

Carlsbad Field Office

OCD Hobbs

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

F/S
[H]

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

HOBBS OCD
APR 25 2019
RECEIVED

1a. Type of work: DRILL REENTER
1b. Type of Well: Oil Well Gas Well Other
1c. Type of Completion: Hydraulic Fracturing Single Zone Multiple Zone

5. Lease Serial No.
NMNM026394

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.

GREEN DRAKE 16 FED COM
706H
323122

2. Name of Operator
EOG RESOURCES INCORPORATED (7377)

9. API Well No.
40-025-45868

3a. Address
1111 Bagby Sky Lobby2 Houston TX 77002

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

10. Field and Pool, or Exploratory (98780)
RED HILLS / WC-025 G-09 S253309A UF

4. Location of Well (Report location clearly and in accordance with any State requirements. *)
At surface NESW / 2390 FSL / 2129 FWL / LAT 32.1298945 / LONG -103.5788795
At proposed prod. zone SESW / 100 FSL / 1980 FWL / LAT 32.1090829 / LONG -103.5793742

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 16 / T25S / 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)
100 feet

16. No of acres in lease
2560

17. Spacing Unit dedicated to this well
480

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

19. Proposed Depth
12316 feet / 19886 feet

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3405 feet

22. Approximate date work will start*
01/01/2019

23. Estimated duration
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.
- 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 requested by the BLM.

25. Signature
(Electronic Submission)

Name (Printed/Typed)
Sarah Mitchell / Ph: (432)848-9133

Date
09/20/2018

Title
Regulatory Agent

Approved by (Signature)
(Electronic Submission)

Name (Printed/Typed)
Cody Layton / Ph: (575)234-5959

Date
02/20/2019

Title
Assistant Field Manager Lands & Minerals

Office
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.

SLP Rec 04/29/19

KZ
04/29/19

APPROVED WITH CONDITIONS
Approval Date: 02/20/2019

INSTRUCTIONS

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

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

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

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

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

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

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

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

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

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

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

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

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

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

Additional Operator Remarks

Location of Well

- 1. SHL: NESW / 2390 FSL / 2129 FWL / TWSP: 25S / RANGE: 33E / SECTION: 16 / LAT: 32.1298945 / LONG: -103.5788795 (TVD: 0 feet, MD: 0 feet)
- PPP: NESW / 2540 FSL / 1980 FWL / TWSP: 25S / RANGE: 33E / SECTION: 16 / LAT: 32.1303079 / LONG: -103.5793603 (TVD: 12051 feet, MD: 12062 feet)
- BHL: SESW / 100 FSL / 1980 FWL / TWSP: 25S / RANGE: 33E / SECTION: 21 / LAT: 32.1090829 / LONG: -103.5798742 (TVD: 12316 feet, MD: 19886 feet)

BLM Point of Contact

Name: Katrina Ponder
Title: Geologist
Phone: 5752345969
Email: kponder@blm.gov

CONFIDENTIAL

Review and Appeal Rights

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

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**PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	EOG Resources Incorporated
LEASE NO.:	NMNM26394
WELL NAME & NO.:	Green Drake 16 Fed Com 706H
SURFACE HOLE FOOTAGE:	2390'/S & 2129'/W
BOTTOM HOLE FOOTAGE:	100'/S & 1980'/W
LOCATION:	Section 16, T.25 S., R.33 E., NMPM
COUNTY:	Lea County, New Mexico

Potash	<input checked="" type="radio"/> None	<input type="radio"/> Secretary	<input type="radio"/> R-111-P
Cave/Karst Potential	<input checked="" type="radio"/> Low	<input type="radio"/> Medium	<input type="radio"/> High
Variance	<input type="radio"/> None	<input checked="" type="radio"/> Flex Hose	<input type="radio"/> Other
Wellhead	<input checked="" type="radio"/> Conventional	<input type="radio"/> Multibowl	
Other	<input type="checkbox"/> 4 String Area	<input type="checkbox"/> Capitan Reef	<input type="checkbox"/> WIPP

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" surface casing shall be set at approximately **1040'** (a minimum of 25' into the Rustler Anhydrite and above the salt) and cemented to surface.
 - a. **If cement does not circulate to 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 **6 hours** after pumping cement, ideally between 8-10 hours after completing the cement job.
 - b. WOC time for a primary cement job will be a minimum of **8 hours** or **500 psi** compressive strength, whichever is greater. This is to include the lead cement.
 - c. If cement falls back, remedial cementing will be done prior to drilling out that string.
 - d. WOC time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 psi compressive strength, whichever is greater.

2. The 9-5/8" intermediate casing shall be set at approximately 4800' and cemented to surface.
 - a. **If cement does not circulate to surface, see B.1.a, b, c & d.**
3. The minimum required fill of cement behind the 7-5/8" intermediate casing is:
 - a. Cement should tie-back at least 200 feet into previous casing string. **Operator shall provide method of verification.**
 - b. BLM calculations show -5% excess on this casing's cement design. More cement may be required to reach surface.
4. The minimum required fill of cement behind the 5-1/2" production casing is:
 - a. Cement shall tie-back at least 200 feet into previous casing string. **Operator shall provide method of verification.**
 - b. BLM calculations show -40% excess on this casing's cement design. More cement may be required to reach surface.

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. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi.**
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **10,000 (10M) psi. Variance approved to use a 5M annular. The annular must be tested to full working pressure (5000 psi).**

DR 1/28/2019

GENERAL REQUIREMENTS

1. 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)
 - Chaves and Roosevelt Counties
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
During office hours call (575) 627-0272.
After office hours call (575)
 - Eddy County
Call 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
2. 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 2nd 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.
3. 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.

4. The record of the drilling rate along with the GR/N well log (one log per well pad is acceptable) 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 integrity 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 integrity 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. 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.
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. The results of the test shall be reported to the appropriate BLM office.
- 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. 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.
- f. 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. This test shall be performed prior to the test at full stack pressure.
- g. 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

1. 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

1. 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.
2. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.



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

Operator Certification Data Report

04/01/2019

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: Sarah Mitchell

Signed on: 09/20/2018

Title: Regulatory Agent

Street Address: 5509 Champions Drive

City: Midland

State: TX

Zip: 79702

Phone: (432)848-9133

Email address: sarah_mitchell@eogresources.com

Field Representative

Representative Name: Michael Yemm

Street Address: 5509 Champions Drive

City: Midland

State: TX

Zip: 79706

Phone: (432)686-3714

Email address: Michael_Yemm@eogresources.com



APD ID: 10400032891

Submission Date: 09/20/2018

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

Show Final Text

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

APD ID: 10400032891

Tie to previous NOS?

Submission Date: 09/20/2018

BLM Office: CARLSBAD

User: Sarah Mitchell

Title: Regulatory Agent

Federal/Indian APD: FED

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

Lease number: NMNM026394

Lease Acres: 2560

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO

APD Operator: EOG RESOURCES 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

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: RED HILLS

Pool Name: WC-025 G-09
S253309A UPPER WC

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

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: GREEN DRAKE 16 FED COM
Number of Legs: 1

Number: 706H/707H

Well Class: HORIZONTAL

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: 33 FT

Distance to lease line: 100 FT

Reservoir well spacing assigned acres Measurement: 480 Acres

Well plat: GREEN_DRAKE_16_FED_COM_706H_C102_APD_20180920153114.pdf

Well work start Date: 01/01/2019

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	2390	FSL	2129	FWL	25S	33E	16	Aliquot NESW	32.1298945	-103.5788795	LEA	NEW MEXI CO	NEW MEXI CO	S	STATE	3405	0	0
KOP Leg #1	2590	FSL	1979	FWL	25S	33E	16	Aliquot NESW	32.1304463	-103.579359	LEA	NEW MEXI CO	NEW MEXI CO	S	STATE	-8433	11842	11838
PPP Leg #1	2540	FSL	1980	FWL	25S	33E	16	Aliquot NESW	32.1303079	-103.5793603	LEA	NEW MEXI CO	NEW MEXI CO	S	STATE	-8646	12062	12051

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
EXIT Leg #1	100	FSL	198 0	FWL	25S	33E	21	Aliquot SESW	32.10908 29	- 103.5793 742	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 026394	- 891 1	198 86	123 16
BHL Leg #1	100	FSL	198 0	FWL	25S	33E	21	Aliquot SESW	32.10908 29	- 103.5793 742	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 026394	- 891 1	198 86	123 16



APD ID: 10400032891

Submission Date: 09/20/2018

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

Well Type: OIL WELL

Well Work Type: Drill

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	PERMIAN	3405	0	0	ALLUVIUM	NONE	No
2	RUSTLER	2391	1014	1014	ANHYDRITE	NONE	No
3	TOP SALT	2066	1339	1339	SALT	NONE	No
4	BASE OF SALT	-1303	4708	4708	SALT	NONE	No
5	LAMAR	-1551	4956	4956	LIMESTONE	NONE	No
6	BELL CANYON	-1574	4979	4979	SANDSTONE	NATURAL GAS,OIL	No
7	CHERRY CANYON	-2559	5964	5964	SANDSTONE	NATURAL GAS,OIL	No
8	BRUSHY CANYON	-4155	7560	7560	SANDSTONE	NATURAL GAS,OIL	No
9	BONE SPRING LIME	-5696	9101	9101	LIMESTONE	NONE	No
10	FIRST BONE SPRING SAND	-6700	10105	10105	SANDSTONE	NATURAL GAS,OIL	No
11	BONE SPRING 2ND	-7203	10608	10608	SANDSTONE	NATURAL GAS,OIL	No
12	BONE SPRING 3RD	-8402	11807	11807	SANDSTONE	NATURAL GAS,OIL	No
13	WOLFCAMP	-8860	12265	12265	SHALE	NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

Pressure Rating (PSI): 10M

Rating Depth: 12316

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 use a 5,000 psi annular BOP with the 10,000 psi BOP stack. 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. Variance is also requested for the 7-5/8" x 5-1/2" casing (minimum clearance) from the top of the cement overlap to surface.

Choke Diagram Attachment:

Green_Drake_16_FC_706H_10_M_Choke_Manifold_20180809080921.pdf

Co_Flex_Hose_Certification_20190116115257.pdf

Co_Flex_Hose_Test_Chart_20190116115405.pdf

BOP Diagram Attachment:

Green_Drake_16_FC_706H_10_M_BOP_Diagram_20180809080953.pdf

Green_Drake_16_FC_706H_EOG_BLM_10M_Annular_Variance__4_String_20180809080954.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	17.5	13.375	NEW	API	N	0	1040	0	1040	3405	2365	1040	J-55	54.5	STC	1.125	1.25	BUOY	1.6	BUOY	1.6
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	4000	0	4000	3405	-595	4000	J-55	40	LTC	1.125	1.25	BUOY	1.6	BUOY	1.6
3	INTERMEDIATE	12.25	9.625	NEW	API	N	4000	4800	4000	4800	-595	-1395	800	HCK-55	40	LTC	1.125	1.25	BUOY	1.6	BUOY	1.6

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

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
4	PRODUCTI ON	6.75	5.5	NEW	API	N	0	10800	0	10800	3405	-7395	10800	OT H E R	20	OTHER - DWC/C-IS MS	1.12 5	1.25	BUOY	1.6	BUOY	1.6
5	INTERMED IATE	8.75	7.625	NEW	API	N	0	11300	0	11300	3405	-7895	11300	HCP -110	29.7	OTHER - FXL	1.12 5	1.25	BUOY	1.6	BUOY	1.6
6	PRODUCTI ON	6.75	5.5	NEW	API	N	10800	19886	10800	12316	-7395	-8911	9086	OT H E R	20	OTHER - VAM SFC	1.12 5	1.25	BUOY	1.6	BUOY	1.6

Casing Attachments

Casing ID: 1 String Type: SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Green_Drake_16_FC_706H_BLM_Plan__10_day_letter_12.7.18_20190116120144.pdf

Casing ID: 2 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

See_previously_attached_Drill_Plan_20180809081938.pdf

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Tail		3840			1.12	16		25	Class C	
INTERMEDIATE	Lead		4300			2.72	11.5		25		Lead: Class C + 0.40% D013 + 0.20% D046 + 0.10% D065 + 0.20% D167 (TOC @ 4,300')
INTERMEDIATE	Tail		9800			1.12	16		25	Class H	
PRODUCTION	Lead		10800			1.26	14.1		25		Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,800')

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
1040	4800	SALT SATURATED	10	10.2							

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

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
4800	1130 0	OIL-BASED MUD	8.7	9.4							
0	1040	WATER-BASED MUD	8.6	8.8							
1130 0	1231 6	OIL-BASED MUD	10	14							

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Open-hole logs are not planned for this well.

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

DS

Coring operation description for the well:

None

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 8966

Anticipated Surface Pressure: 6256.48

Anticipated Bottom Hole Temperature(F): 181

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

Describe:

Contingency Plans geohazards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Green_Drake_16_FC_706H_H2S_Plan_Summary_20180809083417.pdf

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Green_Drake_16_Fed_Com_706_Wall_Plot_20180809083525.pdf

Green_Drake_16_Fed_Com_706H_Planning_Report_20180809083526.pdf

Other proposed operations facets description:

(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.

A multi-bowl wellhead system will be utilized.

After running the 13-3/8" surface casing, a 13-5/8" 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 FBD100 Multi-Bowl 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.

Both the surface and intermediate casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

Other proposed operations facets attachment:

Green_Drake_16_FC_706H_Rig_Layout_20180809083645.pdf

GreenDrake16FedCom_GasCapturePlan_enterprise_20180920131154.pdf

EOG_11_10M_MBU_T_WITH_OLC_HBE010DQ_20190116121253.pdf

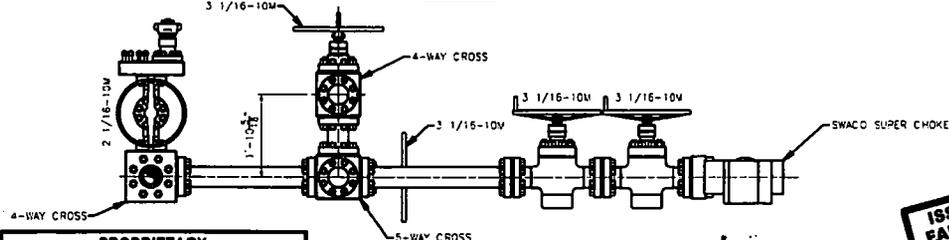
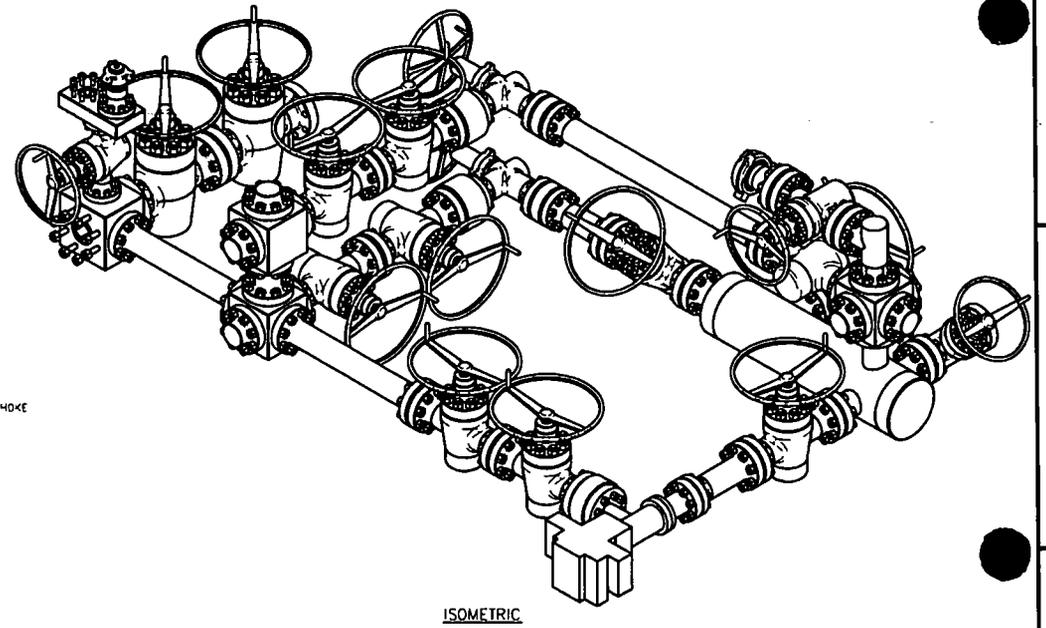
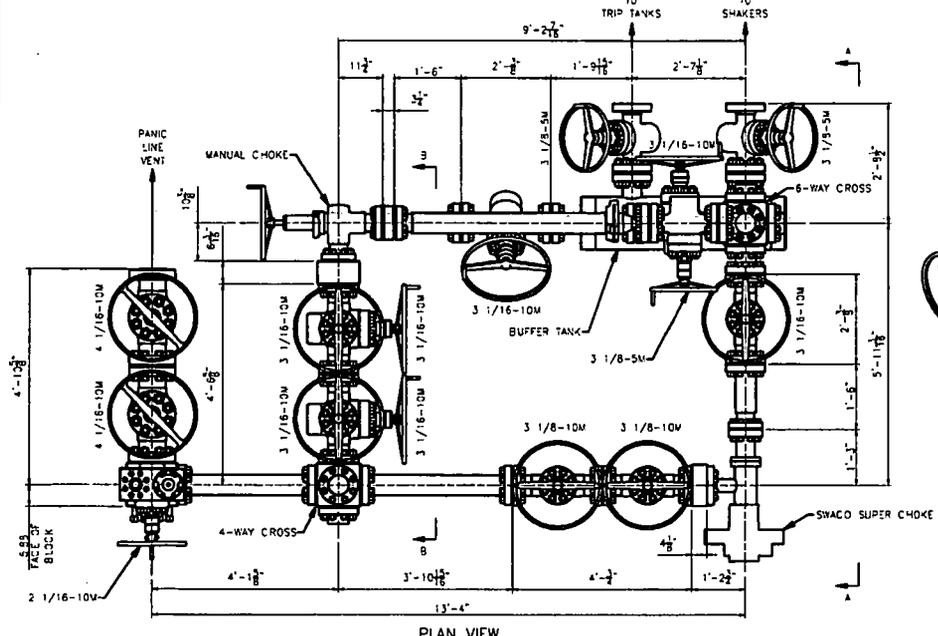
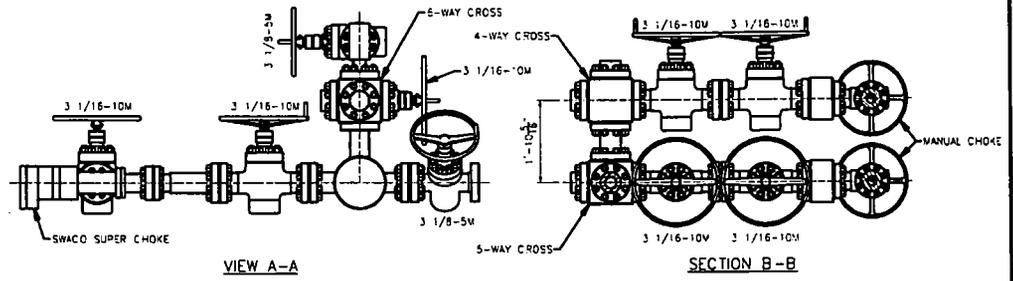
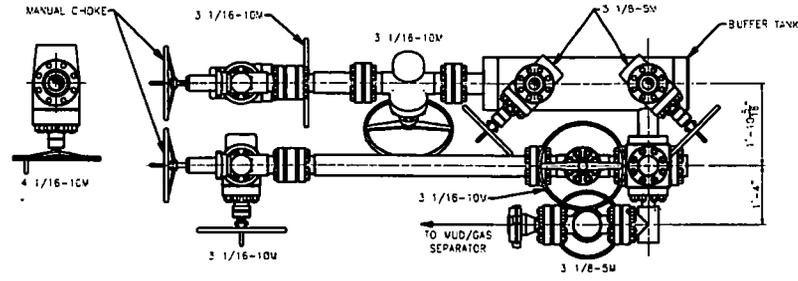
Four_String_Wellhead_Cap_20190116121256.pdf

Green_Drake_16_FC_706H_BLM_Plan__10_day_letter_12.7.18_20190116121259.pdf

Green_Drake_16_FC_706H_Proposed_Wellbore__10_day_letter_12.7.18_20190116121301.pdf

Other Variance attachment:

Green_Drake_16_FC_706H_EOG_BLM_10M_Annular_Variance__4_String_20180809083707.pdf



PROPRIETARY
 THIS DRAWING AND THE IDEAS AND INFORMATION INCLUDED IN THIS DRAWING ARE PROPRIETARY AND ARE NOT TO BE REPRODUCED, DISTRIBUTED OR DISCLOSED IN ANY MANNER WITHOUT THE PRIOR WRITTEN CONSENT OF A DULY AUTHORIZED OFFICER OF HELMERICH & PAYNE INTL. DRILLING CO.

ISSUED FOR FABRICATION
 February-10-2014
 DRAFTSMAN *MW*
 ENGINEER *SPR*

STANDARD TOLERANCES			
DIMENSIONS			
1. FABRICATION DIMENSIONS:	AW 1/8 IN	0.125"	
	3/16 TO 1 IN	0.125"	
	COVER 1/2"	0.125"	
2. MACHINED DIMENSIONS:	ANGULAR	0.125"	
	LINEAR (EXPRESSED AS FRACTIONS)	0.015"	
	LINEAR (EXPRESSED TO TWO DECIMALS)	0.010"	
	LINEAR (EXPRESSED TO THREE DECIMALS)	0.005"	

HELMERICH & PAYNE INTERNATIONAL DRILLING CO.	
TITLE: 3 CHOKE, 3 LEVEL, 10M CHOKE MANIFOLD G.A.	
CUSTOMER: H&P	
PROJECT:	
DRAWN: MWL	DATE: 2/10/2014
SCALE: 3/4"=1'-0"	DWG NO: HP-D1254
REV:	REV:
DATE:	DESCRIPTION:
B7	

Hose Inspection Report

ContiTech Oil & Marine

Customer	Customer Reference #	CBC Reference #	CBC Inspector	Date of Inspection
H&P Drilling	740021604	COM906112	A. Jaimes	10/17/2016

Hose Manufacturer	Contitech Rubber Industrial
--------------------------	-----------------------------

Hose Serial #	62429	Date of Manufacture	05/2012
Hose I.D.	3"	Working Pressure	10000PSI
Hose Type	Choke and Kill	Test Pressure	15000PSI
Manufacturing Standard	API 16C		

Connections

End A: 3.1/16" 10Kpsi API Spec 6A Type 6BX Flange	End B: 3.1/16" 10Kpsi API Spec 6A Type 6BX Flange
• No damage	• No damage
Material: Carbon Steel	Material: Carbon Steel
Seal Face: BX154	Seal Face: BX154
Length Before Hydro Test: 16'	Length After Hydro test: 16'

Conclusion: Hose #62429 passed the external inspection with no notable damages to the hose armor. Internal borescope of the hose showed no damage to the hose liner. Hose #62429 passed the hydrostatic pressure test by holding a pressure of 15,000PSI for 60 minutes. Hose #62429 is suitable for continued service.

Recommendations: In general the hose should be inspected on a regular on-going basis. The frequency and degree of the inspection should as a minimum follow these guidelines:

- Visual inspection: Every 3 months (or during installation/removal)
- Annual: In-situ pressure test
- Initial 5 years service: Major inspection
- 2nd Major inspection: 8 / 10 years of service
- (Detailed description of test regime available upon request, ISS-059 Rev 04)

****NOTE:** There are a number of critical elements in the hose that cannot be thoroughly checked through standard inspection techniques. Away from dissecting the hose body, the best way to evaluate the condition of the hose is through review of the operating conditions recorded during the hose service life, in particular maximums and peak conditions.

Issued By: Alejandro Jaimes
Date: 10/25/2016

Checked By: Jeremy Mckay
Date: 10/25/2016
 QF97

62429

JOB# 88380400886
PICK# 20672
HOSE DESCRIPTION: 8" 10K CHOKER VITE#16
TEST PRESSURE: 15 000PSI
CHART RECORDER: 2444Y
CHART SETTING: 9 1/2 MIN
CBE REPRESENTATIVE: A. J. JAMES
DATE: 10-19-76

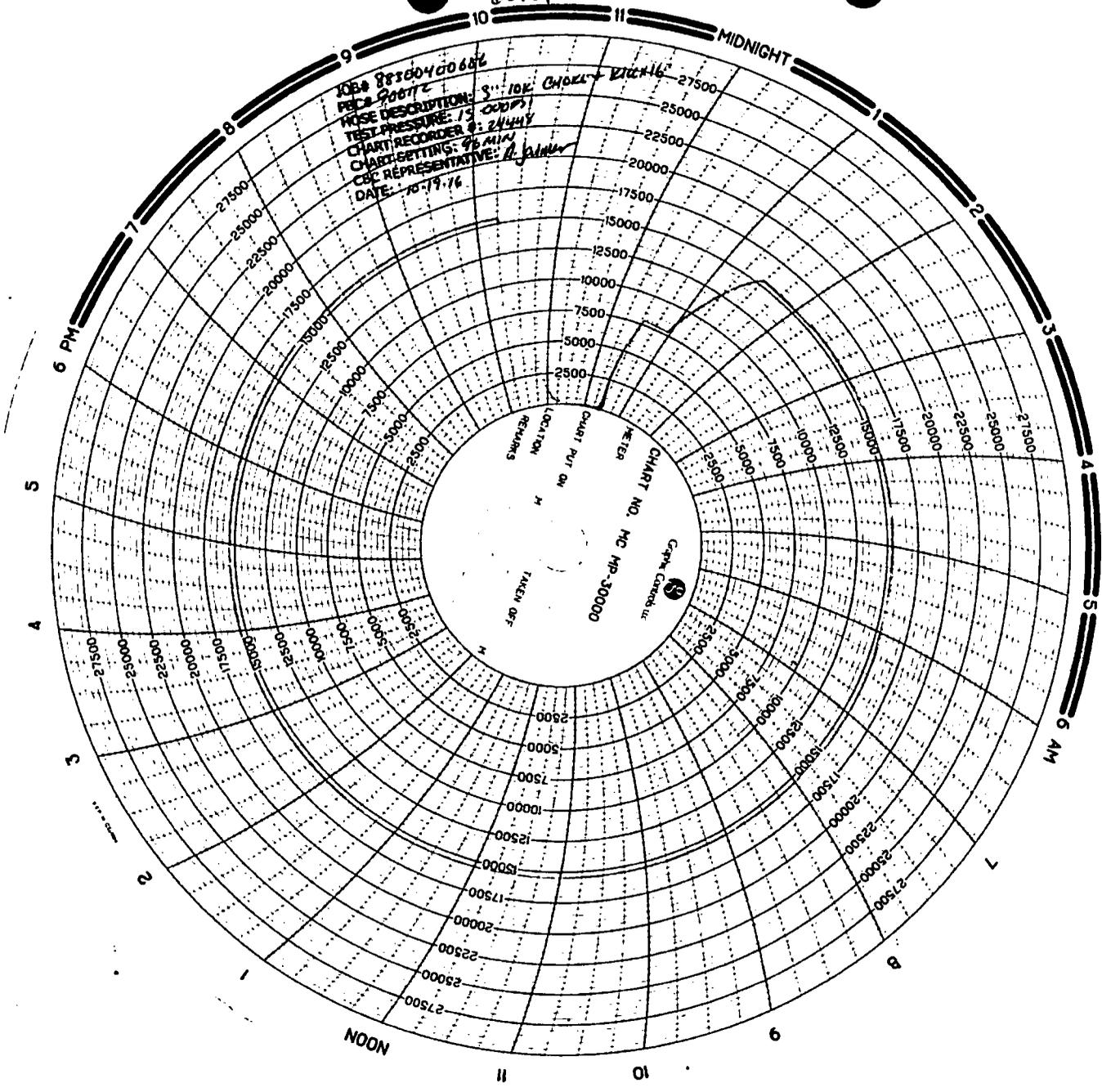


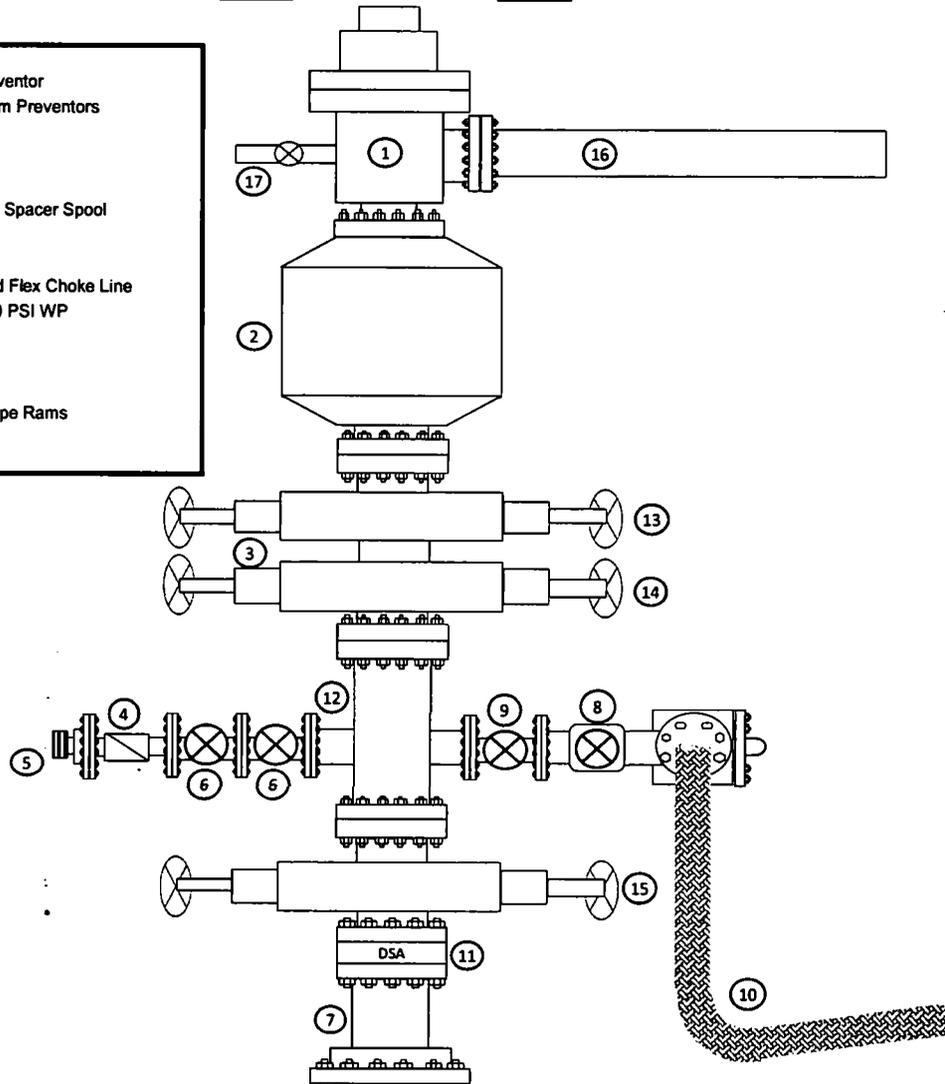
Exhibit 1

EOG Resources

10M BOPE

Rig Floor

- | |
|--|
| 1. 13 5/8" Rotating Head |
| 2. Hydril 13 5/8" 10,000 PSI WP GK Annular Preventor |
| 3. 13 5/8" Cameron Type "U" 10,000 PSI WP Ram Preventors |
| 4. 2 1/16" - 10,000 PSI WP Check Valve |
| 5. 10,000 PSI WP - 1502 Union to kill line |
| 6. 2 1/16" - 10,000 PSI WP Manual Valves |
| 7. 13 5/8" 3,000 PSI WP x 13 5/8" 5,000 PSI WP Spacer Spool |
| 8. 4 1/16" 10,000 PSI WP HCR Valve |
| 9. 4 1/16" 10,000 PSI WP Manual Valve |
| 10. 6" OD x 3" ID 10,000 PSI WP Steel Armoured Flex Choke Line |
| 11. DSA - 13 5/8" 10,000 PSI WP x 13 5/8" 5,000 PSI WP |
| 12. Mud Cross - 13 5/8" 10,000 PSI WP |
| 13. Blind Rams |
| 14. Pipe Rams |
| 15. 13 5/8" Cameron Type "U" 10,000 PSI WP Pipe Rams |
| 16. Flow Line |
| 17. 2" Fill Line |



10,000 PSI BOP Annular Variance Request

EOG Resources request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack. The component and compatibility tables along with the general well control plans demonstrate how the 5000 psi annular BOP will be protected from pressures that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5000 psi annular BOP).

1. Component and Preventer Compatibility Tables

The tables below outlines the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

12-1/4" Intermediate Hole Section 10M psi requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Jars	6.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
DCs and MWD tools	6.500" – 8.000"	Annular	5M	-	-
Mud Motor	8.000" – 9.625"	Annular	5M	-	-
1 st Intermediate casing	9.625"	Annular	5M	-	-
Open-hole	-	Blind Rams	10M	-	-

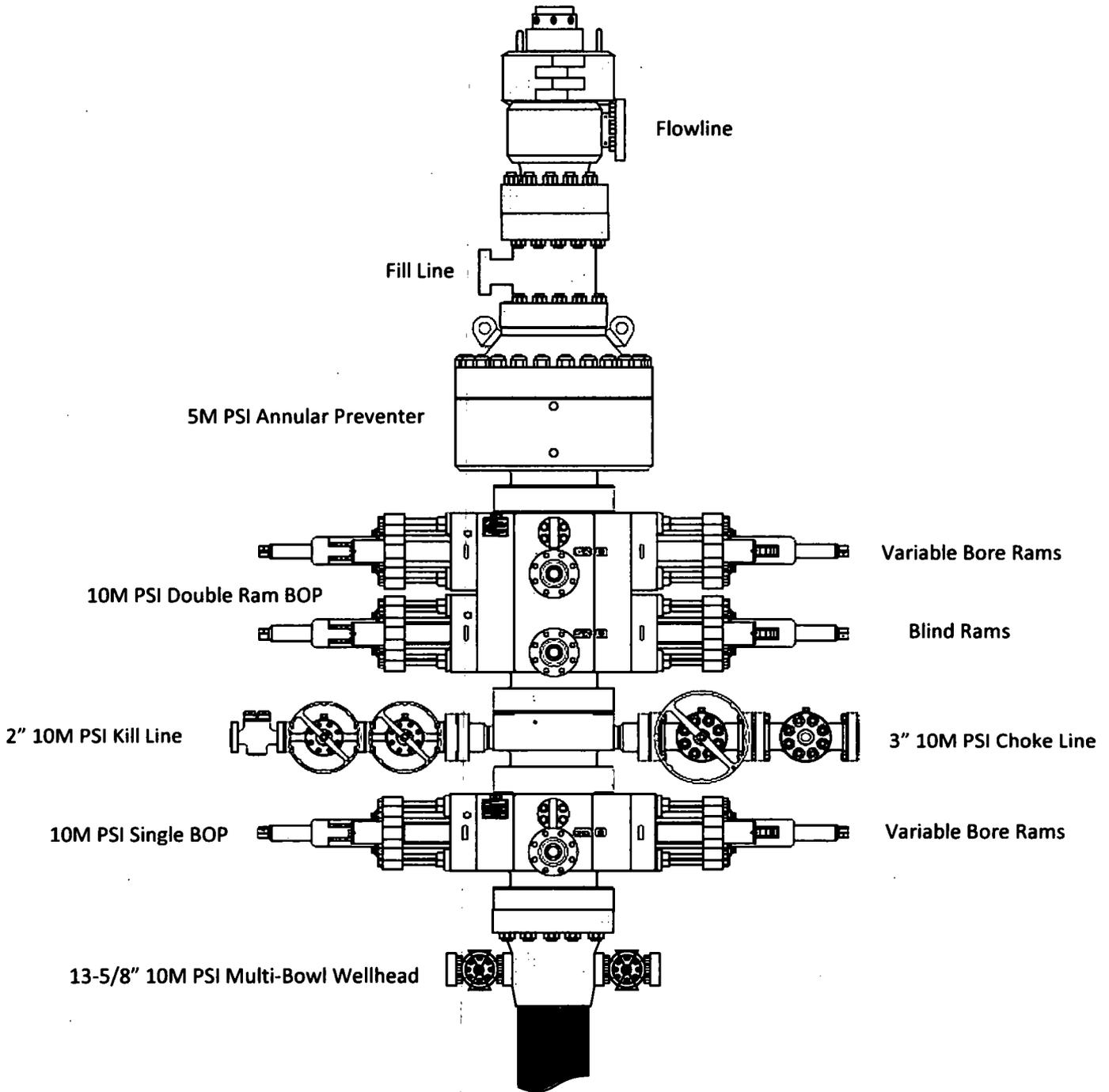
8-3/4" Intermediate Hole Section 10M psi requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Jars	6.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
DCs and MWD tools	6.500" – 8.000"	Annular	5M	-	-
Mud Motor	6.750" – 8.000"	Annular	5M	-	-
2 nd Intermediate casing	7.625"	Annular	5M	-	-
Open-hole	-	Blind Rams	10M	-	-

6-3/4" Production Hole Section					
10M psi requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
HWDP	4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
DCs and MWD tools	4.750" - 5.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Mud Motor	4.750" - 5.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Mud Motor	5.500" - 5.750"	Annular	5M	-	-
Production casing	5.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Open-hole	-	Blind Rams	10M	-	-

VBR = Variable Bore Ram

EOG Resources

13-5/8" 10M PSI BOP Stack



2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the EOG Resources drilling supervisor's office on location, and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

General Procedure While Drilling

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in Well (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full opening safety valve and close
3. Space out drill string
4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Running Production Casing

1. Sound alarm (alert crew)
2. Stab crossover and full opening safety valve and close
3. Space out string

4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams. (HCR and choke will already be in the closed position.)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
 - a. SICP
 - b. Pit gain
 - c. Time
6. Regroup and identify forward plan

General Procedures While Pulling BHA thru Stack

1. PRIOR to pulling last joint of drillpipe thru the stack.
 - a. Perform flowcheck, if flowing:
 - b. Sound alarm (alert crew)
 - c. Stab full opening safety valve and close
 - d. Space out drill string with tool joint just beneath the upper variable bore rams.
 - e. Shut-in using upper variable bore rams. (HCR and choke will already be in the closed position.)
 - f. Confirm shut-in
 - g. Notify toolpusher/company representative
 - h. Read and record the following:
 - i. SIDPP and SICP
 - ii. Pit gain
 - iii. Time
 - i. Regroup and identify forward plan
2. With BHA in the stack and compatible ram preventer and pipe combo immediately available.
 - a. Sound alarm (alert crew)
 - b. Stab crossover and full opening safety valve and close
 - c. Space out drill string with upset just beneath the upper variable bore rams.
 - d. Shut-in using upper variable bore rams. (HCR and choke will already be in the closed position.)
 - e. Confirm shut-in
 - f. Notify toolpusher/company representative
 - g. Read and record the following:
 - i. SIDPP and SICP

- ii. Pit gain
 - iii. Time
 - h. Regroup and identify forward plan
- 3. With BHA in the stack and NO compatible ram preventer and pipe combo immediately available.
 - a. Sound alarm (alert crew)
 - b. If possible to pick up high enough, pull string clear of the stack and follow "Open Hole" scenario.
 - c. If impossible to pick up high enough to pull the string clear of the stack:
 - d. Stab crossover, make up one joint/stand of drillpipe, and full opening safety valve and close
 - e. Space out drill string with tooljoint just beneath the upper variable bore ram.
 - f. Shut-in using upper variable bore ram. (HCR and choke will already be in the closed position.)
 - g. Confirm shut-in
 - h. Notify toolpusher/company representative
 - i. Read and record the following:
 - i. SIDPP and SICP
 - ii. Pit gain
 - iii. Time
 - j. Regroup and identify forward plan

See previously attached Drill Plan

See previously attached Drill Plan

EOG RESOURCES, INC.
GREEN DRAKE 16 FED COM NO. 706H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,014'
Top of Salt	1,339'
Base of Salt	4,708'
Lamar	4,956'
Bell Canyon	4,979'
Cherry Canyon	5,964'
Brushy Canyon	7,560'
Bone Spring Lime	9,101'
1 st Bone Spring Sand	10,105'
2 nd Bone Spring Shale	10,318'
2 nd Bone Spring Sand	10,608'
3 rd Bone Spring Carb	11,155'
3 rd Bone Spring Sand	11,807'
Wolfcamp	12,265'
TD	12,316'

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

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	5,964'	Oil
Brushy Canyon	7,560'	Oil
1 st Bone Spring Sand	10,105'	Oil
2 nd Bone Spring Shale	10,318'	Oil
2 nd Bone Spring Sand	10,608'	Oil
3 rd Bone Spring Carb	11,155'	Oil
3 rd Bone Spring Sand	11,807'	Oil
Wolfcamp	12,265'	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 13.375" casing at 1,040' and circulating cement back to surface.

