

**HOBBS OCD**

FORM APPROVED  
OMB No. 1004-0137  
Expires October 31, 2014

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

MAY 30 2017

RECEIVED

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM114997
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator COG OPERATING LLC (229137)		7. If Unit or CA Agreement, Name and No. NMNM136125
3a. Address 600 West Illinois Ave Midland TX 79701		8. Lease Name and Well No. (315644) STOVE PIPE FEDERAL COM 21H
3b. Phone No. (include area code) (432)683-7443		9. API Well No. 30-025-43839
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface LOT 1 / 409 FNL / 476 FEL / LAT 32.165601 / LONG -103.39957 At proposed prod. zone SESE / 200 FSL / 330 FEL / LAT 32.138215 / LONG -103.399148		10. Field and Pool, or Exploratory WC-025 G-09 S243532M / WOLFBONE (98098)
11. Sec., T. R. M. or Blk. and Survey or Area SEC 6 / T25S / R35E / NMP		12. County or Parish LEA
14. Distance in miles and direction from nearest town or post office* 12 miles		13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 200 feet	16. No. of acres in lease 160.6	17. Spacing Unit dedicated to this well 320.35
18. Distance from proposed location* to nearest well, drilling, completed, 1045 feet applied for, on this lease, ft.	19. Proposed Depth 12729 feet / 22526 feet	20. BLM/BIA Bond No. on file FED: NMB000215
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3295 feet	22. Approximate date work will start* 03/01/2017	23. Estimated duration 30 days
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- |  |   |
|--|---|
| 1. Well plat certified by a registered surveyor.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification   |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM.             |

25. Signature (Electronic Submission)	Name (Printed/Typed) Mayte Reyes / Ph: (575)748-6945	Date 01/11/2017
Title Regulatory Analyst		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Cody Layton / Ph: (575)234-5959	Date 05/25/2017
Title Supervisor Multiple Resources Office HOBBS		

Application approval 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.  
Conditions of approval, if any, are attached.

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 to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

**APPROVED WITH CONDITIONS**

KZ  
05/30/17  
\*(Instructions on page 2)



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

## Operator Certification Data Report

05/25/2017

### Operator Certification

*I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.*

**NAME:** Mayte Reyes

**Signed on:** 01/11/2017

**Title:** Regulatory Analyst

**Street Address:** 2208 W Main Street

**City:** Artesia

**State:** NM

**Zip:** 88210

**Phone:** (575)748-6945

**Email address:** Mreyes1@concho.com

### Field Representative

**Representative Name:** Rand French

**Street Address:** 2208 West Main Street

**City:** Artesia

**State:** NM

**Zip:** 88210

**Phone:** (575)748-6940

**Email address:** rfrench@concho.com

<b>APD ID:</b> 10400008625	<b>Submission Date:</b> 01/11/2017
<b>Operator Name:</b> COG OPERATING LLC	
<b>Well Name:</b> STOVE PIPE FEDERAL COM	<b>Well Number:</b> 21H
<b>Well Type:</b> OIL WELL	<b>Well Work Type:</b> Drill

## Section 1 - General

<b>APD ID:</b> 10400008625	<b>Tie to previous NOS?</b>	<b>Submission Date:</b> 01/11/2017
<b>BLM Office:</b> HOBBS	<b>User:</b> Mayte Reyes	<b>Title:</b> Regulatory Analyst
<b>Federal/Indian APD:</b> FED	<b>Is the first lease penetrated for production Federal or Indian?</b> FED	
<b>Lease number:</b> NMNM114997	<b>Lease Acres:</b> 160.6	
<b>Surface access agreement in place?</b>	<b>Allotted?</b>	<b>Reservation:</b>
<b>Agreement in place?</b> YES	<b>Federal or Indian agreement:</b> FEDERAL	
<b>Agreement number:</b> NMNM136125		
<b>Agreement name:</b>		
<b>Keep application confidential?</b> YES		
<b>Permitting Agent?</b> NO	<b>APD Operator:</b> COG OPERATING LLC	
<b>Operator letter of designation:</b>		
<b>Keep application confidential?</b> YES		

## Operator Info

**Operator Organization Name:** COG OPERATING LLC  
**Operator Address:** 600 West Illinois Ave  
**Operator PO Box:** Zip: 79701  
**Operator City:** Midland **State:** TX  
**Operator Phone:** (432)683-7443  
**Operator Internet Address:** RODOM@CONCHO.COM

