Submit 1 Copy To Appropriate District Office
District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

NM OIL CONSERVATION
ARTESIA DISTRICT
SEP 18 2014
RECEIVED

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

WELL API NO. 30-015-36460	
5. Indicate Type of Lease STATE ☒ FEE ☐	
6. State Oil & Gas Lease No.	
SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	7. Lease Name or Unit Agreement Name: Teddy Graham St Com
1. Type of Well: Oil Well ☐ Gas Well ☒ Other	8. Well Number 1
2. Name of Operator: COG Operating LLC	9. OGRID Number 229137
3. Address of Operator: One Concho Center, 600 W. Illinois Ave, Midland, TX 79701	10. Pool name or Wildcat: Hay Hollow ;Bone Spring
4. Well Location: Unit Letter M : 660 feet from the South line and 660 feet from the West line; Section 9 Township 26S Range 28E NMPM County Eddy	
	11. Elevation *(Show whether DR, RKB, RT, GR, etc.)* 3073' GR

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	P AND A	☐
PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
DOWNHOLE COMMINGLE	☐						
CLOSED-LOOP SYSTEM	☐						
OTHER:		Recompletion to Bone Spring	☒	OTHER:			☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

COG Operating respectfully request to abandon the Wolf Camp and recomplete to the Bone Spring in the Teddy Graham State Com #1. If test in the Bone Spring show to be unproductive, COG Operating request to abandon the Bone Spring and recomplete in the Delaware.

Please see attached recompletion procedures with before and after wellbore schematics.

All operations will be conducted using a closed loop system.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE B. Maiorino TITLE Regulatory Analyst DATE 9/16/14

Type or print name Brian Maiorino E-mail address: bmaiorino@concho.com PHONE: 432-221-0467

For State Use Only

APPROVED BY: T. C. Shepard TITLE Geologist DATE 9-19-2014

Conditions of Approval (if any):

Teddy Graham St Com 1
660' fsl, 660' fwl
M-9-26S-28E
Eddy Co., NM

Bone Spring/Delaware Recompletion Procedure
9 Jun 14

Basic Data:

13-3/8" @ 405' Circ. Cmt.
9-5/8" @ 2440' Circ. Cmt.
7" @ 9500', DV @ 6421', Circ. Cmt. Both Stgs.
4-1/2" @ 13969', TOC @ 8700' TS

7"/23ppf/L80/LTC Burst=6340 psi, 5072 psi @ 80% Nom. ID=6.366" Drift ID=6.241" (.0393 B/F capacity)

4.5"/11.6ppf/M95-110/LTC Burst=10690 psi, 8552 psi at 80% Nom. ID=4.000" Drift ID=3.875" (.0155 B/F capacity)

2.375"/4.7ppf/L80/EUE Burst=11200 psi, 8960 psi at 80% Nom ID=1.995" Drift ID=1.901"
Collapse=11780 psi, 9424 at 80%
Tensile=104,300 lb with no safety factor

Objective: Test 3rd Bone Spring Sand and Delaware Sands and Lime.

Procedure:

1. MIRU WSU, kill well if necessary, NU hydraulic double ram BOP (2-3/8" rams), unseat packer at 9390' and TOOH with tubing laying down gas lift mandrels and valves.

2. Install lubricator, run gauge ring/JB to 9425' and set CIBP + 35' cement at 9421' (top of Wolfcamp at 9421').

3. RU lubricator and perf the Lwr 3rd Bone Spring Sand with 1 spf at any phasing at the depths shown below using a 3-1/8" casing gun with deep penetrating charges (inclusive).

Lwr 3rd BS Sd: 9254-9260', 9317-9323' (14) OH Log (GR/CCL on depth with OH log)

4. RIH with packer to approx. 9200', test annulus to 500 psi, open bypass, pump acid close to packer, close bypass and pump 1500 gals. NE Fe 7.5% HCl acid down tubing at 3-5 bpm while dropping 3 slugs of 10 ballsealers through job (30 balls). Limit treating pressure to 5500 psi while holding 1000 psi on annulus. Swab/flow test to evaluate oil/gas show. Swab into a drum if necessary for accurate oil cut data.

5. If decision made to frac, open bypass, swab fluid level inside of casing down to 6000', ND BOP, install frac valve with BOP on top and TOOH. Recommend using casing saver if wellhead equipment is not 5000 psi WP rated. Frac down casing at 30 bpm using low gel crosslinked gel carrying 100,000 lbs

2040 white sand (last 25,000 lbs curable resin coated, 4 ppg max, est BHST = 150-155°F) while limiting treating pressure to 5000 psi.

6. Leave well shut in 24 hrs for resin to cure then bleed pressure off slowly. RIH with 3-7/8" bit on tubing and clean out any sand fill down to PBD.

7. Well will be rod pumped but will have to wait for pumping unit. A/L design will be issued and will likely use 76 rod design. Will likely run seating nipple on bottom of tubing, TAC 100' above top perf with SN landed below the bottom perf at approx. 9360'.

8. When ready to abandon 3rd BS, install lubricator, run gauge ring/JB to 9200' and set CIBP + 35' cement at 9200' (3rd BS Sand perfs).

9. RIH with tubing to 8700' and circulate the well full of 9.6 ppg brine water (135 bbls capacity with tubing out of hole). Top casing off with 9.6 ppg brine when POOH. There should be 9.6 ppg brine mud outside of 4-1/2" casing and the intent of this step is to balance the hydrostatic pressure inside and outside of the casing when it is cut in the next step.

10. ND wellhead, weld an extension with collar on top onto the 4.5" casing stub, remove slips, install BOP with 4.5" rams, and install wireline lubricator with side outlet and valve for circulation onto the 4.5" casing.

11. RU Rotary, determine free point, chemical cut 4.5" casing just above free point, pull casing free, circulate/reverse circulate mud out of annulus (capacity factor 0.0352 bbl/ft with 4.5" in hole), RU casing handling/laydown equipment and lay down 4.5" casing. Save approx. 90 bbls of the mud circulated out of well if not too viscous and/or sour. If mud in well is unsuitable, have 90 bbls cut brine mud laden fluid composed of 25 sx salt gel per 100 bbls cut brine delivered to location.

12. RIH with open-ended 2-3/8" tubing to approx. 9100', spot 90 bbls mud laden fluid, pull up to casing stub, spot 25 sx Class C neat 50' below top of stub, pull 10 stands, WOC 3-4 hrs and tag plug. Respot plug if deeper than 50' above top of stub. POOH laying down tubing as necessary. (25 sx Class C neat should occupy 50' of 4.5" casing below stub and 130' of 7" casing above the stub)

13. With end of tubing at 6475', spot 25 sx Class C neat across DV tool at 6421', pull 10 stands, WOC 3-4 hrs and tag plug. Respot plug if deeper than 6370'. Pull tubing to 6200' and reverse out any plugging mud above this depth. (25 sx Class C neat should occupy 150' of 7" casing)

14. Close blind rams and test casing to 2500 psi. RU lubricator, run GR/CCL from 6250' to 2300' and perf the Delaware Sand 1 with 3-1/8" casing guns loaded 6 spf at any phasing with deep penetrating charges at the depths shown below.

Delaware 1: 6060', 6114' (12 shots) OH Log

15. RIH with packer to approx. 6025', test annulus to 500 psi, open bypass, pump acid close to packer, close bypass and pump 1500 gals. NE Fe 7.5% HCl acid down tubing at 3-5 bpm while dropping 3 slugs of 8 ballsealers through job (24 balls). Limit treating pressure to 5500 psi while holding 1000 psi on annulus. Swab/flow test to evaluate oil/gas show. Swab into a drum if necessary for accurate oil cut data.

