Form 3160-3
(March 2012)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

# APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM122622

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. (319664)
DOGWOOD 23 FED COM 710H

2. Name of Operator EOG RESOURCES INCORPORATED (7377)

9. API Well No.
30-025-44814

3a. Address
1111 Bagby Sky Lobby2 Houston TX 77002

3b. Phone No. *(include area code)*
(713)651-7000

10. Field and Pool, or Exploratory (98097)
~~RED HILLS / WC-025 S263327G~~ SANDIA TANK; UP WC

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SWSW / 195 FSL / 338 FWL / LAT 32.0222296 / LONG -103.5490154
At proposed prod. zone NWNW / 230 FNL / 338 FWL / LAT 32.0500908 / LONG -103.5505591

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 23 / T26S / R33E / NMP

14. Distance in miles and direction from nearest town or post office*
22 miles

12. County or Parish
LEA

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
230 feet

16. No. of acres in lease
1640

17. Spacing Unit dedicated to this well
320

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
513 feet

19. Proposed Depth
12500 feet / 22587 feet

20. BLM/BIA Bond No. on file
FED: NM2308

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3287 feet

22. Approximate date work will start*
08/01/2017

23. Estimated duration
25 days

## 24. Attachments

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

1. Well plat certified by a registered surveyor.
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 | Name *(Printed/Typed)* | Date |
|---|---|---|
| (Electronic Submission) | Stan Wagner / Ph: (432)686-3689 | 03/07/2017 |

Title
Regulatory Specialsit

| Approved by *(Signature)* | Name *(Printed/Typed)* | Date |
|---|---|---|
| (Electronic Submission) | Cody Layton / Ph: (575)234-5959 | 09/26/2017 |

| Title | Office |
|---|---|
| Supervisor Multiple Resources | CARLSBAD |

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

10/16/17

AFMSS

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

# Operator Certification Data Report

09/29/2017

## 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:** 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

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## 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

**APD ID:** 10400010768 **Submission Date:** 03/07/2017

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** DOGWOOD 23 FED COM **Well Number:** 710H

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

Highlighted data reflects the most recent changes

Show Final Text

## Section 1 - General

**APD ID:** 10400010768 **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:** 710H **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

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** DOGWOOD 23 FED COM **Well Number:** 710H

**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:** DOGWOOD 23 FED COM **Number:** 708H/709H/710H

**Well Class:** HORIZONTAL **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:** 230 FT

**Reservoir well spacing assigned acres Measurement:** 320 Acres

**Well plat:** Dogwood_23_Fed_Com_710H_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 | 195 | FSL | 338 | FWL | 26S | 33E | 23 | Aliquot SWSW | 32.0222296 | -103.5490154 | LEA | NEW MEXICO | NEW MEXICO | F | FEE | 3287 | 0 | 0 |
| KOP Leg #1 | 50 | FSL | 361 | FWL | 26S | 33E | 23 | Aliquot SWSW | 32.0218397 | -103.5504734 | LEA | NEW MEXICO | NEW MEXICO | F | FEE | -8727 | 12028 | 12014 |
| PPP Leg #1 | 330 | FSL | 335 | FWL | 26S | 33E | 23 | Aliquot SWSW | 32.0226015 | -103.5505554 | LEA | NEW MEXICO | NEW MEXICO | F | FEE | -9169 | 12580 | 12456 |

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** DOGWOOD 23 FED COM **Well Number:** 710H

| | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PPP Leg #1 | 1339 | FSL | 325 | FWL | 26S | 33E | 23 | Aliquot SWSW | 32.0253852 | -103.550563 | LEA | NEW MEXICO | NEW MEXICO | F | NMNM 122622 | -9213 | 13600 | 12500 |
| EXIT Leg #1 | 330 | FNL | 338 | FWL | 26S | 33E | 14 | Aliquot NWNW | 32.0498154 | -103.5505607 | LEA | NEW MEXICO | NEW MEXICO | F | NMNM 02965A | -9213 | 22487 | 12500 |
| BHL Leg #1 | 230 | FNL | 338 | FWL | 26S | 33E | 14 | Aliquot NWNW | 32.0500908 | -103.5505591 | LEA | NEW MEXICO | NEW MEXICO | F | NMNM 02965A | -9213 | 22587 | 12500 |

**APD ID:** 10400010768 **Submission Date:** 03/07/2017

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** DOGWOOD 23 FED COM **Well Number:** 710H

