Form 3160 -3 (March 2012)

HOBBS OCD SEP 2 8 2017 5.

UNITED STATES

DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

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

NMNM122622 6. If Indian, Allotee or Tribe Name

5. Lease Serial No.

APPLICATION FOR PERMIT TO	DRIL	ĻOR	REENTER		,		
la. Type of work:	TER				7. If Unit or CA Agre	eement, Na	ame and No.
lb. Type of Well: Oil Well Gas Well Other		y Sin;	gle Zone Multip	le Zone	8. Lease Name and DOGWOOD 23 FE		702H
2. Name of Operator EOG RESOURCES INCORPORATED	6	737	7)		9. API Well No.	51 4	4407
3a. Address 1111 Bagby Sky Lobby2 Houston TX 77002	1	one No. 651-70	(include area code) 000		10. Field and Pool, or RED HILLS / WC-0	•	'\/ 00
4. Location of Well (Report location clearly and in accordance with a	iny State r	equireme	nts.*)		11. Sec., T. R. M. or E	3lk.and Su	rvey or Area
At surface SESE / 200 FSL / 604 FEL / LAT 32.022241	6 / LON	G -10:	3.5365456		SEC 23 / T26S / R	33E / N	ИΡ
At proposed prod. zone NENE / 230 FNL / 843 FEL / LAT	32.0500	0801/	LONG -103.53731	34			
 Distance in miles and direction from nearest town or post office* miles 					12. County or Parish LEA		13. State NM
15. Distance from proposed* location to nearest 200 feet property or lease line, ft. (Also to nearest drig. unit line, if any)	16. N 1640		eres in lease	17. Spacin 320	g Unit dedicated to this	well	
 Distance from proposed location* to nearest well, drilling, completed, 513 feet applied for, on this lease, ft. 		roposed O feet	Depth / 22574 feet	20. BLM/I FED: N	BIA Bond No. on file		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3331 feet	·	рргохіп 1/2017	nate date work will star	rt*	23. Estimated duration 25 days	n	
			hments		1,-		
The following, completed in accordance with the requirements of Onsh				ttached to th	is form:		
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office). 	n Lands,	the	Item 20 above). 5. Operator certific	ation	ns unless covered by an		·
25. Signature (Electronic Submission)			(Printed/Typed) Nagner / Ph: (432)	686-3689		Date 03/07/	2017
Title Regulatory Specialsit	·					'	
Approved by (Signature) (Electronic Submission)			(Printed/Typed) _ayton / Ph: (575)2	234-5959		Date 09/22	/2017
Title Supervisor Multiple Resources		Office CARL					
Application approval does not warrant or certify that the applicant ho conduct operations thereon. Conditions of approval, if any, are attached.	lds legal	or equit	able title to those righ	ts in the sub	ject lease which would	entitle the	applicant to
Fitle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a States any false, fictitious or fraudulent statements or representations a				villfully to n	nake to any department	or agency	of the United

(Continued on page 2)

*(Instructions on page 2)



INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts. ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Continued on page 3)

(Form 3160-3, page 2)

Additional Operator Remarks

Location of Well

1. SHL: SESE / 200 FSL / 604 FEL / TWSP: 26S / RANGE: 33E / SECTION: 23 / LAT: 32.0222416 / LONG: -103.5365456 (TVD: 0 feet, MD: 0 feet)

PPP: SESE / 330 FSL / 843 FEL / TWSP: 26S / RANGE: 33E / SECTION: 23 / LAT: 32.0225988 / LONG: -103.5373177 (TVD: 12455 feet, MD: 12570 feet)

BHL: NENE / 230 FNL / 843 FEL / TWSP: 26S / RANGE: 33E / SECTION: 14 / LAT: 32.0500801 / LONG: -103.5373134 (TVD: 12500 feet, MD: 22574 feet)

BLM Point of Contact

Name: Priscilla Perez

Title: Legal Instruments Examiner

Phone: 5752345934

Email: pperez@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.



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



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: 03/07/2017

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



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



APD ID: 10400010754

Submission Date: 03/07/2017

Highlighted data reflects the most

Operator Name: EOG RESOURCES INCORPORATED

recent changes

Well Name: DOGWOOD 23 FED COM

Well Number: 702H

Show Final Text

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

APD ID:

10400010754

Tie to previous NOS?