16. If decision made to frac, open bypass, swab fluid level inside of casing down to 4000', TOOH with tubing and packer, ND BOP, install 5k frac valve and goat head.

17. Frac down casing at 20-25 bpm with low gel load borate crosslink fluid carrying approx. 50,000 lbs. 20/40 white sand followed by 25,000 lbs curable resin coated sand (75,000 lbs total, 4 ppg max, est BHT 125-130 deg F, see attached frac schedule). Limit treating pressure to 3000 psi. Shut in overnight then flow well down.

18. Will PWOP and produce this zone before continuing with procedure.

19. When/if ready to move uphole, and Delaware 1 is to be abandoned, install lubricator, run gauge ring/JB to 6225' and set CIBP + 35' cement at 6223' (top of Bone Spring at 6223'). Set CIBP, no cement on top, at 6025' to isolate Delaware 1.

20. RU lubricator and perf the Delaware Sand 2 with 3-1/8" casing guns loaded 2 spf at any phasing using deep penetrating charges at the depths shown below (inclusive).

Delaware 2: 5914-5918' (10 shots) OH Log

21. RIH with packer assembly to approx. 5875', pump acid close to packer, close bypass and acidize with 750 gals. NE Fe 7.5% HCl acid at 3-5 bpm while limiting treating pressure to 5500 psi and holding 1000 psi on annulus. Drop slug of 10 ballsealers halfway through job. Swab/flow test to evaluate oil/gas show. Swab into a drum if necessary for accurate oil cut data.

22. If decision made to frac, install frac valve on tubing and frac down tubing at 10-12 bpm with low gel load borate crosslink fluid carrying approx. 20,000 lbs. 20/40 CRC sand (4 ppg max, est BHT 125-130 deg F, see attached frac outline). Limit treating pressure to 5500 psi while holding 1000 psi on annulus. Have pump on backside in case well screens out and we need to reverse circulate the well clean. When sand concentration falls below 4 ppg, bypass blender and go to quick flush. Shut in overnight then flow well down.

23. Will PWOP and produce this zone before continuing with procedure.

24. When/if ready to move uphole, plugback method will be determined based on results of previous zone. RU lubricator and perf the Delaware Sand 3 with 3-1/8" casing guns loaded 1 spf with deep penetrating charges at any phasing at the depths shown below.

Delaware 3: 3046-3064' (18 shots) OH Log

25. RIH with packer assembly to approx. 3000', pump acid close to packer, close bypass and acidize with 1000 gals. NE Fe 7.5% HCl acid at 3-5 bpm while limiting treating pressure to 5500 psi and holding 1000 psi on annulus. Drop 30 ballsealers throughout job. Swab/flow test to evaluate oil/gas show. Swab into a drum if necessary for accurate oil cut data.

26. If decision made to frac, install frac valve on tubing and frac down tubing at 10-12 bpm with low gel load borate crosslink fluid carrying approx. 20,000 lbs. 20/40 CRC sand (max 4 ppg, est BHT 95-100 deg F, see attached frac schedule). Limit treating pressure to 5500 psi while holding 1000 psi on annulus. Have pump on backside in case well screens out and we need to reverse circulate the well clean. When sand concentration falls below 4 ppg, bypass blender and go to quick flush. Shut in overnight then flow well down.

27. Will PWOP and produce this zone.

28. When/if ready to move uphole, plugback method will be determined based on results of previous zone. RU lubricator and perf the Delaware Lime 4 with 3-1/8" casing guns loaded 1 spf with deep penetrating charges at any phasing at the depths shown below.

Delaware 4: 2472-2488' (16 shots) OH Log

29. RIH with packer assembly, pump acid close to packer, close bypass and acidize with 2000 gals. NE Fe 15% HCl acid at 3-5 bpm while limiting treating pressure to 5500 psi and holding 1000 psi on annulus. Drop 30 ballsealers throughout job. Swab/flow test until notified to do otherwise.

