Form 3160-5 (June 2015)

# UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

Rec'd 08/27/2020 - NMOCD FORM APPROVED OMB NO. 1004-0137

SUNDRY N	OTICES AND REPORTS ON WELLS
Do not use this	form for proposals to drill or to re-enter an
abandoned well.	Use form 3160-3 (APD) for such proposals.

6	If Indian	Allottee or Tribe Name	

abandoned we	II. Use form 3160-3 (API	D) for such p	roposals.		o. If fildraff, Affottee of	Titoe Name
SUBMIT IN	TRIPLICATE - Other inst	tructions on	page 2		7. If Unit or CA/Agreer	ment, Name and/or No.
Type of Well     Gas Well □ Oth	ner				8. Well Name and No. ANTIETAM 9 FED	COM 754H
Name of Operator     EOG RESOURCES INCORPO	Contact: DRATEDE-Mail: emily_follis	EMILY FOLL @eogresource	IS s.com		9. API Well No. 30-025-47359-00	)-X1
3a. Address PO BOX 2267 MIDLAND, TX 79702		3b. Phone No. Ph: 432-63	(include area code) 6-3600		10. Field and Pool or Ex RED HILLS-UP E	xploratory Area BONE SPRING SHALE
4. Location of Well (Footage, Sec., T	., R., M., or Survey Description	)			11. County or Parish, S	tate
Sec 9 T25S R33E NENE 1226 32.148972 N Lat, 103.572784					LEA COUNTY, NM	
12. CHECK THE AF	PPROPRIATE BOX(ES)	TO INDICA	ΓE NATURE O	F NOTICE,	REPORT, OR OTH	ER DATA
TYPE OF SUBMISSION			TYPE OF	ACTION		
□ Nation of Intent	☐ Acidize	☐ Deep	oen	☐ Product	ion (Start/Resume)	☐ Water Shut-Off
☐ Notice of Intent	☐ Alter Casing	☐ Hyd:	raulic Fracturing	☐ Reclam	ation	■ Well Integrity
■ Subsequent Report	□ Casing Repair	□ New	Construction	☐ Recomp	olete	<b>⊠</b> Other
☐ Final Abandonment Notice	☐ Change Plans	☐ Plug	and Abandon	□ Tempor	arily Abandon	Change to Original A PD
	☐ Convert to Injection	☐ Plug	Back	■ Water D	Disposal	
If the proposal is to deepen directions Attach the Bond under which the wor following completion of the involved testing has been completed. Final Ab determined that the site is ready for fit EOG respectfully requests an changes: Well number change from 204 Target change from Avalon St Casing design changes to refl BHL change to T-25-S R-33-E RESUBMITTED DUE TO RET	rk will be performed or provide operations. If the operation resonationment Notices must be file in all inspection.  amendment to our approved to 754H nale to Wolfcamp ect deeper target Sec. 16 2540 feet FNL 2  FURNED ES#523822 FOI	the Bond No. on sults in a multiple ed only after all reved APD for the control of the control o	file with BLM/BIA. e completion or recorequirements, including this well to reflect , Lea Co., NM CTION CORRU	Required sulmpletion in a rang reclamation the following t	osequent reports must be f new interval, a Form 3160 n, have been completed an	iled within 30 days -4 must be filed once
	mitted to AFMSS for proce	IRCES INCOR	PORATED, sent to SCILLA PEREZ on	o the Hobbs 08/24/2020	(20PP3343SE)	
Name(Printed/Typed) BEN HOC	HER		Title REGUL/	ATORY AS	SOC.	
Signature (Electronic S	Submission)		Date 08/24/20	)20		
	THIS SPACE FO	R FEDERA	L OR STATE (	OFFICE U	SE	
Approved By ACCEPT	ED		JEROMY F <sub>Title</sub> PETROLE	PORTER JM ENGINI	EER	Date 08/27/2020
Conditions of approval, if any, are attache certify that the applicant holds legal or equal which would entitle the applicant to condu-	iitable title to those rights in the		Office Hobbs			
Title 18 U.S.C. Section 1001 and Title 43 States any false, fictitious or fraudulent				willfully to ma	ake to any department or a	gency of the United

