## **OCD Hobbs**

Form 3160 -3 (March 2012)

DEPARTMENT OF THE INTERIOR
BUREAU OF I AND MANY TERMS

JUN 2 6 2017 APPLICATION FOR PERMIT TO DRILL OR REENTER

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

5. Lease Serial No. NMNM112279

6. If Indian, Allotee or Tribe Name

			V V.	A ST		- 1 TO 1 T		
la. Type of work:			RECEIVED			7. If Unit or CA Agreement, Name and No.		
lb. Type of Well:	Oil Well Gas We	l Other	Sin	gle Zone Multip	le Zone	8. Lease Name and W FOX 30 FED COM		3180
2. Name of Operat	EOG RESOURCES IN	c (37)			A.	9. API Well No.	- 43	879
3a. Address	Bagby Sky Lobby2 Hous	3b. Phone No. (include area code) (713)651-7000			10. Field and Pool, or Exploratory RED HILLS / WC-025 S253336D			
4. Location of Well (Report location clearly and in accordance with any State requirements.*)  At surface NESE / 2190 FSL / 1013 FEL / LAT 32.10026 / LONG -103.50375  At proposed prod. zone SESE / 230 FSL / 330 FEL / LAT 32.0803625 / LONG -1					6	11. Sec., T. R. M. or Blk. and Survey or Area SEC 30 / T25S / R34E / NMP		
14. Distance in miles 19 miles	and direction from nearest tow				12. County or Parish LEA		13. State NM	
15. Distance from proposed* location to nearest 230 feet property or lease line, ft. (Also to nearest drig. unit line, if any)			16. No. of acres in lease 17. Spacin 240			g Unit dedicated to this well		
18. Distance from proposed location* to nearest well, drilling, completed, 660 feet applied for, on this lease, ft.			Tropolar Popus		/BIA Bond No. on file			
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3322 feet			22. Approximate date work will start* 08/01/2017			23. Estimated duration 25 days		
		A TOP	24. Attac	hments				
<ol> <li>Well plat certified</li> <li>A Drilling Plan.</li> <li>A Surface Use Plan.</li> </ol>	eted in accordance with the red by a registered surveyor. lan (if the location is on National Led with the appropriate Forest	onal Forest System La	*	Bond to cover the litem 20 above).     Operator certification.	ne operatio	is form: ons unless covered by an ormation and/or plans as		,
25. Signature (Ele	5. Signature (Electronic Submission)			( <i>Printed/Typed)</i> Wagner / Ph: (432)	Date 02/15/2017		2017	
Title Regulatory S	Specialsit							
Approved by (Signature) (Electronic Submission)			Name (Printed/Typed) Cody Layton / Ph: (575)234-5959				Date 06/09/2017	
Title Supervisor Multiple Resources			Office CARLSBAD					
conduct operations th	does not warrant or certify the nereon. val, if any, are attached.	t the applicant holds	legal or equit	able title to those righ	ts in the sub	oject lease which would e	ntitle the a	applicant to
	n 1001 and Title 43 U.S.C. Sectious or fraudulent statements of				villfully to n	nake to any department o	r agency	of the United

(Continued on page 2)

\*(Instructions on page 2)





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

# **APD Print Report**

APD ID: 10400010925

Operator Name: EOG RESOURCES INC

Well Name: FOX 30 FED COM

Well Type: OIL WELL

Submission Date: 02/15/2017

Federal/Indian APD: FED

Well Number: 704H

Well Work Type: Drill

Highlight All Changes

## Application

Section 1 - General

APD ID:

10400010925

Tie to previous NOS?

Submission Date: 02/15/2017

**BLM Office: CARLSBAD** 

User: Stan Wagner

Title: Regulatory Specialsit

Federal/Indian APD: FED

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

Lease number: NMNM112279

Lease Acres: 559.6

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: EOG RESOURCES INC

Operator letter of designation:

Fox 30 Fed Com 704H signed C-102 02-14-2017.pdf

Keep application confidential? YES

## **Operator Info**

Operator Organization Name: EOG RESOURCES INC

Operator Address: 1111 Bagby Sky Lobby2

Zip: 77002

Operator PO Box:

Operator City: Houston

State: TX

Operator Phone: (713)651-7000

**Operator Internet Address:** 

#### Section 2 - Well Information

Well in Master Development Plan? NO

Mater Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: FOX 30 FED COM

Well Number: 704H

Well Name: FOX 30 FED COM

Well Number: 704H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: RED HILLS

Pool Name: WC-025 S253336D

Is the proposed well in an area containing other mineral resources? NATURAL GAS,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: MULTIPLE WELL

Multiple Well Pad Name: FOX Number: 703H/704H

Well Class: HORIZONTAL

30 FED COM

Number of Legs: 1

Well Work Type: Drill Well Type: OIL WELL **Describe Well Type:** 

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 19 Miles

Distance to nearest well: 660 FT

Distance to lease line: 230 FT

Reservoir well spacing assigned acres Measurement: 240 Acres

Well plat:

Fox 30 Fed Com 704H signed C-102\_02-14-2017.pdf

Well work start Date: 08/01/2017

**Duration: 25 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: 32.10026

Longitude: -103.5037556

SHL

Elevation: 3322

MD: 0

**TVD**: 0

Leg #: 1

Lease Type: STATE

Lease #: STATE

NS-Foot: 2190

NS Indicator: FSL

**EW-Foot**: 1013

EW Indicator: FEL

Twsp: 25S

Range: 34E

Section: 30

Aliquot: NESE

Lot:

Tract:

Well Name: FOX 30 FED COM

Well Number: 704H

STATE: NEW MEXICO Meridian: NEW MEXICO PRINCIPAL County: LEA

**Latitude:** 32.1013607 **Longitude:** -103.5016819

KOP **Elevation:** -8707 **MD:** 12066 **TVD:** 12029

Leg #: 1 Lease Type: STATE Lease #: STATE

NS-Foot: 2595

NS Indicator: FSL

EW-Foot: 374

EW Indicator: FEL

Twsp: 25S Range: 34E Section: 30

Aliquot: NESE Lot: Tract:

STATE: NEW MEXICO Meridian: NEW MEXICO PRINCIPAL County: LEA

Latitude: 32.0941851 Longitude: -103.5015452

PPP **Elevation:** -9208 **MD:** 14800 **TVD:** 12530

Leg #: 1 Lease Type: FEDERAL Lease #: NMNM112279

NS-Foot: 20 NS Indicator: FNL EW-Foot: 330 EW Indicator: FEL

Twsp: 25S Range: 34E Section: 31

Aliquot: NENE Lot: Tract:

STATE: NEW MEXICO Meridian: NEW MEXICO PRINCIPAL County: LEA

Latitude: 32.1005923 Longitude: -103.501559

PPP **Elevation:** -9165 **MD:** 12637 **TVD:** 12487

Leg #: 1 Lease Type: STATE Lease #: STATE

NS-Foot: 2311 NS Indicator: FSL

EW-Foot: 330 EW Indicator: FEL

Twsp: 25S Range: 34E Section: 30

Aliquot: NESE Lot: Tract:

STATE: NEW MEXICO Meridian: NEW MEXICO PRINCIPAL County: LEA

**Latitude:** 32.0806377 **Longitude:** -103.5015349

EXIT **Elevation**: -9208 **MD**: 19902 **TVD**: 12530

Leg #: 1 Lease Type: FEDERAL Lease #: NMNM110839

NS-Foot: 330 NS Indicator: FSL EW-Foot: 330 EW Indicator: FEL

Well Name: FOX 30 FED COM

Well Number: 704H

Twsp: 25S

Range: 34E

Section: 31

Aliquot: SESE

Lot:

Tract:

STATE: NEW MEXICO

Meridian: NEW MEXICO PRINCIPAL County: LEA

Latitude: 32.0803625

Longitude: -103.501536

BHL

Elevation: -9208

MD: 20002

TVD: 12530

Leg #: 1

Lease Type: FEDERAL

Lease #: NMNM110839

NS-Foot: 230

NS Indicator: FSL

F01

EW-Foot: 330

EW Indicator: FEL

Section: 31

Twsp: 25S

Range: 34E

Aliquot: SESE

Lot:

Tract:

## **Drilling Plan**

## **Section 1 - Geologic Formations**

ID: Surface formation

Name: RUSTLER

Lithology(ies):

**ANHYDRITE** 

Elevation: 2382

True Vertical Depth: 940

Measured Depth: 940

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 1

Name: TOP SALT

Lithology(ies):

SALT

Elevation: 1142

True Vertical Depth: 1240

Measured Depth: 1240

Mineral Resource(s):

NONE

Is this a producing formation? N

Well Name: FOX 30 FED COM

Well Number: 704H

ID: Formation 2

Name: BASE OF SALT

Lithology(ies):

