

OCD Hobbs

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APR 26 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. NMNM120908
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 PRODUCTION LLC (217955)		7. If Unit or CA Agreement, Name and No.
3a. Address 2208 West Main Street Artesia NM 88210		8. Lease Name and Well No. AZORES FEDERAL 9H (39881)
3b. Phone No. (include area code) (575)748-6940		9. API Well No. 30-025 43758
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface SWSW / 210 FSL / 460 FWL / LAT 32.181717 / LONG -103.703738 At proposed prod. zone NWNW / 200 FNL / 330 FWL / LAT 32.195101 / LONG -103.704168		10. Field and Pool, or Exploratory WC-025 G-06 S253206M / BONE SPRING (97899)
14. Distance in miles and direction from nearest town or post office* 22 miles		11. Sec., T. R. M. or Blk. and Survey or Area SEC 29 / T24S / R32E / NMP
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 210 feet	16. No. of acres in lease 1891.72	12. County or Parish LEA
18. Distance from proposed location* to nearest well, drilling, completed, 200 feet applied for, on this lease, ft.	19. Proposed Depth 9180 feet / 14008 feet	13. State NM
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3501 feet	22. Approximate date work will start* 01/01/2017	17. Spacing Unit dedicated to this well 160
23. Estimated duration 30 days		20. BLM/BIA Bond No. on file FED: NMB000860
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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
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 12/13/2016
Title Regulatory Analyst		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Christopher Walls / Ph: (575)234-2234	Date 04/07/2017
Title Petroleum Engineer		

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)

\*(Instructions on page 2)

APPROVED WITH CONDITIONS

K2  
04/26/17



## Application for Permit to Drill

U.S. Department of the Interior  
Bureau of Land Management

### APD Package Report

Date Printed: 04/13/2017 12:58 PM

APD ID: 10400008218

Well Status: AAPD

APD Received Date: 12/13/2016 11:28 AM

Well Name: AZORES FEDERAL

Operator: COG PRODUCTION LLC

Well Number: 9H

#### APD Package Report Contents

- Form 3160-3
- Operator Certification Report
- Application Report
- Application Attachments
  - Well Plat: 1 file(s)
- Drilling Plan Report
- Drilling Plan Attachments
  - Blowout Prevention Choke Diagram Attachment: 3 file(s)
  - Blowout Prevention BOP Diagram Attachment: 3 file(s)
  - Casing Design Assumptions and Worksheet(s): 3 file(s)
  - Hydrogen sulfide drilling operations plan: 1 file(s)
  - Proposed horizontal/directional/multi-lateral plan submission: 1 file(s)
- SUPO Report
- SUPO Attachments
  - Existing Road Map: 1 file(s)
  - Attach Well map: 1 file(s)
  - Water source and transportation map: 2 file(s)
  - Construction Materials source location attachment: 1 file(s)
  - Ancillary Facilities attachment: 1 file(s)
  - Well Site Layout Diagram: 2 file(s)
  - Recontouring attachment: 1 file(s)
  - Other SUPO Attachment: 2 file(s)
- PWD Report
- PWD Attachments
  - None
- Bond Report
- Bond Attachments

-- None



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

## Operator Certification Data Report

04/13/2017

### 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:** 12/12/2016

**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 W. Main Street

**City:** Artesia

**State:** NM

**Zip:** 88210

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

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





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

## Application Data Report

04/13/2017

APD ID: 10400008218

Submission Date: 12/13/2016

Operator Name: COG PRODUCTION LLC

Well Name: AZORES FEDERAL

Well Number: 9H

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - General

APD ID: 10400008218

Tie to previous NOS?

Submission Date: 12/13/2016

BLM Office: HOBBS

User: Mayte Reyes

Title: Regulatory Analyst

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMNM120908

Lease Acres: 1891.72

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO

APD Operator: COG PRODUCTION LLC

Operator letter of designation:

Keep application confidential? YES

### Operator Info

Operator Organization Name: COG PRODUCTION LLC

Operator Address: 2208 West Main Street

Zip: 88210

Operator PO Box:

Operator City: Artesia

State: NM

Operator Phone: (575)748-6940

Operator Internet Address: mreyes1@concho.com

### Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: AZORES FEDERAL

Well Number: 9H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: WC-025 G-06  
S253206M

Pool Name: BONE SPRING

**Operator Name:** COG PRODUCTION LLC

**Well Name:** AZORES FEDERAL

**Well Number:** 9H

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

**Describe other minerals:**

**Is the proposed well in a Helium production area?** N **Use Existing Well Pad?** YES **New surface disturbance?** Y

**Type of Well Pad:** MULTIPLE WELL

**Multiple Well Pad Name:**

**Number:** 4H

AZORES FEDERAL

**Well Class:** HORIZONTAL

**Number of Legs:**

**Well Work Type:** Drill

**Well Type:** OIL WELL

**Describe Well Type:**

**Well sub-Type:** INFILL

**Describe sub-type:**

**Distance to town:** 22 Miles

**Distance to nearest well:** 200 FT

**Distance to lease line:** 210 FT

**Reservoir well spacing assigned acres Measurement:** 160 Acres

**Well plat:** COG Azores Fed 9H C102\_12-06-2016.pdf

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

**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:** 32.181717

**Longitude:** -103.703738

SHL

**Elevation:** 3501

**MD:** 0

**TVD:** 0

**Leg #:** 1

**Lease Type:** FEDERAL

**Lease #:** NMNM120908

**NS-Foot:** 210

**NS Indicator:** FSL

**EW-Foot:** 460

**EW Indicator:** FWL

**Twsp:** 24S

**Range:** 32E

**Section:** 29

**Aliquot:** SWSW

**Lot:**

**Tract:**

**Operator Name:** COG PRODUCTION LLC

**Well Name:** AZORES FEDERAL

**Well Number:** 9H

	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.181717	<b>Longitude:</b> -103.703738	
KOP	<b>Elevation:</b> -5192	<b>MD:</b> 8695	<b>TVD:</b> 8693
<b>Leg #:</b> 1	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMNM120908	
	<b>NS-Foot:</b> 210	<b>NS Indicator:</b> FSL	
	<b>EW-Foot:</b> 460	<b>EW Indicator:</b> FWL	
	<b>Twsp:</b> 24S	<b>Range:</b> 32E	<b>Section:</b> 29
	<b>Aliquot:</b> SWSW	<b>Lot:</b>	<b>Tract:</b>
	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.182045	<b>Longitude:</b> -103.704159	
PPP	<b>Elevation:</b> -5514	<b>MD:</b> 9100	<b>TVD:</b> 9015
<b>Leg #:</b> 1	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMNM120908	
	<b>NS-Foot:</b> 330	<b>NS Indicator:</b> FSL	
	<b>EW-Foot:</b> 330	<b>EW Indicator:</b> FWL	
	<b>Twsp:</b> 24S	<b>Range:</b> 32E	<b>Section:</b> 29
	<b>Aliquot:</b> SWSW	<b>Lot:</b>	<b>Tract:</b>
	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.194743	<b>Longitude:</b> -103.704168	
EXIT	<b>Elevation:</b> -5679	<b>MD:</b> 13877	<b>TVD:</b> 9180
<b>Leg #:</b> 1	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMNM120908	
	<b>NS-Foot:</b> 330	<b>NS Indicator:</b> FNL	
	<b>EW-Foot:</b> 330	<b>EW Indicator:</b> FWL	
	<b>Twsp:</b> 24S	<b>Range:</b> 32E	<b>Section:</b> 29
	<b>Aliquot:</b> NWNW	<b>Lot:</b>	<b>Tract:</b>
	<b>STATE:</b> NEW MEXICO	<b>Meridian:</b> NEW MEXICO PRINCIPAL	<b>County:</b> LEA
	<b>Latitude:</b> 32.195101	<b>Longitude:</b> -103.704168	
BHL	<b>Elevation:</b> -5679	<b>MD:</b> 14008	<b>TVD:</b> 9180
<b>Leg #:</b> 1	<b>Lease Type:</b> FEDERAL	<b>Lease #:</b> NMNM120908	
	<b>NS-Foot:</b> 200	<b>NS Indicator:</b> FNL	
	<b>EW-Foot:</b> 330	<b>EW Indicator:</b> FWL	

**Operator Name:** COG PRODUCTION LLC

**Well Name:** AZORES FEDERAL

**Well Number:** 9H

**Twsp:** 24S

**Range:** 32E

**Section:** 29

**Aliquot:** NWNW

**Lot:**

**Tract:**





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

## Drilling Plan Data Report

04/13/2017

APD ID: 10400008218

Submission Date: 12/13/2016

Operator Name: COG PRODUCTION LLC

Well Name: AZORES FEDERAL

Well Number: 9H

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - Geologic Formations

ID: Surface formation

Name: UNKNOWN

Lithology(ies):

Elevation: 3501

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: 2671

True Vertical Depth: 830

Measured Depth: 830

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 2

Name: TOP OF SALT

Lithology(ies):

Elevation: 2426

True Vertical Depth: 1075

Measured Depth: 1075

Mineral Resource(s):

NONE

Is this a producing formation? N

**Operator Name:** COG PRODUCTION LLC

**Well Name:** AZORES FEDERAL

**Well Number:** 9H

**ID:** Formation 3

**Name:** BASE OF SALT

**Lithology(ies):**

**Elevation:** -857

**True Vertical Depth:** 4358

**Measured Depth:** 4358

**Mineral Resource(s):**

NONE

**Is this a producing formation?** N

**ID:** Formation 4

**Name:** LAMAR LS

**Lithology(ies):**

SILTSTONE

**Elevation:** -1086

**True Vertical Depth:** 4587

**Measured Depth:** 4587

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 5

**Name:** BELL CANYON

**Lithology(ies):**

**Elevation:** -1122

**True Vertical Depth:** 4623

**Measured Depth:** 4623

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 6

**Name:** CHERRY CANYON

**Lithology(ies):**

**Elevation:** -2006

**True Vertical Depth:** 5507

**Measured Depth:** 5507

**Mineral Resource(s):**

**Operator Name:** COG PRODUCTION LLC

**Well Name:** AZORES FEDERAL

**Well Number:** 9H

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 7

**Name:** BRUSHY CANYON

**Lithology(ies):**

**Elevation:** -3428

**True Vertical Depth:** 6929

**Measured Depth:** 6929

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 8

**Name:** BONE SPRING LIME

**Lithology(ies):**

**Elevation:** -5020

**True Vertical Depth:** 8521

**Measured Depth:** 8521

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

**ID:** Formation 9

**Name:** AVALON

**Lithology(ies):**

**Elevation:** -5271

**True Vertical Depth:** 8772

**Measured Depth:** 8772

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** Y

**Operator Name:** COG PRODUCTION LLC

**Well Name:** AZORES FEDERAL

**Well Number:** 9H

**ID:** Formation 10

**Name:** BONE SPRING 1ST

**Lithology(ies):**

**Elevation:** -6105

**True Vertical Depth:** 9606

**Measured Depth:** 9606

**Mineral Resource(s):**

NATURAL GAS

OIL

**Is this a producing formation?** N

## Section 2 - Blowout Prevention

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

**Rating Depth:** 4615

**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:**

**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 Azores Fed 9H 2M Choke Sch\_11-22-2016.pdf

**BOP Diagram Attachment:**

COG Azores Fed 9H 2M BOP\_11-22-2016.pdf

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**Pressure Rating (PSI):** 3M

**Rating Depth:** 14008

**Equipment:** Annular, blind ram, pipe ram. 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:**

**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 Azores Fed 9H 3M Choke Sch\_11-22-2016.pdf

**BOP Diagram Attachment:**



Operator Name: COG PRODUCTION LLC

Well Name: AZORES FEDERAL

Well Number: 9H

COG Azores Fed 9H 3M Choke Sch\_11-22-2016.pdf

COG Azores Fed 9H 3M BOP\_11-22-2016.pdf

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### Section 3 - Casing

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String Type: PRODUCTION

Other String Type:

Hole Size: 8.75

Top setting depth MD: 0

Top setting depth TVD: 0

Top setting depth MSL: -5679

Bottom setting depth MD: 14008

Bottom setting depth TVD: 9180

Bottom setting depth MSL: -14859

Calculated casing length MD: 14008

Casing Size: 5.5

Other Size

Grade: P-110

Other Grade:

Weight: 17

Joint Type: LTC

Other Joint Type:

Condition: NEW

Inspection Document:

Standard: API

Spec Document:

Tapered String?: N

Tapered String Spec:

### Safety Factors

Collapse Design Safety Factor: 1.67

Burst Design Safety Factor: 2.98

Joint Tensile Design Safety Factor type: DRY

Joint Tensile Design Safety Factor: 2.85

Body Tensile Design Safety Factor type: DRY

Body Tensile Design Safety Factor: 2.85

Casing Design Assumptions and Worksheet(s):

COG Azores Fed 9H csg assmp\_11-22-2016.pdf

---

**Operator Name:** COG PRODUCTION LLC

**Well Name:** AZORES FEDERAL

**Well Number:** 9H

**String Type:** SURFACE

**Other String Type:**

**Hole Size:** 17.5

**Top setting depth MD:** 0

**Top setting depth TVD:** 0

**Top setting depth MSL:** -5679

**Bottom setting depth MD:** 855

**Bottom setting depth TVD:** 855

**Bottom setting depth MSL:** -6534

**Calculated casing length MD:** 855

**Casing Size:** 13.375

**Other Size**

**Grade:** J-55

**Other Grade:**

**Weight:** 54.5

**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:** 2.89

**Burst Design Safety Factor:** 1.38

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

**Joint Tensile Design Safety Factor:** 11.03

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

**Body Tensile Design Safety Factor:** 11.03

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

COG Azores Fed 9H csg assmp\_12-01-2016.pdf

**Operator Name:** COG PRODUCTION LLC

**Well Name:** AZORES FEDERAL

**Well Number:** 9H

**String Type:** INTERMEDIATE

**Other String Type:**

**Hole Size:** 12.25

**Top setting depth MD:** 0

**Top setting depth TVD:** 0

**Top setting depth MSL:** -5679

**Bottom setting depth MD:** 4615

**Bottom setting depth TVD:** 4615

**Bottom setting depth MSL:** -10294

**Calculated casing length MD:** 4615

**Casing Size:** 9.625

**Other Size**

**Grade:** J-55

**Other Grade:**

**Weight:** 40

**Joint Type:** LTC

**Other Joint Type:**

**Condition:** NEW

**Inspection Document:**

**Standard:** API

**Spec Document:**

**Tapered String?:** N

**Tapered String Spec:**

### **Safety Factors**

**Collapse Design Safety Factor:** 1.05

**Burst Design Safety Factor:** 1.11

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

**Joint Tensile Design Safety Factor:** 2.82

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

**Body Tensile Design Safety Factor:** 2.82

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

COG Azores Fed 9H csg assmp\_12-01-2016.pdf

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### **Section 4 - Cement**

**Casing String Type:** SURFACE

Operator Name: COG PRODUCTION LLC

Well Name: AZORES FEDERAL

Well Number: 9H

Stage Tool Depth:

Lead

Top MD of Segment: 0

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

Density: 13.5

Bottom MD Segment: 855

Quantity (sks): 320

Volume (cu.ft.): 560

Cement Type: Class C

Yield (cu.ff./sk): 1.75

Percent Excess: 50

Tail

Top MD of Segment: 0

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

Density: 14.8

Bottom MD Segment: 855

Quantity (sks): 250

Volume (cu.ft.): 335

Cement Type: Class C

Yield (cu.ff./sk): 1.34

Percent Excess: 50

Casing String Type: INTERMEDIATE

Stage Tool Depth:

Lead

Top MD of Segment: 0

Additives: As needed

Density: 12.7

Bottom MD Segment: 4615

Quantity (sks): 880

Volume (cu.ft.): 1760

Cement Type: 35:65:6 C Blend

Yield (cu.ff./sk): 2

Percent Excess: 50

Tail

Top MD of Segment: 0

Additives: 2% CaCl

Density: 14.8

Bottom MD Segment: 4615

Quantity (sks): 250

Volume (cu.ft.): 335

Cement Type: Class C

Yield (cu.ff./sk): 1.34

Percent Excess: 50

Casing String Type: PRODUCTION

Stage Tool Depth:

Lead

Top MD of Segment: 4115

Additives: As needed

Density: 11.9

Bottom MD Segment: 14008

Quantity (sks): 640

Volume (cu.ft.): 1600

Cement Type: 50:50:10 H Blend

Yield (cu.ff./sk): 2.5

Percent Excess: 25

Tail

Top MD of Segment: 4115

Additives: As needed

Density: 14.4

Bottom MD Segment: 14008

Quantity (sks): 1360

Volume (cu.ft.): 1686

Cement Type: 50:50:2 Class H Blend

Yield (cu.ff./sk): 1.24

Percent Excess: 40



Operator Name: COG PRODUCTION LLC

Well Name: AZORES FEDERAL

Well Number: 9H

## 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: 0	Bottom Depth: 855
Mud Type: OTHER	FW 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: Fresh water gel	
Top Depth: 4615	Bottom Depth: 14008
Mud Type: OTHER	Cut Brine
Min Weight (lbs./gal.): 8.6	Max Weight (lbs./gal.): 9.4
Density (lbs/cu.ft.):	Gel Strength (lbs/100 sq.ft.):
PH:	Viscosity (CP):
Filtration (cc):	Salinity (ppm):
Additional Characteristics: Cut Brine	

**Operator Name:** COG PRODUCTION LLC

**Well Name:** AZORES FEDERAL

**Well Number:** 9H

**Top Depth:** 855

**Bottom Depth:** 4615

**Mud Type:** SALT SATURATED

**Min Weight (lbs./gal.):** 10

**Max Weight (lbs./gal.):** 10.2

**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:**

OTH

**Other log type(s):**

CNL/GR

**Coring operation description for the well:**

None planned

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 4490

**Anticipated Surface Pressure:** 2470.4

**Anticipated Bottom Hole Temperature(F):** 150

**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 Azores Fed 9H H2S Plan\_02-13-2017.pdf

**Operator Name:** COG PRODUCTION LLC

**Well Name:** AZORES FEDERAL

**Well Number:** 9H

## **Section 8 - Other Information**

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

COG Azores Fed 9H Dir Plan 1\_01-05-2017.pdf

**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

**Other Variance attachment:**



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

## SUPO Data Report

04/13/2017

APD ID: 10400008218

Submission Date: 12/13/2016

Operator Name: COG PRODUCTION LLC

Well Name: AZORES FEDERAL

Well Number: 9H

Well Type: OIL WELL

Well Work Type: Drill

### Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

COG Azores Fed 9H Ex Road Map\_12-06-2016.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? YES

#### ROW ID(s)

ID: NM132549

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

### Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

### Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

COG Azores Fed 9H Ex Well Map\_12-05-2016.pdf



Operator Name: COG PRODUCTION LLC

Well Name: AZORES FEDERAL

Well Number: 9H

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 existing Azores Federal #3H facility. A surface flow line of approximately 1711.9' of 3" steel pipe carrying oil, gas and water under a maximum pressure of 125 psi will go to the facility at the Azores Central Tank Battery location. Flowline map attached in Section 12.

## Section 5 - Location and Types of Water Supply

### Water Source Table

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

**Water source type:** OTHER

**Describe type:** Brine Water - Purchased from Malaga Brine Station #1

**Source latitude:** 32.20927

**Source longitude:** -104.004105

**Source datum:** NAD83

**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 use type:** STIMULATION, SURFACE CASING

**Water source type:** OTHER

**Describe type:** Fresh water purchased from Mesquite SWD Inc

**Source latitude:**

**Source longitude:**

**Source datum:**

**Water source permit type:** PRIVATE CONTRACT

**Source land ownership:** COMMERCIAL

**Water source transport method:** PIPELINE

**Source transportation land ownership:** FEDERAL

**Water source volume (barrels):** 225000

**Source volume (acre-feet):** 29.000946

**Source volume (gal):** 9450000

**Operator Name:** COG PRODUCTION LLC

**Well Name:** AZORES FEDERAL

**Well Number:** 9H

**Water source and transportation map:**

COG Azores Fed 9H Brine Wtr Map\_12-12-2016.pdf

COG Azores Fed 9H Fresh Wtr Map\_12-12-2016.pdf

**Water source comments:**

**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:**

**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 from a State pit located about 5 miles South on CR1

**Construction Materials source location attachment:**

COG Azores Fed 9H caliche pit\_12-08-2016.pdf

### Section 7 - Methods for Handling Waste

**Waste type:** SEWAGE

**Waste content description:** Human waste and grey 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:**

**Operator Name:** COG PRODUCTION LLC

**Well Name:** AZORES FEDERAL

**Well Number:** 9H

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

**Disposal type description:**

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

**Waste type:** DRILLING

**Waste content description:** Drilling fluids, produced oil and water during 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:**

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

**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 containmant attachment:**

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

**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**

Operator Name: COG PRODUCTION LLC

Well Name: AZORES FEDERAL

Well Number: 9H

### Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? YES

Description of cuttings location Roll-off cutting containers

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

### Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: YES

Ancillary Facilities attachment:

COG Azores Fed 9H GCP\_12-06-2016.pdf

Comments: Gas Capture Plan attached

### Section 9 - Well Site Layout

Well Site Layout Diagram:

COG Azores Fed 9H Well Site Layout\_12-01-2016.pdf

COG Azores Fed 9H Well Pad Size\_02-13-2017.pdf

Comments:

### Section 10 - Plans for Surface Reclamation

Type of disturbance: NEW

Recontouring attachment:

COG Azores Fed 9H Reclamation Layout\_02-13-2017.pdf

**Drainage/Erosion control construction:** Due to existing well locations/facilities access road and topsoil in reference to elevations, no erosion control structures are needed for this location/APD

**Drainage/Erosion control reclamation:** NA

Wellpad long term disturbance (acres): 2.95

Wellpad short term disturbance (acres): 3.58

Access road long term disturbance (acres): 0

Access road short term disturbance (acres): 0

Pipeline long term disturbance (acres): 0.55215794

Pipeline short term disturbance (acres): 0.55215794

Other long term disturbance (acres): 0

Other short term disturbance (acres): 0



**Operator Name:** COG PRODUCTION LLC

**Well Name:** AZORES FEDERAL

**Well Number:** 9H

**Total long term disturbance:** 3.502158

**Total short term disturbance:** 4.132158

**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 re-used. The stockpiled topsoil will be spread out over reclaimed area and reseeded with BLM approved seed mixture

**Topsoil redistribution:** West 80'

**Soil treatment:** None

**Existing Vegetation at the well pad:** Native prairie grasses, some mesquite and shinnery oak

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

**Existing Vegetation Community at the road:** Native prairie grasses, some mesquite and shinnery oak

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

**Existing Vegetation Community at the pipeline:** Native prairie grasses, some mesquite and shinnery oak

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

**Existing Vegetation Community at other disturbances:**

**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**



**Operator Name:** COG PRODUCTION LLC

**Well Name:** AZORES FEDERAL

**Well Number:** 9H

**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:**

**Seed method:**

**Existing invasive species?** NO

**Existing invasive species treatment description:**

**Existing invasive species treatment attachment:**

**Weed treatment plan description:** NA

**Weed treatment plan attachment:**

**Monitoring plan description:** NA

**Monitoring plan attachment:**

**Success standards:** NA

**Pit closure description:** NA

**Pit closure attachment:**

### **Section 11 - Surface Ownership**

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** BUREAU OF LAND MANAGEMENT

**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:**

**Operator Name:** COG PRODUCTION LLC

**Well Name:** AZORES FEDERAL

**Well Number:** 9H

**USFS Region:**

**USFS Forest/Grassland:**

**USFS Ranger District:**

## 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 11/24/15 by Gerald Herrera (COG), Chad Young (BLM) and Harcrow Surveying

## Other SUPO Attachment

COG Azores Fed 9H Flowline\_12-05-2016.pdf

COG Azores Fed 9H Area Map\_12-05-2016.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

04/13/2017

### Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB000860

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: