Form 3160-3 FORM APPROVED OMB No. 1004-0137 (June 2015) Expires: January 31, 2018 **UNITED STATES** DEPARTMENT OF THE INTERIOR 5 Lease Serial No. NMNM019185 BUREAU OF LAND MANAGEMENT APPLICATION FOR PERMIT TO DRILL OR REENTER 6. If Indian, Allotee or Tribe Name 7. If Unit or CA Agreement, Name and No. **✓** DRILL REENTER 1a. Type of work: 1b. Type of Well: Oil Well X Gas Well Other 8. Lease Name and Well No. 1c. Type of Completion: Hydraulic Fracturing ✓ Single Zone Multiple Zone FOXIE 18 FED COM 702H 9. API Well No 015 48044 2. Name of Operator EOG RESOURCES INCORPORATED 3a. Address 3b. Phone No. (include area code) 10. Field and Pool, or Exploratory PERMIAN / PURPLE SAGE WOLFCAMP 1111 BAGBY SKY LOBBY2 HOUSTON TX 77002 (713)651-7000 4. Location of Well (Report location clearly and in accordance with any State requirements.\*) 11. Sec., T. R. M. or Blk. and Survey or Area SEC 18 / T20S / R28E / NMP At surface NENE / 680 FNL / 200 FEL / LAT 32.5789201 / LONG -104.2092314 At proposed prod. zone NWNE / 988 FNL / 2484 FEL / LAT 32.5797722 / LONG -104.23425 12. County or Parish 14. Distance in miles and direction from nearest town or post office\* 13. State **EDDY** NM 15. Distance from proposed\* 16. No of acres in lease 17. Spacing Unit dedicated to this well 100 feet location to nearest 242.51 property or lease line, ft. (Also to nearest drig. unit line, if any) 18. Distance from proposed location\* 19. Proposed Depth 20. BLM/BIA Bond No. in file to nearest well, drilling, completed, 33 feet 8779 feet / 16438 feet FED: NM2308 applied for, on this lease, ft. 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 22. Approximate date work will start\* 23. Estimated duration 3284 feet 01/17/2020 25 days 24. Attachments The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable) 1. Well plat certified by a registered surveyor. 4. Bond to cover the operations unless covered by an existing bond on file (see 2. A Drilling Plan. Item 20 above). 3. A Surface Use Plan (if the location is on National Forest System Lands, the 5. Operator certification. SUPO must be filed with the appropriate Forest Service Office). 6. Such other site specific information and/or plans as may be requested by the 25. Signature Name (Printed/Typed) Date (Electronic Submission) 06/18/2019 Title Approved by (Signature) Date Name (Printed/Typed) (Electronic Submission) Cody Layton / Ph: (575)234-5959 12/09/2020 Title Office Assistant Field Manager Lands & Minerals **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



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 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
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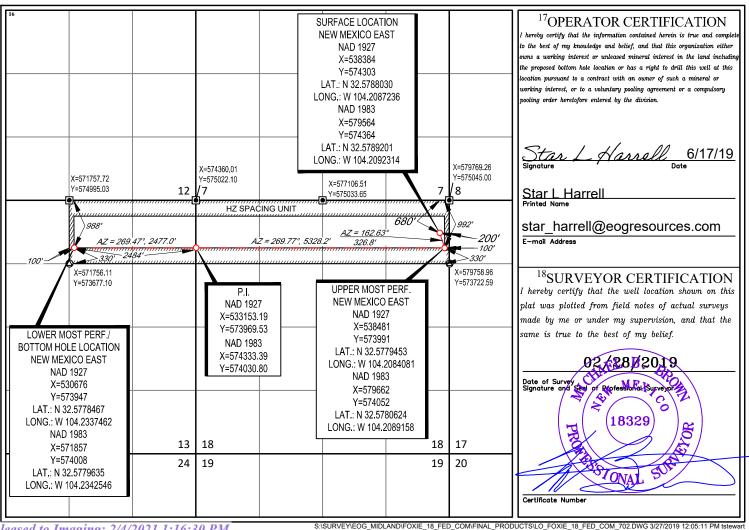
### WELL LOCATION AND ACREAGE DEDICATION PLAT

	<sup>1</sup> API Number <sup>2</sup> Pool Co 30-015-48044 9822		<sup>3</sup> Pool Name Purple Sage; Wolfca	amp			
<sup>4</sup> Property Code	<sup>5</sup> Property Name <sup>6</sup> W						
330176	FOXIE 18 FED COM 702H						
<sup>7</sup> OGRID No.	<sup>8</sup> Operator Name <sup>9</sup> Elevation						
7377	EOG RESOURCES, INC. 3284'						
10 Surface Location							

Surface Location

UL or lot no.	Section 18	Township 20-S	28-E	Lot Idn —	Feet from the 680'	North/South line NORTH	Feet from the 200'	East/West line EAST	EDDY		
	<sup>11</sup> Bottom 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		
В	13	20-S	27-E	_	988'	NORTH	2484'	EAST	EDDY		
<sup>12</sup> Dedicated Acres 242.51	<sup>13</sup> Joint or 1	Infill 14Co	onsolidation 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.



Inten	t	As Dril	led											
API#														
Ope	rator Nar	me:	1			Prop	erty N	ame:						Well Number
Kick C	Off Point	(KOP)												
UL	Section	Township	Range	Lot	Feet		From N	ı/S	Feet		From	ı E/W	County	
Latitu	ıde				Longitu	ude							NAD	
Firet 7	Falsa Daisa	+ (FTD)												
UL	Section	Township	Danga	Lot	Feet		From N	ı/c	Feet			ı E/W	County	
		TOWNSHIP	Range	Lot			FIOIII	1/3	reet		FIOII	I E/ VV		
Latitu	ıde				Longitu	ude							NAD	
Last T	ake Poin	t (LTP)												
UL	Section	Township	Range	Lot	Feet	Fron	n N/S	Feet		From E/	/W	Count	у	
Latitu	ıde				Longitu	ude						NAD		
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API#			]											
0.50	water Na					Ducus	a mts . Ni							Mall Nivesbor
Ope	rator Nar	ne:				Prop	erty N	ame:						Well Number

KZ 06/29/2018

# PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

**OPERATOR'S NAME:** Foxie 18 Fed Com 702H

**LEASE NO.:** | NMNM019185

**WELL NAME & NO.:** Foxie 18 Fed Com 702H

**SURFACE HOLE FOOTAGE:** 680'/N & 200'/E **BOTTOM HOLE FOOTAGE** 988'/N & 2484'/E

**LOCATION:** | Section 18, T.20 S., R.28 E., NMPM

**COUNTY:** Eddy County, New Mexico

COA

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

### A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Cherry Canyon and Brushy Canyon** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

### **B. CASING**

- 1. The 13-3/8 inch surface casing shall be set at approximately 505 feet (a minimum of 70 feet (Eddy 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 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.
- 2. The minimum required fill of cement behind the 9-5/8 inch intermediate casing shall be set at approximately **4600 feet** is:

## **Option 1 (Single Stage):**

• 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.

### Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool:
  - Cement to surface. If cement does not circulate, contact the appropriate BLM office.
    - Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.
- ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
- ❖ In <u>Capitan Reef Areas</u> if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
- \* Special Capitan Reef requirements. If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:
  - Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.

- Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.
- 3. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:

### **Option 1 (Single Stage):**

• Cement should tie-back at least **50 feet** on top of Capitan Reef top **or 200 feet** into the previous casing, whichever is greater. 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, potash or capitan reef.

### **Option 2:**

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

- c. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.
- d. Second stage above DV tool:
  - Cement should tie-back at least **50 feet** on top of Capitan Reef top **or 200 feet** into the previous casing, whichever is greater. 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, potash or capitan reef.

- 4. 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.