SALT

Elevation: -2568

True Vertical Depth: 4950

Measured Depth: 4950

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 3

Name: LAMAR

Lithology(ies):

LIMESTONE

Elevation: -2818

True Vertical Depth: 5200

Measured Depth: 5200

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 4

Name: BELL CANYON

Lithology(ies):

SANDSTONE

Elevation: -2848

True Vertical Depth: 5230

Measured Depth: 5230

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 5

Name: CHERRY CANYON

Lithology(ies):

SANDSTONE

Elevation: -3853

True Vertical Depth: 6235

Measured Depth: 6235

Mineral Resource(s):

Well Name: FOX 30 FED COM

Well Number: 704H

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 6

Name: BRUSHY CANYON

Lithology(ies):

SANDSTONE

Elevation: -5448

True Vertical Depth: 7830

Measured Depth: 7830

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 7

Name: BONE SPRING LIME

Lithology(ies):

LIMESTONE

Elevation: -6948

True Vertical Depth: 9330

Measured Depth: 9330

Mineral Resource(s):

NONE

Is this a producing formation? N

ID: Formation 8

Name: FIRST BONE SPRING SAND

Lithology(ies):

SANDSTONE

Elevation: -7933

True Vertical Depth: 10315

Measured Depth: 10315

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

Well Name: FOX 30 FED COM

Well Number: 704H

ID: Formation 9

Name: BONE SPRING 2ND

Lithology(ies):

SANDSTONE

Elevation: -8453

True Vertical Depth: 10835

Measured Depth: 10835

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 10

Name: BONE SPRING 3RD

Lithology(ies):

SANDSTONE

Elevation: -9513

True Vertical Depth: 11895

Measured Depth: 11895

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? N

ID: Formation 11

Name: WOLFCAMP

Lithology(ies):

SHALE

Elevation: -9983

True Vertical Depth: 12365

Measured Depth: 12365

Mineral Resource(s):

NATURAL GAS

OIL

Is this a producing formation? Y

Section 2 - Blowout Prevention

Well Name: FOX 30 FED COM Well Number: 704H

Pressure Rating (PSI): 5M

Rating Depth: 12530

**Equipment:** The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer and an annular preventer (5000-psi WP). Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOPE will be tested in accordance with Onshore Oil and Gas order No. 2.

Requesting Variance? YES

Variance request: Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line). Variance is requested to wave the centralizer requirements for the 7-5/8" FJ casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" hole interval to maximize cement bond and zonal isolation. Variance is also requested to wave any centralizer requirements for the 5-1/2" FJ casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

**Testing Procedure:** Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 3500/ 250 psig. The surface casing will be tested to 1500 psi for 30 minutes. Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 3500/ 250 psig. The intermediate casing will be tested to 2000 psi for 30 minutes. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

#### **Choke Diagram Attachment:**

Fox 30 Fed Com 704H 5 M Choke Manifold Diagram (3-21-14)\_02-13-2017.pdf

#### **BOP Diagram Attachment:**

Fox 30 Fed Com 704H 5 M BOP Diagram (8-14-14)\_02-13-2017.pdf

Section 3 - Casing

Well Name: FOX 30 FED COM Well Number: 704H

String Type: SURFACE

Other String Type:

Hole Size: 14.75

Top setting depth MD: 0

Top setting depth TVD: 0

Top setting depth MSL: -9208

Bottom setting depth MD: 965

Bottom setting depth TVD: 965

Bottom setting depth MSL: -10173

Calculated casing length MD: 965

Casing Size: 10.75

Other Size

Grade: J-55

Other Grade:

Weight: 40.5

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: 1.125 Burst Design Safety Factor: 1.25

Joint Tensile Design Safety Factor type: BUOYANT Joint Tensile Design Safety Factor: 1.6

Body Tensile Design Safety Factor type: BUOYANT Body Tensile Design Safety Factor: 1.6

Casing Design Assumptions and Worksheet(s):

Well Name: FOX 30 FED COM Well Number: 704H

String Type: INTERMEDIATE

Other String Type:

**Hole Size: 9.875** 

Top setting depth MD: 0

Top setting depth TVD: 0

Top setting depth MSL: -9208

Bottom setting depth MD: 1000

Bottom setting depth TVD: 1000

Bottom setting depth MSL: -10208

Calculated casing length MD: 1000

Casing Size: 7.625

Other Size

Grade: HCP-110

Other Grade:

Weight: 29.7

Joint Type: LTC

Other Joint Type: Flushmax III

Condition: NEW

Inspection Document:

Standard: API

Spec Document:

Tapered String?: N

**Tapered String Spec:** 

## **Safety Factors**

Collapse Design Safety Factor: 1.125

**Burst Design Safety Factor: 1.25** 

Joint Tensile Design Safety Factor type: BUOYANT

Joint Tensile Design Safety Factor: 1.6

Body Tensile Design Safety Factor type: BUOYANT

**Body Tensile Design Safety Factor: 1.6** 

Casing Design Assumptions and Worksheet(s):

Well Name: FOX 30 FED COM Well Number: 704H

String Type: PRODUCTION

Other String Type:

Hole Size: 6.75

Top setting depth MD: 0

Top setting depth TVD: 0

Top setting depth MSL: -9208

Bottom setting depth MD: 10900

Bottom setting depth TVD: 10900

Bottom setting depth MSL: -20108

Calculated casing length MD: 10900

Casing Size: 5.5

Other Size

Grade: OTHER

Other Grade: P-110EC

Weight: 20

Joint Type: OTHER

Other Joint Type: DWC/C-IS MS

Condition: NEW

Inspection Document:

Standard: API

**Spec Document:** 

Tapered String?: N

**Tapered String Spec:** 

## **Safety Factors**

Collapse Design Safety Factor: 1.125

**Burst Design Safety Factor: 1.25** 

Joint Tensile Design Safety Factor type: BUOYANT

Joint Tensile Design Safety Factor: 1.6

Body Tensile Design Safety Factor type: BUOYANT

**Body Tensile Design Safety Factor: 1.6** 

Casing Design Assumptions and Worksheet(s):

Well Name: FOX 30 FED COM Well Number: 704H

String Type: PRODUCTION Other String Type:

Hole Size: 6.75

Top setting depth MD: 10600 Top setting depth TVD: 10600

Top setting depth MSL: -19808

Bottom setting depth MD: 19847 Bottom setting depth TVD: 12400

Bottom setting depth MSL: -21608

Calculated casing length MD: 9247

Casing Size: 5.5 Other Size

Grade: OTHER Other Grade: P-110EC

Weight: 20

Joint Type: OTHER Other Joint Type: VAM SFC

Condition: NEW

Inspection Document:

Standard: API

Spec Document:

Tapered String?: N

Tapered String Spec:

## **Safety Factors**

Collapse Design Safety Factor: 1.125 Burst Design Safety Factor: 1.25

Joint Tensile Design Safety Factor type: BUOYANT Joint Tensile Design Safety Factor: 1.6

Body Tensile Design Safety Factor type: BUOYANT Body Tensile Design Safety Factor: 1.6

Casing Design Assumptions and Worksheet(s):

Well Name: FOX 30 FED COM Well Number: 704H

String Type: INTERMEDIATE

Other String Type:

Hole Size: 9.875

Top setting depth MD: 1000

Top setting depth TVD: 1000

Top setting depth MSL: -10208

Bottom setting depth MD: 3000

Bottom setting depth TVD: 3000

Bottom setting depth MSL: -12208

Calculated casing length MD: 2000

Casing Size: 7.625

Other Size

Grade: OTHER

Other Grade: P-110EC

Weight: 29.7

Joint Type: OTHER

Other Joint Type: SLIJ II

Condition: NEW

**Inspection Document:** 

Standard: API

**Spec Document:** 

Tapered String?: N

**Tapered String Spec:** 

## **Safety Factors**

Collapse Design Safety Factor: 1.125

**Burst Design Safety Factor: 1.25** 

Joint Tensile Design Safety Factor type: BUOYANT

Joint Tensile Design Safety Factor: 1.6

Body Tensile Design Safety Factor type: BUOYANT

**Body Tensile Design Safety Factor: 1.6** 

Casing Design Assumptions and Worksheet(s):

Well Name: FOX 30 FED COM Well Number: 704H

String Type: INTERMEDIATE

Other String Type:

Hole Size: 8.75

Top setting depth MD: 3000

Top setting depth TVD: 3000

Top setting depth MSL: -12208

Bottom setting depth MD: 11400

Bottom setting depth TVD: 11400

Bottom setting depth MSL: -20608

Calculated casing length MD: 8400

Casing Size: 7.625

Other Size

Grade: HCP-110

Other Grade:

Weight: 29.7

Joint Type: OTHER

Other Joint Type: Flushmax III

Condition: NEW

**Inspection Document:** 

Standard: API

Spec Document:

Tapered String?: N

**Tapered String Spec:** 

## **Safety Factors**

Collapse Design Safety Factor: 1.125

**Burst Design Safety Factor: 1.25** 

Joint Tensile Design Safety Factor type: BUOYANT

Joint Tensile Design Safety Factor: 1.6

Body Tensile Design Safety Factor type: BUOYANT

**Body Tensile Design Safety Factor: 1.6** 

Casing Design Assumptions and Worksheet(s):

Fox 30 Fed Com 704H BLM Plan\_02-14-2017.pdf

Section 4 - Cement

Casing String Type: INTERMEDIATE

Well Name: FOX 30 FED COM Well Number: 704H

Stage Tool Depth:

Lead

Top MD of Segment: 0

**Bottom MD Segment: 0** 

Cement Type: 0

Additives: 0

Quantity (sks): 0

Yield (cu.ff./sk): 0

Density: 0

Volume (cu.ft.): 0

**Percent Excess:** 

Casing String Type: PRODUCTION

Stage Tool Depth:

Lead

Top MD of Segment: 0

**Bottom MD Segment:** 0

Cement Type: 0

Additives: 0

Quantity (sks): 0

Yield (cu.ff./sk): 0

Density: 0

Volume (cu.ft.): 0

Percent Excess: 0

Casing String Type: INTERMEDIATE

Stage Tool Depth:

Lead

Top MD of Segment: 0

**Bottom MD Segment:** 0

Cement Type: 0

Additives: 0

Quantity (sks): 0

Yield (cu.ff./sk): 0

Density: 0

Volume (cu.ft.): 0

Percent Excess:

Casing String Type: SURFACE

Stage Tool Depth:

Lead

Top MD of Segment: 0

**Bottom MD Segment: 965** 

Cement Type: Class C

Additives: Class C + 4.0% Bentonite + Quantity (sks): 325 0.6% CD-32 + 0.5% CaCl2 + 0.25 lb/sk

Yield (cu.ff./sk): 1.73

Cello-Flake (TOC @ Surface)

Volume (cu.ft.): 562

Percent Excess: 25

Pensity: 13.5

**Bottom MD Segment: 965** 

Cement Type: Class C

Top MD of Segment: 965

Quantity (sks): 200

Yield (cu.ff./sk): 1.34

Additives: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium

Volume (cu.ft.): 268

Percent Excess: 25

Metasilicate Density: 14.8

Casing String Type: INTERMEDIATE

Well Name: FOX 30 FED COM Well Number: 704H

Stage Tool Depth:

Lead

Cement Type: Class C Top MD of Segment: 0 **Bottom MD Segment: 11400** 

Additives: Class C + 5% Gypsum + 3% Quantity (sks): 2250 Yield (cu.ff./sk): 1.38

CaCl2 pumped via bradenhead

Volume (cu.ft.): 3105 (TOC@surface)

Percent Excess: 25

Density: 14.8

**Bottom MD Segment: 11400** Cement Type: Class H

Top MD of Segment: 11400 Yield (cu.ff./sk): 1.2 Quantity (sks): 550

**Additives:** 50:50 Class H:Poz + 0.25% Volume (cu.ft.): 660 Percent Excess: 25

CPT20A + 0.40% CPT49 + 0.20% CPT35 + 0.80% CPT16A + 0.25%

CPT503P Density: 14.4

Casing String Type: PRODUCTION

Stage Tool Depth:

Lead

Cement Type: Class H Top MD of Segment: 10900 Bottom MD Segment: 20002

Yield (cu.ff./sk): 1.26 Additives: Class H + 0.1% C-20 + Quantity (sks): 850

0.05% CSA-1000 + 0.20% C-49 + Percent Excess: 25 Volume (cu.ft.): 1071 0.40% C-17 (TOC @ 10,900')

Density: 14.1

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: (A) A Kelly cock will be kept in the drill string at all times. (B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times. (C) H2S monitoring and detection equipment will be utilized from surface casing point to TD. Describe the mud monitoring system utilized: An electronic pit volume totalizer (PVT) will be utilized on the circulating system to monitor pit volume, flow rate, pump pressure and stroke rate.

## **Circulating Medium Table**

Well Name: FOX 30 FED COM Well Number: 704H

Top Depth: 965 Bottom Depth: 11400

Mud Type: SALT SATURATED

Min Weight (lbs./gal.): 8.8 Max Weight (lbs./gal.): 10

Density (lbs/cu.ft.): Gel Strength (lbs/100 sq.ft.):

PH: Viscosity (CP):

Filtration (cc): Salinity (ppm):

**Additional Characteristics:** 

Top Depth: 11400 Bottom Depth: 20002

Mud Type: OIL-BASED MUD

Min Weight (lbs./gal.): 10 Max Weight (lbs./gal.): 14

Density (lbs/cu.ft.): Gel Strength (lbs/100 sq.ft.):

PH: Viscosity (CP):
Filtration (cc): Salinity (ppm):

**Additional Characteristics:** 

Top Depth: 0 Bottom Depth: 965

Mud Type: WATER-BASED MUD

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:

Open-hole logs are not planned for this well.

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

DS

Coring operation description for the well:

None

Well Name: FOX 30 FED COM Well Number: 704H

#### Section 7 - Pressure

**Anticipated Bottom Hole Pressure: 7492** 

**Anticipated Surface Pressure: 4735.39** 

Anticipated Bottom Hole Temperature(F): 181

Anticipated abnormal proessures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Fox 30 Fed Com 704H H2S Plan Summary 02-14-2017.pdf

#### Section 8 - Other Information

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

Fox 30 Fed Com 704H Planning Report\_02-14-2017.pdf

Fox 30 Fed Com 704H Wall Plot\_02-14-2017.pdf

Other proposed operations facets description:

#### Other proposed operations facets attachment:

Fox 30 Fed Com 704H 5.500in 20.00 VST P110EC DWC\_C-IS MS Spec Sheet\_02-14-2017.pdf

Fox 30 Fed Com 704H 7.625in 29.7 P110EC VAM SLIJ-II\_02-14-2017.pdf

Fox 30 Fed Com 704H 7.625in 29.70 P-110 FlushMax III Spec Sheet 02-14-2017.pdf

Fox 30 Fed Com 704H BLM Plan\_02-14-2017.pdf

Fox 30 Fed Com 704H 5.500in 20.00 VST P110EC VAM SFC Spec Sheet\_02-14-2017.pdf

Fox 30 Fed Com 704H Proposed Wellbore\_02-14-2017.pdf

Fox 30 Fed Com 704H Rig Layout\_02-14-2017.pdf

## Other Variance attachment:

Fox 30 Fed Com 704H Co-Flex Hose Certification 02-14-2017.PDF

Fox 30 Fed Com 704H Co-Flex Hose Test Chart\_02-14-2017.pdf

#### SUPO

Well Name: FOX 30 FED COM Well Number: 704H

## **Section 1 - Existing Roads**

Will existing roads be used? YES

**Existing Road Map:** 

FOX30FEDCOM\_704H\_vicinity map\_02-14-2017.pdf

Existing Road Purpose: ACCESS;FLUID TRANSPORT

Row(s) Exist? NO

ROW ID(s)

ID:

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? YES

New Road Map:

FOX30FEDCOM\_704H\_well site\_02-14-2017.pdf Fox 30 Fed Com area sketch\_02-14-2017.pdf

New road type: RESOURCE

Length: 333

Feet

Width (ft.): 24

Max slope (%): 2

Max grade (%): 20

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 24

**New road access erosion control:** Newly constructed or reconstructed roads will be constructed as outlined in the BLM "Gold Book" and to meet the standards of the anticipated traffic flow and all anticipated weather requirements as needed. Construction will include ditching, draining, crowning and capping or sloping and dipping the roadbed as necessary to provide a well-constructed and safe road. We plan to grade and water twice a year.

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

Well Name: FOX 30 FED COM Well Number: 704H

Access topsoil source: ONSITE

Access surfacing type description: 6" of Compacted Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: An adequate amount of topsoil/root zone will be stripped by dozer from the proposed well location and stockpiled along the side of the well location as depicted on the well site diagram / survey plat.

Access other construction information:

Access miscellaneous information:

Number of access turnouts:

Access turnout map:

## **Drainage Control**

New road drainage crossing: OTHER

Drainage Control comments: No drainage crossings

Road Drainage Control Structures (DCS) description: N/A

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:

FOX30FEDCOM\_704H\_radius map\_02-14-2017.pdf

**Existing Wells description:** 

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

**Estimated Production Facilities description:** 

Production Facilities description: Fox 30 Fed Com Central Battery located in SE/4 of section 30. State Surface.

**Production Facilities map:** 

Fox 30 Fed Com area sketch\_02-14-2017.pdf

## Section 5 - Location and Types of Water Supply

**Water Source Table** 

Well Name: FOX 30 FED COM Well Number: 704H

Water source use type: OTHER Water source type: RECYCLED

Describe type:

Source latitude: Source longitude:

Source datum:

Water source permit type: WATER RIGHT

Source land ownership: FEDERAL

Water source transport method: PIPELINE, TRUCKING

Source transportation land ownership: FEDERAL

Water source volume (barrels): 0 Source volume (acre-feet): 0

Source volume (gal): 0

Water source and transportation map:

Fox 30 Fed Com Water Source and Caliche map\_02-14-2017.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:

Well Name: FOX 30 FED COM Well Number: 704H

#### Section 6 - Construction Materials

Construction Materials description: Caliche will be supplied from pits shown on the attached caliche source map. Caliche utilized for the drilling pad will be obtained either from an existing approved mineral pit, or by benching into a hill, which will allow the pad to be level with existing caliche from the cut, or extracted by "Flipping" the well location. A mineral material permit will be obtained from BLM prior to excavating any caliche on Federal Lands. Amount will vary for each pad. The procedure for "Flipping" a well location is as follows: \*-An adequate amount of topsoil/root zone (usually top 6 inches of soil) will be stripped from the proposed well location and stockpiled along the side of the well location as depicted on the well site diagram/survey plat. -An area will be used within the proposed well site dimensions to excavate caliche. Subsoil will be removed and stockpiled within the surveyed well pad dimensions. -Once caliche/surfacing mineral is found, the mineral material will be excavated and stock piled within the approved drilling pad dimensions. -Then, subsoil will be pushed back in the excavated hole and caliche will be spread accordingly across the entire well pad and road (if available). -Neither caliche, nor subsoil will be stock piled outside of the well pad dimensions. Topsoil will be stockpiled along the edge of the pad as depicted in the Well Site Layout or survey plat. \* In the event that no caliche is found onsite, caliche will be hauled in from a BLM approved caliche pit or other established mineral pit. A BLM mineral material permit will be acquired prior to obtaining any mineral material from BLM pits or federal land.

**Construction Materials source location attachment:** 

Fox 30 Fed Com Water Source and Caliche map 02-14-2017.pdf

## Section 7 - Methods for Handling Waste

Waste type: DRILLING

**Waste content description:** Drill fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility. Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly. Human waste and grey water will be properly contained of and disposed of properly. After drilling and completion operations; trash, chemicals, salts, frac sand, and other waste material will be removed and disposed of properly at a state approved disposal facility.

Amount of waste: 0

barrels

Waste disposal frequency: Daily

Safe containment description: Steel Tanks

Safe containment attachment:

Waste disposal type: HAUL TO COMMERCIAL

Disposal location ownership: COMMERCIAL

**FACILITY** 

Disposal type description:

Disposal location description: Trucked to NMOCD 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

Well Name: FOX 30 FED COM Well Number: 704H

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 Closed Loop System. Drill cuttings will be disposed of into steel tanks and taken to an

NMOCD approved disposal facility. 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?: NO

**Ancillary Facilities attachment:** 

Comments:

#### Section 9 - Well Site Layout

#### Well Site Layout Diagram:

FOX30FEDCOM\_704H\_pad site\_02-14-2017.pdf

FOX30FEDCOM\_704H\_well site\_02-14-2017.pdf

Fox 30 Fed Com 704H Rig Layout\_02-14-2017.pdf

Comments: Exhibit 2A-Wellsite & Exhibit 2B-Padsite Rig Layout Exhibit 4

### Section 10 - Plans for Surface Reclamation

Type of disturbance: NEW

Recontouring attachment:

FOX30FEDCOM\_704H\_interim reclamation\_02-14-2017.pdf

**Drainage/Erosion control construction:** Proper erosion control methods will be used on the area to control erosion, runoff, and siltation of the surrounding area.

**Drainage/Erosion control reclamation:** The interim reclamation will be monitored periodically to ensure that vegetation has reestablished and that erosion is controlled.

Wellpad long term disturbance (acres): 2.563131

Wellpad short term disturbance (acres): 4.178145

Well Name: FOX 30 FED COM Well Number: 704H

Access road long term disturbance (acres): 0.183471

Access road short term disturbance (acres): 0.183471

Pipeline long term disturbance (acres): 0.5247934

Pipeline short term disturbance (acres): 0.87465566

Other long term disturbance (acres): 0

Other short term disturbance (acres): 0

Total long term disturbance: 3.2713954

Total short term disturbance: 5.236272

Reconstruction method: In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads. Areas planned for interim reclamation will be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.