## Section 2 - Well Information

<b>Well in Master Development Plan?</b> NO	<b>Mater Development Plan name:</b>	
<b>Well in Master SUPO?</b> NO	<b>Master SUPO name:</b>	
<b>Well in Master Drilling Plan?</b> NO	<b>Master Drilling Plan name:</b>	
<b>Well Name:</b> STOVE PIPE FEDERAL COM	<b>Well Number:</b> 21H	<b>Well API Number:</b>
<b>Field/Pool or Exploratory?</b> Field and Pool	<b>Field Name:</b> WC-025 G-09 S243532M	<b>Pool Name:</b> WOLFBONE

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

**Is the proposed well in an area containing other mineral resources?** OIL

**Describe other minerals:**

**Is the proposed well in a Helium production area?** N    **Use Existing Well Pad?** NO    **New surface disturbance?**

**Type of Well Pad:** SINGLE WELL

**Multiple Well Pad Name:**    **Number:**

**Well Class:** HORIZONTAL

**Number of Legs:**

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** EXPLORATORY (WILDCAT)

**Describe sub-type:**

**Distance to town:** 12 Miles

**Distance to nearest well:** 1045 FT

**Distance to lease line:** 200 FT

**Reservoir well spacing assigned acres Measurement:** 320.35 Acres

**Well plat:** COG\_Stove\_Pipe\_21H\_\_C102\_03-22-2017.pdf

**Well work start Date:** 03/01/2017

**Duration:** 30 DAYS

### Section 3 - Well Location Table

**Survey Type:** RECTANGULAR

**Describe Survey Type:**

**Datum:** NAD83

**Vertical Datum:** NAVD88

**Survey number:**

**STATE:** NEW MEXICO

**Meridian:** NEW MEXICO PRINCIPAL **County:** LEA

**Latitude:** 32.165601

**Longitude:** -103.39957

SHL

**Elevation:** 3295

**MD:** 0

**TVD:** 0

**Leg #:** 1

**Lease Type:** FEDERAL

**Lease #:** NMNM114997

**NS-Foot:** 409

**NS Indicator:** FNL

**EW-Foot:** 476

**EW Indicator:** FEL

**Twsp:** 25S

**Range:** 35E

**Section:** 6

**Aliquot:**

**Lot:** 1

**Tract:**

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.165601	<b>Longitude:</b> -103.39957	
KOP	<b>Elevation:</b> 3295	<b>MD:</b> 0	<b>TVD:</b> 0
<b>Leg #: 1</b>	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMNM114997	
	<b>NS-Foot:</b> 409	<b>NS Indicator:</b> FNL	
	<b>EW-Foot:</b> 476	<b>EW Indicator:</b> FEL	
	<b>Twsp:</b> 25S	<b>Range:</b> 35E	<b>Section:</b> 6
	<b>Aliquot:</b>	<b>Lot:</b> 1	<b>Tract:</b>
	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.165602	<b>Longitude:</b> -103.399099	
PPP	<b>Elevation:</b> -8956	<b>MD:</b> 12251	<b>TVD:</b> 12251
<b>Leg #: 1</b>	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMNM114997	
	<b>NS-Foot:</b> 409	<b>NS Indicator:</b> FNL	
	<b>EW-Foot:</b> 330	<b>EW Indicator:</b> FEL	
	<b>Twsp:</b> 25S	<b>Range:</b> 35E	<b>Section:</b> 6
	<b>Aliquot:</b>	<b>Lot:</b> 1	<b>Tract:</b>
	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.138573	<b>Longitude:</b> -103.399148	
EXIT	<b>Elevation:</b> -9334	<b>MD:</b> 22400	<b>TVD:</b> 12629
<b>Leg #: 1</b>	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMNM119760	
	<b>NS-Foot:</b> 330	<b>NS Indicator:</b> FSL	
	<b>EW-Foot:</b> 330	<b>EW Indicator:</b> FEL	
	<b>Twsp:</b> 25S	<b>Range:</b> 35E	<b>Section:</b> 7
	<b>Aliquot:</b> SESE	<b>Lot:</b>	<b>Tract:</b>
	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.138215	<b>Longitude:</b> -103.399148	
BHL	<b>Elevation:</b> -9434	<b>MD:</b> 22526	<b>TVD:</b> 12729
<b>Leg #: 1</b>	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMNM119760	
	<b>NS-Foot:</b> 200	<b>NS Indicator:</b> FSL	
	<b>EW-Foot:</b> 330	<b>EW Indicator:</b> FEL	

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

**Twsp:** 25S

**Range:** 35E

**Section:** 7

**Aliquot:** SESE

**Lot:**

**Tract:**



APD ID: 10400008625

Submission Date: 01/11/2017

Operator Name: COG OPERATING LLC

Well Name: STOVE PIPE FEDERAL COM

Well Number: 21H

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - Geologic Formations

ID: Surface formation

Name: UNKNOWN

Lithology(ies):

Elevation: 0

True Vertical Depth: 0

Measured Depth: 0

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 1

Name: RUSTLER

Lithology(ies):

Elevation: -831

True Vertical Depth: 831

Measured Depth: 831

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 2

Name: TOP OF SALT

Lithology(ies):

Elevation: -1273

True Vertical Depth: 1273

Measured Depth: 1273

Mineral Resource(s):

NONE

Is this a producing formation? N

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

**ID:** Formation 3

**Name:** BASE OF SALT

**Lithology(ies):**

**Elevation:** -5126

**True Vertical Depth:** 5126

**Measured Depth:** 5126

**Mineral Resource(s):**

NONE

**Is this a producing formation?** N

**ID:** Formation 4

**Name:** LAMAR LS

**Lithology(ies):**

**Elevation:** -5440

**True Vertical Depth:** 5440

**Measured Depth:** 5440

**Mineral Resource(s):**

NONE

**Is this a producing formation?** N

**ID:** Formation 5

**Name:** BELL CANYON

**Lithology(ies):**

**Elevation:** -5481

**True Vertical Depth:** 5481

**Measured Depth:** 5481

**Mineral Resource(s):**

NONE

**Is this a producing formation?** N

**ID:** Formation 6

**Name:** CHERRY CANYON

**Lithology(ies):**

**Elevation:** -6445

**True Vertical Depth:** 6445

**Measured Depth:** 6445

**Mineral Resource(s):**

NATURAL GAS

OIL

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

**Is this a producing formation?** N

**ID:** Formation 7

**Name:** BRUSHY CANYON

**Lithology(ies):**

**Elevation:** -8045

**True Vertical Depth:** 8045

**Measured Depth:** 8045

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 8

**Name:** BONE SPRING LIME

**Lithology(ies):**

**Elevation:** -9315

**True Vertical Depth:** 9315

**Measured Depth:** 9315

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 9

**Name:** BONE SPRINGS UPPER SHAL

**Lithology(ies):**

**Elevation:** -9360

**True Vertical Depth:** 9360

**Measured Depth:** 9360

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 10

**Name:** BONE SPRING LOWER

**Lithology(ies):**

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

**Elevation:** -9565

**True Vertical Depth:** 9565

**Measured Depth:** 9565

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 11

**Name:** BONE SPRING 1ST

**Lithology(ies):**

**Elevation:** -10572

**True Vertical Depth:** 10572

**Measured Depth:** 10572

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 12

**Name:** BONE SPRING 2ND

**Lithology(ies):**

**Elevation:** -11104

**True Vertical Depth:** 11104

**Measured Depth:** 11104

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 13

**Name:** BONE SPRING 3RD

**Lithology(ies):**

**Elevation:** -12107

**True Vertical Depth:** 12107

**Measured Depth:** 12107

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

**ID:** Formation 14

**Name:** WOLFCAMP

**Lithology(ies):**

**Elevation:** -12559

**True Vertical Depth:** 12559

**Measured Depth:** 12559

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** Y

## Section 2 - Blowout Prevention

---

**Pressure Rating (PSI):** 2M

**Rating Depth:** 12000

**Equipment:** Annular. The BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

**Requesting Variance?** YES

**Variance request:** A variance is requested for the use of a flexible choke line from the BOP to choke manifold. See attached for specs and hydrostatic test chart.

**Testing Procedure:** BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all of the components installed will be functional and tested.

**Choke Diagram Attachment:**

COG Stove Pipe 21H\_2M Choke\_01-11-2017.pdf

**BOP Diagram Attachment:**

COG Stove Pipe 21H\_2M BOP\_01-11-2017.pdf

---

**Pressure Rating (PSI):** 5M

**Rating Depth:** 23000

**Equipment:** Annular. The BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

**Requesting Variance?** NO

**Variance request:** A variance is requested for the use of a flexible choke line from the BOP to choke manifold. See attached for specs and hydrostatic test chart.