# 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 CountyCall the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822
  - Lea County
     Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)
     393-3612
- 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.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

## State of New Mexico Energy, Minerals and Natural Resources Department

Submit Original to Appropriate District Office

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

<b>GAS</b>	CA	PT	URF	PI	AN
UAD	-				<i>((</i>

Date: 06/14/2019		
□ Original	Operator & OGRID No.:	EOG Resources, Inc. 7377
☐ Amended - Reason for Amendment:	•	

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

### Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Foxie 18 Fed Com 701H	30-015-****	A-18-20S-28E	647' FNL & 200' FEL	±3500	None Planned	APD Submission
Foxie 18 Fed Com 702H	30-015-****	A-18-20S-28E	680' FNL & 200' FEL	±3500	None Planned	APD Submission

#### **Gathering System and Pipeline Notification**

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to <a href="Lucid Energy"><u>Lucid Energy</u></a> /<a href="Energy Enterprise Field Services"><u>EOG Resources</u></a> and will be connected to <a href="EOG Resources"><u>EOG Resources</u></a> and will be connected to <a href="EOG Resources"><u>EOG Resources</u></a> provides (periodically) to <a href="Lucid Energy"><u>Lucid Energy</u></a> /<a href="Enterprise Field Services"><u>Enterprise Field Services</u></a> a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, <a href="EOG Resources">EOG Resources</a> and <a href="Lucid Energy"><u>Lucid Energy</u></a> /<a href="Enterprise Field Services">Enterprise Field Services</a> Processing Plant located in <a href="Lea"><u>Lea</u></a> County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

#### Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on **Lucid Energy** /**Enterprise Field Services** system at that time. Based on current information, it is **EOG Resources**' belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

#### **Alternatives to Reduce Flaring**

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas On lease
  - o Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal On lease
- o Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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## 1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

### 2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Tansill	480'
Yates	670'
Seven Rivers	965'
Queen	1,774
Capitan Reef	2,441'
Bone Spring Lime	4,483°
Leonard B Shale	5,672'
1 <sup>st</sup> Bone Spring Sand	6,357'
2 <sup>nd</sup> Bone Spring Shale	6,415'
2 <sup>nd</sup> Bone Spring Sand	6,873'
3 <sup>rd</sup> Bone Spring Carb	7,386'
3 <sup>rd</sup> Bone Spring Sand	8,228'
Wolfcamp	8,651'
TD	8,779'

# 3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Upper Permian Sands	0-400'	Fresh Water
Yates	670'	Oil
Leonard B Shale	5,672'	Oil
1 <sup>st</sup> Bone Spring Sand	6,357'	Oil
2 <sup>nd</sup> Bone Spring Shale	6,415'	Oil
2 <sup>nd</sup> Bone Spring Sand	6,873'	Oil
3 <sup>rd</sup> Bone Spring Carb	7,386'	Oil
3 <sup>rd</sup> Bone Spring Sand	8,228'	Oil
Wolfcamp	8,651'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 9.625" casing at 400' and circulating cement back to surface.

#### 4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF <sub>min</sub> Collapse	DF <sub>min</sub> Burst	DF <sub>min</sub> Tension
17.5"	0-400'	13.375"	54.5#	J-55	STC	1.125	1.25	1.60
12.25"	0-4,000'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
12.25"	4,000' – 4,600'	9.625"	40#	HCL-80	LTC	1.125	1.25	1.60
8.75"	0 – 7,900'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0'-7,200'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60
6.75"	7,200'-7,900'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60
6.75"	7,900' – 16,437'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60

Variance is requested to waive 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 waive 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.

Variance is also requested to waive the annular clearance requirements for the 5-1/2" casing by 7-5/8" casing annulus to the proposed top of cement.

EOG requests permission to allow deviation from the 0.422" annulus clearance requirement from Onshore Order #2 under the following conditions:

- Annular clearance to meet or exceed 0.422" between intermediate casing ID and production casing coupling only on the first 500" overlap between both casing strings.
- Annular clearance less than 0.422" is acceptable for the curve and lateral portions of the production open hole section.

# **Cementing Program:**

Donth	No.	Wt.	Yld Ft³/sk	Shame Decement on
Depth	Sacks	lb/gal		Slurry Description
400'	140	13.5	1.74	Lead: Class C + $4.0\%$ Bentonite Gel + $0.5\%$ CaCl <sub>2</sub> + $0.25$ lb/sk
13-3/8"				Cello-Flake (TOC @ Surface)
	160	14.8	1.35	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2%
				Sodium Metasilicate (TOC @ 200')
4,600'	340	12.7	2.32	Stage 1 Tail: Class C + 10% NaCl + 3% MagOx (TOC @
9-5/8"				1,700')
DV Tool				· · ·
w/ ECP @	500	12.7	2.22	Stage 2 Tail: Class C + 10% NaCl + 6% Bentonite Gel + 3%
1,700'				MagOx (TOC @ Surface)
7,900'	140	10.8	3.67	Lead: Class C + 3% CaCl2 + 3% Microbond (TOC @ 2,390')
7-5/8"				, , ,
	100	14.8	2.38	Tail: Class H + 0.6% Halad-9 + 0.45% HR-601 + 3%
				Microbond (TOC @ 6,320')
16,437'	740	14.8	1.31	Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond
5-1/2"				(TOC @ 7,200')

Additive	Purpose
Bentonite Gel	Lightweight/Lost circulation prevention
Calcium Chloride	Accelerator
Cello-flake	Lost circulation prevention
Sodium Metasilicate	Accelerator
MagOx	Expansive agent
Pre-Mag-M	Expansive agent
Sodium Chloride	Accelerator
FL-62	Fluid loss control
Halad-344	Fluid loss control
Halad-9	Fluid loss control
HR-601	Retarder
Microbond	Expansive Agent

Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased-hole overlap section.

### 5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).

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 (5,000-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.

Variance is requested to use a 5,000 psi annular BOP with the 10,000 psi BOP stack.

Pipe rams and 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.

### **6.** TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal.

The applicable depths and properties of the drilling fluid systems are as follows.

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0-400'	Fresh - Gel	8.6-8.8	28-34	N/c
400' - 4,600'	Brine	10.0-10.2	28-34	N/c
4,600'-7,900'	Oil Base	8.7-9.4	58-68	N/c - 6
7,900'- 16,437'	Oil Base	10.0-11.5	58-68	3 - 6
Lateral				

The highest mud weight needed to balance formation is expected to be 11.5 ppg. In order to maintain hole stability, mud weights up to 14.0 ppg may be 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.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

### 7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

(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) H<sub>2</sub>S monitoring and detection equipment will be utilized from surface casing point to TD.

## 8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logs are not planned for this well.

GR-CCL Will be run in cased hole during completions phase of operations.

# 9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES AND POTENTIAL HAZARDS:

The estimated bottom-hole temperature (BHT) at TD is 181 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 6,384 psig and a maximum anticipated surface pressure of 4,452 psig (based on 14.0 ppg MW). No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. Severe loss circulation is expected from 7,300' to Intermediate casing point.

### 10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

The drilling operation should be finished in approximately one month. If the well is productive, an additional 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

(A) EOG Resources requests the option to contract a Surface Rig to drill, set surface casing, and cement on the subject well. After WOC 8 hours or 500 psi compressive strength (whichever is greater), the Surface Rig will move off so the wellhead can be installed. A welder will cut the casing to the proper height and weld on the wellhead (both "A" and "B" sections). The weld will be tested to 1000 psi. All valves will be closed and a wellhead cap will be installed (diagram attached). If the timing between rigs is such that EOG Resources would not be able to preset the surface, the Primary Rig will MIRU and drill the well in its entirety per the APD.

#### 11. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the 9-5/8" surface casing, a 9-5/8" BOP/BOPE system with a minimum working pressure of 10,000 psi will be installed on the wellhead system and will be

pressure tested to 250 psi low followed by a 10,000 psi pressure test. This pressure test will be repeated at least every 30 days, as per Onshore Order No. 2

The minimum working pressure of the BOP and related BOPE required for drilling below the surface casing shoe shall be 10,000 psi.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Stream Flo WH system has been sent to the NM BLM office in Carlsbad, NM.

The wellhead will be installed by a third party welder while being monitored by WH vendor's representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

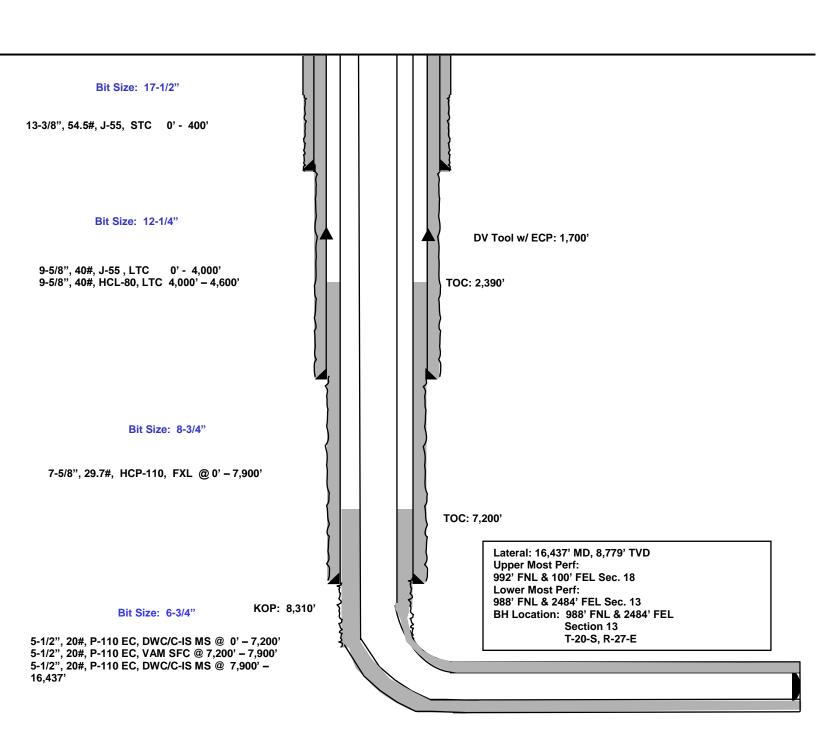
Casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

680' FNL 200' FEL Section 18 T-20-S, R-28-E

**Proposed Wellbore** 

KB: 3,309' GL: 3,284'

API: 30-025-\*\*\*\*





# **EOG Resources - Midland**

Eddy County, NM (NAD 83 NME) Foxie 18 Fed Com #702H

OH

Plan: Plan #0.1

# **Standard Planning Report**

03 May, 2019



#### Planning Report

Database: EDM 5000.14

Company: EOG Resources - Midland
Project: Eddy County, NM (NAD 83 NME)

Site: Foxie 18 Fed Com

 Well:
 #702H

 Wellbore:
 OH

 Design:
 Plan #0.1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well #702H

KB = 25 @ 3309.0usft KB = 25 @ 3309.0usft

Grid

Minimum Curvature

267.36

Project Eddy County, NM (NAD 83 NME)

Map System: US State Plane 1983
Geo Datum: North American Datum 1983

Map Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

0.0

Site Foxie 18 Fed Com

Northing: 574,397.00 usft Site Position: Latitude: 32° 34' 44.438 N From: Мар Easting: 579,564.00 usft Longitude: 104° 12' 33.232 W **Position Uncertainty:** 0.0 usft Slot Radius: 13-3/16 " Grid Convergence: 0.07

Well #702H

 Well Position
 +N/-S
 -33.0 usft
 Northing:
 574,364.00 usft
 Latitude:
 32° 34′ 44.111 N

 +E/-W
 0.0 usft
 Easting:
 579,564.00 usft
 Longitude:
 104° 12′ 33.232 W

Position Uncertainty 0.0 usft Wellhead Elevation: Ground Level: 3,284.0 usft

Wellbore OH

 Magnetics
 Model Name
 Sample Date (°)
 Declination (°)
 Dip Angle (°)
 Field Strength (nT)

 IGRF2015
 5/3/2019
 7.07
 60.26
 47,887.91466193

Plan #0.1 Design Audit Notes: Version: Phase: **PLAN** Tie On Depth: 0.0 Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (usft) (usft) (usft) (°)

0.0

Plan Survey Tool Program Date 5/3/2019

Depth From Depth To

(usft) (usft) Survey (Wellbore) Tool Name Remarks

0.0

1 0.0 16,437.4 Plan #0.1 (OH) MWD

OWSG MWD - Standard

**Plan Sections** Vertical Measured Dogleg Build Turn Depth Inclination Azimuth Depth +N/-S +E/-W Rate Rate Rate TFO (usft) (°/100usft) (usft) (°/100usft) (°/100usft) (°) (usft) (usft) (°) (°) **Target** 0.00 0.00 0.00 0.0 0.0 0.0 0.0 0.00 0.00 0.00 1,000.0 0.00 0.00 1,000.0 0.0 0.0 0.00 0.00 0.00 0.00 1,138.0 2.76 2.00 2.00 0.00 154.62 154.62 1,137.9 -3.0 1.4 8.171.8 2.76 154.62 8.163.6 -309.0 146.6 0.00 0.00 0.00 0.00 8,301.5 8,309.8 0.00 -312.0 148.0 2.00 -2.00 0.00 180.00 KOP(Foxie 18 Fed Cc 0.00 9,059.8 90.00 269.68 8,779.0 -314.7 -329.5 12.00 12.00 -12.04 269.68 16,437.4 90.00 269 68 8,779.0 -356.0 -7,707.0 0.00 0.00 0.00 0.00 PBHL(Foxie 18 Fed C

# eog resources

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 OH

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Survey Calculation Method:

Well #702H

KB = 25 @ 3309.0usft KB = 25 @ 3309.0usft

Grid

d Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
0.008	0.00	0.00	0.008	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	2.00	154.62	1,100.0	-1.6	0.7	-0.7	2.00	2.00	0.00
1,138.0	2.76	154.62	1,137.9	-3.0	1.4	-1.3	2.00	2.00	0.00
1,200.0	2.76	154.62	1,199.9	-5.7	2.7	-2.4	0.00	0.00	0.00
1,300.0	2.76	154.62	1,199.8	-10.1	4.8	-2.4 -4.3	0.00	0.00	0.00
1,400.0	2.76	154.62	1,399.6	-14.4	6.8	-6.2	0.00	0.00	0.00
1,500.0	2.76	154.62	1,499.5	-18.8	8.9	-8.0	0.00	0.00	0.00
1,600.0	2.76	154.62	1,599.4	-23.1	11.0	-9.9	0.00	0.00	0.00
1,700.0	2.76	154.62	1,699.3	-27.5	13.0	-11.7	0.00	0.00	0.00
1,800.0	2.76	154.62	1,799.2	-31.8	15.1	-13.6	0.00	0.00	0.00
1,900.0	2.76	154.62	1,899.1	-36.2	17.1	-15.5	0.00	0.00	0.00
2,000.0	2.76	154.62	1,998.9	-40.5	19.2	-17.3	0.00	0.00	0.00
2,100.0	2.76	154.62	2,098.8	-44.9	21.3	-19.2	0.00	0.00	0.00
2,200.0	2.76	154.62	2,198.7	-49.2	23.3	-21.0	0.00	0.00	0.00
2,300.0	2.76	154.62	2,298.6	-53.6	25.4	-22.9	0.00	0.00	0.00
2,400.0	2.76	154.62	2,398.5	-57.9	27.5	-24.8	0.00	0.00	0.00
2,500.0	2.76	154.62	2,498.4	-62.3	29.5	-26.6	0.00	0.00	0.00
2,600.0	2.76	154.62	2,598.3	-66.6	31.6	-28.5	0.00	0.00	0.00
2,700.0	2.76	154.62	2,698.1	-71.0	33.7	-30.3	0.00	0.00	0.00
2,800.0	2.76	154.62	2,798.0	-75.3	35.7	-32.2	0.00	0.00	0.00
2,900.0	2.76	154.62	2,897.9	-79.7	37.8	-34.1	0.00	0.00	0.00
3,000.0	2.76	154.62	2,997.8	-84.0	39.8	-35.9	0.00	0.00	0.00
3,100.0	2.76	154.62	3,097.7	-88.4	41.9	-37.8	0.00	0.00	0.00
3,200.0	2.76	154.62	3,197.6	-92.7	44.0	-39.7	0.00	0.00	0.00
3,300.0	2.76	154.62	3,297.4	-97.1	46.0	-41.5	0.00	0.00	0.00
3,400.0	2.76	154.62	3,397.3	-101.4	48.1	-43.4	0.00	0.00	0.00
3,500.0	2.76	154.62	3,497.2	-101.4	50.2	-45.4 -45.2	0.00	0.00	0.00
	2.76	154.62			50.2 52.2	-45.2 -47.1		0.00	0.00
3,600.0			3,597.1	-110.1			0.00		
3,700.0 3,800.0	2.76 2.76	154.62 154.62	3,697.0 3,796.9	-114.5 -118.8	54.3 56.4	-49.0 -50.8	0.00 0.00	0.00 0.00	0.00 0.00
3,900.0	2.76	154.62	3,896.7	-123.2	58.4	-52.7	0.00	0.00	0.00
4,000.0	2.76	154.62	3,996.6	-127.5	60.5	-54.5	0.00	0.00	0.00
4,100.0	2.76	154.62	4,096.5	-131.9	62.5	-56.4	0.00	0.00	0.00
4,200.0	2.76	154.62	4,196.4	-136.2	64.6	-58.3	0.00	0.00	0.00
4,300.0	2.76	154.62	4,296.3	-140.6	66.7	-60.1	0.00	0.00	0.00
4,400.0	2.76	154.62	4,396.2	-144.9	68.7	-62.0	0.00	0.00	0.00
4,500.0	2.76	154.62	4,496.0	-149.3	70.8	-63.8	0.00	0.00	0.00
4,600.0	2.76	154.62	4,595.9	-153.6	72.9	-65.7	0.00	0.00	0.00
4,700.0	2.76	154.62	4,695.8	-158.0	72.9 74.9	-67.6	0.00	0.00	0.00
4,700.0 4,800.0	2.76 2.76	154.62	4,695.8 4,795.7	-158.0 -162.3	74.9 77.0	-67.6 -69.4	0.00	0.00	0.00
4,900.0 5,000.0	2.76	154.62 154.62	4,895.6	-166.7 171.0	79.1 81.1	-71.3 -73.1	0.00	0.00	0.00
	2.76		4,995.5	-171.0			0.00	0.00	0.00
5,100.0	2.76	154.62	5,095.4	-175 4	83.2	-75.0	0.00	0.00	0.00

# eog resources

### Planning Report

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Site: Foxie 18 Fed Com

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KB = 25 @ 3309.0usft KB = 25 @ 3309.0usft

Grid

11.									
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Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.0	2.76	154.62	5,295.1	-184.1	87.3	-78.7	0.00	0.00	0.00
5,400.0	2.76	154.62	5,395.0	-188.4	89.4	-80.6	0.00	0.00	0.00
5,500.0	2.76	154.62	5,494.9	-192.8	91.4	-82.4	0.00	0.00	0.00
5,600.0	2.76	154.62	5,594.8	-197.1	93.5	-84.3	0.00	0.00	0.00
5,700.0	2.76	154.62	5,694.7	-201.5	95.6	-86.2	0.00	0.00	0.00
5,800.0	2.76	154.62	5,794.5	-205.8	97.6	-88.0	0.00	0.00	0.00
5,900.0	2.76	154.62	5,894.4	-210.2	99.7	-89.9	0.00	0.00	0.00
6,000.0	2.76	154.62	5,994.3	-214.5	101.8	-91.8	0.00	0.00	0.00
6,100.0	2.76	154.62	6,094.2	-218.9	103.8	-93.6	0.00	0.00	0.00
6,200.0	2.76	154.62	6,194.1	-223.2	105.9	-95.5	0.00	0.00	0.00
6,300.0	2.76	154.62	6,294.0	-227.6	107.9	-97.3	0.00	0.00	0.00
6,400.0	2.76	154.62	6,393.8	-231.9	110.0	-99.2	0.00	0.00	0.00
6,500.0	2.76	154.62	6,493.7	-236.3	112.1	-101.1	0.00	0.00	0.00
6,600.0	2.76	154.62	6,593.6	-240.6	114.1	-102.9	0.00	0.00	0.00
6,700.0	2.76	154.62	6,693.5	-245.0	116.2	-104.8	0.00	0.00	0.00
6,800.0	2.76	154.62	6,793.4	-249.3	118.3	-106.6	0.00	0.00	0.00
6,900.0	2.76	154.62	6,893.3	-253.7	120.3	-108.5	0.00	0.00	0.00
7,000.0	2.76	154.62	6,993.1	-258.0	122.4	-110.4	0.00	0.00	0.00
7,100.0	2.76	154.62	7,093.0	-262.4	124.5	-112.2	0.00	0.00	0.00
7,200.0	2.76	154.62	7,192.9	-266.7	126.5	-114.1	0.00	0.00	0.00
7,300.0	2.76	154.62	7,292.8	-271.1	128.6	-115.9	0.00	0.00	0.00
7,400.0	2.76	154.62	7,392.7	-275.4	130.6	-117.8	0.00	0.00	0.00
7,500.0	2.76	154.62	7,492.6	-279.8	132.7	-119.7	0.00	0.00	0.00
7,600.0	2.76	154.62	7,592.5	-284.1	134.8	-121.5	0.00	0.00	0.00
7,700.0	2.76	154.62	7,692.3	-288.5	136.8	-123.4	0.00	0.00	0.00
7,800.0	2.76	154.62	7,792.2	-292.8	138.9	-125.2	0.00	0.00	0.00
7,900.0	2.76	154.62	7,892.1	-297.2	141.0	-127.1	0.00	0.00	0.00
8,000.0	2.76	154.62	7,992.0	-301.5	143.0	-129.0	0.00	0.00	0.00
8,100.0	2.76	154.62	8,091.9	-305.9	145.1	-130.8	0.00	0.00	0.00
8,171.8	2.76	154.62	8,163.6	-309.0	146.6	-132.2	0.00	0.00	0.00
8,200.0	2.20	154.62	8,191.8	-310.1	147.1	-132.6	2.00	-2.00	0.00
8,309.8	0.00	0.00	8,301.5	-312.0	148.0	-133.4	2.00	-2.00	0.00
KOP(Foxie	18 Fed Com #702	2H)							
8,325.0	1.83	269.68	8,316.7	-312.0	147.8	-133.2	12.00	12.00	0.00
8,350.0	4.83	269.68	8,341.7	-312.0	146.3	-131.8	12.00	12.00	0.00
8,375.0	7.83	269.68	8,366.5	-312.0	143.6	-129.0	12.00	12.00	0.00
8,400.0	10.83	269.68	8,391.2	-312.0	139.5	-125.0	12.00	12.00	0.00
8,425.0	13.83	269.68	8,415.6	-312.1	134.2	-119.6	12.00	12.00	0.00
8,450.0	16.83	269.68	8,439.7	-312.1	127.6	-113.0	12.00	12.00	0.00
8,475.0	19.83	269.68	8,463.5	-312.2	119.7	-105.2	12.00	12.00	0.00
8,500.0	22.83	269.68	8,486.7	-312.2	110.6	-96.1	12.00	12.00	0.00
8,525.0	25.83	269.68	8,509.5	-312.3	100.3	-85.8	12.00	12.00	0.00
8,550.0	28.83	269.68	8,531.7	-312.3	88.8	-74.3	12.00	12.00	0.00
8,575.0	31.83	269.68	8,553.3	-312.4	76.2	-61.7	12.00	12.00	0.00
8,600.0	34.83	269.68	8,574.2	-312.5	62.5	-48.0	12.00	12.00	0.00
8,625.0	37.83	269.68	8,594.3	-312.6	47.7	-33.2	12.00	12.00	0.00
8,650.0	40.83	269.68	8,613.7	-312.7	31.8	-17.4	12.00	12.00	0.00
8,675.0	43.83	269.68	8,632.1	-312.7	15.0	-0.5	12.00	12.00	0.00
8,700.0	46.83	269.68	8,649.7	-312.8	-2.8	17.2	12.00	12.00	0.00
8,710.7	48.11	269.68	8,656.9	-312.9	-10.6	25.1	12.00	12.00	0.00
	8 Fed Com #702	•							
8,725.0	49.83	269.68	8,666.3	-312.9	-21.5	35.9	12.00	12.00	0.00
8,750.0	52.83	269.68	8,682.0	-313.1	-41.0	55.4	12.00	12.00	0.00

# eog resources

### Planning Report

Database: EDM 5000.14

Company: EOG Resources - Midland
Project: EOdy County, NM (NAD 83 NME)

Site: Foxie 18 Fed Com

 Well:
 #702H

 Wellbore:
 OH

 Design:
 Plan #0.1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

**Survey Calculation Method:** 

Well #702H

KB = 25 @ 3309.0usft KB = 25 @ 3309.0usft

Grid

esign:	Plan #0.1								
Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,775.0	55.83	269.68	8,696.5	-313.2	-61.3	75.7	12.00	12.00	0.00
8,800.0	58.83	269.68	8,710.0	-313.3	-82.3	96.7	12.00	12.00	0.00
8,825.0	61.83	269.68	8,722.4	-313.4	-104.0	118.4	12.00	12.00	0.00
8,850.0	64.83	269.68	8,733.6	-313.5	-126.4	140.7	12.00	12.00	0.00
8,875.0	67.83	269.68	8,743.7	-313.7	-149.3	163.6	12.00	12.00	0.00
8,900.0	70.83	269.68	8,752.5	-313.8	-172.7	187.0	12.00	12.00	0.00
8,925.0	73.83	269.68	8,760.1	-313.9	-196.5	210.8	12.00	12.00	0.00
8,950.0	76.83	269.68	8,766.4	-314.1	-220.7	234.9	12.00	12.00	0.00
8,975.0	79.83	269.68	8,771.5	-314.2	-245.1	259.4	12.00	12.00	0.00
9,000.0	82.83	269.68	8,775.2	-314.3	-269.8	284.1	12.00	12.00	0.00
9,025.0	85.83	269.68	8,777.7	-314.5	-294.7	308.9	12.00	12.00	0.00
9,050.0	88.83	269.68	8,778.9	-314.6	-319.7	333.9	12.00	12.00	0.00
9,059.8	90.00	269.68	8,779.0	-314.7	-329.5	343.6	12.00	12.00	0.00
9,100.0	90.00	269.68	8,779.0	-314.9	-369.7	383.8	0.00	0.00	0.00
9,200.0	90.00	269.68	8,779.0	-315.5	-469.7	483.7	0.00	0.00	0.00
9,300.0	90.00	269.68	8,779.0	-316.0	-569.7	583.7	0.00	0.00	0.00
9,400.0	90.00	269.68	8,779.0	-316.6	-669.7	683.6	0.00	0.00	0.00
9,500.0	90.00	269.68	8,779.0	-317.1	-769.7	783.5	0.00	0.00	0.00
9,600.0	90.00	269.68	8,779.0	-317.7	-869.7	883.4	0.00	0.00	0.00
9,700.0	90.00	269.68	8,779.0	-318.3	-969.7	983.3	0.00	0.00	0.00
9,800.0	90.00	269.68	8,779.0	-318.8	-1,069.7	1,083.3	0.00	0.00	0.00
9,900.0	90.00	269.68	8,779.0	319.4	-1,169.7	1,183.2	0.00	0.00	0.00
10,000.0	90.00	269.68	8,779.0	-319.9	-1,269.7	1,283.1	0.00	0.00	0.00
10,100.0	90.00	269.68	8,779.0	-320.5	-1,369.7	1,383.0	0.00	0.00	0.00
10,200.0	90.00	269.68	8,779.0	-321.1	-1,369.7 -1,469.7	1,482.9	0.00	0.00	0.00
10,200.0	30.00	203.00	0,779.0	-021.1	-1,403.7	1,402.3	0.00	0.00	0.00
10,300.0	90.00	269.68	8,779.0	-321.6	-1,569.7	1,582.8	0.00	0.00	0.00
10,400.0	90.00	269.68	8,779.0	-322.2	-1,669.7	1,682.8	0.00	0.00	0.00
10,500.0	90.00	269.68	8,779.0	-322.7	-1,769.7	1,782.7	0.00	0.00	0.00
10,600.0	90.00	269.68	8,779.0	-323.3	-1,869.7	1,882.6	0.00	0.00	0.00
				-323.9					
10,700.0	90.00	269.68	8,779.0	-323.9	-1,969.7	1,982.5	0.00	0.00	0.00
10,800.0	90.00	269.68	8,779.0	-324.4	-2,069.7	2,082.4	0.00	0.00	0.00
10,900.0	90.00	269.68	8,779.0	-325.0	-2,169.7	2,182.3	0.00	0.00	0.00
11,000.0	90.00	269.68	8,779.0	-325.5	-2,269.7	2,282.3	0.00	0.00	0.00
11,100.0	90.00	269.68	8,779.0	-326.1	-2,369.7	2,382.2	0.00	0.00	0.00
11,200.0	90.00	269.68	8,779.0	-326.7	-2,469.7	2,482.1	0.00	0.00	0.00
11,300.0	90.00	269.68	8,779.0	-327.2	-2,569.7	2,582.0	0.00	0.00	0.00
11,400.0	90.00	269.68	8,779.0	-327.8	-2,669.7	2,681.9	0.00	0.00	0.00
11,500.0	90.00	269.68	8,779.0	-328.3	-2,009.7 -2,769.7	2,781.9	0.00	0.00	0.00
11,600.0	90.00	269.68	8,779.0	-328.9	-2,869.7	2,881.8	0.00	0.00	0.00
11,700.0	90.00	269.68	8,779.0	-329.5	-2,969.7	2,981.7	0.00	0.00	0.00
11,800.0	90.00	269.68	8,779.0	-330.0	-3,069.6	3,081.6	0.00	0.00	0.00
11,900.0						3,181.5		0.00	
	90.00	269.68	8,779.0	-330.6	-3,169.6		0.00		0.00
12,000.0	90.00	269.68	8,779.0	-331.1	-3,269.6	3,281.4	0.00	0.00	0.00
12,100.0	90.00	269.68	8,779.0	-331.7	-3,369.6	3,381.4	0.00	0.00	0.00
12,200.0	90.00	269.68	8,779.0	-332.3	-3,469.6	3,481.3	0.00	0.00	0.00
12,300.0	00.00	260.60		222.0	2 500 0	3,581.2	0.00	0.00	0.00
	90.00	269.68	8,779.0	-332.8	-3,569.6		0.00	0.00	
12,400.0	90.00	269.68	8,779.0	-333.4	-3,669.6	3,681.1	0.00	0.00	0.00
12,500.0	90.00	269.68	8,779.0	-333.9	-3,769.6	3,781.0	0.00	0.00	0.00
12,600.0	90.00	269.68	8,779.0	-334.5	-3,869.6	3,880.9	0.00	0.00	0.00
12,700.0	90.00	269.68	8,779.0	-335.1	-3,969.6	3,980.9	0.00	0.00	0.00
12,800.0	90.00	269.68	8,779.0	-335.6	-4,069.6	4,080.8	0.00	0.00	0.00
12,900.0	90.00	269.68	8,779.0	-336.2	-4,169.6	4,180.7	0.00	0.00	0.00
13,000.0	90.00	269.68	8,779.0	-336.7	-4,169.6 -4,269.6	4,180.7	0.00	0.00	0.00
13,100.0									
	90.00	269.68	8,779.0	-337.3	-4,369.6	4,380.5	0.00	0.00	0.00



### Planning Report

Database: EDM 5000.14

Company: EOG Resources - Midland
Project: Eddy County, NM (NAD 83 NME)

Site: Foxie 18 Fed Com

 Well:
 #702H

 Wellbore:
 OH

 Design:
 Plan #0.1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

Survey Calculation Method:

Well #702H

KB = 25 @ 3309.0usft KB = 25 @ 3309.0usft

Grid

-									
anned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,200.0	90.00	269.68	8,779.0	-337.9	-4,469.6	4,480.5	0.00	0.00	0.00
13,300.0	90.00	269.68	8,779.0	-338.4	-4,569.6	4,580.4	0.00	0.00	0.00
13,400.0	90.00	269.68	8,779.0	-339.0	-4,669.6	4,680.3	0.00	0.00	0.00
13,500.0	90.00	269.68	8,779.0	-339.5	-4,769.6	4,780.2	0.00	0.00	0.00
13,600.0	90.00	269.68	8,779.0	-340.1	-4,869.6	4,880.1	0.00	0.00	0.00
13,700.0	90.00	269.68	8,779.0	-340.7	-4,969.6	4,980.0	0.00	0.00	0.00
13,800.0	90.00	269.68	8,779.0	-341.2	-5,069.6	5,080.0	0.00	0.00	0.00
13,900.0	90.00	269.68	8,779.0	-341.8	-5,169.6	5,179.9	0.00	0.00	0.00
14,000.0	90.00	269.68	8,779.0	-342.3	-5,269.6	5,279.8	0.00	0.00	0.00
14,100.0	90.00	269.68	8,779.0	-342.9	-5,369.6	5,379.7	0.00	0.00	0.00
14,200.0	90.00	269.68	8,779.0	-343.5	-5,469.6	5,479.6	0.00	0.00	0.00
14,300.0	90.00	269.68	8,779.0	-344.0	-5,569.6	5,579.6	0.00	0.00	0.00
14,400.0	90.00	269.68	8,779.0	-344.6	-5,669.6	5,679.5	0.00	0.00	0.00
14,500.0	90.00	269.68	8,779.0	-345.1	-5,769.6	5,779.4	0.00	0.00	0.00
14,600.0	90.00	269.68	8,779.0	-345.7	-5,869.6	5,879.3	0.00	0.00	0.00
14,700.0	90.00	269.68	8,779.0	-346.3	-5,969.6	5,979.2	0.00	0.00	0.00
14,800.0	90.00	269.68	8,779.0	-346.8	-6,069.6	6,079.1	0.00	0.00	0.00
14,900.0	90.00	269.68	8,779.0	-347.4	-6,169.6	6,179.1	0.00	0.00	0.00
15,000.0	90.00	269.68	8,779.0	-347.9	-6,269.6	6,279.0	0.00	0.00	0.00
15,100.0	90.00	269.68	8,779.0	-348.5	-6,369.6	6,378.9	0.00	0.00	0.00
15,200.0	90.00	269.68	8,779.0	-349.1	-6,469.6	6,478.8	0.00	0.00	0.00
15,300.0	90.00	269.68	8,779.0	-349.6	-6,569.6	6,578.7	0.00	0.00	0.00
15,400.0	90.00	269.68	8,779.0	-350.2	-6,669.6	6,678.6	0.00	0.00	0.00
15,500.0	90.00	269.68	8,779.0	-350.7	-6,769.6	6,778.6	0.00	0.00	0.00
15,600.0	90.00	269.68	8,779.0	-351.3	-6,869.6	6,878.5	0.00	0.00	0.00
15,700.0	90.00	269.68	8,779.0	-351.9	-6,969.6	6,978.4	0.00	0.00	0.00
15,800.0	90.00	269.68	8,779.0	-352.4	-7,069.6	7,078.3	0.00	0.00	0.00
15,900.0	90.00	269.68	8,779.0	-353.0	-7,169.6	7,178.2	0.00	0.00	0.00
16,000.0	90.00	269.68	8,779.0	-353.5	-7,269.6	7,278.2	0.00	0.00	0.00
16,100.0	90.00	269.68	8,779.0	-354.1	-7,369.6	7,378.1	0.00	0.00	0.00
16,200.0	90.00	269.68	8,779.0	-354.7	-7,469.6	7,478.0	0.00	0.00	0.00
16,300.0	90.00	269.68	8,779.0	-355.2	-7,569.6	7,577.9	0.00	0.00	0.00
16,400.0	90.00	269.68	8,779.0	-355.8	-7,669.6	7,677.8	0.00	0.00	0.00
16,437.4	90.00	269.68	8,779.0	-356.0	-7,707.0	7,715.2	0.00	0.00	0.00
PBHL(Foxie	18 Fed Com #70	02H)							

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP(Foxie 18 Fed Com - plan hits target cen - Point	0.00 ter	0.00	8,301.5	-312.0	148.0	574,052.00	579,712.00	32° 34' 41.022 N	104° 12' 31.507 W
FTP(Foxie 18 Fed Com: - plan misses target - Point		0.00 .4usft at 871	8,779.0 0.7usft MD (	-312.0 (8656.9 TVD,	98.0 -312.9 N, -10.6	574,052.00 6 E)	579,662.00	32° 34' 41.023 N	104° 12' 32.091 W
PBHL(Foxie 18 Fed Con - plan hits target cen - Point	0.00 ter	0.00	8,779.0	-356.0	-7,707.0	574,008.00	571,857.00	32° 34' 40.668 N	104° 14' 3.311 W



### Planning Report

Database: EDM 5000.14

Company: EOG Resources - Midland
Project: Eddy County, NM (NAD 83 NME)

Site: Foxie 18 Fed Com

 Well:
 #702H

 Wellbore:
 OH

 Design:
 Plan #0.1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Well #702H

KB = 25 @ 3309.0usft KB = 25 @ 3309.0usft

Grid



Eddy County, NM (NAD 83 NME)

Foxie 18 Fed Com #702H

Plan #0.1

PROJECT DETAILS: Eddy County, NM (NAD 83 NME)

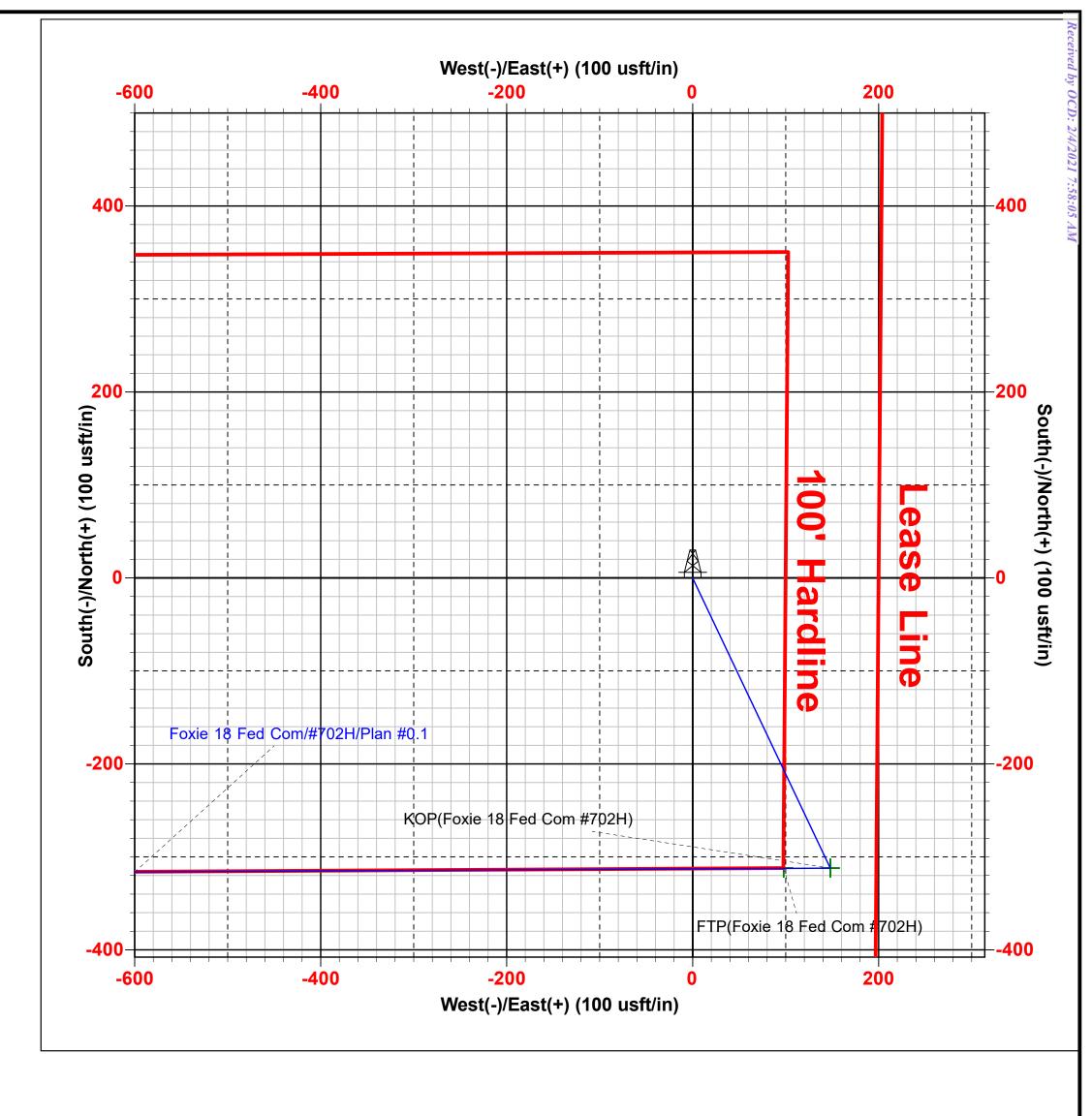
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

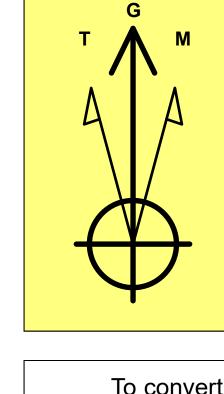
WELL DETAILS: #702H

3284.0

KB = 25 @ 3309.0usft
Northing Easting Latittude
574364.00 579564.00 32° 34' 44.111 N

Longitude 104° 12' 33.232 W





Magnetic North: 7.01°

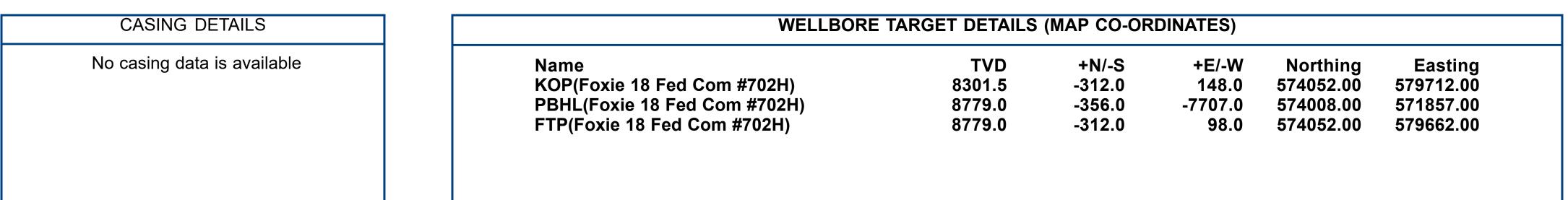
Magnetic Field
Strength: 47887.9snT
Dip Angle: 60.26°
Date: 5/3/2019
Model: IGRF2015

