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1625 N. French Dr., Hobbs, NM 88240  
District II  
811 S. First St., Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Submit Original  
to Appropriate  
District Office

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

AUG 10 2018

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**GAS CAPTURE PLAN**

Date: 3/21/2018

Original Operator & OGRID No.: COG Operating LLC, OGRID 229137  
 Amended - Reason for Amendment: \_\_\_\_\_

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

**Well(s)/Production Facility – Name of facility**

The well(s) that will be located at the production facility are shown in the table below.

| Well Name                   | API                     | Well Location (ULSTR) | Footages            | Expected MCF/D | Flared or Vented | Comments                          |
|-----------------------------|-------------------------|-----------------------|---------------------|----------------|------------------|-----------------------------------|
| Littlefield 33 Fed Com 708H | 30-015-<br><i>45165</i> | 9-33-26S-29E          | 250' FSL & 736' FWL | 2,637 MCF      |                  | Gas will connect on proposed CTB. |
|                             |                         |                       |                     |                |                  |                                   |

**Gathering System and Pipeline Notification**

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to DBM, and will be connected to Ramsey low/high pressure gathering system located in Reeves County, Texas. It will require 0' to an undetermined amount of feet of pipeline to connect the facility to low/high pressure gathering system. COG Operating LLC provides (periodically) to DBM a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, COG Operating LLC and DBM have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Ramsey Processing Plant located in Sec 36, Blk 58-T1-T&P, Reeves County, Texas. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

**Flowback Strategy**

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Gas Transporter system at that time. Based on current information, it is Operator's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

**Alternatives to Reduce Flaring**

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

**COG Operating, LLC - Littlefield 33 Federal Com 708H**

**7. Drilling Conditions**

| <b>Condition</b>           | <b>Specify what type and where?</b> |
|----------------------------|-------------------------------------|
| BH Pressure at deepest TVD | 5750 psi at 10050' TVD              |
| Abnormal Temperature       | NO 160 Deg. F.                      |

No abnormal pressure or temperature conditions are anticipated. Sufficient mud materials to maintain mud properties and weight increase requirements will be kept on location at all times.

Sufficient supplies of Paper/LCM for periodic sweeps to control seepage and losses will be maintained on location.

|  |                                |
|--|--------------------------------|
| Hydrogen Sulfide (H <sub>2</sub> S) monitors will be installed prior to drilling out the surface shoe. If H <sub>2</sub> S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM. |                                |
| N  | H <sub>2</sub> S is present    |
| Y  | H <sub>2</sub> S Plan attached |

**8. Other Facets of Operation**

|   |                            |
|---|----------------------------|
| Y | Is it a walking operation? |
| Y | Is casing pre-set?         |

|   |                         |
|---|-------------------------|
| x | H <sub>2</sub> S Plan.  |
| x | BOP & Choke Schematics. |
| x | Directional Plan        |