**EOG RESOURCES, INC.
GREEN DRAKE 16 FED COM NO. 706H**

4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
17.5"	0 – 1,040'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0 – 4,000'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	4,000' – 4,800'	9.625"	40#	HCK55	LTC	1.125	1.25	1.60
8.75"	0 – 11,300'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0' – 10,800'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60
6.75"	10,800'–19,886'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60

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.

Variance is also requested for the 7-5/8" x 5-1/2" casing (minimum clearance) from the top of the cement overlap to surface.

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /ft	Mix Water Gal/sk	Slurry Description
13-3/8" 1,040'	610	13.5	1.73	9.13	Lead: Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	160	14.8	1.34	6.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 840')
9-5/8" 4,800'	770	12.7	2.20	11.64	Lead: Class C + 0.15% C-20 + 11.63 pps Salt + 0.1% C-51 + 0.75% C-41P (TOC @ Surface)
	360	16.0	1.12	4.75	Tail: Class C + 0.13% C-20 (TOC @ 3,840')
7-5/8" 11,300'	280	11.5	2.72	15.70	Lead: Class C + 0.40% D013 + 0.20% D046 + 0.10% D065 + 0.20% D167 (TOC @ 4,300')
	180	16.0	1.12	4.74	Tail: Class H + 94.0 pps D909 + 0.25% D065 + 0.30% D167 + 0.02% D208 + 0.15% D800 (TOC @ 9,800')
5-1/2" 19,886'	770	14.1	1.26	5.80	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,800')

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.

EOG RESOURCES, INC.
GREEN DRAKE 16 FED. COM NO. 706H

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. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

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

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 10,000/ 250 psig and the annular preventer to 5,000/ 250 psig.

Before drilling out of the intermediate casing strings (both the 9-5/8" and 7-5/8" strings), the ram-type BOP and accessory equipment will be tested to 10,000/ 250 psig and the annular preventer to 5,000/ 250 psig.

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 - 1,040'	Fresh - Gel	8.6-8.8	28-34	N/c
1,040' - 4,800'	Brine	10.0-10.2	28-34	N/c
4,800' - 11,300'	Oil Base	8.7-9.4	58-68	N/c - 6
11,300' - 19,886' Lateral	Oil Base	10.0-14.0	58-68	3 - 6

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.

EOG RESOURCES, INC.
GREEN DRAKE 16 FED COM NO. 706H

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) H₂S 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 8966 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:

EOG RESOURCES, INC.
GREEN DRAKE 16 FED COM NO. 706H

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 13-3/8" surface casing, a 13-5/8" 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 FBD100 Multi-Bowl 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.

Both the surface and intermediate casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

See previously attached Drill Plan

See previously attached Drill Plan

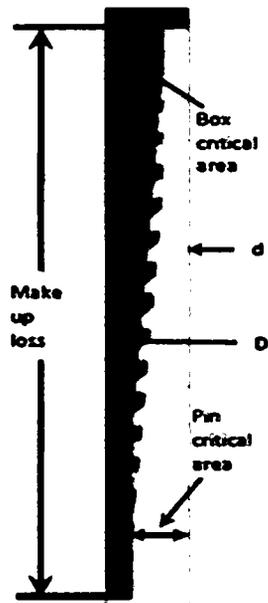
Metal One Corp. Metal One	MO-FXL Connection Data Sheet	Page	MCTP
		Date	3-Nov-16
		Rev.	0

MO-FXL

	<u>Imperial</u>	<u>S.I.</u>
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Pipe Body				
Pipe OD (D)	7 5/8	in	193.68	mm
Actual weight	29.04		43.26	kg/m
Pipe ID (d)	6.875	in	174.63	mm
Drift Dia.	6.750	in	171.45	mm

Connection				
PIN ID	6.875	in	174.63	mm
Thread Taper	1 / 10 (1.2" per ft)			



Performance Properties for Pipe Body				
M.I.Y.P. *1	10,760	psi	74.21	MPa

Note S.M.Y.S. = Specified Minimum YIELD Strength of Pipe body
M.I.Y.P. = Minimum Internal Yield Pressure of Pipe body
*1 Based on VSB P110HC (YS=125~140ksi)

Performance Properties for Connection	
Min. Compression Yield	747 kips (70% of S.M.Y.S.)
External Pressure	100% of Collapse Strength

Recommended Torque				
Opti.	17,200	ft-lb	23,300	N-m
Operational Max.	23,600	ft-lb	32,000	N-m

Note : Operational Max. torque can be applied for high torque application

See previously attached Drill Plan

EOG RESOURCES, INC.
GREEN DRAKE 16 FED COM #706H

Hydrogen Sulfide Plan Summary

- A. All personnel shall receive proper H₂S training in accordance with Onshore Order III.C.3.a.
- B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment:
- Well control equipment
 - a. Flare line 150' from wellhead to be ignited by flare gun.
 - b. Choke manifold with a remotely operated choke.
 - c. Mud/gas separator
 - Protective equipment for essential personnel.

Breathing apparatus:

 - a. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
 - b. Work/Escapes packs — 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
 - c. Emergency Escape Packs — 4 packs shall be stored in the doghouse for emergency evacuation.

Auxiliary Rescue Equipment:

 - a. Stretcher
 - b. Two OSHA full body harness
 - c. 100 ft 5/8 inch OSHA approved rope
 - d. 1-20# class ABC fire extinguisher
 - H₂S detection and monitoring equipment:

The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged.
(Gas sample tubes will be stored in the safety trailer)
 - Visual warning systems.
 - a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
 - b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
 - c. Two wind socks will be placed in strategic locations, visible from all angles.

EOG RESOURCES, INC.
GREEN DRAKE 16 FED COM #706H

- **Mud program:**
The mud program has been designed to minimize the volume of H₂S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H₂S bearing zones.

- **Metallurgy:**
All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.

- **Communication:**
Communication will be via cell phones and land lines where available.

**EOG RESOURCES, INC.
GREEN DRAKE 16 FED COM #706H**

Emergency Assistance Telephone List

PUBLIC SAFETY:	911 or
Lea County Sheriff's Department	(575) 396-3611
Rod Coffman	
Fire Department:	
Carlsbad	(575) 885-3125
Artesia	(575) 746-5050
Hospitals:	
Carlsbad	(575) 887-4121
Artesia	(575) 748-3333
Hobbs	(575) 392-1979
Dept. of Public Safety/Carlsbad	(575) 748-9718
Highway Department	(575) 885-3281
New Mexico Oil Conservation	(575) 476-3440
U.S. Dept. of Labor	(575) 887-1174

EOG Resources, Inc.

EOG / Midland Office (432) 686-3600

Company Drilling Consultants:

Jett Dueitt Cell (432) 230-4840
Blake Burney

Drilling Engineer

Steve Munsell Office (432) 686-3609
Cell (432) 894-1256

Drilling Manager

Floyd Hernandez Office (432) 686-3716
Cell (817) 682-4569

Drilling Superintendent

Todd Hamilton Office (432) 848-9029
Cell (210) 413-9569

H&P Drilling

H&P Drilling Office (432) 563-5757
H&P 415 Drilling Rig Rig (432) 230-4840

Tool Pusher:

Johnathan Craig Cell (817) 760-6374
Brad Garrett

Safety

Brian Chandler (HSE Manager) Office (432) 686-3695
Cell (817) 239-0251



Lea County, NM (NAD 83 NME)
Green Drake 16 Fed Com #706H
Plan #0.1

PROJECT DETAILS: Lea 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: #706H
 KB = 25 @ 3430.0usft 3495.0
 Northing 411828.00 Easting 774832.00 Latitude 32° 7' 47.817 N Longitude 103° 34' 43.954 W



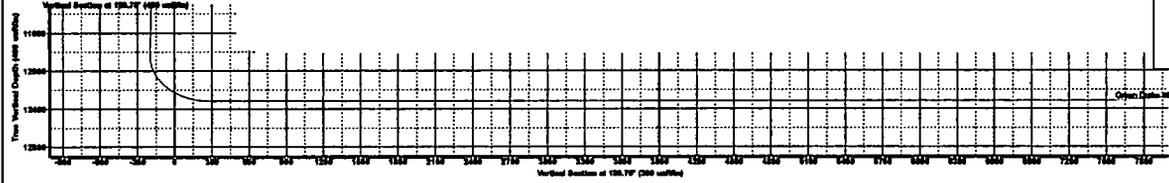
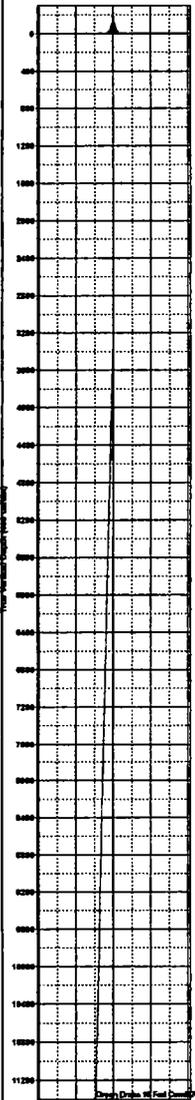
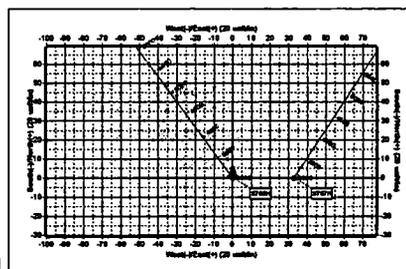
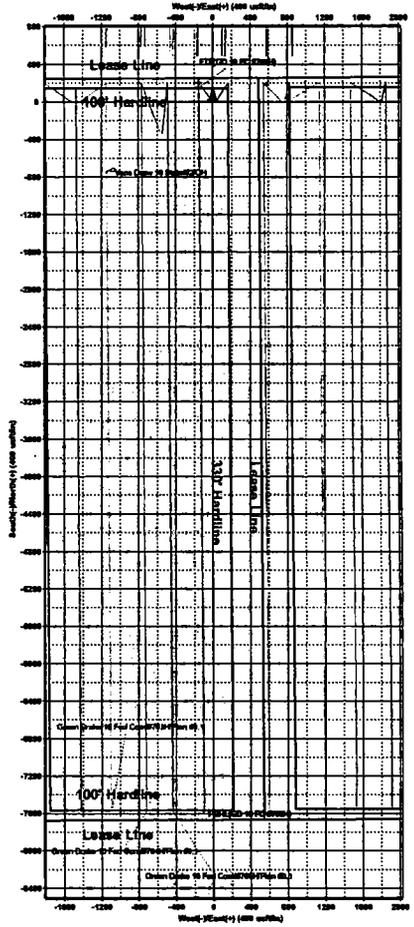
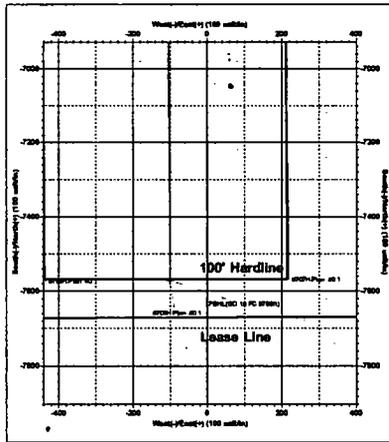
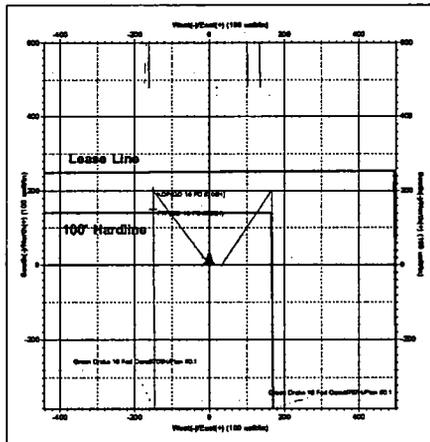
To convert a Magnetic Direction to a Grid Direction, Add 0.44°
 To convert a Magnetic Direction to a True Direction, Add 0.84° East
 To convert a True Direction to a Grid Direction, Subtract 0.40°

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	
3	3081.8	1.64	323.13	3081.8	0.9	-0.7	2.00	323.13	-0.9	
4	11760.3	1.64	323.13	11756.7	199.1	-149.3	0.00	0.00	-197.1	
5	11842.1	0.00	0.00	11838.5	200.0	-150.0	2.00	180.00	-198.0	KOP(GD 16 FC #706H)
6	12592.1	90.00	179.83	12316.0	-277.5	-146.9	12.00	179.83	279.4	
7	19886.8	90.00	179.83	12316.0	-7572.0	-100.0	0.00	0.00	7572.7	PBHL(GD 16 FC #706H)

CASING DETAILS
 No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	ML-S	+E-W	Northing	Easting
KOP(GD 16 FC #706H)	11838.5	200.0	-150.0	411828.00	774732.00
FTF(GD 16 FC #706H)	12316.0	100.0	-100.0	411828.00	774732.00
PBHL(GD 16 FC #706H)	12316.0	-7572.0	-100.0	404237.00	774732.00



Green Drake 16 Fed Com #706H

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Diag	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	
3	3081.8	1.64	323.13	3081.8	0.9	-0.7	2.00	323.13	-0.9	
4	11760.3	1.64	323.13	11756.7	199.1	-149.3	0.00	0.00	-197.1	
5	11842.1	0.00	0.00	11838.5	200.0	-150.0	2.00	180.00	-198.0	KOP(GD 16 FC #706H)
6	12592.1	90.00	179.83	12316.0	-277.5	-146.9	12.00	179.83	279.4	
7	19886.8	90.00	179.83	12316.0	-7572.0	-100.0	0.00	0.00	7572.7	PBHL(GD 16 FC #706H)

Lea County, NM (NAD 83 NME)
 Green Drake 16 Fed Com #706H
 Plan #0.1



EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Green Drake 16 Fed Com

#706H

Plan #0.1

Plan: Plan #0.1

Standard Planning Report

25 July, 2018



Planning Report

Database: EDM 5000.14
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Green Drake 16 Fed Com
 Well: #706H
 Wellbore: Plan #0.1
 Design: Plan #0.1

Local Co-ordinate Reference: Well #706H
 TVD Reference: KB = 25 @ 3430.0usft
 MD Reference: KB = 25 @ 3430.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Project	Lea County, NM (NAD 83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Green Drake 16 Fed Com				
Site Position:		Northing:	411,802.00 usft	Latitude:	32° 7' 47.652 N
From:	Map	Easting:	773,380.00 usft	Longitude:	103° 35' 1.431 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.40 °

Well	#706H					
Well Position	+N/-S	7.0 usft	Northing:	411,809.00 usft	Latitude:	32° 7' 47.617 N
	+E/-W	1,502.0 usft	Easting:	774,882.00 usft	Longitude:	103° 34' 43.964 W
Position Uncertainty	0.0 usft		Wellhead Elevation:		Ground Level:	3,405.0 usft

Wellbore	Plan #0.1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2015	7/3/2018	(°)	(°)	(nT)
			6.84	59.96	47,774.33856465

Design	Plan #0.1			
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	0.0	0.0	180.76

Plan Survey Tool Program	Date	7/24/2018			
Depth From	Depth To	Survey (Wellbore)	Tool Name	Remarks	
(usft)	(usft)				
1	0.0	19,886.8 Plan #0.1 (Plan #0.1)	MWD	OWSG MWD - Standard	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,081.8	1.64	323.13	3,081.8	0.9	-0.7	2.00	2.00	0.00	323.13	
11,760.3	1.64	323.13	11,756.7	199.1	-149.3	0.00	0.00	0.00	0.00	
11,842.1	0.00	0.00	11,838.5	200.0	-150.0	2.00	-2.00	0.00	180.00	KOP(GD 16 FC #706I)
12,592.1	90.00	179.63	12,316.0	-277.5	-146.9	12.00	12.00	23.95	179.63	
19,886.8	90.00	179.63	12,316.0	-7,572.0	-100.0	0.00	0.00	0.00	0.00	PBHL(GD 16 FC #70I)



Planning Report

Database: EDM 5000.14
 Company: EOG Resources - Midland
 Project: Lea County, NM (NAD 83 NME)
 Site: Green Drake 16 Fed Com
 Well: #706H
 Wellbore: Plan #0.1
 Design: Plan #0.1

Local Co-ordinate Reference: Well #706H
 TVD Reference: KB = 25 @ 3430.0usft
 MD Reference: KB = 25 @ 3430.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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)
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
800.0	0.00	0.00	800.0	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	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,081.8	1.64	323.13	3,081.8	0.9	-0.7	-0.9	2.00	2.00	0.00
3,100.0	1.64	323.13	3,100.0	1.3	-1.0	-1.3	0.00	0.00	0.00
3,200.0	1.64	323.13	3,199.9	3.6	-2.7	-3.6	0.00	0.00	0.00
3,300.0	1.64	323.13	3,299.9	5.9	-4.4	-5.9	0.00	0.00	0.00
3,400.0	1.64	323.13	3,399.9	8.2	-6.1	-8.1	0.00	0.00	0.00
3,500.0	1.64	323.13	3,499.8	10.5	-7.9	-10.4	0.00	0.00	0.00
3,600.0	1.64	323.13	3,599.8	12.8	-9.6	-12.6	0.00	0.00	0.00
3,700.0	1.64	323.13	3,699.7	15.0	-11.3	-14.9	0.00	0.00	0.00
3,800.0	1.64	323.13	3,799.7	17.3	-13.0	-17.2	0.00	0.00	0.00
3,900.0	1.64	323.13	3,899.7	19.6	-14.7	-19.4	0.00	0.00	0.00
4,000.0	1.64	323.13	3,999.6	21.9	-16.4	-21.7	0.00	0.00	0.00
4,100.0	1.64	323.13	4,099.6	24.2	-18.1	-23.9	0.00	0.00	0.00
4,200.0	1.64	323.13	4,199.5	26.5	-19.8	-26.2	0.00	0.00	0.00
4,300.0	1.64	323.13	4,299.5	28.7	-21.6	-28.5	0.00	0.00	0.00
4,400.0	1.64	323.13	4,399.5	31.0	-23.3	-30.7	0.00	0.00	0.00
4,500.0	1.64	323.13	4,499.4	33.3	-25.0	-33.0	0.00	0.00	0.00
4,600.0	1.64	323.13	4,599.4	35.6	-26.7	-35.2	0.00	0.00	0.00
4,700.0	1.64	323.13	4,699.3	37.9	-28.4	-37.5	0.00	0.00	0.00
4,800.0	1.64	323.13	4,799.3	40.2	-30.1	-39.8	0.00	0.00	0.00
4,900.0	1.64	323.13	4,899.2	42.4	-31.8	-42.0	0.00	0.00	0.00
5,000.0	1.64	323.13	4,999.2	44.7	-33.5	-44.3	0.00	0.00	0.00
5,100.0	1.64	323.13	5,099.2	47.0	-35.3	-46.5	0.00	0.00	0.00
5,200.0	1.64	323.13	5,199.1	49.3	-37.0	-48.8	0.00	0.00	0.00



Planning Report

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 Site: Green Drake 16 Fed Com
 Well: #706H
 Wellbore: Plan #0.1
 Design: Plan #0.1

Local Co-ordinate Reference: Well #706H
 TVD Reference: KB = 25 @ 3430.0usft
 MD Reference: KB = 25 @ 3430.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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)
5,300.0	1.64	323.13	5,299.1	51.6	-38.7	-51.1	0.00	0.00	0.00
5,400.0	1.64	323.13	5,399.0	53.9	-40.4	-53.3	0.00	0.00	0.00
5,500.0	1.64	323.13	5,499.0	56.1	-42.1	-55.6	0.00	0.00	0.00
5,600.0	1.64	323.13	5,599.0	58.4	-43.8	-57.8	0.00	0.00	0.00
5,700.0	1.64	323.13	5,698.9	60.7	-45.5	-60.1	0.00	0.00	0.00
5,800.0	1.64	323.13	5,798.9	63.0	-47.2	-62.4	0.00	0.00	0.00
5,900.0	1.64	323.13	5,898.8	65.3	-49.0	-64.6	0.00	0.00	0.00
6,000.0	1.64	323.13	5,998.8	67.6	-50.7	-66.9	0.00	0.00	0.00
6,100.0	1.64	323.13	6,098.8	69.8	-52.4	-69.1	0.00	0.00	0.00
6,200.0	1.64	323.13	6,198.7	72.1	-54.1	-71.4	0.00	0.00	0.00
6,300.0	1.64	323.13	6,298.7	74.4	-55.8	-73.7	0.00	0.00	0.00
6,400.0	1.64	323.13	6,398.6	76.7	-57.5	-75.9	0.00	0.00	0.00
6,500.0	1.64	323.13	6,498.6	79.0	-59.2	-78.2	0.00	0.00	0.00
6,600.0	1.64	323.13	6,598.6	81.3	-60.9	-80.4	0.00	0.00	0.00
6,700.0	1.64	323.13	6,698.5	83.5	-62.7	-82.7	0.00	0.00	0.00
6,800.0	1.64	323.13	6,798.5	85.8	-64.4	-85.0	0.00	0.00	0.00
6,900.0	1.64	323.13	6,898.4	88.1	-66.1	-87.2	0.00	0.00	0.00
7,000.0	1.64	323.13	6,998.4	90.4	-67.8	-89.5	0.00	0.00	0.00
7,100.0	1.64	323.13	7,098.4	92.7	-69.5	-91.7	0.00	0.00	0.00
7,200.0	1.64	323.13	7,198.3	95.0	-71.2	-94.0	0.00	0.00	0.00
7,300.0	1.64	323.13	7,298.3	97.2	-72.9	-96.3	0.00	0.00	0.00
7,400.0	1.64	323.13	7,398.2	99.5	-74.6	-98.5	0.00	0.00	0.00
7,500.0	1.64	323.13	7,498.2	101.8	-76.4	-100.8	0.00	0.00	0.00
7,600.0	1.64	323.13	7,598.1	104.1	-78.1	-103.0	0.00	0.00	0.00
7,700.0	1.64	323.13	7,698.1	106.4	-79.8	-105.3	0.00	0.00	0.00
7,800.0	1.64	323.13	7,798.1	108.7	-81.5	-107.6	0.00	0.00	0.00
7,900.0	1.64	323.13	7,898.0	110.9	-83.2	-109.8	0.00	0.00	0.00
8,000.0	1.64	323.13	7,998.0	113.2	-84.9	-112.1	0.00	0.00	0.00
8,100.0	1.64	323.13	8,097.9	115.5	-86.6	-114.3	0.00	0.00	0.00
8,200.0	1.64	323.13	8,197.9	117.8	-88.3	-116.6	0.00	0.00	0.00
8,300.0	1.64	323.13	8,297.9	120.1	-90.1	-118.9	0.00	0.00	0.00
8,400.0	1.64	323.13	8,397.8	122.4	-91.8	-121.1	0.00	0.00	0.00
8,500.0	1.64	323.13	8,497.8	124.6	-93.5	-123.4	0.00	0.00	0.00
8,600.0	1.64	323.13	8,597.7	126.9	-95.2	-125.6	0.00	0.00	0.00
8,700.0	1.64	323.13	8,697.7	129.2	-96.9	-127.9	0.00	0.00	0.00
8,800.0	1.64	323.13	8,797.7	131.5	-98.6	-130.2	0.00	0.00	0.00
8,900.0	1.64	323.13	8,897.6	133.8	-100.3	-132.4	0.00	0.00	0.00
9,000.0	1.64	323.13	8,997.6	136.0	-102.0	-134.7	0.00	0.00	0.00
9,100.0	1.64	323.13	9,097.5	138.3	-103.7	-136.9	0.00	0.00	0.00
9,200.0	1.64	323.13	9,197.5	140.6	-105.5	-139.2	0.00	0.00	0.00
9,300.0	1.64	323.13	9,297.5	142.9	-107.2	-141.5	0.00	0.00	0.00
9,400.0	1.64	323.13	9,397.4	145.2	-108.9	-143.7	0.00	0.00	0.00
9,500.0	1.64	323.13	9,497.4	147.5	-110.6	-146.0	0.00	0.00	0.00
9,600.0	1.64	323.13	9,597.3	149.7	-112.3	-148.3	0.00	0.00	0.00
9,700.0	1.64	323.13	9,697.3	152.0	-114.0	-150.5	0.00	0.00	0.00
9,800.0	1.64	323.13	9,797.3	154.3	-115.7	-152.8	0.00	0.00	0.00
9,900.0	1.64	323.13	9,897.2	156.6	-117.4	-155.0	0.00	0.00	0.00
10,000.0	1.64	323.13	9,997.2	158.9	-119.2	-157.3	0.00	0.00	0.00
10,100.0	1.64	323.13	10,097.1	161.2	-120.9	-159.6	0.00	0.00	0.00
10,200.0	1.64	323.13	10,197.1	163.4	-122.6	-161.8	0.00	0.00	0.00
10,300.0	1.64	323.13	10,297.0	165.7	-124.3	-164.1	0.00	0.00	0.00
10,400.0	1.64	323.13	10,397.0	168.0	-126.0	-166.3	0.00	0.00	0.00
10,500.0	1.64	323.13	10,497.0	170.3	-127.7	-168.6	0.00	0.00	0.00
10,600.0	1.64	323.13	10,596.9	172.6	-129.4	-170.9	0.00	0.00	0.00



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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)
10,700.0	1.64	323.13	10,696.9	174.9	-131.1	-173.1	0.00	0.00	0.00
10,800.0	1.64	323.13	10,796.8	177.1	-132.9	-175.4	0.00	0.00	0.00
10,900.0	1.64	323.13	10,896.8	179.4	-134.6	-177.6	0.00	0.00	0.00
11,000.0	1.64	323.13	10,996.8	181.7	-136.3	-179.9	0.00	0.00	0.00
11,100.0	1.64	323.13	11,096.7	184.0	-138.0	-182.2	0.00	0.00	0.00
11,200.0	1.64	323.13	11,196.7	186.3	-139.7	-184.4	0.00	0.00	0.00
11,300.0	1.64	323.13	11,296.6	188.6	-141.4	-186.7	0.00	0.00	0.00
11,400.0	1.64	323.13	11,396.6	190.8	-143.1	-188.9	0.00	0.00	0.00
11,500.0	1.64	323.13	11,496.6	193.1	-144.8	-191.2	0.00	0.00	0.00
11,600.0	1.64	323.13	11,596.5	195.4	-146.6	-193.5	0.00	0.00	0.00
11,700.0	1.64	323.13	11,696.5	197.7	-148.3	-195.7	0.00	0.00	0.00
11,760.3	1.64	323.13	11,756.7	199.1	-149.3	-197.1	0.00	0.00	0.00
11,800.0	0.84	323.13	11,796.4	199.8	-149.8	-197.8	2.00	-2.00	0.00
11,842.1	0.00	0.00	11,838.5	200.0	-150.0	-198.0	2.00	-2.00	0.00
KOP(GD 16 FC #706H)									
11,850.0	0.95	179.63	11,846.4	199.9	-150.0	-197.9	12.00	12.00	0.00
11,875.0	3.95	179.63	11,871.4	198.9	-150.0	-196.9	12.00	12.00	0.00
11,900.0	6.95	179.63	11,896.3	196.5	-150.0	-194.5	12.00	12.00	0.00
11,925.0	9.95	179.63	11,921.0	192.8	-150.0	-190.8	12.00	12.00	0.00
11,950.0	12.95	179.63	11,945.5	187.9	-149.9	-185.9	12.00	12.00	0.00
11,975.0	15.95	179.63	11,969.7	181.6	-149.9	-179.6	12.00	12.00	0.00
12,000.0	18.95	179.63	11,993.6	174.1	-149.8	-172.1	12.00	12.00	0.00
12,025.0	21.95	179.63	12,017.0	165.4	-149.8	-163.4	12.00	12.00	0.00
12,050.0	24.95	179.63	12,039.9	155.4	-149.7	-153.4	12.00	12.00	0.00
12,075.0	27.95	179.63	12,062.3	144.3	-149.6	-142.3	12.00	12.00	0.00
12,100.0	30.95	179.63	12,084.1	132.0	-149.6	-130.0	12.00	12.00	0.00
12,125.0	33.95	179.63	12,105.2	118.6	-149.5	-116.6	12.00	12.00	0.00
12,150.0	36.95	179.63	12,125.5	104.1	-149.4	-102.1	12.00	12.00	0.00
12,175.0	39.95	179.63	12,145.1	88.5	-149.3	-86.6	12.00	12.00	0.00
12,200.0	42.95	179.63	12,163.8	72.0	-149.2	-70.0	12.00	12.00	0.00
12,225.0	45.95	179.63	12,181.7	54.5	-149.1	-52.5	12.00	12.00	0.00
12,245.5	48.41	179.63	12,195.6	39.5	-149.0	-37.5	12.00	12.00	0.00
FTP(GD 16 FC #706H)									
12,250.0	48.95	179.63	12,198.6	36.1	-148.9	-34.1	12.00	12.00	0.00
12,275.0	51.95	179.63	12,214.5	16.8	-148.8	-14.8	12.00	12.00	0.00
12,300.0	54.95	179.63	12,229.4	-3.3	-148.7	5.2	12.00	12.00	0.00
12,325.0	57.95	179.63	12,243.2	-24.1	-148.6	26.1	12.00	12.00	0.00
12,350.0	60.95	179.63	12,255.9	-45.6	-148.4	47.6	12.00	12.00	0.00
12,375.0	63.95	179.63	12,267.5	-67.8	-148.3	69.8	12.00	12.00	0.00
12,400.0	66.95	179.63	12,277.9	-90.5	-148.1	92.5	12.00	12.00	0.00
12,425.0	69.95	179.63	12,287.0	-113.8	-148.0	115.7	12.00	12.00	0.00
12,450.0	72.95	179.63	12,295.0	-137.5	-147.8	139.4	12.00	12.00	0.00
12,475.0	75.95	179.63	12,301.7	-161.6	-147.7	163.5	12.00	12.00	0.00
12,500.0	78.95	179.63	12,307.1	-186.0	-147.5	187.9	12.00	12.00	0.00
12,525.0	81.95	179.63	12,311.3	-210.6	-147.4	212.5	12.00	12.00	0.00
12,550.0	84.95	179.63	12,314.1	-235.5	-147.2	237.4	12.00	12.00	0.00
12,575.0	87.95	179.63	12,315.7	-260.4	-147.0	262.3	12.00	12.00	0.00
12,592.1	90.00	179.63	12,316.0	-277.5	-146.9	279.4	12.00	12.00	0.00
12,600.0	90.00	179.63	12,316.0	-285.4	-146.9	287.3	0.00	0.00	0.00
12,700.0	90.00	179.63	12,316.0	-385.4	-146.2	387.3	0.00	0.00	0.00
12,800.0	90.00	179.63	12,316.0	-485.4	-145.6	487.3	0.00	0.00	0.00
12,900.0	90.00	179.63	12,316.0	-585.4	-144.9	587.3	0.00	0.00	0.00
13,000.0	90.00	179.63	12,316.0	-685.4	-144.3	687.2	0.00	0.00	0.00
13,100.0	90.00	179.63	12,316.0	-785.4	-143.7	787.2	0.00	0.00	0.00



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13,200.0	90.00	179.63	12,316.0	-885.4	-143.0	887.2	0.00	0.00	0.00
13,300.0	90.00	179.63	12,316.0	-985.4	-142.4	987.2	0.00	0.00	0.00
13,400.0	90.00	179.63	12,316.0	-1,085.4	-141.7	1,087.2	0.00	0.00	0.00
13,500.0	90.00	179.63	12,316.0	-1,185.4	-141.1	1,187.1	0.00	0.00	0.00
13,600.0	90.00	179.63	12,316.0	-1,285.4	-140.4	1,287.1	0.00	0.00	0.00
13,700.0	90.00	179.63	12,316.0	-1,385.4	-139.8	1,387.1	0.00	0.00	0.00
13,800.0	90.00	179.63	12,316.0	-1,485.4	-139.2	1,487.1	0.00	0.00	0.00
13,900.0	90.00	179.63	12,316.0	-1,585.4	-138.5	1,587.1	0.00	0.00	0.00
14,000.0	90.00	179.63	12,316.0	-1,685.4	-137.9	1,687.0	0.00	0.00	0.00
14,100.0	90.00	179.63	12,316.0	-1,785.4	-137.2	1,787.0	0.00	0.00	0.00
14,200.0	90.00	179.63	12,316.0	-1,885.4	-136.6	1,887.0	0.00	0.00	0.00
14,300.0	90.00	179.63	12,316.0	-1,985.4	-135.9	1,987.0	0.00	0.00	0.00
14,400.0	90.00	179.63	12,316.0	-2,085.4	-135.3	2,087.0	0.00	0.00	0.00
14,500.0	90.00	179.63	12,316.0	-2,185.4	-134.7	2,186.9	0.00	0.00	0.00
14,600.0	90.00	179.63	12,316.0	-2,285.4	-134.0	2,286.9	0.00	0.00	0.00
14,700.0	90.00	179.63	12,316.0	-2,385.4	-133.4	2,386.9	0.00	0.00	0.00
14,800.0	90.00	179.63	12,316.0	-2,485.4	-132.7	2,486.9	0.00	0.00	0.00
14,900.0	90.00	179.63	12,316.0	-2,585.4	-132.1	2,586.9	0.00	0.00	0.00
15,000.0	90.00	179.63	12,316.0	-2,685.3	-131.4	2,686.8	0.00	0.00	0.00
15,100.0	90.00	179.63	12,316.0	-2,785.3	-130.8	2,786.8	0.00	0.00	0.00
15,200.0	90.00	179.63	12,316.0	-2,885.3	-130.2	2,886.8	0.00	0.00	0.00
15,300.0	90.00	179.63	12,316.0	-2,985.3	-129.5	2,986.8	0.00	0.00	0.00
15,400.0	90.00	179.63	12,316.0	-3,085.3	-128.9	3,086.8	0.00	0.00	0.00
15,500.0	90.00	179.63	12,316.0	-3,185.3	-128.2	3,186.8	0.00	0.00	0.00
15,600.0	90.00	179.63	12,316.0	-3,285.3	-127.6	3,286.7	0.00	0.00	0.00
15,700.0	90.00	179.63	12,316.0	-3,385.3	-126.9	3,386.7	0.00	0.00	0.00
15,800.0	90.00	179.63	12,316.0	-3,485.3	-126.3	3,486.7	0.00	0.00	0.00
15,900.0	90.00	179.63	12,316.0	-3,585.3	-125.6	3,586.7	0.00	0.00	0.00
16,000.0	90.00	179.63	12,316.0	-3,685.3	-125.0	3,686.7	0.00	0.00	0.00
16,100.0	90.00	179.63	12,316.0	-3,785.3	-124.4	3,786.6	0.00	0.00	0.00
16,200.0	90.00	179.63	12,316.0	-3,885.3	-123.7	3,886.6	0.00	0.00	0.00
16,300.0	90.00	179.63	12,316.0	-3,985.3	-123.1	3,986.6	0.00	0.00	0.00
16,400.0	90.00	179.63	12,316.0	-4,085.3	-122.4	4,086.6	0.00	0.00	0.00
16,500.0	90.00	179.63	12,316.0	-4,185.3	-121.8	4,186.6	0.00	0.00	0.00
16,600.0	90.00	179.63	12,316.0	-4,285.3	-121.1	4,286.5	0.00	0.00	0.00
16,700.0	90.00	179.63	12,316.0	-4,385.3	-120.5	4,386.5	0.00	0.00	0.00
16,800.0	90.00	179.63	12,316.0	-4,485.3	-119.9	4,486.5	0.00	0.00	0.00
16,900.0	90.00	179.63	12,316.0	-4,585.3	-119.2	4,586.5	0.00	0.00	0.00
17,000.0	90.00	179.63	12,316.0	-4,685.3	-118.6	4,686.5	0.00	0.00	0.00
17,100.0	90.00	179.63	12,316.0	-4,785.3	-117.9	4,786.4	0.00	0.00	0.00
17,200.0	90.00	179.63	12,316.0	-4,885.3	-117.3	4,886.4	0.00	0.00	0.00
17,300.0	90.00	179.63	12,316.0	-4,985.3	-116.6	4,986.4	0.00	0.00	0.00
17,400.0	90.00	179.63	12,316.0	-5,085.3	-116.0	5,086.4	0.00	0.00	0.00
17,500.0	90.00	179.63	12,316.0	-5,185.3	-115.4	5,186.4	0.00	0.00	0.00
17,600.0	90.00	179.63	12,316.0	-5,285.3	-114.7	5,286.3	0.00	0.00	0.00
17,700.0	90.00	179.63	12,316.0	-5,385.3	-114.1	5,386.3	0.00	0.00	0.00
17,800.0	90.00	179.63	12,316.0	-5,485.3	-113.4	5,486.3	0.00	0.00	0.00
17,900.0	90.00	179.63	12,316.0	-5,585.3	-112.8	5,586.3	0.00	0.00	0.00
18,000.0	90.00	179.63	12,316.0	-5,685.3	-112.1	5,686.3	0.00	0.00	0.00
18,100.0	90.00	179.63	12,316.0	-5,785.3	-111.5	5,786.3	0.00	0.00	0.00
18,200.0	90.00	179.63	12,316.0	-5,885.3	-110.9	5,886.2	0.00	0.00	0.00
18,300.0	90.00	179.63	12,316.0	-5,985.3	-110.2	5,986.2	0.00	0.00	0.00
18,400.0	90.00	179.63	12,316.0	-6,085.3	-109.6	6,086.2	0.00	0.00	0.00
18,500.0	90.00	179.63	12,316.0	-6,185.3	-108.9	6,186.2	0.00	0.00	0.00



Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #706H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3430.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3430.0usft
Site:	Green Drake 16 Fed Com	North Reference:	Grid
Well:	#706H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan #0.1		
Design:	Plan #0.1		