**Testing Procedure:** BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all of the components installed will be functional and tested.

**Choke Diagram Attachment:**

COG Stove Pipe 21H\_5M Choke\_01-11-2017.pdf

**BOP Diagram Attachment:**

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

COG Stove Pipe 21H\_5M Choke\_01-11-2017.pdf

COG Stove Pipe 21H\_5M BOP\_01-11-2017.pdf

---

### Section 3 - Casing

---

**String Type:** SURFACE

**Other String Type:**

**Hole Size:** 17.5

**Top setting depth MD:** 0

**Top setting depth TVD:** 0

**Top setting depth MSL:** -8956

**Bottom setting depth MD:** 860

**Bottom setting depth TVD:** 860

**Bottom setting depth MSL:** -9816

**Calculated casing length MD:** 860

**Casing Size:** 13.375

**Other Size**

**Grade:** J-55

**Other Grade:**

**Weight:** 68

**Joint Type:** STC

**Other Joint Type:**

**Condition:** NEW

**Inspection Document:**

**Standard:** API

**Spec Document:**

**Tapered String?:** N

**Tapered String Spec:**

### Safety Factors

**Collapse Design Safety Factor:** 4.96

**Burst Design Safety Factor:** 0.77

**Joint Tensile Design Safety Factor type:** DRY

**Joint Tensile Design Safety Factor:** 11.54

**Body Tensile Design Safety Factor type:** DRY

**Body Tensile Design Safety Factor:** 11.54

**Casing Design Assumptions and Worksheet(s):**

COG Stove Pipe 21H\_Casing Program\_01-23-2017.pdf

---

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

**String Type:** INTERMEDIATE

**Other String Type:**

**Hole Size:** 12.25

**Top setting depth MD:** 0

**Top setting depth TVD:** 0

**Top setting depth MSL:** -8956

**Bottom setting depth MD:** 12154

**Bottom setting depth TVD:** 12154

**Bottom setting depth MSL:** -21110

**Calculated casing length MD:** 12154

**Casing Size:** 9.625

**Other Size**

**Grade:** L-80

**Other Grade:**

**Weight:** 47

**Joint Type:** OTHER

**Other Joint Type:** BTC

**Condition:** NEW

**Inspection Document:**

**Standard:** API

**Spec Document:**

**Tapered String?:** N

**Tapered String Spec:**

### **Safety Factors**

**Collapse Design Safety Factor:** 1.25

**Burst Design Safety Factor:** 1.21

**Joint Tensile Design Safety Factor type:** DRY

**Joint Tensile Design Safety Factor:** 1.9

**Body Tensile Design Safety Factor type:** DRY

**Body Tensile Design Safety Factor:** 1.9

**Casing Design Assumptions and Worksheet(s):**

COG Stove Pipe 21H\_Casing Program\_01-11-2017.pdf

---

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

**String Type:** PRODUCTION

**Other String Type:**

**Hole Size:** 8.5

**Top setting depth MD:** 0

**Top setting depth TVD:** 0

**Top setting depth MSL:** -8956

**Bottom setting depth MD:** 22526

**Bottom setting depth TVD:** 12154

**Bottom setting depth MSL:** -21110

**Calculated casing length MD:** 22526

**Casing Size:** 5.5

**Other Size**

**Grade:** P-110

**Other Grade:**

**Weight:** 23

**Joint Type:** OTHER

**Other Joint Type:** BTC

**Condition:** NEW

**Inspection Document:**

**Standard:** API

**Spec Document:**

**Tapered String?:** N

**Tapered String Spec:**

### Safety Factors

**Collapse Design Safety Factor:** 2.09

**Burst Design Safety Factor:** 2.23

**Joint Tensile Design Safety Factor type:** DRY

**Joint Tensile Design Safety Factor:** 2.49

**Body Tensile Design Safety Factor type:** DRY

**Body Tensile Design Safety Factor:** 2.49

**Casing Design Assumptions and Worksheet(s):**

COG Stove Pipe 21H\_Casing Program\_01-11-2017.pdf

---

### Section 4 - Cement

**Casing String Type:** SURFACE

Operator Name: COG OPERATING LLC

Well Name: STOVE PIPE FEDERAL COM

Well Number: 21H

Stage Tool Depth:

Lead

Top MD of Segment: 0

Bottom MD Segment: 860

Cement Type: Class C

Additives: 4% Gel + 1% CaCl<sub>2</sub>

Quantity (sks): 330

Yield (cu.ff./sk): 1.75

Density: 13.5

Volume (cu.ft.): 577

Percent Excess: 50

Tail

Top MD of Segment: 0

Bottom MD Segment: 860

Cement Type: C

Additives: 2% CaCl<sub>2</sub>

Quantity (sks): 250

Yield (cu.ff./sk): 1.34

Density: 14.8

Volume (cu.ft.): 335

Percent Excess: 50

Casing String Type: INTERMEDIATE

Stage Tool Depth:

Lead

Top MD of Segment: 0

Bottom MD Segment: 12154

Cement Type: C Blend 35:65:6

Additives: No additives

Quantity (sks): 2650

Yield (cu.ff./sk): 2

Density: 12.7

Volume (cu.ft.): 5280

Percent Excess: 50

Tail

Top MD of Segment: 0

Bottom MD Segment: 12154

Cement Type: C

Additives: 2% CaCl

Quantity (sks): 250

Yield (cu.ff./sk): 1.34

Density: 14.8

Volume (cu.ft.): 335

Percent Excess: 50

Casing String Type: PRODUCTION

Stage Tool Depth:

Lead

Top MD of Segment: 0

Bottom MD Segment: 22526

Cement Type: Lead: 50:50:10 H Blend

Additives: No additives

Quantity (sks): 120

Yield (cu.ff./sk): 2.5

Density: 11.9

Volume (cu.ft.): 300

Percent Excess: 30

Tail

Top MD of Segment: 0

Bottom MD Segment: 22526

Cement Type: Tail: 50:50:2 Class H Blend

Additives: No additives

Quantity (sks): 2720

Yield (cu.ff./sk): 1.24

Density: 14.4

Volume (cu.ft.): 3373

Percent Excess: 30

Operator Name: COG OPERATING LLC

Well Name: STOVE PIPE FEDERAL COM

Well Number: 21H

## Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times

Describe the mud monitoring system utilized: PVT/Pason/Visual Monitoring

### Circulating Medium Table

---

Top Depth: 860	Bottom Depth: 12154
Mud Type: OTHER	Brine Diesel Emulsion
Min Weight (lbs./gal.): 8.4	Max Weight (lbs./gal.): 9
Density (lbs/cu.ft.):	Gel Strength (lbs/100 sq.ft.):
PH:	Viscosity (CP):
Filtration (cc):	Salinity (ppm):
Additional Characteristics:	

---

Top Depth: 12154	Bottom Depth: 22526
Mud Type: OIL-BASED MUD	
Min Weight (lbs./gal.): 9.6	Max Weight (lbs./gal.): 10.5
Density (lbs/cu.ft.):	Gel Strength (lbs/100 sq.ft.):
PH:	Viscosity (CP):
Filtration (cc):	Salinity (ppm):
Additional Characteristics:	