#### Revisions to Operator-Submitted EC Data for Sundry Notice #526916

**Operator Submitted** 

**BLM Revised (AFMSS)** 

Sundry Type: APDCH

SR

APDCH SR

Lease: NMNM118726 NMNM118726

Agreement:

Operator: EOG RESOURCES INC

PO BOX 2267 MIDLAND, TX 79702 Ph: 432-636-3600

EOG RESOURCES INCORPORATED

PO BOX 2267 MIDLAND, TX 79702 Ph: 432.686.3689

Admin Contact:

EMILY FOLLIS SR REGULATORY ADMINISTRATOR E-Mail: emily\_follis@eogresources.com

**EMILY FOLLIS** 

SR REGULATORY ADMINISTRATOR E-Mail: emily\_follis@eogresources.com

Ph: 432-636-3600

Tech Contact:

BEN HOCHER REGULATORY ASSOC. E-Mail: Ben\_Hocher@eogresources.com

Ph: 432.636.3600

**BEN HOCHER** REGULATORY ASSOC.

E-Mail: Ben\_Hocher@eogresources.com Cell: 432-556-7258 Ph: 432-636-3600

Ph: 432-636-3600

Location:

Field/Pool:

State: County:

NM LEA COUNTY

NM LEA

98180 WC025 G09 S253309P RED HILLS-UP BONE SPRING SHALE

Well/Facility:

ANTIETAM 9 FED COM 754H Sec 9 T25S R33E 1226FNL 1243FEL

ANTIETAM 9 FED COM 754H Sec 9 T25S R33E NENE 1226FNL 1243FEL

32.148972 N Lat, 103.572784 W Lon

District I 1625 N. French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax: (575) 393-0720 District II 811 S. First St., Artesia, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720 District III 1000 Rio Brazos Road, Aztec, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources
Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

FORM C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

AMENDED REPORT

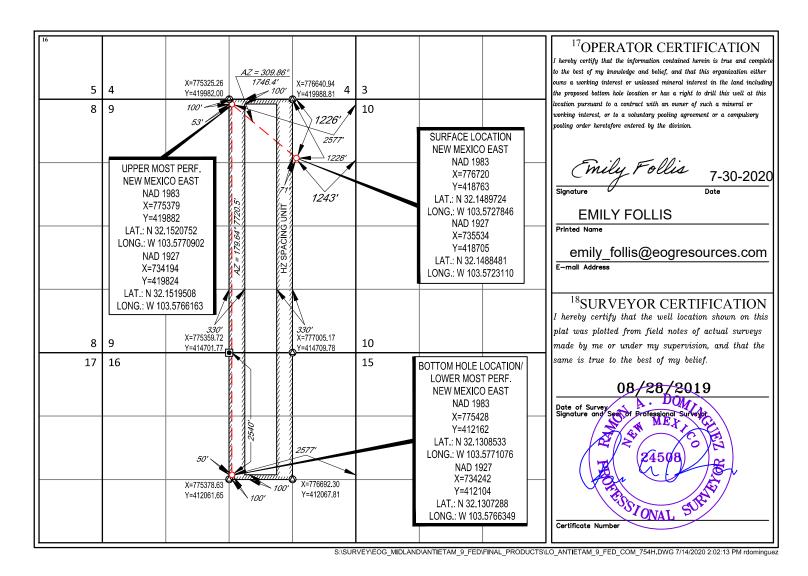
# WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <sup>2</sup> Pool Code		<sup>2</sup> Pool Code	<sup>3</sup> Pool Name			
3002547359 98180		98180	WC025 G09 S253309P UPPER WOLFCAMP			
<sup>4</sup> Property Code		<sup>5</sup> P	roperty Name	<sup>6</sup> Well Number		
317131		ANTIETA	M 9 FED COM	754H		
<sup>7</sup> OGRID No.		<sup>8</sup> O	perator Name	<sup>9</sup> Elevation		
7377	EOG RESOURCES, INC. 3422'					

