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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101
August 1, 2011

Permit 230869

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
COG OPERATING LLC One Concho Center Midland, TX 79701	229137
	3. API Number 30-025-43550

4. Property Code	5. Property Name	6. Well No.
315647	VAST STATE	021H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
P	17	26S	33E	P	210	S	1125	E	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
A	17	26S	33E	A	200	N	660	E	Lea

9. Pool Information

WC-025 G-09 S263327G;UPPER WOLFCAMP	98097

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3260
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	17041	Wolfcamp		1/31/2017
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	13.5	10.75	45.5	1025	700	
Int1	9.875	7.625	29.7	11650	1000	
Prod	6.75	5.5	23	17041	1350	11000

Casing/Cement Program: Additional Comments

Drill 13-1/2" hole to ~1025' w/ fresh water spud mud. Run 10-3/4" 45.5# J55 STC casing to TD and cement to surface in one stage. Drill 9-7/8" hole to ~11,650' with diesel brine emulsion. Run 7-5/8" 29.7# P110 casing to TD and cement to surface in one stage. Drill 6-3/4" vertical hole, curve & lateral to 17,041' with OBM. Run 5-1/2" 23# P110 LTC by 5" 18# P110 LTC casing to TD and cement to 11,000' in one stage.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	3000	5000	Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature:		**OIL CONSERVATION DIVISION**		
Printed Name:	Electronically filed by Diane Kuykendall	Approved By:	Paul Kautz	
Title:	Production Reporting Mgr	Title:	Geologist	
Email Address:	production@concho.com	Approved Date:	1/21/2017	Expiration Date: 1/21/2019
Date:	1/18/2017 Phone: 432-683-7443	Conditions of Approval Attached		

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Form C-102
August 1, 2011

Permit 230869

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number	2. Pool Code	3. Pool Name
30-025-43550	98097	WC-025 G-09 S263327G;UPPER WOLFCAMP
4. Property Code	**5. Property Name**	**6. Well No.**
315647	VAST STATE	021H
7. OGRID No.	**8. Operator Name**	**9. Elevation**
229137	COG OPERATING LLC	3260

10. Surface Location

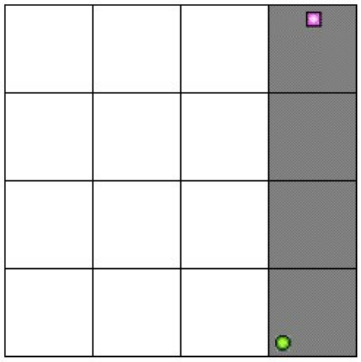
UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
P	17	26S	33E	P	210	S	1125	E	Lea

11. Bottom Hole Location If Different From Surface

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
A	17	26S	33E	A	200	N	660	E	Lea

12. Dedicated Acres	13. Joint or Infill	14. Consolidation Code	15. Order No.
160.00			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location(s) or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

E-Signed By: Diane Kuykendall
Title: Production Reporting Mgr
Date: 1/18/2017

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Surveyed By: Chad Harcrow
Date of Survey: 12/12/2016
Certificate Number: 17777

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PERMIT COMMENTS

Operator Name and Address:	API Number:
COG OPERATING LLC [229137] One Concho Center Midland, TX 79701	30-025-43550
	Well: VAST STATE #021H

Created By	Comment	Comment Date
mreyes3	OIL: COG Operating has conducted a review to determine if an H2S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal. H2S concentrations of wells in this area from surface to TD are low enough; therefore we do not believe that an H2S Contingency Plan would be necessary.	1/18/2017

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PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
COG OPERATING LLC [229137] One Concho Center Midland, TX 79701	30-025-43550
	Well: VAST STATE #021H

OCD Reviewer	Condition
pkautz	Will require a directional survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	If using a pit for drilling and completion operations, must have an approved pit from prior to spudding the well.
pkautz	1) SURFACE & INTERNEMIATE CASING - Cement must circulate to surface -- 2) PRODUCTION CASING - Cement must tie back into intermediate casing --
pkautz	If cement does not circulate to surface, must run temperature survey or other log to determine top of cement
pkautz	Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water
pkautz	Must notify OCD Hobbs Office if lost circulation is encountered at 575-370-3186
pkautz	1) Must notify OCD Hobbs Office prior to running Stage Tool at 575-370-3186 2) If using Stage Tool on Surface casing, Stage Tool must be set greater than 350' from surface and a minimum of 200 feet above surface shoe. 3) When using a Stage Tool on Intermediate or Production Casing Stage must be a minimum of 50 feet below previous casing shoe.
pkautz	Must submit Gas Capture Plan