

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720
District II
 811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720
District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
 1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

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 154142

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

1. Operator Name and Address COG OPERATING LLC ONE CONCHO CENTER MIDLAND, TX 79701	2. OGRID Number 229137
4. Property Code 38834	3. API Number 30-025-40732
5. Property Name LIGHTNING P-38 STATE	6. Well No. 005H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
A	1	21S	33E	9	3627	N	359	E	LEA

8. Pool Information

BERRY;BONE SPRING, NORTH	5535
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Additional Well Information

9. Work Type New Well	10. Well Type OIL	11. Cable/Rotary	12. Lease Type State	13. Ground Level Elevation 3759
14. Multiple N	15. Proposed Depth 15951	16. Formation 3rd Bone Spring Sand	17. Contractor	18. Spud Date 9/3/2012
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

19. Proposed Casing and Cement Program

Type	Hole Size	Casing Type	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	54.5	1750	1100	
Int1	12.25	9.625	40	5500	1300	
Prod	7.875	5.5	17	15951	1500	5000

Casing/Cement Program: Additional Comments

Plan to drill a 17-1/2" hole to 1750' with Fresh Water. Run 13-3/8", 54.5#, J-55 csg and cmt to surface. Drill 12-1/4" hole to 5500' with Brine, and run 9-5/8", 40#, J55/N80 and cement to surface in 2 stages. Drill 7-7/8" curve and lateral with cut brine to approx 15,951'MD. Run 5-1/2", 17#, P-110 csg and cement to 5000' in 1 stage.

Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
DoubleRam	3000	3000	Cameron

I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines <input type="checkbox"/> , a general permit <input type="checkbox"/> , or an (attached) alternative OCD-approved plan <input type="checkbox"/> .	OIL CONSERVATION DIVISION
Printed Name: Electronically filed by Diane Kuykendall	Approved By: Paul Kautz
Title: Production Reporting Mgr	Title: Geologist
Email Address: dkuykendall@conchoresources.com	Approved Date: 8/29/2012 Expiration Date: 8/29/2014
Date: 8/27/2012 Phone: 432-683-7443	Conditions of Approval Attached

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Form C-102
 August 1, 2011
 Permit 154142

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number 30-025-40732	2. Pool Code 5535	3. Pool Name BERRY;BONE SPRING, NORTH
4. Property Code 38834	5. Property Name LIGHTNING P-38 STATE	
6. Well No. 005H	8. Operator Name COG OPERATING LLC	
7. OGRID No. 229137	9. Elevation 3759	

10. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
A	1	21S	33E	9	3627	N	359	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
D	1	21S	33E	5	3310	N	330	W	LEA

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

	<p>OPERATOR CERTIFICATION</p> <p><i>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.</i></p> <p>E-Signed By: Diane Kuykendall Title: Production Reporting Mgr Date: 8/27/2012</p>
	<p>SURVEYOR CERTIFICATION</p> <p><i>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.</i></p> <p>Surveyed By: Jeffrey Hudson Date of Survey: 7/8/2012 Certificate Number: 20559</p>

Permit Comments

Operator: COG OPERATING LLC , 229137

Well: LIGHTNING P-38 STATE #005H

API: 30-025-40732

Created By	Comment	Comment Date
mreyes1	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.	8/27/2012
pkautz	Land s/S	8/28/2012
CHERRERA	OCD RECEIVED FORM C144 CLEZ. OCD PERMIT # P1-05120	8/29/2012

Permit Conditions of Approval

Operator: COG OPERATING LLC , 229137

Well: LIGHTNING P-38 STATE #005H

API: 30-025-40732

OCD Reviewer	Condition
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