**Topsoil redistribution:** Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts and fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites. **Soil treatment:** Re-seed according to BLM standards. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion is controlled.

Existing Vegetation at the well pad: Grass, forbs, and small woody vegetation, such as mesquite will be excavated as the topsoil is removed. Large woody vegetation will be stripped and stored separately and respreads evenly on the site following topsoil respreading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils.

Existing Vegetation at the well pad attachment:

**Existing Vegetation Community at the road:** All disturbed areas, including roads, pipelines, pads, will be recontoured to the contour existing prior to the initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

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

**Existing Vegetation Community at the pipeline:** All disturbed areas, including roads, pipelines, pads, will be recontoured to the contour existing prior to the initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

Existing Vegetation Community at the pipeline attachment:

**Existing Vegetation Community at other disturbances:** All disturbed areas, including roads, pipelines, pads, will be recontoured to the contour existing prior to the initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

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:

Well Name: FOX 30 FED COM Well Number: 704H

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: Stan Last Name: Wagner

Phone: (432)686-3689 Email: stan\_wagner@eogresources.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:** All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, erosion is controlled, and free of noxious weeds. Weeds will be treated if found. **Weed treatment plan attachment:** 

**Monitoring plan description:** Reclamation will be completed within 6 months of well plugging. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, erosion is controlled, and free of noxious weeds.

Monitoring plan attachment:

Success standards: N/A

Pit closure description: NA

Pit closure attachment:

Well Name: FOX 30 FED COM Well Number: 704H

## Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: STATE GOVERNMENT

Other surface owner description:

**BIA Local Office:** 

**BOR Local Office:** 

**COE Local Office:** 

**DOD Local Office:** 

**NPS Local Office:** 

State Local Office: STATE OF NEW MEXICO

Military Local Office:

**USFWS Local Office:** 

Other Local Office:

**USFS** Region:

USFS Forest/Grassland:

**USFS Ranger District:** 

Email:

Fee Owner: Oliver Kiehne

Fee Owner Address: P.O. Box 135 Orla, TX 79770

Phone: (575)399-9281

ine. (373)339-3201

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: surface use agreement

Surface Access Bond BLM or Forest Service:

**BLM Surface Access Bond number:** 

USFS Surface access bond number:

Well Name: FOX 30 FED COM Well Number: 704H

#### Section 12 - Other Information

Right of Way needed? NO

Use APD as ROW?

ROW Type(s):

## **ROW Applications**

**SUPO Additional Information:** An onsite meeting was conducted 11/17/16. Poly lines are planned to transport water for operations. Will truck if necessary. See attached SUPO Plan. **Use a previously conducted onsite?** YES

Previous Onsite information: Onsite meeting conducted 11/17/16.

#### Other SUPO Attachment

Fox 30 Fed Com 704H signed C-102\_02-14-2017.pdf Fox 30 Fed Com\_704H SUPO\_02-14-2017.pdf FOX30FEDCOM\_704H COMBINED\_02-14-2017.PDF

#### **PWD**

## 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

Operator Name: EOG RESOURCES INC Well Name: FOX 30 FED COM Well Number: 704H 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: Decribe 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:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Well Name: FOX 30 FED COM Well Number: 704H

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:

Injection well name:

Assigned injection well API number?

Injection well API number:

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

Well Name: FOX 30 FED COM Well Number: 704H

**UIC Permit attachment:** 

## 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:

#### **Bond Info**

#### **Bond Information**

Federal/Indian APD: FED

**BLM Bond number: NM2308** 

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:

Well Name: FOX 30 FED COM Well Number: 704H

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

#### **Operator Certification**

## **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: Stan Wagner Signed on: 02/15/2017

Title: Regulatory Specialsit

Street Address: 5509 Champions Drive

City: Midland State: TX Zip: 79702

Phone: (432)686-3689

Email address: Stan\_Wagner@eogresources.com

## Field Representative

Representative Name: James Barwis

Street Address: 5509 Champions Drive

City: Midland State: TX Zip: 79706

Phone: (432)425-1204

Email address: james barwis@eogresources.com

#### Payment Info

#### **Payment**

APD Fee Payment Method: BLM DIRECT

CBS Receipt number: 3764402