

**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 188137

**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 40318		3. API Number 30-025-41938
5. Property Name MERLIN STATE COM		6. Well No. 002H

**7. Surface Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
D	32	21S	34E		190	N	660	W	Lea

**8. Proposed Bottom Hole Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
M	32	21S	34E	M	330	S	660	W	Lea

**9. Pool Information**

WC-025 G-07 S213430M;BONE SPRING	97962
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**Additional Well Information**

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3727
16. Multiple N	17. Proposed Depth 16480	18. Formation Bone Spring	19. Contractor	20. Spud Date 6/30/2014
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	17.5	13.375	54.5	1900	1250	
Int1	12.25	9.625	40	5850	2010	
Prod	8.75	5.5	17	16480	2630	

**Casing/Cement Program: Additional Comments**

Drill 17-1/2" hole to ~1900' w/ fresh water spud mud. Run 13-3/8" 54.5# J55 STC casing to TD and cement to surface in one stage. Will use 1" tubing and Class C w/ 2% CaCl2 to cement to surface, if necessary. Drill 12-1/4" hole to ~5850' with saturated brine water. If losses occur in the Reef, will switch to fresh water to interval TD. Run 9-5/8" 40# L80 BTC casing to TD with a DV tool placed ~ 100' above the Reef. Plan to circulate cement on both stages. Drill 8-3/4" vertical hole and curve and 7-7/8" lateral to 16480' with cut brine. Run 5-1/2" 17# P110 LTC casing to TD and cement to surface in one stage.

**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000	3000	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 <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> , if applicable.  Signature:	<b>OIL CONSERVATION DIVISION</b>
Printed Name: Electronically filed by Diane Kuykendall Title: Production Reporting Mgr Email Address: dkuykendall@conchoresources.com Date: 6/23/2014	Approved By: Paul Kautz Title: Geologist Approved Date: 6/26/2014 Expiration Date: 6/26/2016 Conditions of Approval Attached

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Form C-102  
August 1, 2011  
Permit 188137

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1. API Number 30-025-41938	2. Pool Code 97962	3. Pool Name WC-025 G-07 S213430M;BONE SPRING
4. Property Code 40318	5. Property Name MERLIN STATE COM	6. Well No. 002H
7. OGRID No. 229137	8. Operator Name COG OPERATING LLC	9. Elevation 3727

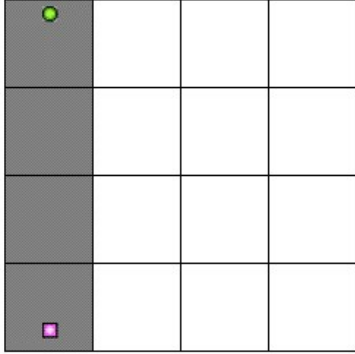
**10. Surface Location**

UL - Lot D	Section 32	Township 21S	Range 34E	Lot Idn	Feet From 190	N/S Line N	Feet From 660	E/W Line W	County Lea
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**11. Bottom Hole Location If Different From Surface**

UL - Lot M	Section 32	Township 21S	Range 34E	Lot Idn M	Feet From 330	N/S Line S	Feet From 660	E/W Line W	County Lea
12. Dedicated Acres 160.00	13. Joint or Infill		14. Consolidation Code				15. Order No.		

**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 style="text-align: center;"><b>OPERATOR CERTIFICATION</b></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: 6/23/2014</p> <hr/> <p style="text-align: center;"><b>SURVEYOR CERTIFICATION</b></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: Chad Harcrow Date of Survey: 12/11/2013 Certificate Number: 17777</p>
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Form APD Comments  
  
Permit 188137

**PERMIT COMMENTS**

Operator Name and Address: COG OPERATING LLC [229137] One Concho Center Midland, TX 79701		API Number: 30-025-41938
		Well: MERLIN STATE COM #002H
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.	6/23/2014

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Form APD Conditions  
 Permit 188137

**PERMIT CONDITIONS OF APPROVAL**

Operator Name and Address: COG OPERATING LLC [229137] One Concho Center Midland, TX 79701		API Number: 30-025-41938
		Well: MERLIN STATE COM #002H
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	1) SURFACE & INTERMEDIATE CASING - Cement must circulate to surface -- 2) PRODUCTION CASING - Cement must tie back into intermediate casing --	
pkautz	Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water	