Submission Date: 03/07/2017

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: NMNM122622

Lease Acres: 1640

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? NO

Permitting Agent? NO

APD Operator: EOG RESOURCES INCORPORATED

Operator letter of designation:

Operator Info

Operator Organization Name: EOG RESOURCES INCORPORATED

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: DOGWOOD 23 FED COM

Well Number: 702H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: RED HILLS

Pool Name: WC-025 S263327G

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

Well Name: DOGWOOD 23 FED COM

Well Number: 702H

Describe other minerals:

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

New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name:

Number: 701H/702H

Well Class: HORIZONTAL

DOGWOOD 23 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: 22 Miles

Distance to nearest well: 513 FT

Distance to lease line: 200 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat:

Dogwood_23_Fed_Com_702H_signed_C_102_03-07-2017.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:

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	200	FSL	604	FEL	26S	33E	23	Aliquot SESE	32.02224 16	- 103.5365 456	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 122622	333 1	0	0
KOP Leg #1	50	FSL	829	FEL	26S	33E	23	Aliquot SESE	32.02183 71	- 103.5372 771	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 122622	- 868 2	120 18	120 13
PPP Leg #1	330	FSL	843	FEL	26S	33E	23	Aliquot SESE	32.02259 88	- 103.5373 177.	LEA	l	NEW MEXI CO	F	NMNM 122622	- 912 4	125 70	124 55

Well Name: DOGWOOD 23 FED COM

Well Number: 702H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
EXIT Leg #1	330	FNL	843	FEL	268	33E	14	Aliquot NENE	32.04980 44	- 103.5373 15		NEW MEXI CO			NMNM 122621	- 916 9		125 00
BHL Leg #1	230	FNL	843	FEL	26S	33E	14	Aliquot NENE	32.05008 01	- 103.5373 134	ı	NEW MEXI CO	• • • • • • • • • • • • • • • • • • •	F	NMNM 122621	- 916 9	225 74	125 00

Well Name: DOGWOOD 23 FED COM Well Number: 702H

Pressure Rating (PSI): 10M

Rating Depth: 12500

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 (10000-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 5000/ 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 5000/ 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:

Dogwood 23 Fed Com 702H 5 M Choke Manifold Diagram (3-21-14)_03-02-2017.pdf 10M_Choke_Manifold_07-10-2017.pdf

BOP Diagram Attachment:

Dogwood 23 Fed Com 702H 5 M BOP Diagram (8-14-14)_03-02-2017.pdf 10M_BOPE_07-10-2017.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
	INTERMED IATE	9.87 5	7.625	NEW	API	N	0	1000	0	1000	3331	2331	1000	HCP -110	29.7	LTC	1.12 5	1.25	BUOY	1.6	BUOY	1.6
2	SURFACE	14.7 5	10.75	NEW	API	N	0	1045	0	1045	3331	2286	1045	J-55	40.5	STC	1.12 5	1.25	BUOY	1.6	BUOY	1.6
1	INTERMED IATE	9.87 5	7.625	NEW	API	N	1000	3000	1000	3000	2331	331		OTH ER		۱	1.12 5	1.25	BUOY	1.6	BUOY	1.6
	PRODUCTI ON	6.75	5.5	NEW	API	N	0	11100	0	11100	3331	-7769	11100	OTH ER		OTHER - DWC/C-IS MS	1.12 5	1.25	BUOY	1.6	BUOY	1.6

Well Name: DOGWOOD 23 FED COM

Well Number: 702H

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
_	INTERMED IATE	8.75	7.625	NEW	API	N	3000	11600	3000	11600	331	-8269	8600	HCP -110		OTHER - Flushmax III		1.25	BUOY	1.6	BUOY	1.6
_	PRODUCTI ON	6.75	5.5	NEW	API	N	11100	22574	11100	12500	-7769	-9169	11474	OTH ER	l .	OTHER - VAM SFC	1.12 5	1.25	BUOY	1.6	BUOY	1.6