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

Highlighted data reflects the most recent changes

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## Section 1 - Geologic Formations

| Formation ID | Formation Name | Elevation | True Vertical Depth | Measured Depth | Lithologies | Mineral Resources | Producing Formation |
|---|---|---|---|---|---|---|---|
| 17706 | PERMIAN | 3287 | 0 | 0 | ANHYDRITE | NONE | No |
| 17746 | RUSTLER | 2406 | 881 | 881 | ANHYDRITE | NONE | No |
| 17718 | TOP SALT | 2056 | 1231 | 1231 | SALT | NONE | No |
| 17722 | BASE OF SALT | -1554 | 4841 | 4841 | SALT | NONE | No |
| 17719 | LAMAR | -1781 | 5068 | 5068 | LIMESTONE | NONE | No |
| 15332 | BELL CANYON | -1820 | 5107 | 5107 | SANDSTONE | NATURAL GAS,OIL | No |
| 15316 | CHERRY CANYON | -2862 | 6149 | 6149 | SANDSTONE | NATURAL GAS,OIL | No |
| 17713 | BRUSHY CANYON | -4543 | 7830 | 7830 | SANDSTONE | NATURAL GAS,OIL | No |
| 17721 | BONE SPRING LIME | -6017 | 9304 | 9304 | LIMESTONE | NONE | No |
| 15338 | BONE SPRING 1ST | -6945 | 10232 | 10232 | SANDSTONE | NATURAL GAS,OIL | No |
| 17737 | BONE SPRING 2ND | -7499 | 10786 | 10786 | SANDSTONE | NATURAL GAS,OIL | No |
| 17738 | BONE SPRING 3RD | -8572 | 11859 | 11859 | SANDSTONE | NATURAL GAS,OIL | No |
| 17709 | WOLFCAMP | -8993 | 12280 | 12280 | SHALE | NATURAL GAS,OIL | Yes |

## Section 2 - Blowout Prevention

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** DOGWOOD 23 FED COM **Well Number:** 710H

**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:**

10M_Choke_Manifold_07-12-2017.pdf

**BOP Diagram Attachment:**

10M_BOPE_07-12-2017.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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | SURFACE | 14.75 | 10.75 | NEW | API | N | 0 | 905 | 0 | 905 | -9213 | -10118 | 905 | J-55 | 40.5 | STC | 1.125 | 1.25 | BUOY | 1.6 | BUOY | 1.6 |
| 2 | INTERMEDIATE | 9.875 | 7.625 | NEW | API | N | 0 | 1000 | 0 | 1000 | -9213 | -10213 | 1000 | HCP-110 | 29.7 | LTC | 1.125 | 1.25 | BUOY | 1.6 | BUOY | 1.6 |
| 3 | INTERMEDIATE | 9.875 | 7.625 | NEW | API | N | 1000 | 3000 | 1000 | 3000 | -10213 | -12213 | 2000 | OTHER | 29.7 | OTHER - SJIJ II | 1.125 | 1.25 | BUOY | 1.6 | BUOY | 1.6 |
| 4 | PRODUCTION | 6.75 | 5.5 | NEW | API | N | 0 | 11100 | 0 | 11100 | -9213 | -20313 | 11100 | OTHER | 20 | OTHER - DWC/C-IS MS | 1.125 | 1.25 | BUOY | 1.6 | BUOY | 1.6 |
| 5 | INTERMEDIATE | 8.75 | 7.625 | NEW | API | N | 3000 | 11600 | 3000 | 11600 | -12213 | -20813 | 8600 | HCP-110 | 29.7 | OTHER - Flushmax III | 1.125 | 1.25 | BUOY | 1.6 | BUOY | 1.6 |
| 6 | PRODUCTION | 6.75 | 5.5 | NEW | API | N | 11100 | 22587 | 11100 | 12500 | -20313 | -21713 | 11487 | OTHER | 20 | OTHER - VAM SFC | 1.125 | 1.25 | BUOY | 1.6 | BUOY | 1.6 |

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** DOGWOOD 23 FED COM **Well Number:** 710H

**Casing Attachments**

**Casing ID:** 1 **String Type:** SURFACE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Dogwood_23_Fed_Com_710H_BLM_Plan_03-06-2017.pdf

**Casing ID:** 2 **String Type:** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Dogwood_23_Fed_Com_710H_BLM_Plan_03-06-2017.pdf

**Casing ID:** 3 **String Type:** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Dogwood_23_Fed_Com_710H_BLM_Plan_03-06-2017.pdf