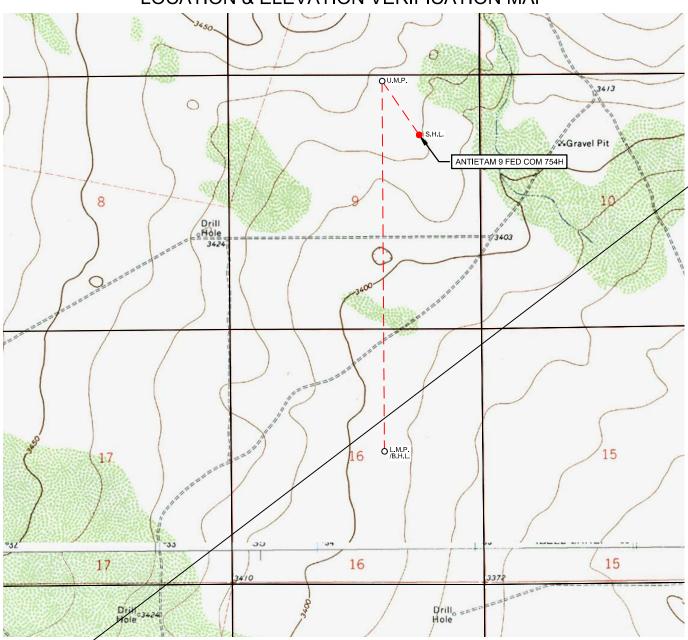
<sup>10</sup>Surface Location

	UL or lot no.	Section <b>9</b>	Township 25-S	33-E	Lot Idn —	Feet from the 1226'	North/South line NORTH	Feet from the 1243'	EAST	LEA
•	11Bottom Hole Location If Different From Surface									
	UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	G	16	25-S	33-E	-	2540'	NORTH	2577'	EAST	LEA
	<sup>12</sup> Dedicated Acres 240.00	<sup>13</sup> Joint or I	infill 14Co	nsolidation Co	de <sup>15</sup> Ord	er No.				

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



## **LOCATION & ELEVATION VERIFICATION MAP**



eog resources, inc.

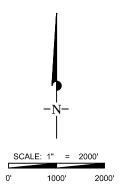
LEASE NAME & WELL NO.: \_\_\_\_\_ANTIETAM 9 FED COM 754H

 SECTION
 9
 TWP
 25-S
 RGE
 33-E
 SURVEY
 N.M.P.M.

 COUNTY
 LEA
 STATE
 NM
 ELEVATION
 3422'

 DESCRIPTION
 1226' FNL & 1243' FEL

LATITUDE N 32.1489724 LONGITUDE W 103.5727846



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 COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.



1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140

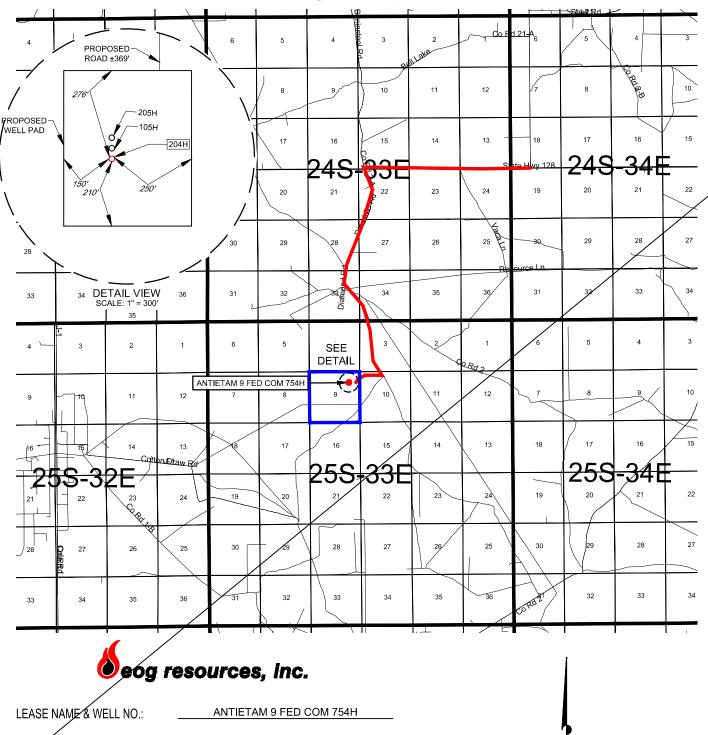
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554

2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705

TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743

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# EXHIBIT 2 VICINITY MAP



N.M.P.M.

\_ SURVEY \_

#### **DISTANCE & DIRECTION**

SECTION

COUNTY.

