

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*

**Carlsbad Field Office**  
**OCD Artesia**

5. Lease Serial No. NMNM112273  
6. If Pool or Well Name or Tribe Name  
7. If Unit or CA/Agreement, Name and/or No.

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. Well Name and No. MOSSY FEDERAL 1H
2. Name of Operator COG OPERATING LLC Contact: AMANDA AVERY E-Mail: aaavery@concho.com		9. API Well No. 30-015-42735
3a. Address 2208 W MAIN STREET ARTESIA, NM 88210	3b. Phone No. (include area code) Ph: 575-748-6940	10. Field and Pool, or Exploratory PARKWAY-BONE SPRING
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 12 T20S R29E NENE 990FNL 550FEL		11. County or Parish, and State EDDY COUNTY, NM

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Venting and/or Flaring
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

COG Operating LLC requests permission to install a Vapor Combustor Unit (VCU) at the Mossy Federal #1H Battery. This request is due to the fact that the cost of installing and operating equipment necessary to capture the gas exceeds the value of the gas over the life of the facility. COG Operating LLC understands that the following conditions apply:

1. COG Operating LLC may be required to provide economic justification and provide volume verification to the Authorized Officer upon request.
2. COG Operating LLC will comply with NTL-4A requirements.
3. If volume being combusted is less than 50 MCF of gas per day, it is considered ?unavoidably lost?, therefore, no royalty obligation shall be accrued and will not be required to be reported.
  - a. Unavoidably Lost production shall mean (1) those gas vapors which are released (in this case combusted) from low-pressure storage tanks.
4. Essentially all measured combusted volumes over 50 MCF will require payment of royalties and

SEE ATTACHED FOR  
CONDITIONS OF APPROVAL

**SUBJECT TO LIKE  
APPROVAL BY STATE**

**NM OIL CONSERVATION  
ARTESIA DISTRICT**

14. I hereby certify that the foregoing is true and correct. Electronic Submission #348425 verified by the BLM Well Information System For COG OPERATING LLC, sent to the Carlsbad Committed to AFMSS for processing by DEBORAH MCKINNEY on 08/30/2016 ()		SEP 26 2016 db RECEIVED 9/22/16
Name (Printed/Typed) AMANDA AVERY	Title AUTHORIZED REPRESENTATIVE	
Signature (Electronic Submission)	Date 08/19/2016	

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <b>Teungku Muchlis Krueng</b>	Title <b>PETROLEUM ENGINEER</b>	Date <b>SEP - 9 2016</b>
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		
Office		

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 any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

BUREAU OF LAND MANAGEMENT  
CARLSBAD FIELD OFFICE

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

## Additional data for EC transaction #348425 that would not fit on the form

### 32. Additional remarks, continued

volumes need to be reported on OGOR ?B? reports as disposition code ?08?.

5. Per 43 CFR 3162.7-5(d)/Onshore Order No.3.III.1.1, site facility diagram must be submitted within 60 days of equipment installation.

6. This approval does not authorize any additional surface disturbance.

7. Subject to like approval from NMOCD.

The Mossy Fed tank vapor measurement method was performed in the following manner:

Measurement Instrument: Fox Instruments Thermal Mass Meter

? This meter technology was chosen due to its volume turndown capabilities

? The meter was calibrated for 3? diameter pipe.

? A standard gas analysis, comparable to the gas expected from the Mossy Fed production stream, was also inputted into the thermal mass meter transmitter for gas density calculations.

? The calibration of the meter allows for a span of 0-300 Mcfd.

? Test results 7.92 MSCF on 8/16/16

The thermal mass meter was installed on the outlet of the production tanks. The valve to the combustor was placed in the closed position and all tank vapors were directed to the thermal mass meter. Our technician verified there were no leaks on the tank vent valves or thief hatches during testing. The tank vapors were measured for 4 hours during the hottest part of the day. Our cumulative 4-hour volume was then averaged over a 24 hour period to arrive at our 24-hr daily production. Due to the measurement period occurring during the heat of the day, we feel our measured volumes are higher than the actual production.

Attached are the following:

Site Security Diagram of the current tank battery, as well as the location of the VCU and the manifold line connecting the tanks to the VCU.

Contact name and number to retrieve information on volumes being combusted.

Specification sheet(s) for the VCU.





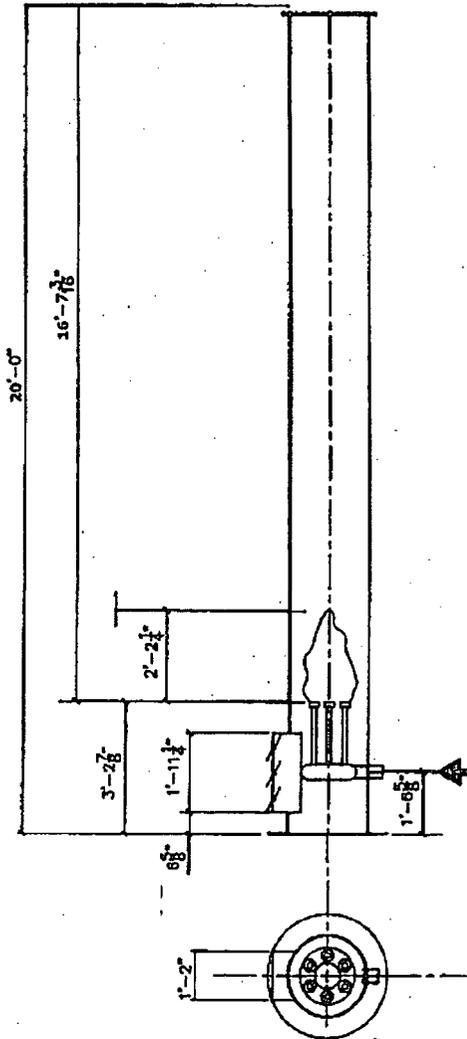
2606 W CR 130, Midland TX 79705  
432-687-7060

THERMAL OXIDATION CALCULATIONS

Flow Rate 1.157 SCFS  
 Temperature (vapor) 585 deg. R  
 P<sub>av</sub> 10 in.W.C.  
 Temperature (air) 545 deg. R  
 Hgt:D Ratio 8.5  
 Diameter 24 in.  
 Ambient air density 0.0716 lb./cf

	C	H	
Formula	36	6	
MW avg	42.00		
H:C Ratio	0.1667		
Mass flow	0.1283	Lbs/sec	
Air required	2.1810	Lbs/sec	29.0694 SCFS
CO2	0.4030	Lbs/sec	3.47 SCFS
H2O	0.1649	Lbs/sec	6.94 SCFS
N2	1.72	Lbs/sec	23.59 SCFS
Exit Mass	2.2909	Lbs/sec	34.0052 SCFS
MW 28.72			
Heat Input	2576	BTU/sec.	
Temperature rise	1049.10	deg. F/sec	
Total Volume	92.11	ACFS	
Stack Area	3.14	SF	
Velocity	29.32	fps	
Stack height	21.66	ft.	
Residence	0.78	sec.	

Pdraft 0.1935 in.WC  
 Area req'd (air intake) 273 in.2  
 Grill size 14x23 in.



**BURNER**

V <sub>s</sub>	=892 fps
Mach exit	=.202xV <sub>s</sub> =180.18fps
AREA	=.996 in.2
Δ P	=10.4 in.WC
L <sub>f</sub>	=2.19 ft.

← HEADER INLET

1	REVISED PER FINAL DATA	8/14/14
REV.	DESCRIPTION	DATE

**Edge CXV 24" Combustor Data Sheet**

**Mossy Federal #1H Battery**

**Contact**

**Winston Ballard – 575-513-9366**

BUREAU OF LAND MANAGEMENT  
Carlsbad Field Office  
620 East Greene Street  
Carlsbad, New Mexico 88220  
575-234-5972

**CONDITIONS OF APPROVAL TO INSTALL  
VAPOR COMBUSTOR UNIT (VCU)**

1. These conditions of approval are for installation of a VCU on low-pressure oil storage tank facilities. This approval is due to the fact that the cost of installing and operating equipment necessary to capture the gas exceeds the value of the gas over the life of the facility. The operator may be required to provide economic justification to the Authorized Officer upon request. The operator may be required to provide volume verification to the Authorized Officer upon request.
2. Comply with NTL-4A requirements.
3. If volume being combusted is less than 50 MCF of gas per day, it is considered "unavoidably lost", therefore, no royalty obligation shall be accrued and will not be required to be reported.
  - a. "Unavoidably Lost" production shall mean (1) those gas vapors which are released (in this case combusted) from low-pressure storage tanks.
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5. Per 43 CFR 3162.7-5(d)/Onshore Order No.3.III.I.1, site facility diagram must be submitted within 60 days of equipment installation.
6. This approval does not authorize any additional surface disturbance.
7. Subject to like approval from NMOCD.