Planned Survey

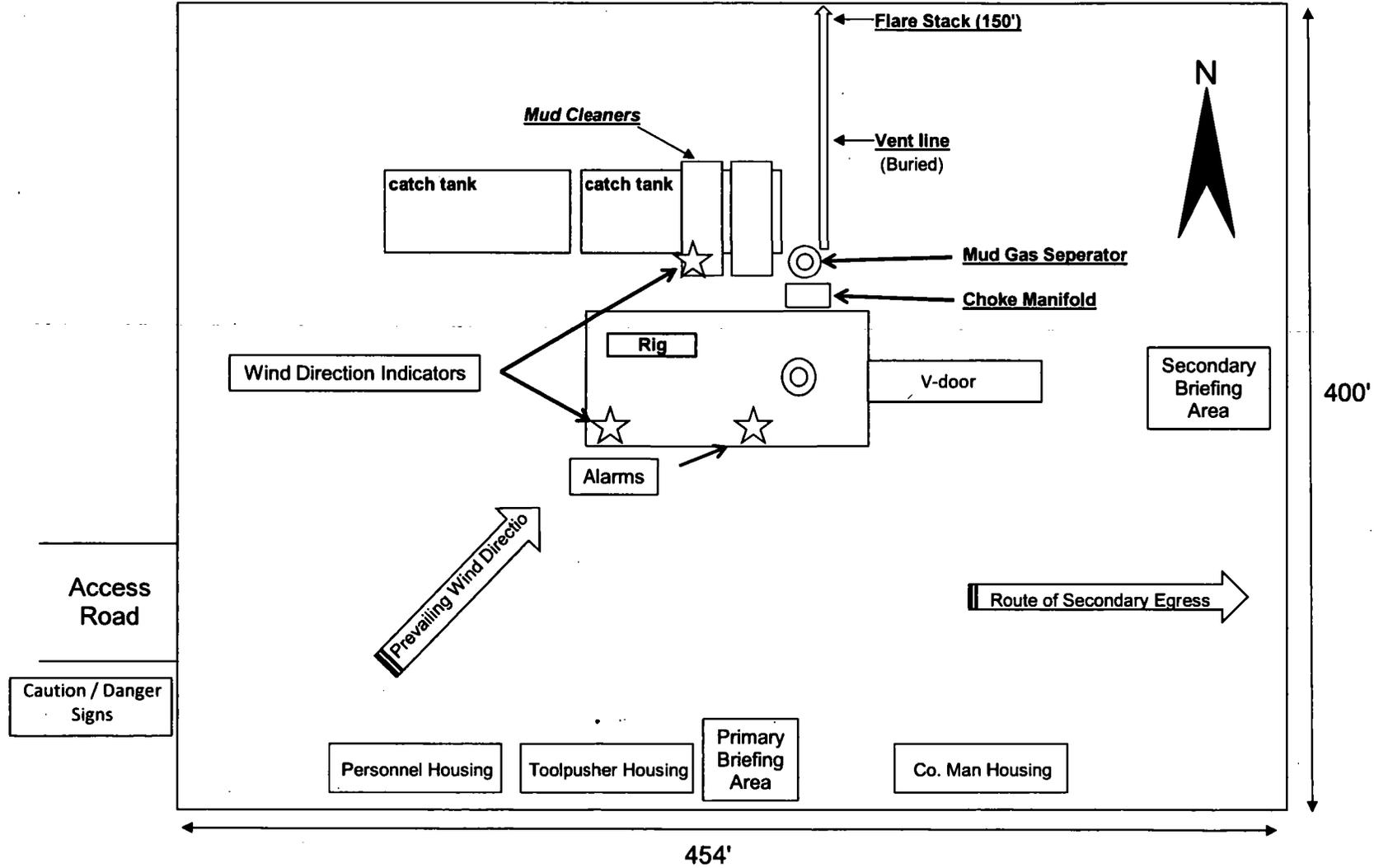
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,600.0	90.00	179.63	12,316.0	-6,285.3	-108.3	6,286.2	0.00	0.00	0.00
18,700.0	90.00	179.63	12,316.0	-6,385.3	-107.6	6,386.1	0.00	0.00	0.00
18,800.0	90.00	179.63	12,316.0	-6,485.3	-107.0	6,486.1	0.00	0.00	0.00
18,900.0	90.00	179.63	12,316.0	-6,585.3	-106.3	6,586.1	0.00	0.00	0.00
19,000.0	90.00	179.63	12,316.0	-6,685.3	-105.7	6,686.1	0.00	0.00	0.00
19,100.0	90.00	179.63	12,316.0	-6,785.3	-105.1	6,786.1	0.00	0.00	0.00
19,200.0	90.00	179.63	12,316.0	-6,885.3	-104.4	6,886.0	0.00	0.00	0.00
19,300.0	90.00	179.63	12,316.0	-6,985.3	-103.8	6,986.0	0.00	0.00	0.00
19,400.0	90.00	179.63	12,316.0	-7,085.3	-103.1	7,086.0	0.00	0.00	0.00
19,500.0	90.00	179.63	12,316.0	-7,185.3	-102.5	7,186.0	0.00	0.00	0.00
19,600.0	90.00	179.63	12,316.0	-7,285.3	-101.8	7,286.0	0.00	0.00	0.00
19,700.0	90.00	179.63	12,316.0	-7,385.3	-101.2	7,385.9	0.00	0.00	0.00
19,800.0	90.00	179.63	12,316.0	-7,485.2	-100.6	7,485.9	0.00	0.00	0.00
19,886.8	90.00	179.63	12,316.0	-7,572.0	-100.0	7,572.7	0.00	0.00	0.00
PBHL(GD 16 FC #706H)									

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(GD 16 FC #706H) - plan hits target center - Point	0.00	0.00	11,838.5	200.0	-150.0	412,009.00	774,732.00	32° 7' 49.607 N	103° 34' 45.692 W
FTP(GD 16 FC #706H) - plan misses target center by 163.4usft at 12245.5usft MD (12195:6 TVD, 39.5 N, -149.0 E) - Point	0.00	0.00	12,316.0	150.0	-150.0	411,959.00	774,732.00	32° 7' 49.112 N	103° 34' 45.696 W
PBHL(GD 16 FC #706H) - plan hits target center - Point	0.00	0.00	12,316.0	-7,572.0	-100.0	404,237.00	774,782.00	32° 6' 32.697 N	103° 34' 45.743 W

Exhibit 4
EOG Resources
Green Drake 16 Fed Com #706H

Well Site Diagram



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

Submit Original
to Appropriate
District Office

HOBBS OCD

APR 25 2019

RECEIVED

GAS CAPTURE PLAN

Date: 09/17/2018

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, recomple 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
Green Drake 16 Fed Com 708H	30-025-***	J-16-25S-33E	2390 FSL & 2382 FEL	±3500	None Planned	APD Submission
Green Drake 16 Fed Com 709H	30-025-***	J-16-25S-33E	2390 FSL & 2349 FEL	±3500	None Planned	APD Submission
Green Drake 16 Fed Com 710H	30-025-***	J-16-25S-33E	2390 FSL & 2316 FEL	±3500	None Planned	APD Submission
Green Drake 16 Fed Com 711H	30-025-***	J-16-25S-33E	2395 FSL & 1340 FEL	±3500	None Planned	APD Submission
Green Drake 16 Fed Com 712H	30-025-***	I-16-25S-33E	2395 FSL & 1307 FEL	±3500	None Planned	APD Submission
Green Drake 16 Fed Com 713H	30-025-***	I-16-25S-33E	2390 FSL & 689 FEL	±3500	None Planned	APD Submission
Green Drake 16 Fed Com 714H	30-025-***	I-16-25S-33E	2390 FSL & 656 FEL	±3500	None Planned	APD Submission
Green Drake 16 Fed Com 715H	30-025-***	I-16-25S-33E	2390 FSL & 623 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 **Enterprise Field Services** and will be connected to **EOG Resources** low/high pressure gathering system located in Eddy/Lea County, New Mexico. **EOG Resources** provides (periodically) to **Enterprise Field Services** a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, **EOG Resources** and **Enterprise Field Services** have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at **Enterprise Field Services** Processing Plant located in **Lea** County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

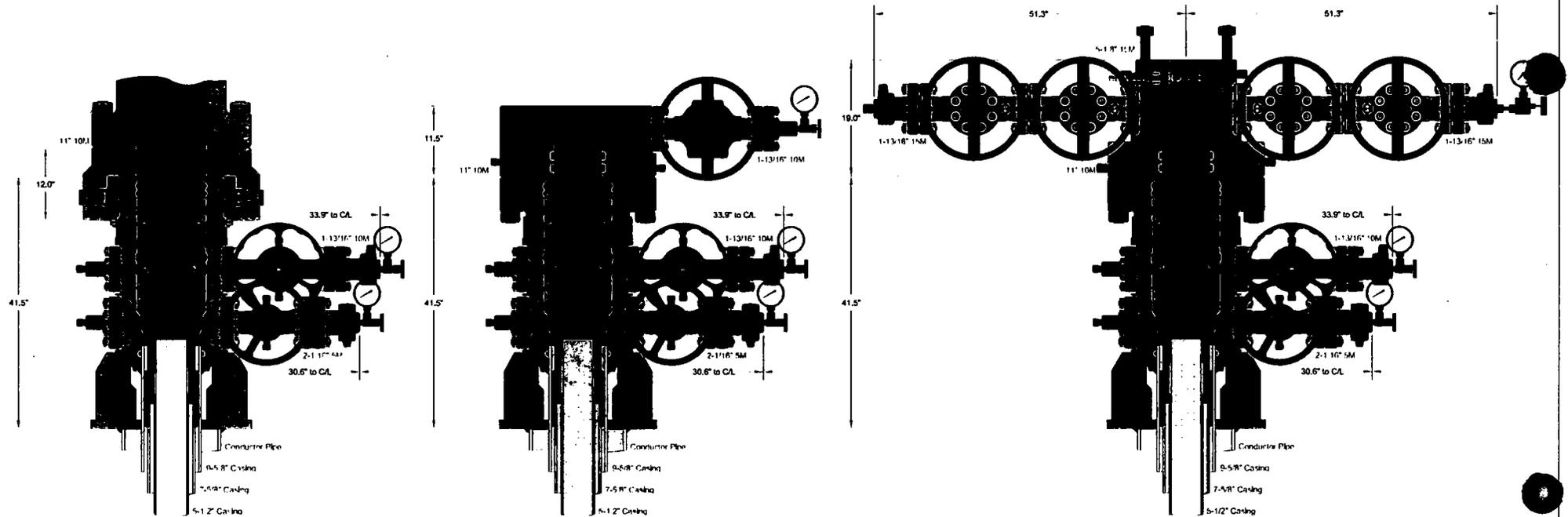
After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on **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
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines



INFORMATION CONTAINED HEREIN IS THE PROPERTY OF CACTUS WELLHEAD, LLC. REPRODUCTION, DISCLOSURE, OR USE THEREOF IS PERMISSIBLE ONLY AS PROVIDED BY CONTRACT OR AS EXPRESSLY AUTHORIZED BY CACTUS WELLHEAD, LLC.

CACTUS WELLHEAD LLC

20" x 9-5/8" x 7-5/8" x 5-1/2" MBU-T-SF SOW Wellhead System
 With 11" 10M x 5-1/8" 15M CMT-DBLHPS-SB Tubing Head,
 Mandrel Hangers, Quick Connect Drilling Adapter And TA Cap

ALL DIMENSIONS APPROXIMATE

EOG RESOURCES
 DELAWARE

DRAWN
 APPROV

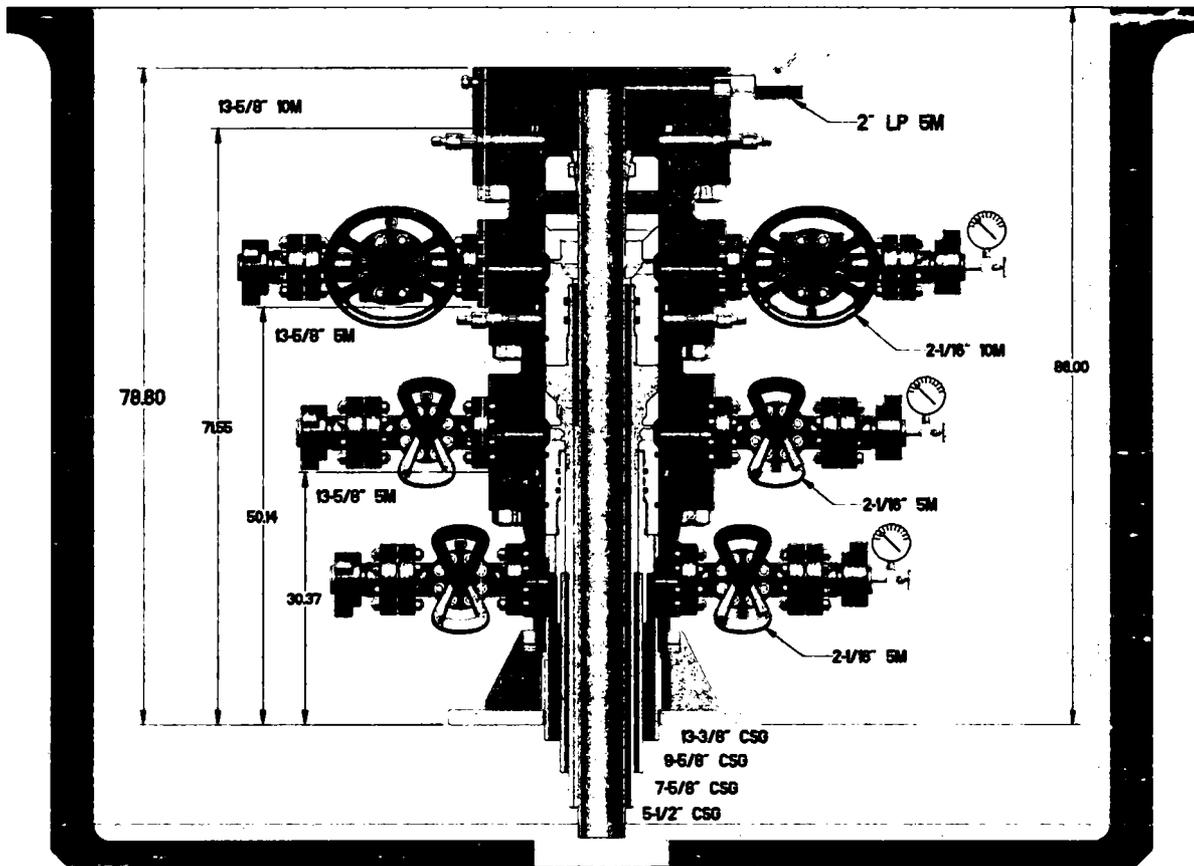
DLE 23OCT18

DRAWING NO.

HBE000010



FBD-100 WELLHEAD SYSTEM



EOG RESOURCES 13-3/8" X 9-5/8" X 7-5/8" X 5-1/2" FBD100 WELLHEAD SYSTEM	DWN. EA 12/28/17	 Worldwide Expertise • Global Strength	DRAWING No.
	CHK.		WH-17731
	APPR.		
	BY DATE		
WH-17063	Compresspac	WH-17731	WH-17731

EOG RESOURCES, INC.
GREEN DRAKE 16 FED COM NO. 706H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,014'
Top of Salt	1,339'
Base of Salt	4,708'
Lamar	4,956'
Bell Canyon	4,979'
Cherry Canyon	5,964'
Brushy Canyon	7,560'
Bone Spring Lime	9,101'
1 st Bone Spring Sand	10,105'
2 nd Bone Spring Shale	10,318'
2 nd Bone Spring Sand	10,608'
3 rd Bone Spring Carb	11,155'
3 rd Bone Spring Sand	11,807'
Wolfcamp	12,265'
TD	12,316'

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

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	5,964'	Oil
Brushy Canyon	7,560'	Oil
1 st Bone Spring Sand	10,105'	Oil
2 nd Bone Spring Shale	10,318'	Oil
2 nd Bone Spring Sand	10,608'	Oil
3 rd Bone Spring Carb	11,155'	Oil
3 rd Bone Spring Sand	11,807'	Oil
Wolfcamp	12,265'	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 13.375" casing at 1,040' and circulating cement back to surface.

EOG RESOURCES, INC.
GREEN DRAKE 16 FED COM NO. 706H

4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
17.5"	0 - 1,040'	13.375"	54.5#	J55	STC	1.125	1.25	1.60
12.25"	0 - 4,000'	9.625"	40#	J55	LTC	1.125	1.25	1.60
12.25"	4,000' - 4,800'	9.625"	40#	HCK55	LTC	1.125	1.25	1.60
8.75"	0 - 11,300'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0' - 10,800'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60
6.75"	10,800' - 19,886'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60

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.

Variance is also requested for the 7-5/8" x 5-1/2" casing (minimum clearance) from the top of the cement overlap to surface.

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /ft	Mix Water Gal/sk	Slurry Description
13-3/8" 1,040'	610	13.5	1.73	9.13	Lead: Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	160	14.8	1.34	6.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 840')
9-5/8" 4,800'	770	12.7	2.20	11.64	Lead: Class C + 0.15% C-20 + 11.63 pps Salt + 0.1% C-51 + 0.75% C-41P (TOC @ Surface)
	360	16.0	1.12	4.75	Tail: Class C + 0.13% C-20 (TOC @ 3,840')
7-5/8" 11,300'	280	11.5	2.72	15.70	Lead: Class C + 0.40% D013 + 0.20% D046 + 0.10% D065 + 0.20% D167 (TOC @ 4,300')
	180	16.0	1.12	4.74	Tail: Class H + 94.0 pps D909 + 0.25% D065 + 0.30% D167 + 0.02% D208 + 0.15% D800 (TOC @ 9,800')
5-1/2" 19,886'	770	14.1	1.26	5.80	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,800')

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.

**EOG RESOURCES, INC.
GREEN DRAKE 16 FED COM NO. 706H**

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. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

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

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 10,000/ 250 psig and the annular preventer to 5,000/ 250 psig.

Before drilling out of the intermediate casing strings (both the 9-5/8" and 7-5/8" strings), the ram-type BOP and accessory equipment will be tested to 10,000/ 250 psig and the annular preventer to 5,000/ 250 psig.

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 - 1,040'	Fresh - Gel	8.6-8.8	28-34	N/c
1,040' - 4,800'	Brine	10.0-10.2	28-34	N/c
4,800' - 11,300'	Oil Base	8.7-9.4	58-68	N/c - 6
11,300' - 19,886' Lateral	Oil Base	10.0-14.0	58-68	3 - 6

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.

EOG RESOURCES, INC.
GREEN DRAKE 16 FED COM NO. 706H

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) H₂S 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 8966 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:

EOG RESOURCES, INC.
GREEN DRAKE 16 FED COM NO. 706H

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 13-3/8" surface casing, a 13-5/8" 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 FBD100 Multi-Bowl 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.

Both the surface and intermediate casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

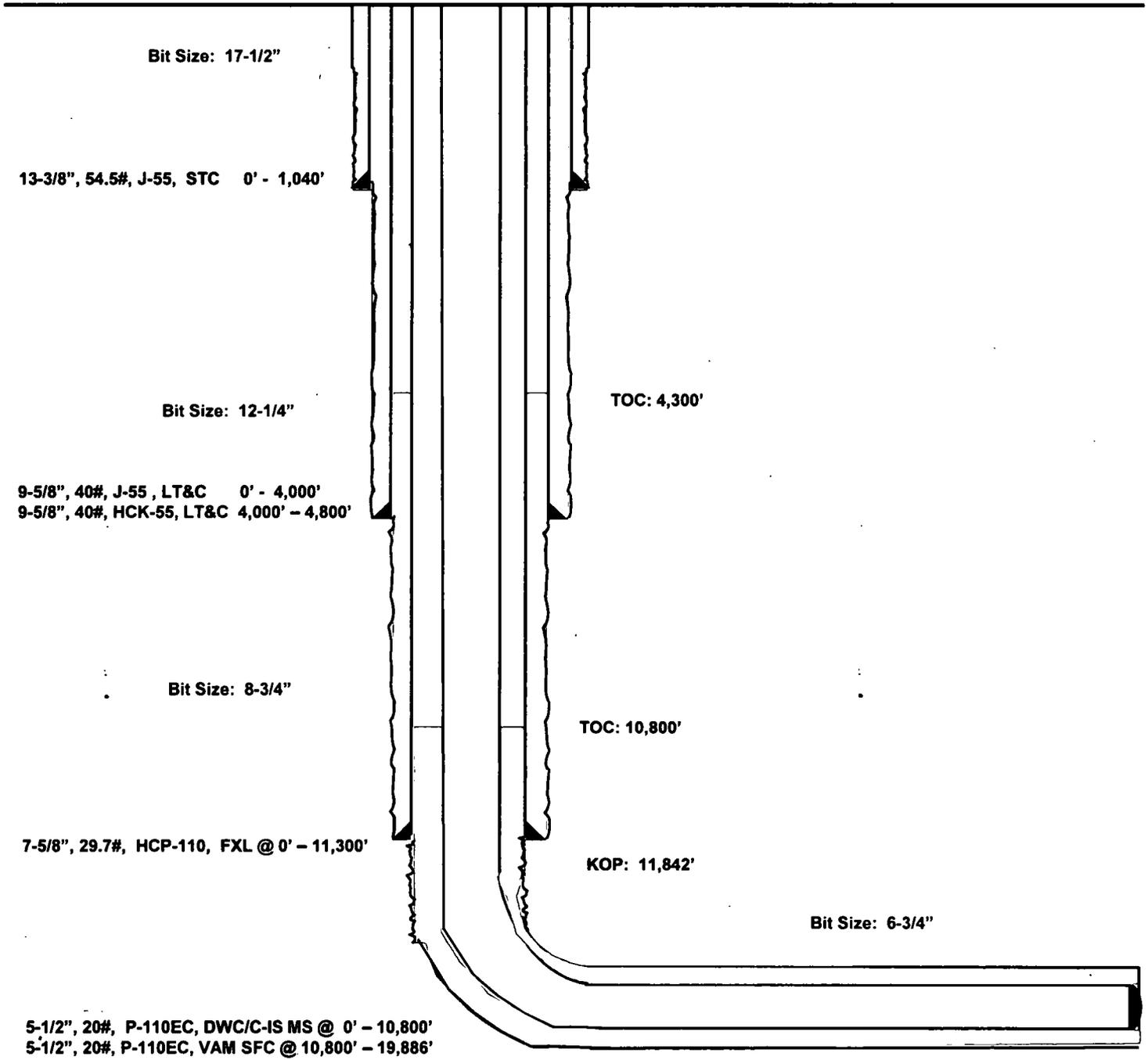
**Green Drake 16 Fed Com #706H
Lea County, New Mexico**

**2390' FSL
2129' FWL
Section 16
T-25-S, R-33-E**

Proposed Wellbore

API: 30-025-*****

**KB: 3,430'
GL: 3,405'**



**Lateral: 19,886' MD, 12,316' TVD
Upper Most Perf:
2540' FSL & 1980' FWL Sec. 16
Lower Most Perf:
100' FSL & 1980' FWL Sec. 21
BH Location: 100' FSL & 1980' FWL
Section 21
T-25-S, R-33-E**

10,000 PSI BOP Annular Variance Request

EOG Resources request a variance to use a 5000 psi annular BOP with a 10,000 psi BOP stack. The component and compatibility tables along with the general well control plans demonstrate how the 5000 psi annular BOP will be protected from pressures that exceed its rated working pressure (RWP). The pressure at which the control of the wellbore is transferred from the annular preventer to another available preventer will not exceed 3500 psi (70% of the RWP of the 5000 psi annular BOP).

1. Component and Preventer Compatibility Tables

The tables below outlines the tubulars and the compatible preventers in use. This table, combined with the drilling fluid, documents that two barriers to flow will be maintained at all times.

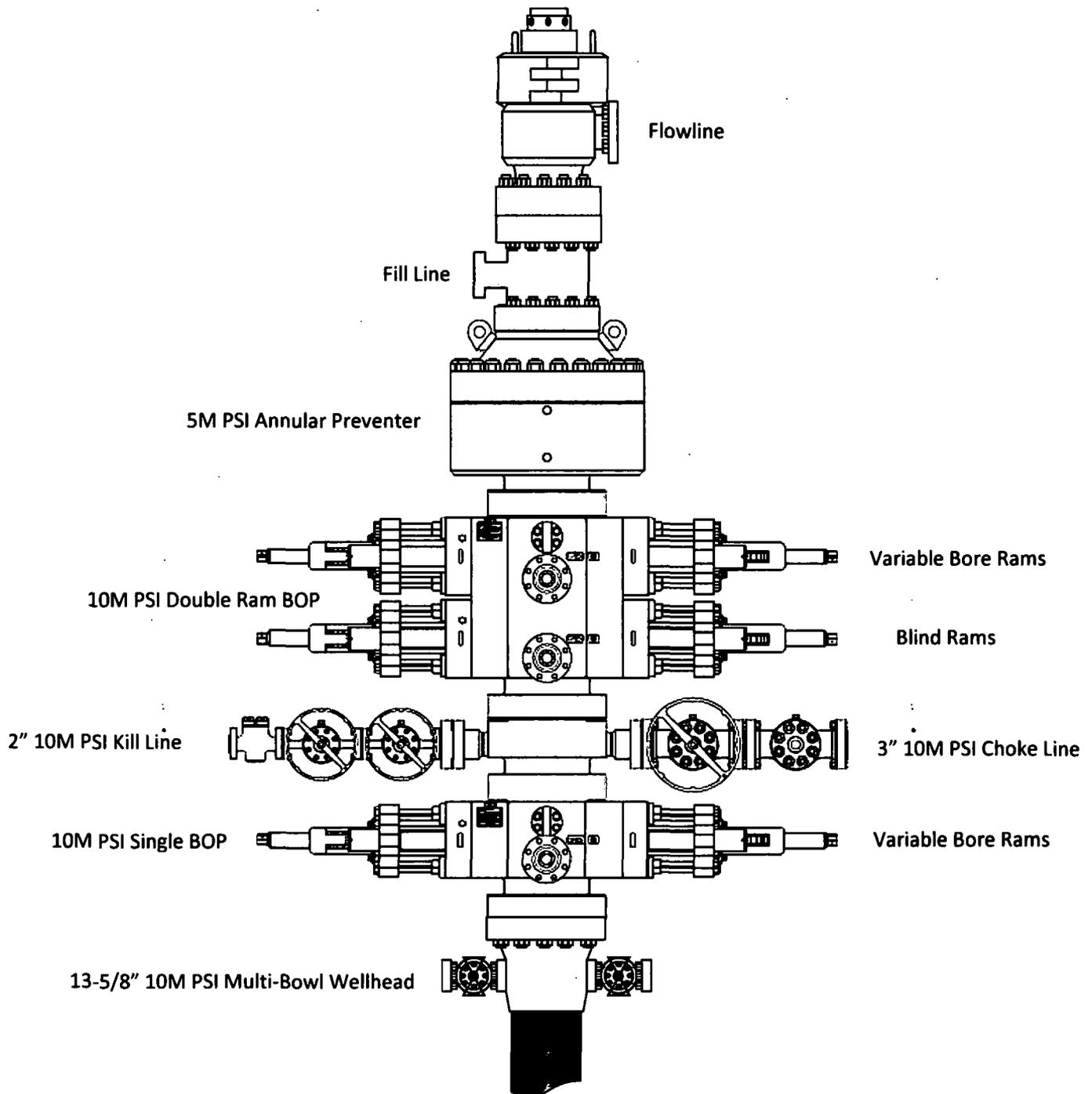
12-1/4" Intermediate Hole Section 10M psi requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Jars	6.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
DCs and MWD tools	6.500" – 8.000"	Annular	5M	-	-
Mud Motor	8.000" – 9.625"	Annular	5M	-	-
1 st Intermediate casing	9.625"	Annular	5M	-	-
Open-hole	-	Blind Rams	10M	-	-

8-3/4" Intermediate Hole Section 10M psi requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
HWDP	5.000" or 4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Jars	6.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
DCs and MWD tools	6.500" – 8.000"	Annular	5M	-	-
Mud Motor	6.750" – 8.000"	Annular	5M	-	-
2 nd Intermediate casing	7.625"	Annular	5M	-	-
Open-hole	-	Blind Rams	10M	-	-

6-3/4" Production Hole Section					
10M psi requirement					
Component	OD	Primary Preventer	RWP	Alternate Preventer(s)	RWP
Drillpipe	4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
HWDP	4.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
DCs and MWD tools	4.750" - 5.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Mud Motor	4.750" - 5.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Mud Motor	5.500" - 5.750"	Annular	5M	-	-
Production casing	5.500"	Annular	5M	Upper 3.5 - 5.5" VBR Lower 3.5 - 5.5" VBR	10M 10M
Open-hole	-	Blind Rams	10M	-	-

VBR = Variable Bore Ram

EOG Resources 13-5/8" 10M PSI BOP Stack



2. Well Control Procedures

Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. At least one well control drill will be performed weekly per crew to demonstrate compliance with the procedure and well control plan. The well control drill will be recorded in the daily drilling log. The type of drill will be determined by the ongoing operations, but reasonable attempts will be made to vary the type of drill conducted (pit, trip, open hole, choke, etc.). This well control plan will be available for review by rig personnel in the EOG Resources drilling supervisor's office on location, and on the rig floor. All BOP equipment will be tested as per Onshore O&G Order No. 2 with the exception of the 5000 psi annular which will be tested to 70% of its RWP.

General Procedure While Drilling

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in Well (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full opening safety valve and close
3. Space out drill string
4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure While Running Production Casing

1. Sound alarm (alert crew)
2. Stab crossover and full opening safety valve and close
3. Space out string

4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
 - a. SIDPP and SICP
 - b. Pit gain
 - c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach 70% or greater of the RWP of the annular preventer, confirm spacing and close the upper variable bore rams.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams. (HCR and choke will already be in the closed position.)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
 - a. SICP
 - b. Pit gain
 - c. Time
6. Regroup and identify forward plan

General Procedures While Pulling BHA thru Stack

1. PRIOR to pulling last joint of drillpipe thru the stack.
 - a. Perform flowcheck, if flowing:
 - b. Sound alarm (alert crew)
 - c. Stab full opening safety valve and close
 - d. Space out drill string with tool joint just beneath the upper variable bore rams.
 - e. Shut-in using upper variable bore rams. (HCR and choke will already be in the closed position.)
 - f. Confirm shut-in
 - g. Notify toolpusher/company representative
 - h. Read and record the following:
 - i. SIDPP and SICP
 - ii. Pit gain
 - iii. Time
 - i. Regroup and identify forward plan
2. With BHA in the stack and compatible ram preventer and pipe combo immediately available.
 - a. Sound alarm (alert crew)
 - b. Stab crossover and full opening safety valve and close
 - c. Space out drill string with upset just beneath the upper variable bore rams.
 - d. Shut-in using upper variable bore rams. (HCR and choke will already be in the closed position.)
 - e. Confirm shut-in
 - f. Notify toolpusher/company representative
 - g. Read and record the following:
 - i. SIDPP and SICP

- ii. Pit gain
 - iii. Time
 - h. Regroup and identify forward plan
- 3. With BHA in the stack and NO compatible ram preventer and pipe combo immediately available.
 - a. Sound alarm (alert crew)
 - b. If possible to pick up high enough, pull string clear of the stack and follow "Open Hole" scenario.
 - c. If impossible to pick up high enough to pull the string clear of the stack:
 - d. Stab crossover, make up one joint/stand of drillpipe, and full opening safety valve and close
 - e. Space out drill string with tooljoint just beneath the upper variable bore ram.
 - f. Shut-in using upper variable bore ram. (HCR and choke will already be in the closed position.)
 - g. Confirm shut-in
 - h. Notify toolpusher/company representative
 - i. Read and record the following:
 - i. SIDPP and SICP
 - ii. Pit gain
 - iii. Time
 - j. Regroup and identify forward plan

APD ID: 10400032891

Submission Date: 09/20/2018

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

Well Type: OIL WELL

Well Work Type: Drill


[Show Final Text](#)**Section 1 - Existing Roads**

Will existing roads be used? YES

Existing Road Map:

GREEN_DRAKE_16_FED_COM_706H_Vicinity_20180920140829.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:

GREEN_DRAKE_16_FED_COM_706H_Padsite_20180920140851.pdf

GREEN_DRAKE_16_FED_COM_706H_Wellsite_20180920140855.pdf

Green_Drake_16_Fed_Com_Infrastructure_20180920140910.pdf

New road type: RESOURCE

Length: 1167

Feet

Width (ft.): 25

Max slope (%): 2

Max grade (%): 20

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 25

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

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

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:

GREEN_DRAKE_16_FED_COM_706H_Radius_20180920141046.pdf

Existing Wells description:

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Green Drake 16 Fed Com central battery is located in the SW/4 of section 16.

Production Facilities map:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

- Green_Drake_16_Fed_Com_706H_707H_FL_20180920141126.pdf
- Green_Drake_16_Fed_Com_706H_707H_Road_Easement_20180920141129.pdf
- Green_Drake_16_Fed_Com_CTB_Road_Easement_20180920141130.pdf
- Green_Drake_16_Fed_Com_CTB_20180920141130.pdf
- Green_Drake_16_Fed_Com_GasLift_20180920141131.pdf
- Green_Drake_16_Fed_Com_GasLift2_20180920141131.pdf
- Green_Drake_16_Fed_Com_GasLift3_20180920141132.pdf
- Green_Drake_16_Fed_Com_GGS_20180920141132.pdf
- Green_Drake_16_Fed_Com_GGS2_20180920141136.pdf
- Green_Drake_16_Fed_Com_Infrastructure_20180920141137.pdf
- Green_Drake_16_Fed_Com_OHE_20180920141138.pdf
- Green_Drake_16_Fed_Com_WGS_20180920141141.pdf
- Green_Drake_16_Fed_Com_WGS2_20180920141142.pdf

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:

Green_Drake_16_Fed_Com_water_and_caliche_map_20180920141301.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:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

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:

Green_Drake_16_Fed_Com_water_and_caliche_map_20180920141321.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:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

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

Disposal type description:

Disposal location description: Trucked to NMOCD approved disposal facility

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.)

Reserve pit width (ft.)

Reserve pit depth (ft.)

Reserve pit volume (cu. yd.)

Is at least 50% of the reserve pit in cut?

Reserve pit liner

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:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

Section 9 - Well Site Layout

Well Site Layout Diagram:

GREEN_DRAKE_16_FED_COM_706H_Padsite_20180920141356.pdf

GREEN_DRAKE_16_FED_COM_706H_Wellsite_20180920141357.pdf

Green_Drake_16_FC_706H_Rig_Layout_20180920141427.pdf

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

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: GREEN DRAKE 16 FED COM

Multiple Well Pad Number: 706H/707H

Recontouring attachment:

GREEN_DRAKE_16_FED_COM_706H_Reclamation_20180920141444.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.

Well pad proposed disturbance (acres): 0	Well pad interim reclamation (acres): 0	Well pad long term disturbance (acres): 0
Road proposed disturbance (acres): 0	Road interim reclamation (acres): 0	Road long term disturbance (acres): 0
Powerline proposed disturbance (acres): 0	Powerline interim reclamation (acres): 0	Powerline long term disturbance (acres): 0
Pipeline proposed disturbance (acres): 0	Pipeline interim reclamation (acres): 0	Pipeline long term disturbance (acres): 0
Other proposed disturbance (acres): 0	Other interim reclamation (acres): 0	Other long term disturbance (acres): 0
Total proposed disturbance: 0	Total interim reclamation: 0	Total long term disturbance: 0

Disturbance Comments: All Interim and Final reclamation must be within 6 months. Interim must be within 6 months of completion and final within 6 months of abandonment plugging. Dual pad operations may alter timing.

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 resspreading. 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

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils.

Existing Vegetation at the well pad attachment:

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

Existing Vegetation Community at the road attachment:

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

Existing Vegetation Community at the pipeline attachment:

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

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

Seed Summary	
Seed Type	Pounds/Acre

Total pounds/Acre:

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: Star

Last Name: Harrell

Phone: (432)848-9161

Email: star_harrell@eogresources.com

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, erosion is controlled, and free of noxious weeds. Weeds will be treated if found.

Weed treatment plan attachment:

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

Monitoring plan attachment:

Success standards: N/A

Pit closure description: NA

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: NEW MEXICO STATE LAND 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 5/3/18. 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:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: GREEN DRAKE 16 FED COM

Well Number: 706H

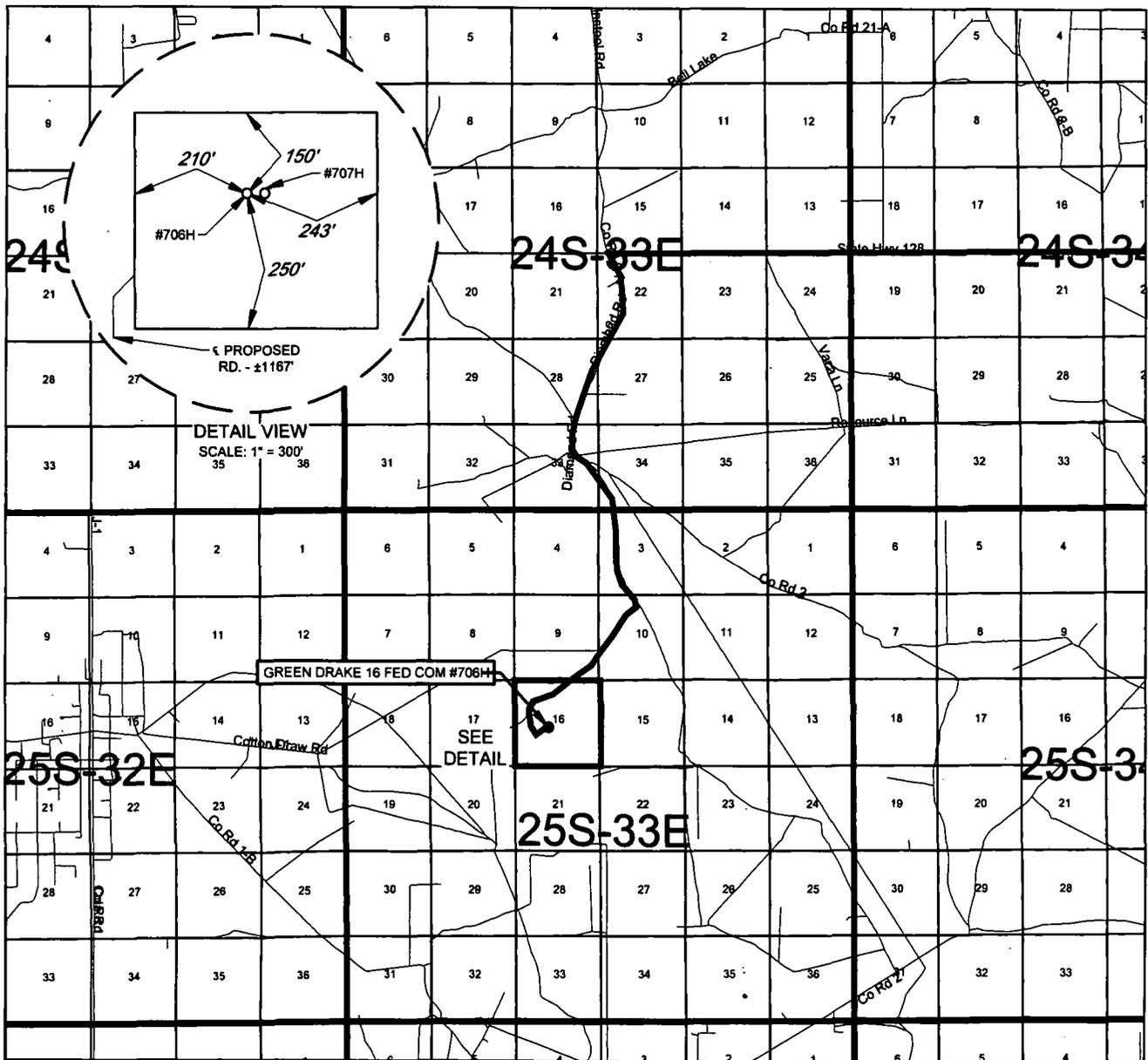
Other SUPO Attachment

GREEN_DRAKE_16_FED_COM_706H_Location_20180920141551.pdf

GreenDrake16FedCom_GasCapturePlan_enterprise_20180920141626.pdf

SUPO_Green_Drake_16_Fed_Com_706H_20180920141632.pdf

EXHIBIT 2
VICINITY MAP



LEASE NAME & WELL NO.: GREEN DRAKE 16 FED COM #706H

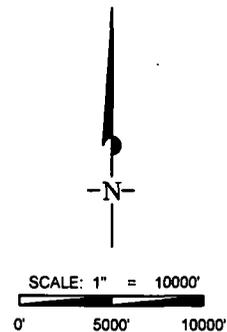
SECTION 16 TWP 25-S RGE 33-E SURVEY N.M.P.M.
 COUNTY LEA STATE NM
 DESCRIPTION 2390' FSL & 2129' FWL

DISTANCE & DIRECTION

FROM INT. OF NM-18. & NM-128. GO WEST ON NM-128 FOR ±23.9 MILES. THENCE SOUTH (LEFT) ON DIAMOND RD. FOR ±2.5 MILES. THENCE SOUTHEAST (LEFT) ON COUNTY RD. 2 FOR ±0.2 MILES. THENCE SOUTHEAST (RIGHT) ON VACA RD. ±1.8 MILES, THENCE SOUTHWEST (RIGHT) ON LEASE RD. ±2.1 MILES, THENCE SOUTHEAST (LEFT) PROPOSED RD. FOR ±1167 FEET TO A POINT ±258 FEET SOUTHWEST OF THIS 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 COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.

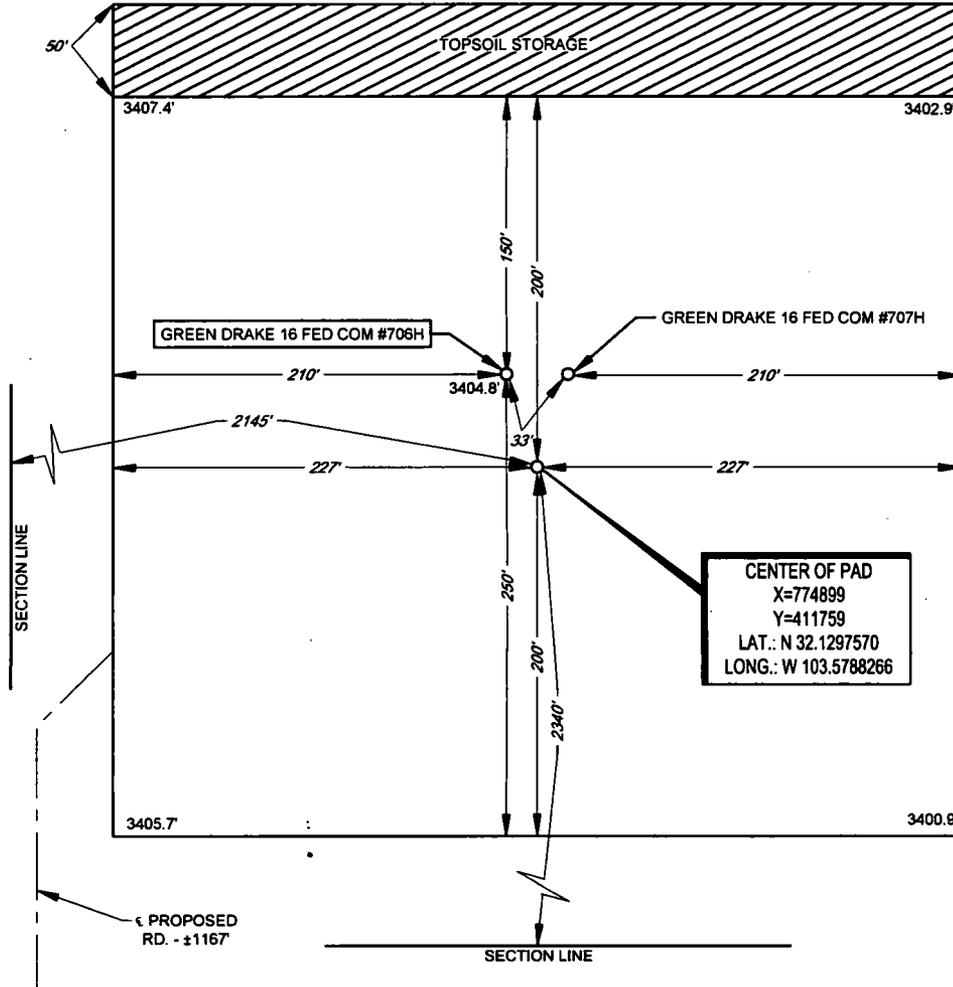


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SECTION 16, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
 LEA COUNTY, NEW MEXICO

DETAIL VIEW
 SCALE: 1" = 100'

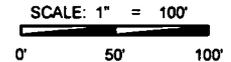


LEASE NAME & WELL NO.: GREEN DRAKE 16 FED COM #706H
 #706H LATITUDE N 32.1298945 #706H LONGITUDE W 103.5788795

CENTER OF PAD IS 2340' FSL & 2145' FWL

LEGEND

PROPOSED ROAD



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.

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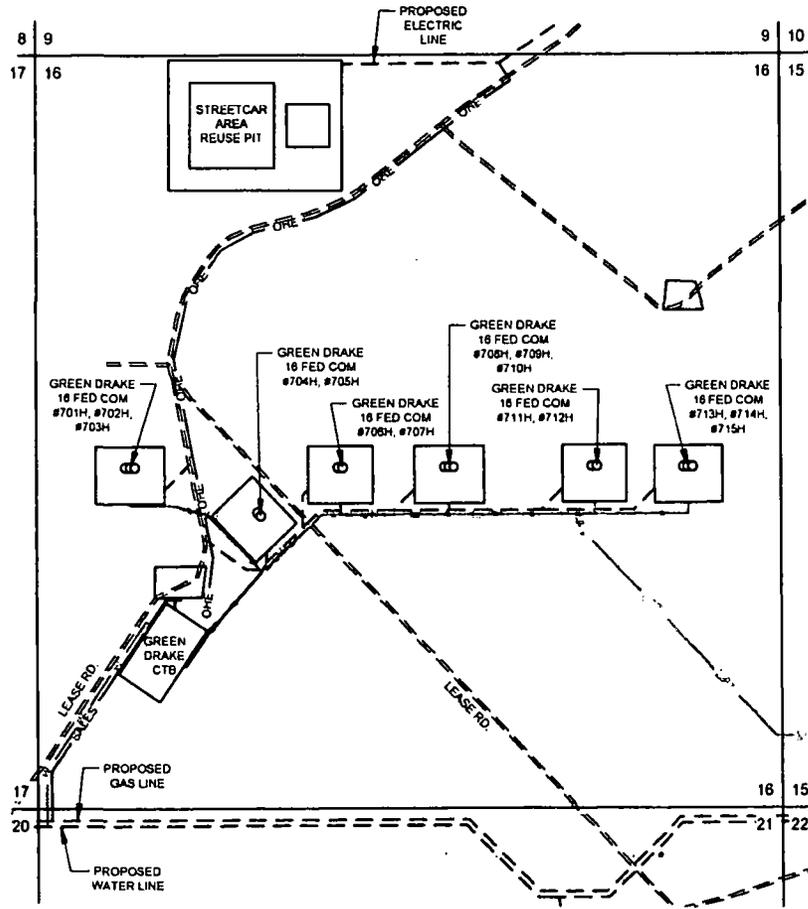
EXHIBIT 5
SECTION 15, 16, & 21, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SCALE 1" = 1000'
0 500' 1000'

**GREEN DRAKE 16 FED COM
INFRASTRUCTURE MAP**



PROPOSED ROAD -TOTAL FOOTAGES	4,583 FT
FROM LEASE RD	
TO GREEN DRAKE 16 FED COM CTB	.79 FT
TO GREEN DRAKE 16 FED COM #701H, #702H, #703H	249 FT
TO GREEN DRAKE 16 FED COM #704H, #705H	595 FT
TO GREEN DRAKE 16 FED COM #706H, #707H	1,187 FT
TO GREEN DRAKE 16 FED COM #708H, #709H, #710H	1,778 FT
TO GREEN DRAKE 16 FED COM #711H, #712H	2,820 FT
TO GREEN DRAKE 16 FED COM #713H, #714H, #715H	3,409 FT
FLOWLINE -TOTAL FOOTAGES	14,846 FT
FROM CTB	
TO GREEN DRAKE 16 FED COM #701H, #702H, #703H	1,966 FT
TO GREEN DRAKE 16 FED COM #704H, #705H	1,189 FT
TO GREEN DRAKE 16 FED COM #706H, #707H	1,604 FT
TO GREEN DRAKE 16 FED COM #708H, #709H, #710H	2,425 FT
TO GREEN DRAKE 16 FED COM #711H, #712H	3,454 FT
TO GREEN DRAKE 16 FED COM #713H, #714H, #715H	4,118 FT



W	WATER LINES -TOTAL FOOTAGES	5,840 FT
GA	GAS LINE -TOTAL FOOTAGES	5,608 FT
GL	GAS LIFT LINE -TOTAL FOOTAGES	9,841 FT
	FROM TIE IN	
	TO GREEN DRAKE 16 FED COM #701H, #702H, #703H	8,742 FT
	TO GREEN DRAKE 16 FED COM #704H, #705H	15 FT
	TO GREEN DRAKE 16 FED COM #706H, #707H	77 FT
	TO GREEN DRAKE 16 FED COM #708H, #709H, #710H	77 FT
	TO GREEN DRAKE 16 FED COM #711H, #712H	185 FT
	TO GREEN DRAKE 16 FED COM #713H, #714H, #715H	745 FT
OE	OVERHEAD ELECTRIC -TOTAL FOOTAGES	5,647 FT

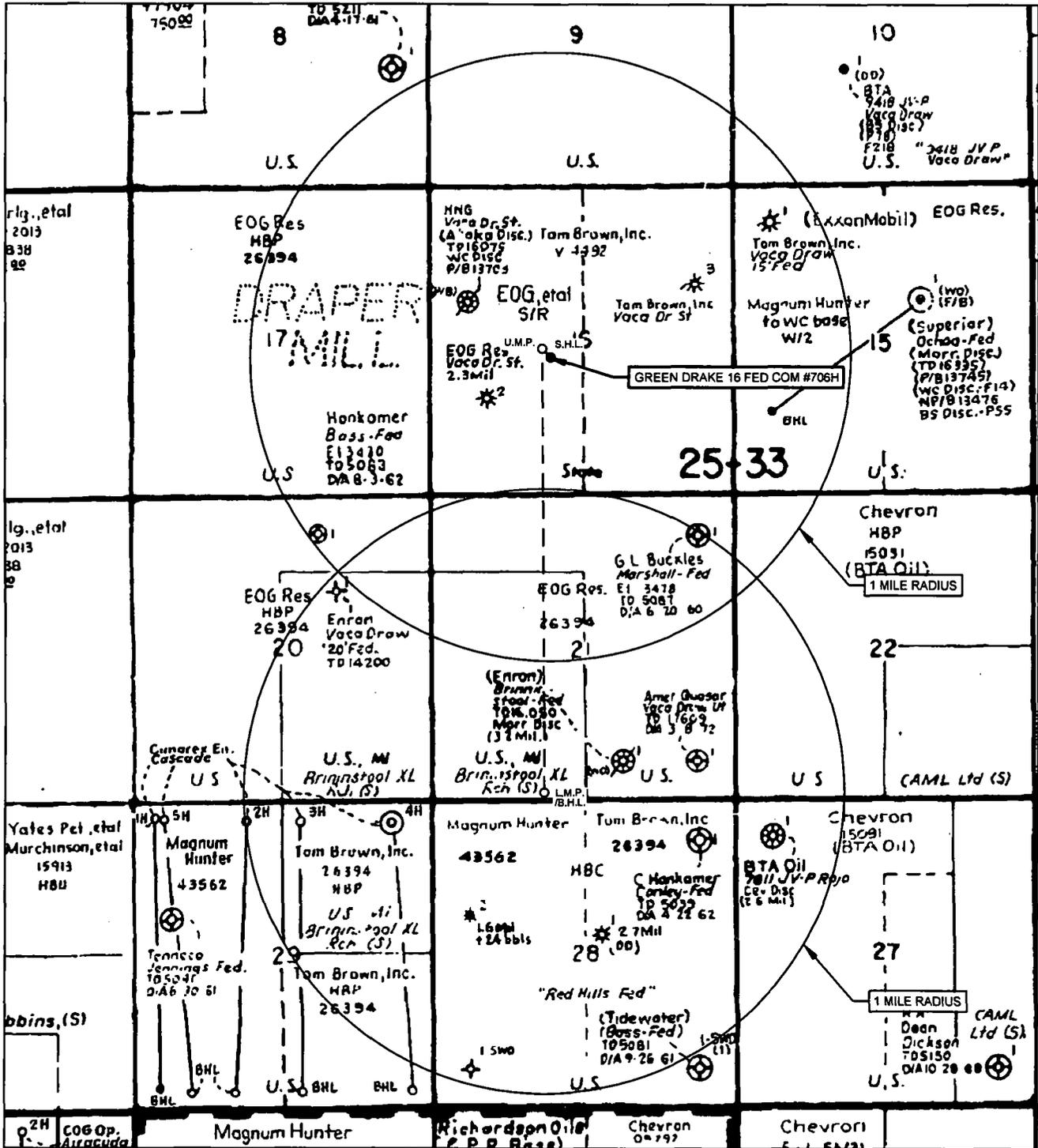
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LOYALTY INNOVATION LEGACY
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TEXAS FIRM REGISTRATION NO. 10042504
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GREEN DRAKE 16 FED COM INFRASTRUCTURE MAP	REVISION:	
	MML	08/13/18
DATE:	05/17/18	
FILE:	SM_GREEN_DRAKE_16_FED_COM_REV2	
DRAWN BY:	MML	
SHEET:	1 OF 1	

E:\GOREY\2008\MOCKUP\GREEN_DRAKE_16_FED_COM\FINAL_PRODUCTS\SECTION\GREEN_DRAKE_16_FED_COM_REV2.DWG 8/15/2018 10:43:15 AM

EXHIBIT 3

SECTION 16, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: GREEN DRAKE 16 FED COM #706H

SCALE: NTS #706H LATITUDE N 32.1298945 #706H LONGITUDE W 103.5788795

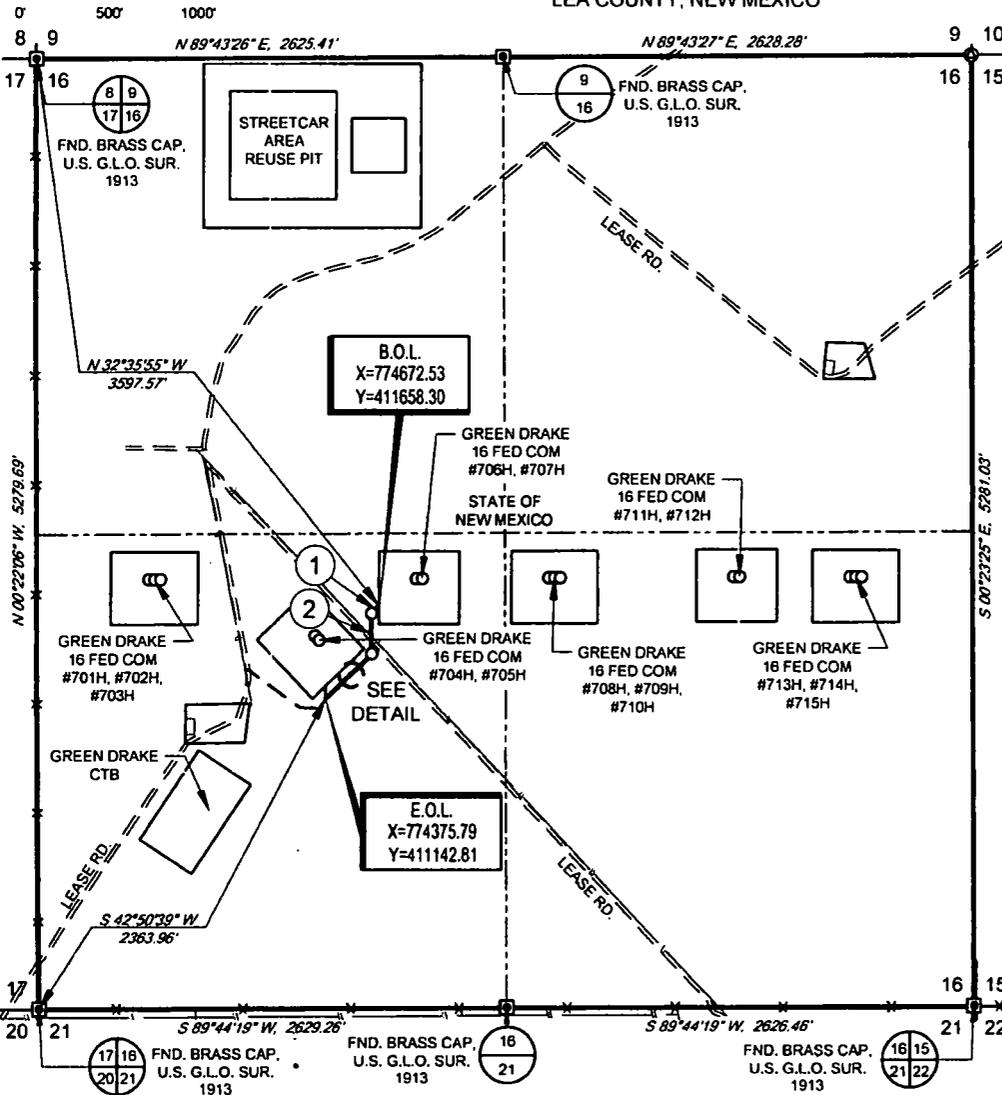
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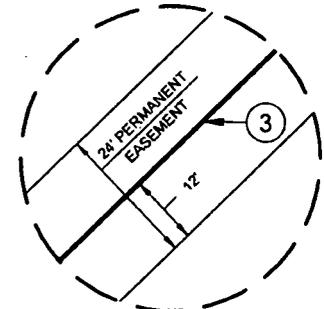
SCALE: 1" = 1000'

SECTION 16, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LINE TABLE

LINE	BEARING	DISTANCE
1	S 44°51'53" W	57.65'
2	S 00°16'15" E	227.14'
3	S 46°05'49" W	356.90'



LEGEND

- SECTION LINE
- QUARTER SECTION LINE
- SIXTEENTH SECTION LINE
- SURVEYED BASELINE
- CONTINUED BASELINE
- TRACT BORDER
- EDGE OF EASEMENT
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OHE OVERHEAD ELECTRIC
- MONUMENT
- CALCULATED CORNER
- POINT OF INTERSECTION

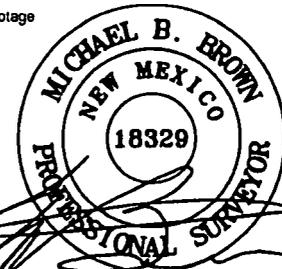
**GREEN DRAKE 16 FED COM 706H-707H
ROAD EASEMENT**

Being a proposed road easement being 24 feet in width, 12 feet left, and 12 feet right of the above platted centerline total line footage containing 641.69 feet or 38.89 rods, containing 0.35 acres more or less and allocated by quarter quarters as follows:

NE/4 SW/4 - 641.69 feet or 38.89 rods, containing 0.35 acres



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Michael Blake Brown, P.S. No. 18329
MAY 18, 2018