---

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

**Top Depth:** 0

**Bottom Depth:** 860

**Mud Type:** OTHER

Fresh water gel

**Min Weight (lbs./gal.):** 8.6

**Max Weight (lbs./gal.):** 8.8

**Density (lbs/cu.ft.):**

**Gel Strength (lbs/100 sq.ft.):**

**PH:**

**Viscosity (CP):**

**Filtration (cc):**

**Salinity (ppm):**

**Additional Characteristics:**

---

## Section 6 - Test, Logging, Coring

**List of production tests including testing procedures, equipment and safety measures:**

None planned

**List of open and cased hole logs run in the well:**

CNL,GR

**Coring operation description for the well:**

None planned

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 6955

**Anticipated Surface Pressure:** 4154.62

**Anticipated Bottom Hole Temperature(F):** 180

**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO

**Describe:**

**Contingency Plans geohazards description:**

**Contingency Plans geohazards attachment:**

**Hydrogen Sulfide drilling operations plan required?** YES

**Hydrogen sulfide drilling operations plan:**

COG Stove Pipe 21H\_H2S SUP\_01-11-2017.pdf

COG Stove Pipe 21H\_H2S Schematic\_01-11-2017.pdf

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

## **Section 8 - Other Information**

**Proposed horizontal/directional/multi-lateral plan submission:**

COG Stove Pipe 21H\_AC Report\_01-11-2017.pdf

COG Stove Pipe 21H\_Directional Plan\_01-11-2017.PDF

**Other proposed operations facets description:**

None

**Other proposed operations facets attachment:**

COG Stove Pipe 21H\_Drilling Program\_01-11-2017.pdf

**Other Variance attachment:**

COG Stove Pipe 21H\_Flex Hose Variance\_01-11-2017.pdf

APD ID: 10400008625

Submission Date: 01/11/2017

Operator Name: COG OPERATING LLC

Well Name: STOVE PIPE FEDERAL COM

Well Number: 21H

Well Type: OIL WELL

Well Work Type: Drill

## Section 1 - Existing Roads

Will existing roads be used? NO

## Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

COG Stove Pipe 21H\_Maps Plat\_01-11-2017.pdf

New road type: RESOURCE

Length: 1748 Feet Width (ft.): 30

Max slope (%): 33 Max grade (%): 1

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Operator Name: COG OPERATING LLC

Well Name: STOVE PIPE FEDERAL COM

Well Number: 21H

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: Blading

Access other construction information: No turnouts are planned. Re-routing access road around proposed well location.

Access miscellaneous information:

Number of access turnouts:

Access turnout map:

### Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: None necessary

Road Drainage Control Structures (DCS) description: None needed.

Road Drainage Control Structures (DCS) attachment:

### Access Additional Attachments

Additional Attachment(s):

### Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

COG Stove Pipe 21H\_1 Mile Map Data\_01-11-2017.pdf

Existing Wells description:

### Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? DEFER

**Estimated Production Facilities description:** Production will be sent to the Stove Pipe Federal Com #2H Central Tank Battery facility. A surface flow line of approximately 1546.2' of 3" steel pipe carrying oil, gas and water under a maximum pressure of 125 psi will follow the road to the facility at the Stove Pipe Federal Com #2H Central Tank Battery location. We plan to install a 4" surface polyethylene pipe transporting Gas Lift Gas from the Stove Pipe Federal Com #2H Central Tank Battery to the Stove Pipe Federal Com #21H. The surface Gas Lift Gas pipe of approximately 1546.2' under a maximum pressure of 125 psi will be installed no farther than 10 feet from the edge of the road.

### Section 5 - Location and Types of Water Supply

#### Water Source Table

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

**Water source use type:** ICE PAD CONSTRUCTION & MAINTENANCE, STIMULATION, SURFACE CASING

**Water source type:** OTHER

**Describe type:** Fresh water will be furnished by the J-5 water well located in Section 13, T26S, R35E, the water will be purchased from Gregory Rock House Ranch LLC, 1108 W Pierce Street, Carlsbad, NM 88220

**Source longitude:**

**Source latitude:**

**Source datum:**

**Water source permit type:** PRIVATE CONTRACT

**Source land ownership:** PRIVATE

**Water source transport method:** PIPELINE

**Source transportation land ownership:** PRIVATE

**Water source volume (barrels):** 450000

**Source volume (acre-feet):** 58.001892

**Source volume (gal):** 18900000

**Water source use type:** INTERMEDIATE/PRODUCTION CASING

**Water source type:** OTHER

**Describe type:** Brine water: Will be provided from the Malaga Brine Station. Brine Water will be purchased from Mesquite SWD Inc, P O BOX 1479, CARLSBAD, NM 88221. Phone: 5757061840.

**Source longitude:**

**Source latitude:**

**Source datum:**

**Water source permit type:** PRIVATE CONTRACT

**Source land ownership:** COMMERCIAL

**Water source transport method:** TRUCKING

**Source transportation land ownership:** COMMERCIAL

**Water source volume (barrels):** 30000

**Source volume (acre-feet):** 3.866793

**Source volume (gal):** 1260000

**Water source and transportation map:**

COG Stove Pipe 21H\_Fresh Water Map\_01-11-2017.pdf

COG Stove Pipe 21H\_Brine Water Map\_01-11-2017.pdf

**Water source comments:** Fresh water will be furnished by the J-5 water well located in Section 13, T26S, R35E, the water will be purchased from Gregory Rock House Ranch LLC, 1108 W Pierce Street, Carlsbad, NM 88220. Brine water will be provided by Malaga Brine Station. Brine water will be purchased from Mesquite SWD Inc., P O Box 1479, Carlsbad, NM 88221. Phone: 575-706-1840