**Casing Attachments**

**Casing ID:** 4 **String Type:** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Dogwood_23_Fed_Com_710H_BLM_Plan_03-06-2017.pdf

**Casing ID:** 5 **String Type:** INTERMEDIATE

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Dogwood_23_Fed_Com_710H_BLM_Plan_03-06-2017.pdf

**Casing ID:** 6 **String Type:** PRODUCTION

**Inspection Document:**

**Spec Document:**

**Tapered String Spec:**

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

Dogwood_23_Fed_Com_710H_BLM_Plan_03-06-2017.pdf

## Section 4 - Cement

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** DOGWOOD 23 FED COM **Well Number:** 710H

| String Type | Lead/Tail | Stage Tool Depth | Top MD | 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 | 905 | 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 | | 905 | 905 | 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 | 11600 | 2250 | 1.38 | 14.8 | 3105 | 25 | Class C | Class C + 5% Gypsum + 3% CaCl2 pumped via bradenhead (TOC@surface) |
| INTERMEDIATE | Tail | | 11600 | 11600 | 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. |
| PRODUCTION | Lead | | 11100 | 22587 | 950 | 1.26 | 14.1 | 1197 | 25 | Class H | Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,600') |

## 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 (lbs/gal) | Density (lbs/cu ft) | Gel Strength (lbs/100 sqft) | PH | Viscosity (CP) | Salinity (ppm) | Filtration (cc) | Additional Characteristics |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 905 | 11600 | SALT SATURATED | 8.8 | 10 | | | | | | | |
| 11600 | 22587 | OIL-BASED MUD | 10 | 14 | | | | | | | |
| 0 | 905 | WATER-BASED MUD | 8.6 | 8.8 | | | | | | | |

## 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

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** DOGWOOD 23 FED COM **Well Number:** 710H

## Section 7 - Pressure

**Anticipated Bottom Hole Pressure:** 7443 **Anticipated Surface Pressure:** 4693

**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_710H_H2S_Plan_Summary_03-06-2017.pdf

## Section 8 - Other Information

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

Dogwood_23_Fed_Com_710H_Planning_Report_03-06-2017.pdf
Dogwood_23_Fed_Com_710H_Wall_Plot_03-06-2017.pdf

**Other proposed operations facets description:**

**Other proposed operations facets attachment:**

Dogwood_23_Fed_Com_710H_5.500in_20.00_VST_P110EC_DWC_C_IS_MS_Spec_Sheet_03-06-2017.pdf
Dogwood_23_Fed_Com_710H_5.500in_20.00_VST_P110EC_VAM_SFC_Spec_Sheet_03-06-2017.pdf
Dogwood_23_Fed_Com_710H_7.625in_29.7_P110EC_VAM_SLIJ_II_03-06-2017.pdf
Dogwood_23_Fed_Com_710H_7.625in_29.70_P_110_FlushMax_III_Spec_Sheet_03-06-2017.pdf
Dogwood_23_Fed_Com_710H_BLM_Plan_03-06-2017.pdf
Dogwood_23_Fed_Com_710H_Proposed_Wellbore_03-06-2017.pdf
Dogwood_23_Fed_Com_710H_Rig_Layout_03-06-2017.pdf
Dogwood23FC710_deficiency_response_07-18-2017.pdf

**Other Variance attachment:**

Dogwood_23_Fed_Com_710H_Co_Flex_Hose_Certification_03-06-2017.PDF
Dogwood_23_Fed_Com_710H_Co_Flex_Hose_Test_Chart_03-06-2017.pdf

## 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:**

**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?**

**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 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:**

**Reclamation bond amount:**

**Reclamation bond rider amount:**

**Additional reclamation bond information attachment:**

**APD ID:** 10400010768 **Submission Date:** 03/07/2017

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** DOGWOOD 23 FED COM **Well Number:** 710H

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

Highlighted data reflects the most recent changes

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## Section 1 - Existing Roads

**Will existing roads be used?** YES

**Existing Road Map:**

DOGWOOD23FEDCOM_710H_vicinity_map_03-06-2017.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:**

DOGWOOD_23_FED_COM_infrastructure_sketch_03-06-2017.pdf
DOGWOOD23FEDCOM_710H_well_site_03-06-2017.pdf

**New road type:** RESOURCE

**Length:** 1056 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

**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:**

DOGWOOD23FEDCOM_710H_radius_map_03-06-2017.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:** Dogwood 23 Fed Com central battery is located in SE/4 of section 23