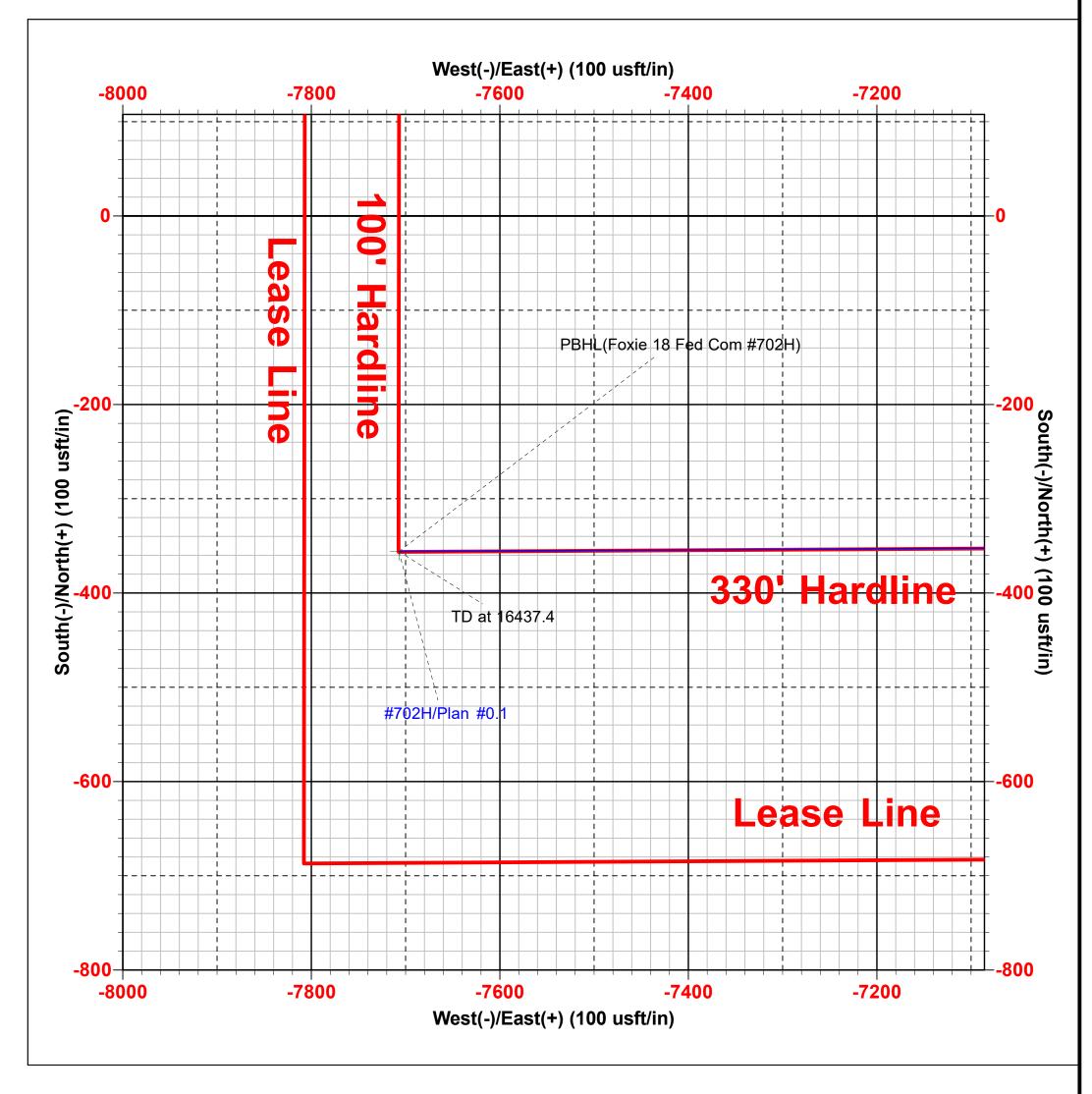
**Azimuths to Grid North** 

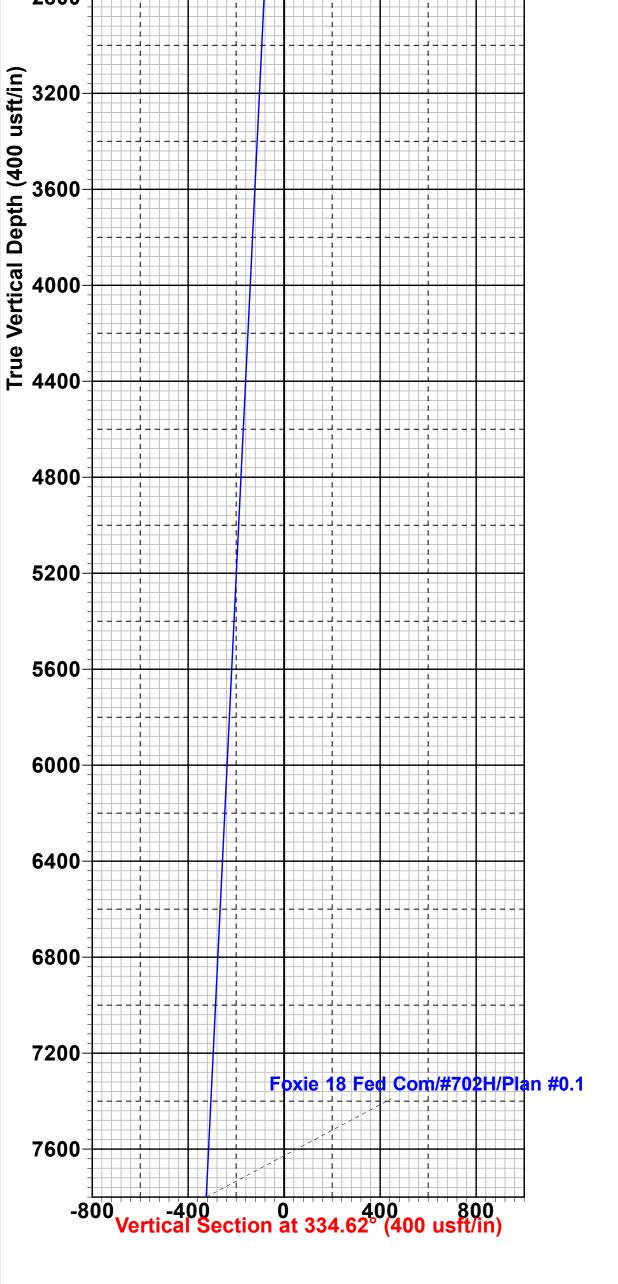
True North: -0.07°

To convert a Magnetic Direction to a Grid Direction, Add 7.01°
To convert a Magnetic Direction to a True Direction, Add 7.07° East
To convert a True Direction to a Grid Direction, Subtract 0.07°

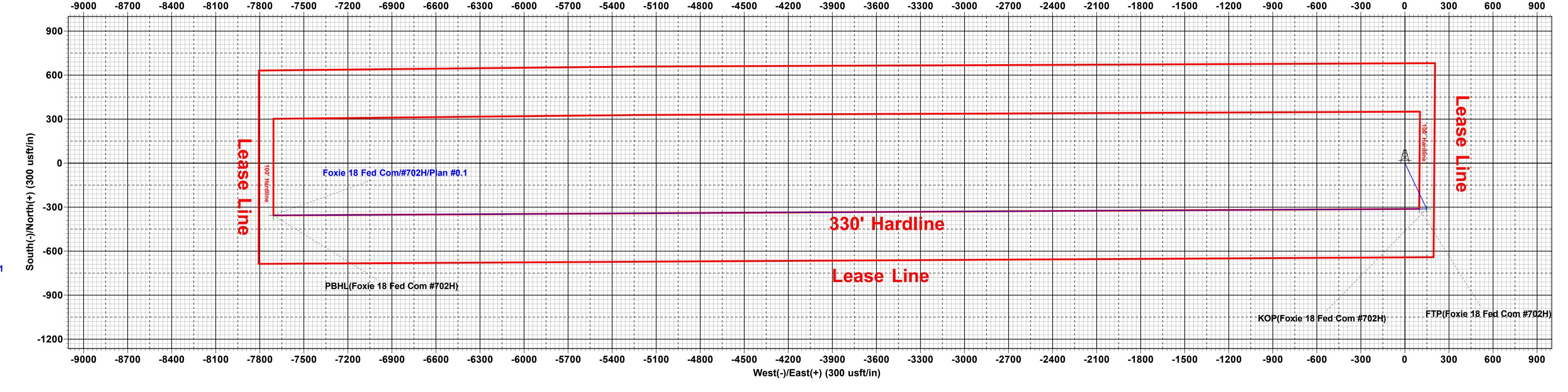
	SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1138.0	2.76	154.62	1137.9	-3.0	1.4	2.00	154.62	-1.3	
4	8171.8	2.76	154.62	8163.6	-309.0	146.6	0.00	0.00	-132.2	
5	8309.8	0.00	0.00	8301.5	-312.0	148.0	2.00	180.00	-133.4	KOP(Foxie 18 Fed Com #702H)
6	9059.8	90.00	269.68	8779.0	-314.7	-329.5	12.00	269.68	343.6	
7	16437.4	90.00	269.68	8779.0	-356.0	-7707.0	0.00	0.00	7715.2	PBHL(Foxie 18 Fed Com #702H)

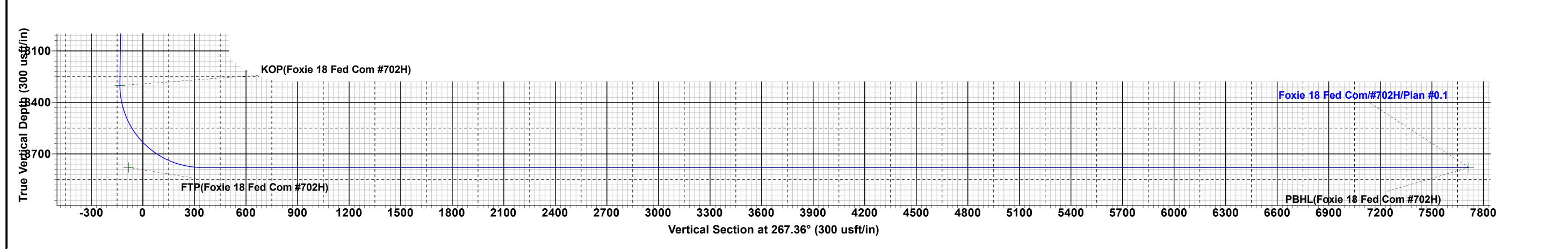


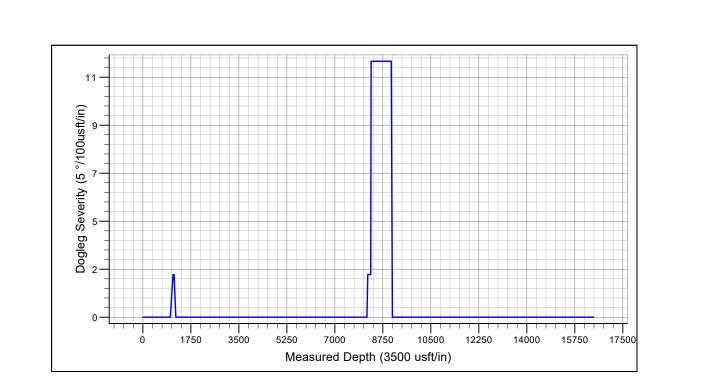


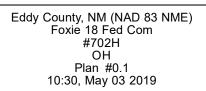


2400-









<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720 District III

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**State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. **Santa Fe, NM 87505** 

COMMENTS

Action 16884

#### **COMMENTS**

Operator:			OGRID:	Action Number:	Action Type:
EOG RESOURCES INC	P.O. Box 2267	Midland, TX79702	7377	16884	FORM 3160-3

Created By	Comment	Comment Date
kpickford	KP GEO Review 2/4/2021	02/04/2021

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CONDITIONS

Action 16884

#### **CONDITIONS OF APPROVAL**

Operator:				Action Number:	Action Type:
EOG RESOURCES INC	P.O. Box 2267	Midland, TX79702	7377	16884	FORM 3160-3

OCD	Condition
Reviewer	
kpickford	Surface casing must be set 25' below top of Rustler Anhydrite in order to seal off protectable water
kpickford	Will require a administrative order for non-standard location prior to placing the well on production
kpickford	Will require administrative order for non-standard spacing unit
kpickford	Notify OCD 24 hours prior to casing & cement
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104
kpickford	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system