**New water well?** NO

**New Water Well Info**

**Well latitude:**

**Well Longitude:**

**Well datum:**

**Well target aquifer:**

**Est. depth to top of aquifer(ft):**

**Est thickness of aquifer:**

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

**Aquifer comments:**

**Aquifer documentation:**

**Well depth (ft):**

**Well casing type:**

**Well casing outside diameter (in.):**

**Well casing inside diameter (in.):**

**New water well casing?**

**Used casing source:**

**Drilling method:**

**Drill material:**

**Grout material:**

**Grout depth:**

**Casing length (ft.):**

**Casing top depth (ft.):**

**Well Production type:**

**Completion Method:**

**Water well additional information:**

**State appropriation permit:**

**Additional information attachment:**

## Section 6 - Construction Materials

**Construction Materials description:** Caliche will be obtained from the actual well site. If caliche does not exist or is not plentiful from the well site, the caliche will be hauled from a BLM approved caliche pit. Candidate source will be caliche pit from Bert Madera located in Section 6. T24S. R35E.

**Construction Materials source location attachment:**

## Section 7 - Methods for Handling Waste

**Waste type:** SEWAGE

**Waste content description:** Human waste and gray water

**Amount of waste:** 1000 gallons

**Waste disposal frequency :** One Time Only

**Safe containment description:** Waste will be properly contained and disposed of properly at a state approved disposal facility.

**Safe containmant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY      **Disposal location ownership:** PRIVATE

**Disposal type description:**

**Disposal location description:** Trucked to an approved disposal facility

**Waste type:** DRILLING

**Waste content description:** Drilling fluids and produced oil land water while drilling and completion operations

**Amount of waste:** 6000 barrels

**Waste disposal frequency :** One Time Only

**Safe containment description:** All drilling waste will be stored safely and disposed of properly

**Safe containmant attachment:**

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY    **Disposal location ownership:** COMMERCIAL FACILITY

**Disposal type description:**

**Disposal location description:** Trucked to an approved disposal facility

**Waste type:** GARBAGE

**Waste content description:** Garbage and trash produced during drilling and completion operations.

**Amount of waste:** 500 pounds

**Waste disposal frequency :** One Time Only

**Safe containment description:** Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility

**Safe containant attachment:**

**Waste disposal type:** HAUL TO COMMERCIAL FACILITY    **Disposal location ownership:** COMMERCIAL FACILITY

**Disposal type description:**

**Disposal location description:** Trucked to an approved disposal facility.

### Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.)                  Reserve pit width (ft.)

Reserve pit depth (ft.)                                  Reserve pit volume (cu. yd.)

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

### Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? YES

Description of cuttings location Roll off cutting containers on tracks

Cuttings area length (ft.)                                  Cuttings area width (ft.)

Cuttings area depth (ft.)                                  Cuttings area volume (cu. yd.)

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Operator Name: COG OPERATING LLC

Well Name: STOVE PIPE FEDERAL COM

Well Number: 21H

## Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: YES

Ancillary Facilities attachment:

COG Stove Pipe 21H\_GCP\_01-11-2017.pdf

Comments: Gas Capture Plan attached

## Section 9 - Well Site Layout

Well Site Layout Diagram:

COG Stove Pipe 21H\_Production Facility\_01-11-2017.pdf

COG\_Stove\_Pipe\_21H\_Flowline\_04-07-2017.pdf

**Comments:** Production will be sent to the Stove Pipe Federal Com #2H Central Tank Battery facility. A surface flow line of approximately 1546.2' of 3" steel pipe carrying oil, gas and water under a maximum pressure of 125 psi will follow the road to the facility at the Stove Pipe Federal Com #2H Central Tank Battery location. We plan to install a 4" surface polyethylene pipe transporting Gas Lift Gas from the Stove Pipe Federal Com #2H Central Tank Battery to the Stove Pipe Federal Com #21H. The surface Gas Lift Gas pipe of approximately 1546.2' under a maximum pressure of 125 psi will be installed no farther than 10 feet from the edge of the road.

## Section 10 - Plans for Surface Reclamation

Type of disturbance: NEW

Recontouring attachment:

**Drainage/Erosion control construction:** Due to the flat topography that is identified on the 600' x 600' plat there is no need for erosion control structures.