DESCRIPTION

FROM INT. OF NM-128 W & DELAWARE BASIN RD.. GO WEST ON NM-128 W ±3.3 MILES, THENCE SOUTH (LEFT) ON DIAMOND RD. ±2.5 MILES, THENCE SOUTHEAST (LEFT) ON C.R. 2 ±0.2 MILES, THENCE SOUTHWEST (RIGHT) AT VACA LN. ±1.8 MILE, THENCE WEST (RIGHT) ON LEASE RD. ±466 MILES, THENCE SOUTHWEST ON A PROPOSED RD. ±1352 FEET TO A POINT ±829 FEET NORTHEAST OF THE LOCATION.

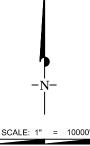
\_\_\_\_\_ STATE \_\_\_\_ 1226' FNL & 1243' FEL

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.

\_ TWP <u>25-S</u> RGE <u>33-E</u>

LEA

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.





5000'

10000

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2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705

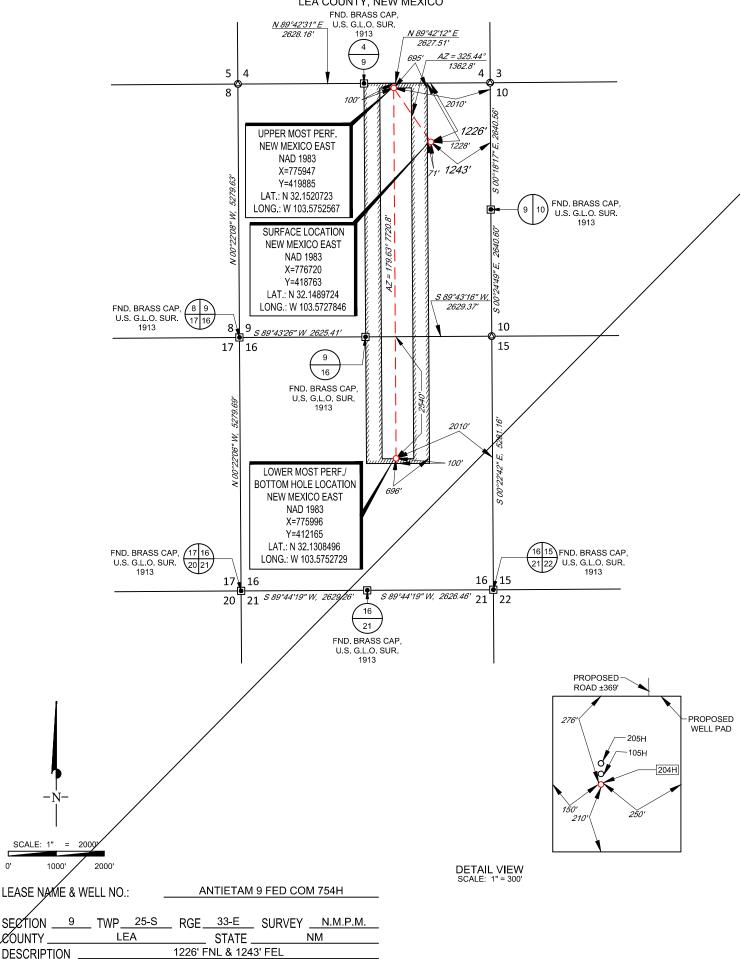
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743

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# **EXHIBIT 2A**

SECTION 9, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M. LEA COUNTY, NEW MEXICO



## **DISTANCE & DIRECTION**

SCALE: 1"

SERTION \_

LOUNTY.

**DESCRIPTION** 

1000

FROM INT. OF NM-128 W & DELAWARE BASIN RD., GO WEST ON NM-128 W ±3.3 MILES, THENCE SOUTH (LEFT) ON DIAMOND RD, ±2.5 MILES, THENCE SOUTHEAST (LEFT) ON C.R. 2 ±0.2 MILES, THENCE SOUTHWEST (RIGHT) AT VACA LN. ±1.8 MILE, THENCE WEST (RIGHT) ON LEASE RD. ±466 MILES, THENCE SOUTHWEST ON A PROPOSED RD. ±1352 FEET TO A POINT ±829 FEET NORTHEAST OF THE LOCATION.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND THIS EASEMENTIASENT USE LOCATION SHOWN RESERVED HAS SEEN SURVEYED. OF 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. "PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE.

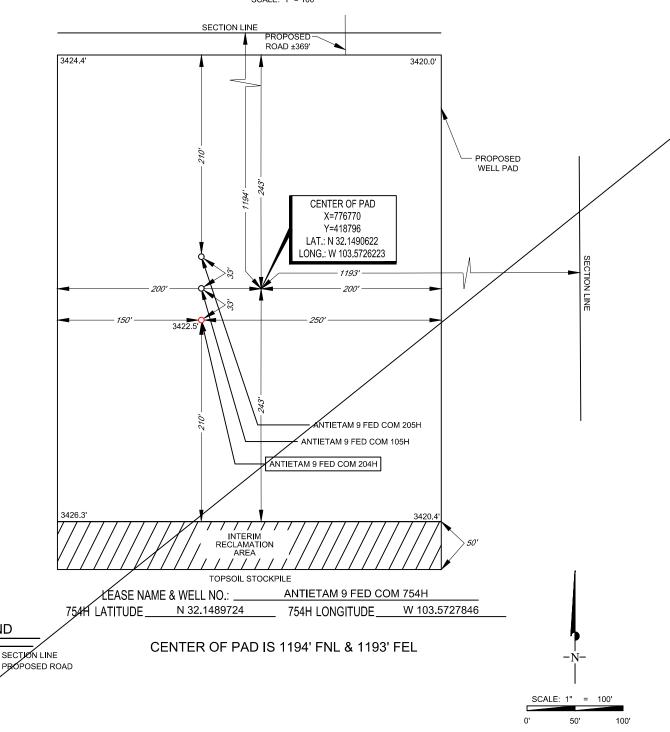
> Ramon A Dominguez, P.S. No. 25408 JULY 9, 2018



TELEPHONE: (817) 744-7512 • FAX (817) 744-7554 2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705 TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743 WWW.TOPOGRAPHIC.COM

SECTION 9, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M. LEA COUNTY, NEW MEXICO

DETAIL VIEW SCALE: 1" = 100'



ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.

THIS PROPOSED PAD SITE 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.

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

**LEGEND** 



1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140

TELEPHONE: (817) 744-7512 • FAX (817) 744-7554

2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705

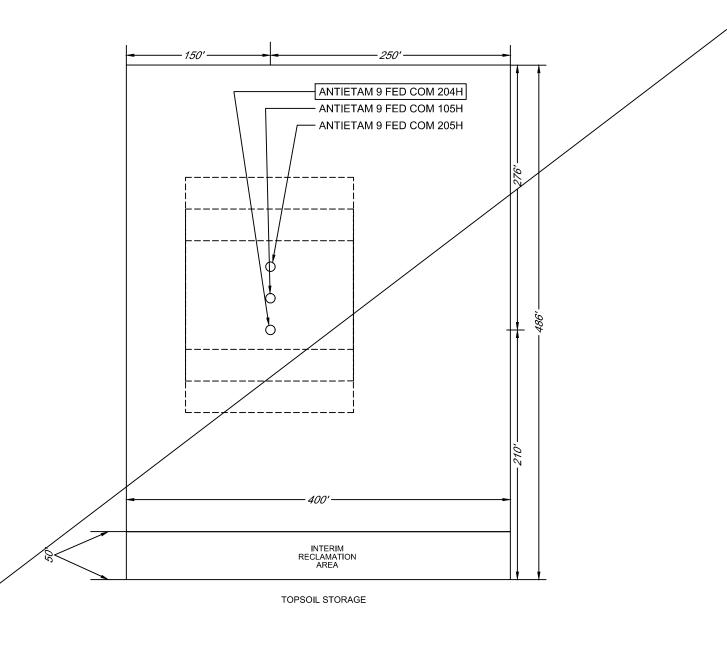
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743

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# **EXHIBIT 2C**RECLAMATION AND FACILITY DIAGRAM - PRODUCTION FACILITIES DIAGRAM

SECTION 9, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M. LEA COUNTY, NEW MEXICO DETAIL VIEW SCALE: 1" = 100'