Casing Attachments

Casing ID: 1	String Type: INTERMEDIATE	
Inspection Document:		
Spec Document:		
Tapered String Spec:		
Casing Design Assumpt	ions and Worksheet(s):	
Dogwood 23 Fed Co	om 702H BLM Plan_03-02-2017.pdf	
Casing ID: 2	String Type: SURFACE	

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Dogwood 23 Fed Com 702H BLM Plan_03-02-2017.pdf

Operator Name: EOG RESOURCES INCORPORATED Well Name: DOGWOOD 23 FED COM Well Number: 702H **Casing Attachments** Casing ID: 3 String Type: INTERMEDIATE **Inspection Document: Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s): Dogwood 23 Fed Com 702H BLM Plan_03-02-2017.pdf Casing ID: 4 String Type: PRODUCTION Inspection Document: **Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s): Dogwood 23 Fed Com 702H BLM Plan_03-02-2017.pdf Casing ID: 5 String Type: INTERMEDIATE **Inspection Document: Spec Document:**

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Dogwood 23 Fed Com 702H BLM Plan_03-02-2017.pdf

Well Name: DOGWOOD 23 FED COM

Well Number: 702H

Casing Attachments

Casing ID: 6

String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Dogwood 23 Fed Com 702H BLM Plan_03-02-2017.pdf

Section 4 - Cement

						,				,	
String Type	Lead/Tail	Stage Tool Depth	Тор МD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Lead		0	0	0	0	0	0		0	0
PRODUCTION	Lead		0	0	0	0	0	0	0	0	0
INTERMEDIATE	Lead		0	0	0	0	0	0		0	0
SURFACE	Lead		0	1045	325	1.73	13.5	562	25	Class C	Class C + 4.0% Bentonite + 0.6% CD- 32 + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface)
SURFACE	Tail		1045	1045	200	1.34	14.8	268	25	Class C	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
INTERMEDIATE	Lead		0	1160 0	2250	1.38	14.8	3105	25	Class C	Class C + 5% Gypsum + 3% CaCl2 pumped via bradenhead (TOC@surface)
INTERMEDIATE	Tail		1160 0	1160 0	550	1.2	14.4	660	25	Class H	50:50 Class H:Poz + 0.25% CPT20A + 0.40% CPT49 + 0.20% CPT35 + 0.80% CPT16A + 0.25% CPT503P pumped conventionally.

Well Name: DOGWOOD 23 FED COM

Well Number: 702H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		1110 0	2257 4	950	1.26	14.1	1197	25		Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 11100')

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

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (Ibs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	ЬН	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
1045	1160 0	SALT SATURATED	8.8	10				!			
1160 0	2257 4	OIL-BASED MUD	10	14							
0	1045	WATER-BASED MUD	8.6	8.8							

Well Name: DOGWOOD 23 FED COM

Well Number: 702H

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

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7516

Anticipated Surface Pressure: 4766

Anticipated Bottom Hole Temperature(F): 181

Anticipated abnormal pressures, 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:

Dogwood 23 Fed Com 702H H2S Plan Summary 03-02-2017.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Dogwood 23 Fed Com 702H Planning Report_03-02-2017.pdf

Dogwood 23 Fed Com 702H Wall plot_03-02-2017.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Dogwood 23 Fed Com 702H 5.500in 20.00 VST P110EC DWC_C-IS MS Spec Sheet_03-02-2017.pdf

Dogwood 23 Fed Com 702H 7.625in 29.7 P110EC VAM SLIJ-II 03-02-2017.pdf

Dogwood 23 Fed Com 702H 5.500in 20.00 VST P110EC VAM SFC Spec Sheet 03-02-2017.pdf

Dogwood 23 Fed Com 702H 7.625in 29.70 P-110 FlushMax III Spec Sheet 03-02-2017.pdf

Dogwood 23 Fed Com 702H BLM Plan 03-02-2017.pdf

Dogwood 23 Fed Com 702H Rig Layout_03-02-2017.pdf

Dogwood 23 Fed Com 702H Proposed Wellbore 03-02-2017.pdf

Other Variance attachment:

Dogwood 23 Fed Com 702H Co-Flex Hose Certification 03-02-2017.PDF

Well Name: DOGWOOD 23 FED COM

Well Number: 702H

Dogwood 23 Fed Com 702H Co-Flex Hose Test Chart_03-02-2017.pdf