**Production Facilities map:**

DOGWOOD_23_FED_COM_infrastructure_sketch_03-06-2017.pdf

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** DOGWOOD 23 FED COM **Well Number:** 710H

## Section 5 - Location and Types of Water Supply

### Water Source Table

**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:**

Dogwood 23 Fed Com Water Source and Caliche Map_02-27-2017.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:**

## 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:**

Dogwood 23 Fed Com Water Source and Caliche Map_02-27-2017.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 containmant attachment:**

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

**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:**

DOGWOOD23FEDCOM_710H_pad_site_03-06-2017.pdf
DOGWOOD23FEDCOM_710H_well_site_03-06-2017.pdf
Dogwood_23_Fed_Com_710H_Rig_Layout_03-06-2017.pdf
**Comments:** Exhibit 2A-Wellsite & Exhibit 2B-Padsite Rig Layout Exhibit 4

## Section 10 - Plans for Surface Reclamation

**Type of disturbance:** NEW

**Recontouring attachment:**

DOGWOOD23FEDCOM_710H interim reclamation_02-27-2017.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.

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** DOGWOOD 23 FED COM **Well Number:** 710H

**Wellpad long term disturbance (acres):** 2.966024 **Wellpad short term disturbance (acres):** 4.499541

**Access road long term disturbance (acres):** 0.581818 **Access road short term disturbance (acres):** 0.581818

**Pipeline long term disturbance (acres):** 2.9139118 **Pipeline short term disturbance (acres):** 4.8565197

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

**Total long term disturbance:** 6.461754 **Total short term disturbance:** 9.937879

**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

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** DOGWOOD 23 FED COM **Well Number:** 710H

**Seed harvest description:**

**Seed harvest description attachment:**

## Seed Management

### Seed Table

**Seed type:**

**Seed source:**

**Seed name:**

**Source name:**

**Source address:**

**Source phone:**

**Seed cultivar:**

**Seed use location:**

**PLS pounds per acre:**

**Proposed seeding season:**

### Seed Summary

**Total pounds/Acre:**

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

**Seed reclamation attachment:**

## Operator Contact/Responsible Official Contact Info

**First Name:** 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

**Operator Name:** EOG RESOURCES INCORPORATED

**Well Name:** DOGWOOD 23 FED COM **Well Number:** 710H

**Pit closure attachment:**

## Section 11 - Surface Ownership

**Disturbance type:** WELL PAD

**Describe:**

**Surface Owner:** PRIVATE OWNERSHIP

**Other surface owner description:**

**BIA Local Office:**

**BOR Local Office:**

**COE Local Office:**

**DOD Local Office:**

**NPS Local Office:**

**State Local Office:**

**Military Local Office:**

**USFWS Local Office:**

**Other Local Office:**

**USFS Region:**

**USFS Forest/Grassland:** **USFS Ranger District:**

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

**Phone:** (575)399-9281 **Email:**

**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:**

## 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 12/20/16. Poly lines are planned to transport water for operations. Will truck if necessary. See attached SUPO Plan.
**Use a previously conducted onsite?** NO

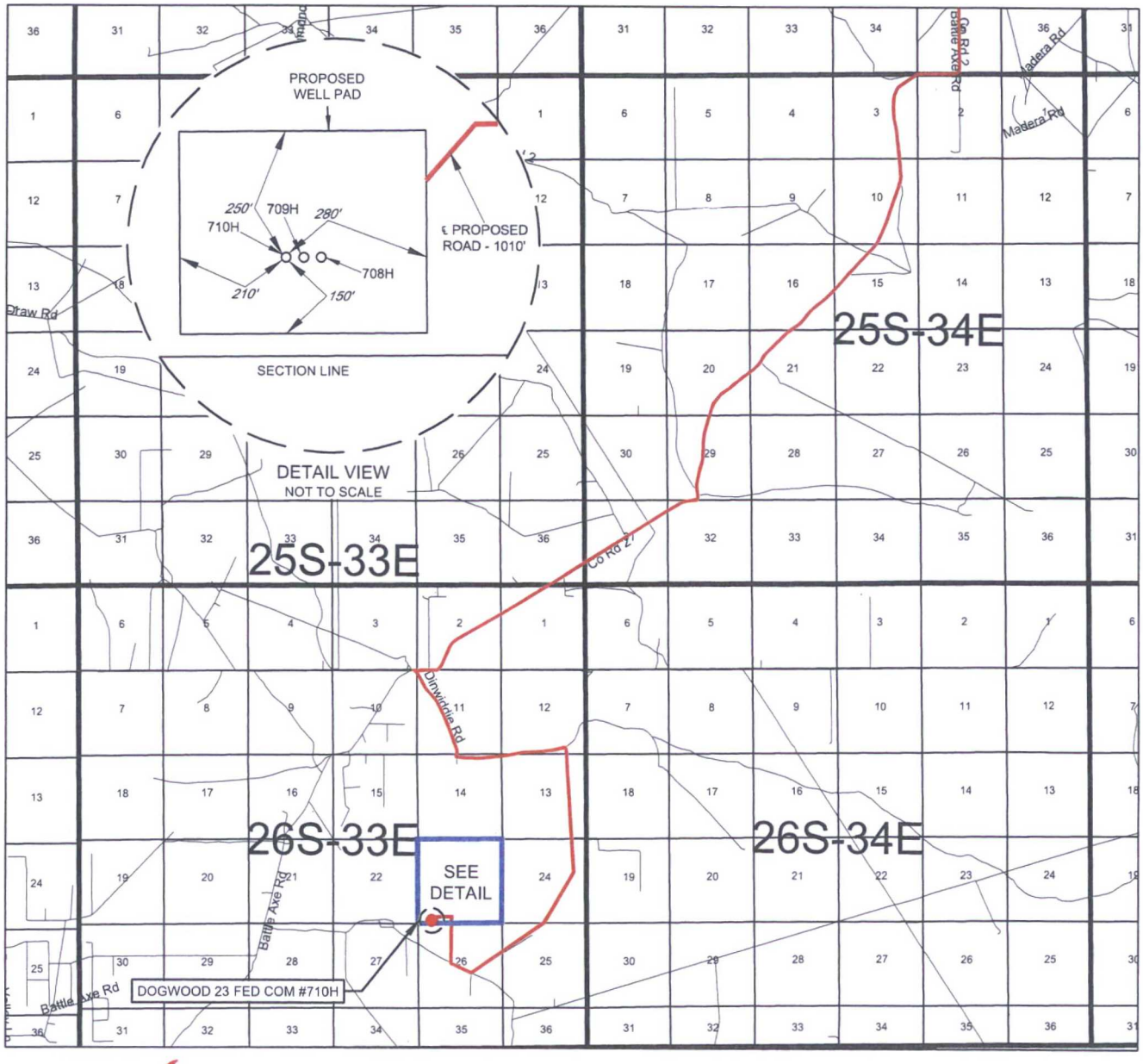
**Previous Onsite information:**

## Other SUPO Attachment

Dogwood_23_Fed_Com_710H_SUPO_03-06-2017.pdf
DOGWOOD_23_FED_COM_infrastructure_sketch_03-06-2017.pdf
DOGWOOD23FEDCOM_710H_COMBINED_03-06-2017.PDF
Dogwood_23_Fed_Com_710H_signed_C_102_03-07-2017.pdf
Dogwood23FC710_deficiency_response_07-18-2017.pdf

EXHIBIT 2

# VICINITY MAP



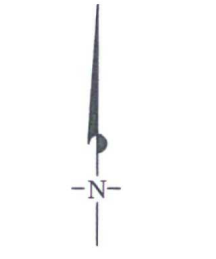

**eog resources, inc.**

LEASE NAME & WELL NO.: DOGWOOD 23 FED COM #710H

SECTION 23 TWP 26-S RGE 33-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 195' FSL & 813' FWL

DISTANCE & DIRECTION

FROM INT. OF NM-18 N. & NM-128, GO WEST ON NM-128 ±14.1 MILES, THENCE SOUTHWEST (LEFT) ON BATTLE AXE RD. ±13.2 MILES, THENCE WEST (RIGHT) ON BATTLE AXE RD./J-2 ±0.3 MILES, THENCE SOUTHEAST (LEFT) ON DINWIDDIE RD. ±2.5 MILES, THENCE SOUTH (RIGHT) ON LEASE RD. ±3.2 MILES, THENCE NORTHWEST (RIGHT) ON A LEASE RD. ±1428 FEET, THENCE NORTH (RIGHT) ON A PROPOSED RD. ±2950 FEET, THENCE WEST (LEFT) ON A PROPOSED RD. ±1010 FEET TO A POINT ±292 FEET NORTHEAST OF THE LOCATION.




THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY EOG RESOURCES, INC. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET.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