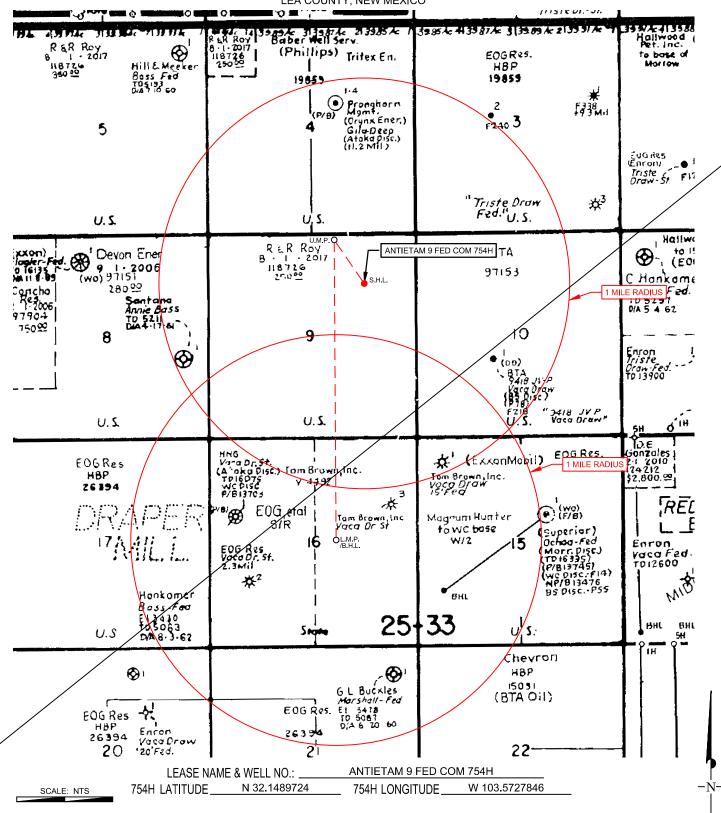
 LEASE NAME & WELL NO.:
 ANTIETAM 9 FED COM 754H

 754H LATITUDE
 N 32.1489724
 754H LONGITUDE
 W 103.5727846

# **EXHIBIT 3**

eog resources, inc.

SECTION 9, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M. LEA COUNTY, NEW MEXICO



ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.

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# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME: | EOG RESOURCES

**LEASE NO.:** | NMNM118726

WELL NAME & NO.: | ANTIETAM 9 FED COM 754H

SURFACE HOLE FOOTAGE: 1226'/N & 1243'/E BOTTOM HOLE FOOTAGE 2540'/N & 2577'/E

LOCATION: | Section 09, T.25 S., R.33 E., NMPM

**COUNTY:** Lea County, New Mexico

COA

H2S	O Yes	• No	
Potash	None	Secretary	© R-111-P
Cave/Karst Potential	• Low	Medium	O High
Cave/Karst Potential	Critical		
Variance	O None	Flex Hose	Other
Wellhead	Conventional	• Multibowl	O Both
Other	☐4 String Area	☐ Capitan Reef	□WIPP
Other	☐ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	<b>☑</b> COM	□ Unit

#### A. HYDROGEN SULFIDE

1. Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

#### **B. CASING**

- 1. The 13-3/8 inch surface casing shall be set at approximately 1,205 feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. Wait on cement (WOC) time for a primary cement job will be a minimum of  $\underline{8}$

- **hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.

# Intermediate Casing must be kept at least 1/3 fluid filled to meet BLM Collapse Requirement.

- 2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is:
  - Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
- 3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
  - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

#### C. PRESSURE CONTROL

- 1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
- 2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
  - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
  - c. Manufacturer representative shall install the test plug for the initial BOP test.
  - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
  - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

# D. SPECIAL REQUIREMENT (S)

## **Communitization Agreement**

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

JJP08272020

# GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)
  - Eddy County
     Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822
- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
  - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure

rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).

- b. When the operator proposes to set surface casing with Spudder Rig
  - Notify the BLM when moving in and removing the Spudder Rig.
  - Notify the BLM when moving in the 2<sup>nd</sup> Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
  - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

#### A. CASING

- 1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
- 2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

- 4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
- 8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

#### B. PRESSURE CONTROL

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
- 2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
- 3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
- 4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
  - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- c. Manufacturer representative shall install the test plug for the initial BOP test.
- d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
- e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
  - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
  - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall

have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

#### C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

#### D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.