**Drainage/Erosion control reclamation:** N/A

**Wellpad long term disturbance (acres):** 2.35

**Wellpad short term disturbance (acres):** 3.4

**Access road long term disturbance (acres):** 0.56

**Access road short term disturbance (acres):** 0.56

**Pipeline long term disturbance (acres):** 3.5353534E-7

**Pipeline short term disturbance (acres):** 3.5353534E-7

**Other long term disturbance (acres):** 0

**Other short term disturbance (acres):** 0

**Total long term disturbance:** 2.9100003

**Total short term disturbance:** 3.9600003

**Reconstruction method:** Portions of the pad not needed for production operations will be re-contoured to its original state as much as possible. The caliche that is removed will be reused. The stockpiled topsoil will be spread out over reclaimed area and reseeded with BLM approved seed mixture.

**Topsoil redistribution:** North - 65'

**Soil treatment:** None

**Existing Vegetation at the well pad:** Shinnery Oak/Mesquite grassland

**Existing Vegetation at the well pad attachment:**

**Existing Vegetation Community at the road:** Shinnery Oak/Mesquite grassland

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

**Existing Vegetation Community at the road attachment:**

**Existing Vegetation Community at the pipeline:** Shinnery Oak/Mesquite grassland

**Existing Vegetation Community at the pipeline attachment:**

**Existing Vegetation Community at other disturbances:** N/A

**Existing Vegetation Community at other disturbances attachment:**

**Non native seed used?** NO

**Non native seed description:**

**Seedling transplant description:**

**Will seedlings be transplanted for this project?** NO

**Seedling transplant description attachment:**

**Will seed be harvested for use in site reclamation?** NO

**Seed harvest description:**

**Seed harvest description attachment:**

## Seed Management

### Seed Table

**Seed type:**

**Seed source:**

**Seed name:**

**Source name:**

**Source address:**

**Source phone:**

**Seed cultivar:**

**Seed use location:**

**PLS pounds per acre:**

**Proposed seeding season:**

### Seed Summary

**Total pounds/Acre:**

Seed Type	Pounds/Acre
-----------	-------------

**Seed reclamation attachment:**

### Operator Contact/Responsible Official Contact Info

**First Name:** Rand

**Last Name:** French

**Phone:** (432)254-5556

**Email:** rfrench@concho.com

**Seedbed prep:**

**Seed BMP:**

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

**Seed method:**

**Existing invasive species?** NO

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** N/A

**Weed treatment plan attachment:**

**Monitoring plan description:** N/A

**Monitoring plan attachment:**

**Success standards:** N/A

**Pit closure description:** N/A

**Pit closure attachment:**

COG Stove Pipe 21H\_Closed Loop System\_01-11-2017.pdf

## **Section 11 - Surface Ownership**

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** PRIVATE OWNERSHIP

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

**Operator Name:** COG OPERATING LLC

**Well Name:** STOVE PIPE FEDERAL COM

**Well Number:** 21H

**Fee Owner:** Bert Madera

**Fee Owner Address:** PO Box 2795, Ruidoso NM 88355

**Phone:** (575)631-4444

**Email:**

**Surface use plan certification:** NO

**Surface use plan certification document:**

**Surface access agreement or bond:** Agreement

**Surface Access Agreement Need description:** As per Surface Use and Occupancy Agreement between COG Operating LLC and S&S, Inc., dated

**Surface Access Bond BLM or Forest Service:**

**BLM Surface Access Bond number:**

**USFS Surface access bond number:**

## Section 12 - Other Information

**Right of Way needed?** NO

**Use APD as ROW?**

**ROW Type(s):**

### ROW Applications

**SUPO Additional Information:**

**Use a previously conducted onsite?** YES

**Previous Onsite information:** Onsite completed on 10/27/2016 by Gerald Herrera (COG) and Jeff Robertson (BLM).

### Other SUPO Attachment

COG Stove Pipe 21H\_Certification\_01-11-2017.pdf

COG Stove Pipe 21H\_Flowline\_01-11-2017.pdf

## Section 1 - General

Would you like to address long-term produced water disposal? NO

## Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

### Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

### Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number:

Assigned injection well API number?

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Injection well name:

Injection well API number:

## Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

## Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:



U.S. Department of the Interior  
BUREAU OF LAND MANAGEMENT

## Bond Info Data Report

05/25/2017

### Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB000215

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment: