200
6	0	2268	299927	370398
7	0	2268	299438	374430
8	1512	798	298227	379344
9	1512	750	300212	373626
10	0	2268	300272	375732
11	0	2268	299499	366198
12	0	2262	300843	365016
13	0	3780	302740	399042
14	1512	756	302754	378966
15	0	2268	301524	375816
16	0	3234	1760	271824
17	0	2268	298123	366408
18	1512	756	300121	379722
19	1512	756	301666	388920
20	1512	756	300974	378630
21	1512	750	296701	379136
22	1512	756	34239	394884
23	1470	756	300382	453810
24	1512	756	300980	379134
25	1512	750	300541	372954
26	1512	882	301191	389046
27	1512	756	2651	169428
28	1512	756	301644	379134
29	1512	756	301639	369978
30	1512	756	300753	370944
31	750	756	299766	386526
32	1512	756	300740	372162
33	1512	756	300390	369936
34	1512	750	300052	370224
35	1512	756	302301	373134
36	1512	756	300408	366954
37	1512	756	299124	374514
38	1512	1512	300934	347382
39	1512	756	300917	399000
40	1554	756	301944	372590
41	1512	756	300977	378126
42	1512	756	2143	93282
43	1512	756	301107	356454
44	1512	756	298396	365232
45	1680	756	313492	377664
Totals	**47,790**	**57,971**	**12,150,640**	**16,852,364**

COPPERHEAD 31 FEDERAL COM 21H

	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
	17,660	19	6	17,511	19	6	17,362	19	6	17,214	18	6	17,034	49	6
From	17,641	18	6	17,493	19	6	17,344	19	5	17,195	19	6	17,014	14	6
Bottom	17,623	19	6	17,474	19	6	17,325	18	5	17,176	18	6	17,000	13	6
to Top	17,604	18	6	17,455	18	6	17,307	19	4	17,158	19	6	16,987	14	6
	17,586	19	5	17,437	19	5	17,288		4	17,139	19	5	16,973	13	5
	17,567	19	5	17,418	18	5	17,269	18	4	17,120	16	5	16,960	13	5
	17,548	18	5	17,400	19	5	17,251	19	4	17,104	21	5	16,947	13	5
	17,530		5	17,381		5	17,232		3	17,083		5	16,934		5
	Plug to Plug	185	44	Plug to Plug	148	44	Plug to Plug	149	35	Plug to Plug	181	44	Plug to Plug	132	44
	Frac Plug	17,885	Total Shots	Frac Plug	17,520	Total Shots	Frac Plug	17,372	Total Shots	Frac Plug	17,223	Total Shots	Frac Plug	17,042	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
	16,902	32	6	16,760	20	6	16,618	19	6	16,486	22	6	16,317	22	6
From	16,897	18	6	16,748	18	6	16,600	19	6	16,451	19	6	16,302	19	6
Bottom	16,879	19	6	16,730	19	6	16,581	24	6	16,432	18	6	16,283	18	6
to Top	16,860	19	6	16,711	18	6	16,557	13	6	16,414	19	6	16,265	23	6
	16,841	18	5	16,693	19	5	16,544	19	5	16,395	22	5	16,242	15	5
	16,823	19	5	16,674	19	5	16,525	18	5	16,373	15	5	16,227	18	5
	16,804	24	5	16,655	18	5	16,507	19	5	16,358	19	5	16,209	19	5
	16,780		5	16,637		5	16,488		5	16,339		5	16,190		5
	Plug to Plug	140	44	Plug to Plug	143	44	Plug to Plug	148	44	Plug to Plug	154	44	Plug to Plug	148	44
	Frac Plug	16,810	Total Shots	Frac Plug	16,770	Total Shots	Frac Plug	16,627	Total Shots	Frac Plug	16,479	Total Shots	Frac Plug	16,325	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
	16,169	21	6	16,017	24	6	15,868	25	6	15,725	19	6	15,576	19	6
From	16,158	24	6	16,004	18	6	15,855	18	6	15,702	14	6	15,558	19	6
Bottom	16,134	18	6	15,986	19	6	15,837	19	6	15,688	19	6	15,539	18	6
to Top	16,116	19	6	15,967	19	6	15,818	18	6	15,669	18	6	15,521	19	6
	16,097	18	5	15,948	21	5	15,800	19	5	15,651	19	5	15,502	16	5
	16,079	19	5	15,927	16	5	15,781	19	5	15,632	21	5	15,486	21	5
	16,060	19	5	15,911	18	5	15,762	18	5	15,611	16	5	15,465	19	5
	16,041		5	15,893		5	15,744		5	15,595		5	15,446		5
	Plug to Plug	145	44	Plug to Plug	158	44	Plug to Plug	142	44	Plug to Plug	148	44	Plug to Plug	158	44
	Frac Plug	16,177	Total Shots	Frac Plug	16,032	Total Shots	Frac Plug	15,876	Total Shots	Frac Plug	15,734	Total Shots	Frac Plug	15,586	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
	15,420	26	6	15,275	22	6	15,130	18	6	14,978	22	6	14,827	19	6
From	15,409	14	6	15,260	19	6	15,111	18	6	14,962	18	6	14,814	19	6
Bottom	15,395	23	6	15,241	18	6	15,093	23	6	14,944	19	6	14,795	19	6
to Top	15,372	19	6	15,223	19	6	15,070	15	6	14,925	18	6	14,776	20	6
	15,353	18	5	15,204	18	5	15,055	18	5	14,907	19	5	14,756	17	5
	15,335	19	5	15,186	16	5	15,037	19	5	14,888	19	5	14,739	18	5
	15,316	19	5	15,170	22	5	15,018	18	5	14,869	23	5	14,721	19	5
	15,297		5	15,148		5	15,000		5	14,846		5	14,702		5
	Plug to Plug	145	44	Plug to Plug	144	44	Plug to Plug	149	44	Plug to Plug	154	44	Plug to Plug	148	44
	Frac Plug	15,428	Total Shots	Frac Plug	15,283	Total Shots	Frac Plug	15,139	Total Shots	Frac Plug	14,990	Total Shots	Frac Plug	14,836	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
	14,677	25	6	14,520	33	6	14,380	21	6	14,237	18	6	14,088	19	6
From	14,665	19	6	14,503	23	6	14,366	18	6	14,218	18	6	14,069	15	6
Bottom	14,646	15	6	14,480	7	6	14,348	18	6	14,200	20	6	14,054	22	6
to Top	14,631	22	6	14,473	15	6	14,330	19	6	14,180	18	6	14,032	18	6
	14,609	19	5	14,458	16	5	14,311	18	5	14,162	18	5	14,014	19	5
	14,590	18	5	14,442	19	5	14,293	17	5	14,144	19	5	13,995	19	5
	14,572	19	5	14,423	22	5	14,276	21	5	14,125	18	5	13,976	13	5
	14,553		5	14,401		5	14,255		5	14,107		5	13,963		5
	Plug to Plug	160	44	Plug to Plug	140	44	Plug to Plug	144	44	Plug to Plug	149	44	Plug to Plug	149	44
	Frac Plug	14,990	Total Shots	Frac Plug	14,530	Total Shots	Frac Plug	14,390	Total Shots	Frac Plug	14,246	Total Shots	Frac Plug	14,097	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
	13,939	24	6	13,790	19	6	13,640	20	6	13,493	25	6	13,344	18	6
From	13,921	19	6	13,772	19	6	13,623	19	6	13,474	19	6	13,325	18	6
Bottom	13,902	19	6	13,753	14	6	13,604	18	6	13,455	18	6	13,307	21	6
to Top	13,883	20	6	13,739	23	6	13,586	19	6	13,437	21	6	13,286	17	6
	13,863	17	5	13,716	19	5	13,567	18	5	13,416	16	5	13,269	18	5
	13,846	18	5	13,697	18	5	13,549	19	5	13,400	18	5	13,251	19	5
	13,828	19	5	13,679	19	5	13,530	12	5	13,382	20	5	13,232	18	5
	13,809		5	13,660		5	13,518		5	13,362		5	13,214		5
	Plug to Plug	148	44	Plug to Plug	149	44	Plug to Plug	149	44	Plug to Plug	149	44	Plug to Plug	162	44
	Frac Plug	13,848	Total Shots	Frac Plug	13,800	Total Shots	Frac Plug	13,651	Total Shots	Frac Plug	13,502	Total Shots	Frac Plug	13,353	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
	13,182	32	6	13,046	24	6	12,897	19	6	12,749	18	6	12,597	24	6
From	13,176	15	6	13,028	19	6	12,879	15	6	12,730	19	6	12,591	18	6
Bottom	13,161	22	6	13,009	19	6	12,864	18	6	12,711	18	6	12,563	19	6
to Top	13,139	18	6	12,990	21	6	12,846	23	6	12,693	19	6	12,544	21	6
	13,121	19	5	12,969	16	5	12,823	19	5	12,674	18	5	12,523	16	5
	13,102	19	5	12,953	15	5	12,804	18	5	12,656	19	5	12,507	18	5
	13,083	13	5	12,938	22	5	12,786	19	5	12,637	16	5	12,489	20	5
	13,070		5	12,916		5	12,767		5	12,621		5	12,469		5
	Plug to Plug	136	44	Plug to Plug	148	44	Plug to Plug	149	44	Plug to Plug	152	44	Plug to Plug	146	44
	Frac Plug	13,191	Total Shots	Frac Plug	13,055	Total Shots	Frac Plug	12,907	Total Shots	Frac Plug	12,758	Total Shots	Frac Plug	12,608	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
	12,451	18	6	12,298	24	6	12,151	23	6	12,004	19	6	11,850	24	6
From	12,432	18	6	12,283	18	6	12,135	19	6	11,986	19	6	11,837	19	6
Bottom	12,414	24	6	12,265	19	6	12,116	19	6	11,967	16	6	11,818	18	6
to Top	12,390	14	6	12,248	18	6	12,097	23	6	11,951	21	6	11,800	19	6
	12,376	18	5	12,228	19	5	12,074	14	5	11,930	19	5	11,781	20	5
	12,358	19	5	12,209	19	5	12,060	18	5	11,911	18	5	11,761	17	5
	12,339	17	5	12,190	16	5	12,042	19	5	11,893	19	5	11,744	19	5
	12,322		5	12,174		5	12,023		5	11,874		5	11,725		5
	Plug to Plug	147	44	Plug to Plug	153	44	Plug to Plug	146	44	Plug to Plug	149	44	Plug to Plug	154	44
	Frac Plug	12,480	Total Shots	Frac Plug	12,313	Total Shots	Frac Plug	12,160	Total Shots	Frac Plug	12,014	Total Shots	Frac Plug	11,865	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
	11,703	22	6	11,558	18	6	11,406	24	6	11,260	23	6	11,111	19	6
From	11,868	18	6	11,534	13	6	11,390	18	6	11,242	19	6	11,093	19	6
Bottom	11,670	19	6	11,521	19	6	11,372	19	6	11,223	19	6	11,074	18	6
to Top	11,651	16	6	11,502	19	6	11,353	18	6	11,204	14	6	11,056	19	6
	11,635	21	5	11,483	18	5	11,335	19	5	11,190	23	5	11,037	19	5
	11,614	19	5	11,465	19	5	11,316	19	5	11,167	18	5	11,018	18	5
	11,595	19	5	11,446	16	5	11,297	14	5	11,149	19	5	11,000	19	5
	11,576		5	11,430		5	11,283		5	11,130		5	10,981		5
	Plug to Plug	144	44	Plug to Plug	146	44	Plug to Plug	151	44	Plug to Plug	149	44	Plug to Plug	65	44
	Frac Plug	11,711	Total Shots	Frac Plug	11,567	Total Shots	Frac Plug	11,421	Total Shots	Frac Plug	11,270	Total Shots	Frac Plug	11,121	Total Shots

VES SURVEY INTERNATIONAL

May 23, 2017

NM OIL CONSERVATION
ARTESIA DISTRICT
SEP 14 2017
RECEIVED

Concho Resources, Inc.
One Concho Center
600 W. Illinois Avenue
Midland, Texas 79701

Attn: Kanicia Castillo

RE: **Copperhead 31 Federal Com No. 021H**

Please find enclosed a copy of the survey from 0' to 9750' ran on the above referenced well.

Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
§
COUNTY OF NUECES §

This instrument was acknowledged before me on the 23rd day of May , A.D., 2017, by Keith Havelka.

Jennifer Ann Byerly
Notary Public, State of Texas

JENNIFER ANN BYERLY
Notary Public, State of Texas
My Commission Expires
August 16, 2017

VES Survey International
P.O. Box 261021, Corpus Christi, Texas 78426
T (361) 767-0602 F (361) 767-0612
www.vessurvey.com