30. If decision made to frac, install frac valve on tubing and frac down tubing at 8-10 bpm with low gel load borate crosslink fluid carrying approx. 10,000 lbs. 20/40 brown sand (max 2 ppg, est BHT 85-90 deg F, see attached frac schedule). Limit treating pressure to 5500 psi while holding 1000 psi on annulus. Have pump on backside in case well screens out and we need to reverse circulate the well clean. When sand concentration falls below 2 ppg, bypass blender and go to quick flush. Shut in overnight then flow well down.

31. Will PWOP and produce this zone.

---------- Additional Procedures Will Be Issued If/As Necessary ----------

Kbc/teddy graham st com 1 bs del recompl proc 9 jun 14

Well: Teddy Graham St Com. #1

Location: 660' FSL 660' FWL
M-9-26S-28E
Eddy Co., NM
30-015-36460

Zero: 17' AGL
KB: 3090'
GL: 3073'

Casing Program:

Size	Wt.	Grade	Conn.	Depth
13 3/8	48	H-40	STC	405
9 5/8	36	J-55	STC	2440
7"	23	N-80	LTC	6811
7"	23	P-110	LTC	9500
4 1/2"	11.6	HCP110	LTC	13969
2 3/8"	4.7	L-80	EUE	

17 1/2"

13 3/8" @ 405'
450 sx P+ w/2% $CaCl_2$ (circ. cmt.)

12 1/4"

9 5/8" @ 2440' 760 sx H/L and 250 sx P+ w/2% $CaCl_2$ (circ. cmt)

8 3/4"

6060', 6114' (12) Del 1

DV @ 6421'

25 sx "C" 6370' 6475'

AFTER Delaware

4 1/2" cut ±8700'

25 sx C 50' in/out

TOC 8700' TS

CIBP + 35' cmt 9200'

CIBP + 35' cmt 9421'

9254-9323' (14) 3rd BSS

1st Stage: 220 H/L and 200 sx Super H (circ. cmt.)

9468'-9580'

7" @ 9500' 2nd Stage 900 H/L and 100 sx P+ (circ. cmt.)

WC

10188-10350'

6 1/8"

CIBP + 35' cmt 10594'

Cmt Plug 12283'-13070'

12591-12697' (104) Morrow 4

CIBP 13140'

13196-13202' (42) Morrow 3

CIBP 13750'

13796-13810' (90) Morrow 1

FC @ 13925'

4 1/2" @ 13969' 435 sx Super H (TOC 8700' TS)

Well: Teddy Graham St. Com. #1

Location: 660' FSL 660' FWL
M-9-26S-28E
Eddy Co., NM
30-015-36460

Zero: 17' AGL
KB: 3090'
GL: 3073'

Casing Program:

Size	Wt.	Grade	Conn.	Depth
13 3/8	48	H40	STC	405
9 5/8	36	J55	STC	2440
7"	23	N80	LTC	6811
7"	23	P110	LTC	9500
4 1/2"	11.6	HCP110	LTC	13969
2 3/8"	4.7	L80	EUE	

17 1/2"

13 3/8" @ 405'
450 sx P+ w/2% $CaCl_2$ (circ. cmt.)

12 1/4"

9 5/8" @ 2440' 760 sx H/L and 250 sx P+ w/2% $CaCl_2$ (circ. cmt)

AFTER 3rd BSS Zone

8 3/4"

DV @ 6421'

TOC 8700' TS

9254-9323' (14) 3rd BSS 1st Stage: 220 H/L and 200 sx Super H (circ. cmt.)

7" @ 9500' 2nd Stage 900 H/L and 100 sx P+ (circ. cmt.)

CIBP + 35' Cmt 9421'

9468'-9580'

WC

10188-10350'

6 1/8"

CIBP + 35' cmt 10594'

Cmt Plug 12283'-13970'

CIBP 13140'

12591-12697' (104) Morrow 4

13196-13202' (42) Morrow 3

CIBP 13750'

13796-13810' (90) Morrow 1

FC @ 13925'

4 1/2" @ 13969' 435 sx Super H (TOC 8700' TS)

GH Freeman, Inc. 12-08

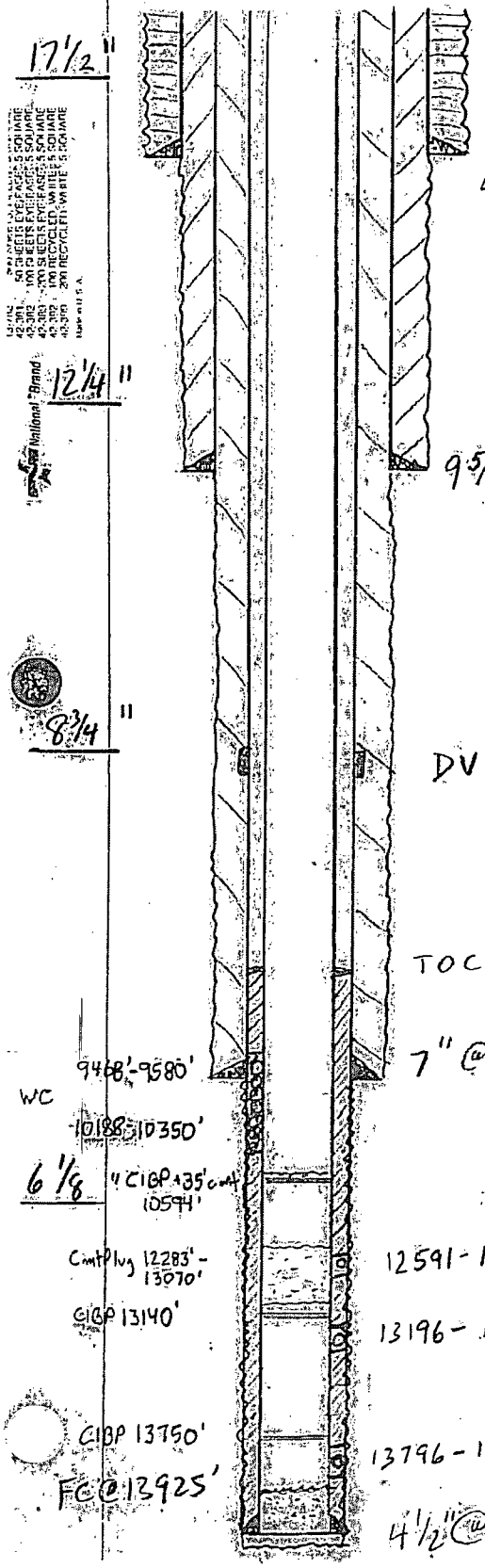
Well: Teddy Graham St. Com. #1

Location: 660' FSL 660' FWL
M-9-26S-28E
Eddy Co., NM
30-015-36460

Zero: 17' AGL
KB: 3090'
GL: 3073'

Casing Program:

Size	Wt.	Grade	Conn.	Depth
13 3/8	48	H40	STC	405
9 5/8	36	J55	STC	2440
7"	23	N80	LTC	6811
7"	23	P110	LTC	9500
4 1/2"	11.6	HCP110	LTC	13969
2 3/8"	4.7	L80	EUE	



13 3/8" @ 405'
450 sx P+ w/2% $CaCl_2$ (circ. cmt.)

9 5/8" @ 2440' 760 sx H/L and 250 sx P+ w/2% $CaCl_2$ (circ. cmt)

BEFORE

DV @ 6421'

TOC 8700' TS

7" @ 9500' 1st Stage: 220 H/L and 200 Sx Super H (circ. cmt.)
2nd Stage 900 H/L and 100 Sx P+ (circ. cmt.)

12591-12697' (104) Morrow 4

13196-13202' (42) Morrow 3

13796-13810' (90) Morrow 1

4 1/2" @ 13969' 435 sx Super H (TOC 8700' TS)