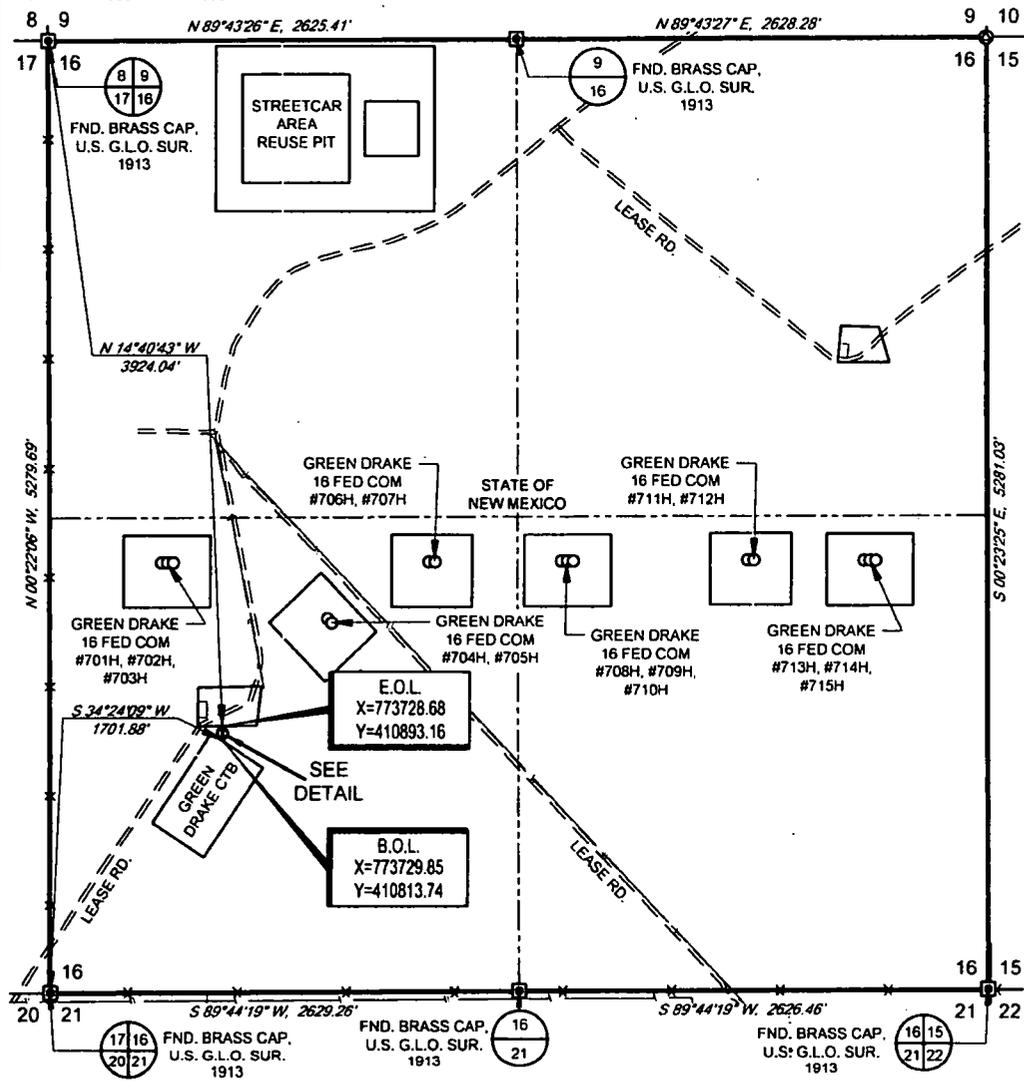


GREEN DRAKE 16 FED COM 706H-707H ROAD EASEMENT	REVISION:	
	INT	DATE
DATE: 05/18/18		
FILE: EP_GREEN_DRAKE_16_FED_COM_706H_707H.ROAD		
DRAWN BY: GJU		
SHEET: 1 OF 1		

- NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
 2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.
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 5. E.O.L./P.O.E. = END OF LINE/POINT OF EXIT

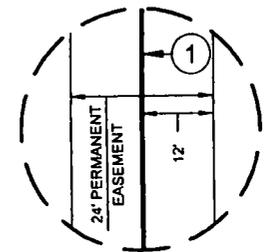
SCALE: 1" = 1000'

SECTION 16, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LINE TABLE

LINE	BEARING	DISTANCE
1	N 00°50'15" W	79.43'

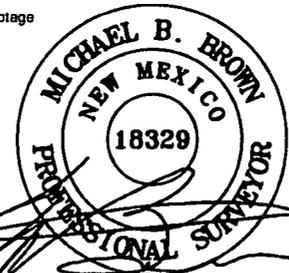


LEGEND

- SECTION LINE
- - - QUARTER SECTION LINE
- - - SIXTEENTH SECTION LINE
- SURVEYED BASELINE
- TRACT BORDER
- - - EDGE OF EASEMENT
- - - ROAD WAY
- X FENCE LINE
- - - EXISTING PIPELINE
- OHE OVERHEAD ELECTRIC
- ⊙ MONUMENT
- ⊙ CALCULATED CORNER

GREEN DRAKE 16 FED COM CTB ROAD EASEMENT

Being a proposed road easement being 24 feet in width, 12 feet left, and 12 feet right of the above platted centerline total line footage containing 79.43 feet or 4.81 rods, containing 0.04 acres more or less and allocated by quarter quarters as follows:
NW/4 SW/4 - 79.43 feet or 4.81 rods, containing 0.04 acres

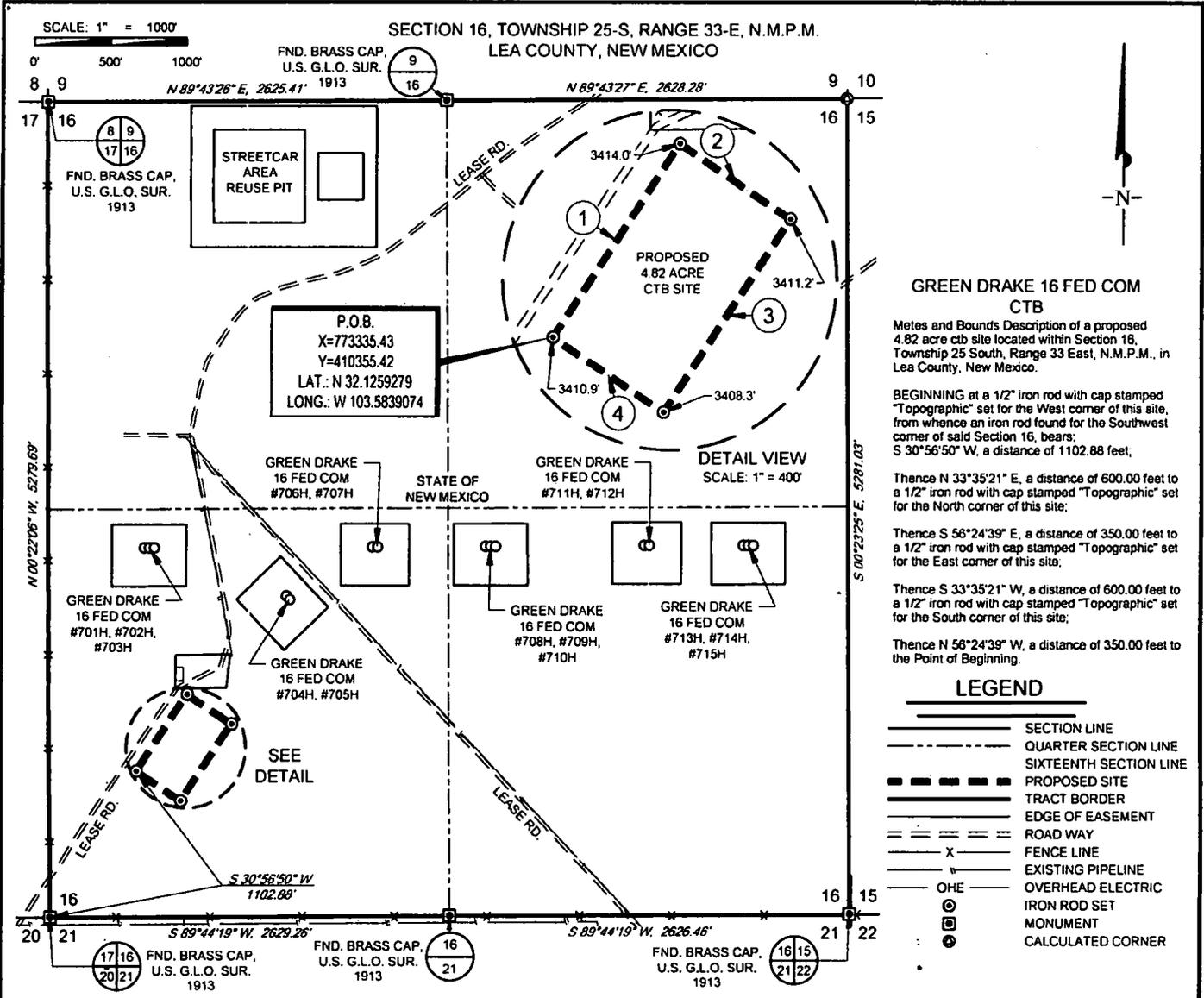


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MAY 17, 2018

GREEN DRAKE 16 FED COM CTB ROAD EASEMENT	REVISION:		NOTES:
	INT	DATE	
DATE: 05/17/18			<p>1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"</p> <p>2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1883, EAST ZONE, U.S. SURVEY FEET</p> <p>3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY EOG RESOURCES, INC. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.</p> <p>4. B.O.L./P.O.B. = BEGINNING OF LINE/POINT OF BEGINNING</p> <p>5. E.O.L./P.O.E. = END OF LINE/POINT OF EXIT</p>
FILE: EP_GREEN_DRAKE_16_FED_COM_CT_B_ROAD			
DRAWN BY: MML			
SHEET: 1 OF 1			



GREEN DRAKE 16 FED COM CTB

Metes and Bounds Description of a proposed 4.82 acre ctb site located within Section 16, Township 25 South, Range 33 East, N.M.P.M., in Lea County, New Mexico.

BEGINNING at a 1/2" iron rod with cap stamped "Topographic" set for the West corner of this site, from whence an iron rod found for the Southwest corner of said Section 16, bears:

S 30°56'50" W, a distance of 1102.88 feet;

Thence N 33°35'21" E, a distance of 600.00 feet to a 1/2" iron rod with cap stamped "Topographic" set for the North corner of this site;

Thence S 56°24'39" E, a distance of 350.00 feet to a 1/2" iron rod with cap stamped "Topographic" set for the East corner of this site;

Thence S 33°35'21" W, a distance of 600.00 feet to the South corner of this site;

Thence N 56°24'39" W, a distance of 350.00 feet to the Point of Beginning.

LEGEND

- SECTION LINE
- - - QUARTER SECTION LINE
- - - - SIXTEENTH SECTION LINE
- PROPOSED SITE
- TRACT BORDER
- EDGE OF EASEMENT
- == ROAD WAY
- X- FENCE LINE
- EXISTING PIPELINE
- OHE OVERHEAD ELECTRIC
- ⊙ IRON ROD SET
- ⊠ MONUMENT
- ⊙ CALCULATED CORNER

LINE TABLE

LINE	BEARING	DISTANCE
1	N 33°35'21" E.	600.00'
2	S 56°24'39" E.	350.00'
3	S 33°35'21" W.	600.00'
4	N 56°24'39" W.	350.00'

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MAY 17, 2018



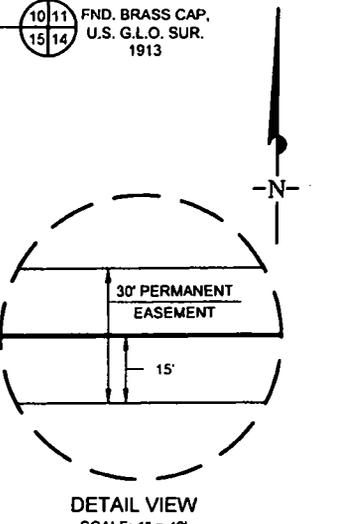
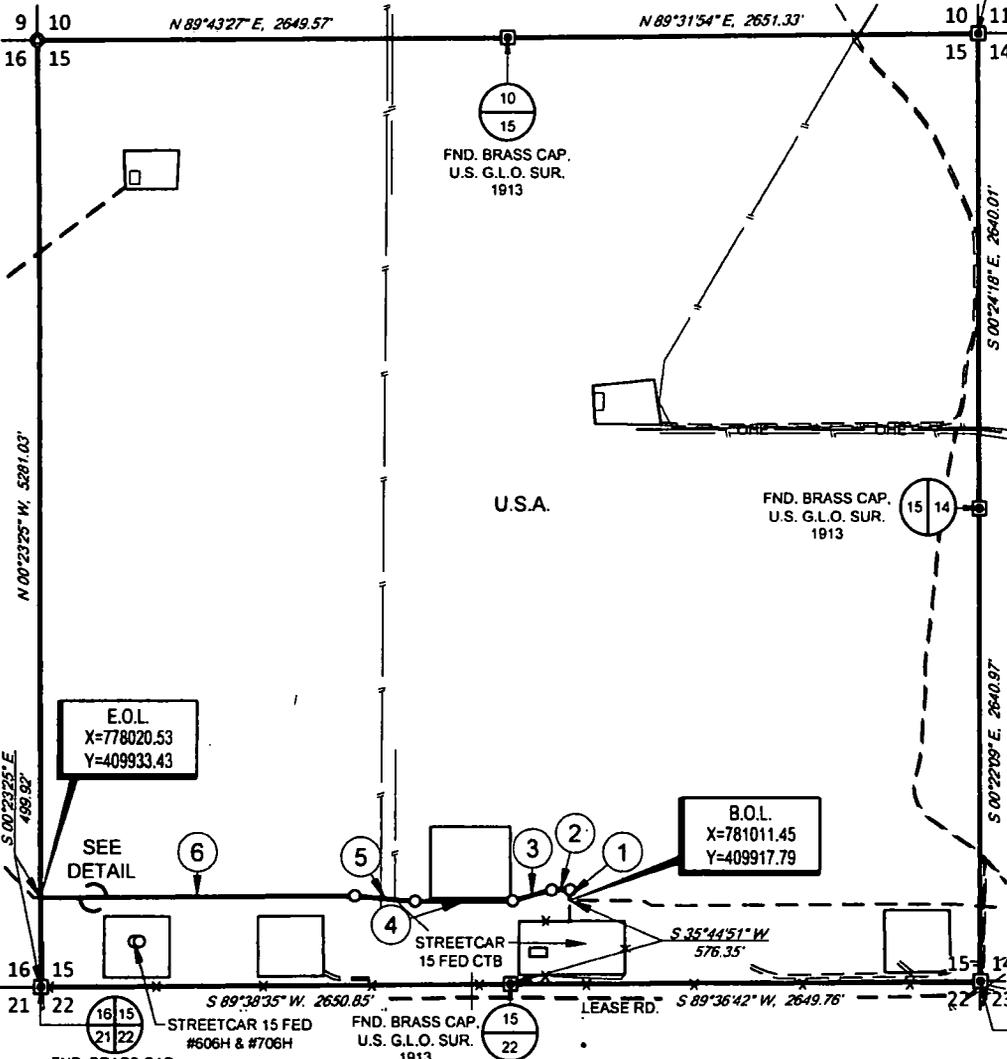
GREEN DRAKE 16 FED COM CTB	REVISION:	
	INT	DATE
DATE: 05/17/18		
FILE: BO_GREEN_DRAKE_16_FED_COM_CTБ		
DRAWN BY: MML		
SHEET: 1 OF 1		

NOTES:

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4. P.O.B. = POINT OF BEGINNING

SCALE: 1" = 1000'

SECTION 15, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LINE TABLE

LINE	BEARING	DISTANCE
1	N 00°24'15" W.	59.77'
2	S 89°35'45" W.	103.77'
3	S 74°35'45" W.	230.19'
4	S 89°37'44" W.	551.45'
5	N 84°28'53" W.	341.04'
6	S 89°37'44" W.	1773.84'

LEGEND

- SECTION LINE
- SURVEYED BASELINE
- - - CONTINUED BASELINE
- TRACT BORDER
- EDGE OF EASEMENT
- ROAD WAY
- X FENCE LINE
- EXISTING PIPELINE
- OHE OVERHEAD ELECTRIC
- POINT OF INTERSECTION
- MONUMENT
- CALCULATED CORNER

E.O.L.
X=778020.53
Y=409933.43

B.O.L.
X=781011.45
Y=409917.79

SEE
DETAIL

STREETCAR
15 FED CTB

FND. BRASS CAP.
U.S. G.L.O. SUR.
1913

FND. BRASS CAP.
U.S. G.L.O. SUR.
1913

FND. BRASS CAP.
U.S. G.L.O. SUR.
1913

GREEN DRAKE 16 FED COM
GAS LIFT LINES

Being a proposed gas lift line easements being 30 feet in width, 15 feet left, and 15 feet right of the above plated centerline total line footage containing 3060.16 feet or 185.46 rods, containing 2.11 acres more or less.

TOPOGRAPHIC
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AUGUST 13, 2018

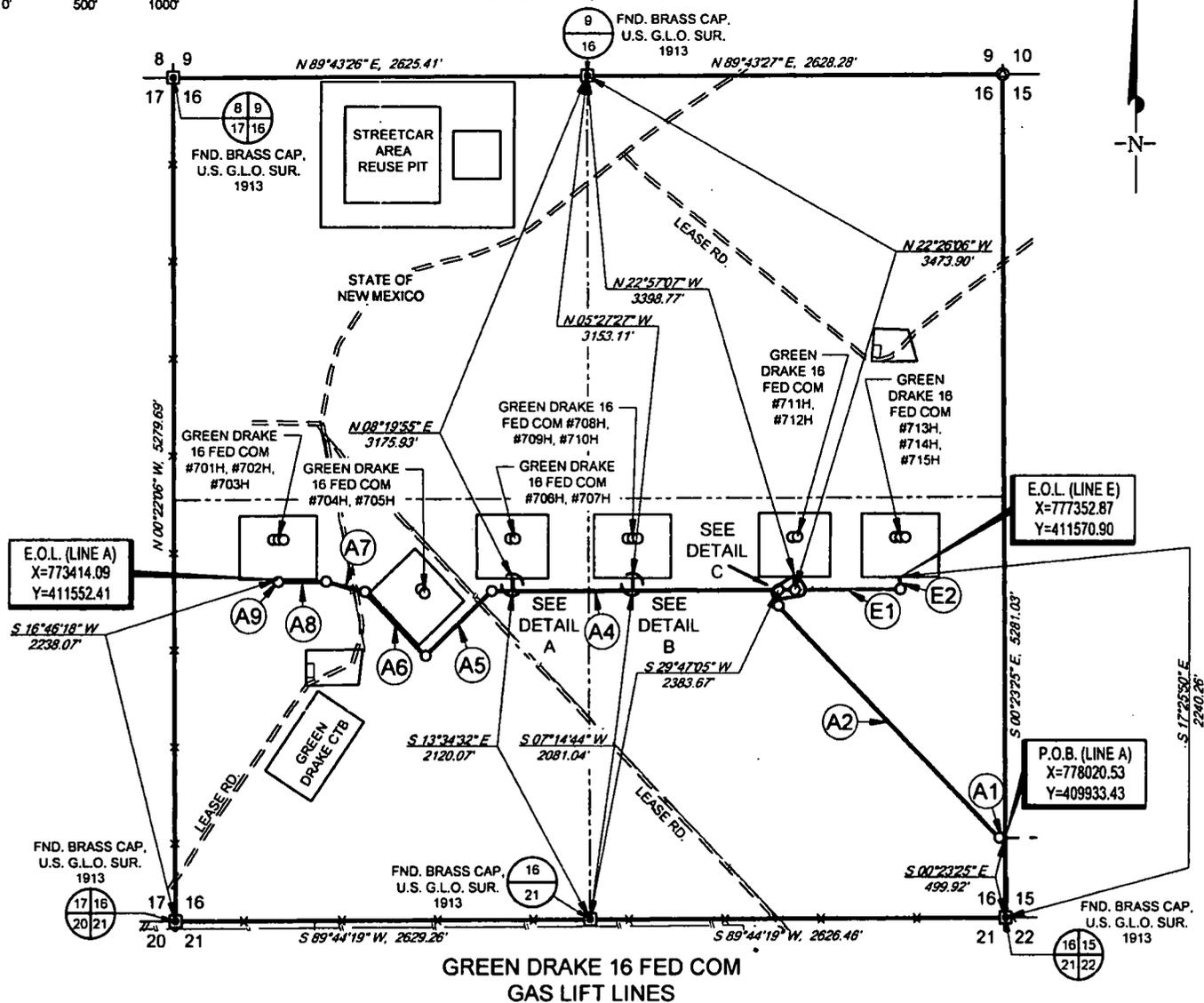


GREEN DRAKE 16 FED COM GAS LIFT LINES	REVISION:	
	INT	DATE
DATE: 08/13/2018		
FILE: P:\GREEN DRAKE 16 FED COM GAS LIFT LINES SEC 15		
DRAWN BY: MML		
SHEET: 1 OF 1		

- NOTES
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 4. P.O.B. = POINT OF BEGINNING
 5. E.O.L. = END OF LINE

SCALE: 1" = 1000'
0' 500' 1000'

SECTION 16, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



Being a proposed gas lift line easements being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 6765.42 feet or 410.03 rods, containing 4.66 acres more or less and allocated by quarter quarters as follows:

- SE/4 SE/4 - 1169.70 feet or 70.89 rods, containing 0.81 acres
- NE/4 SE/4 - 1456.98 feet or 88.30 rods, containing 1.00 acres
- NW/4 SE/4 - 1737.33 feet or 105.30 rods, containing 1.20 acres
- NE/4 SW/4 - 1675.54 feet or 101.55 rods, containing 1.15 acres
- NW/4 SW/4 - 725.87 feet or 43.99 rods, containing 0.50 acres



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AUGUST 13, 2018

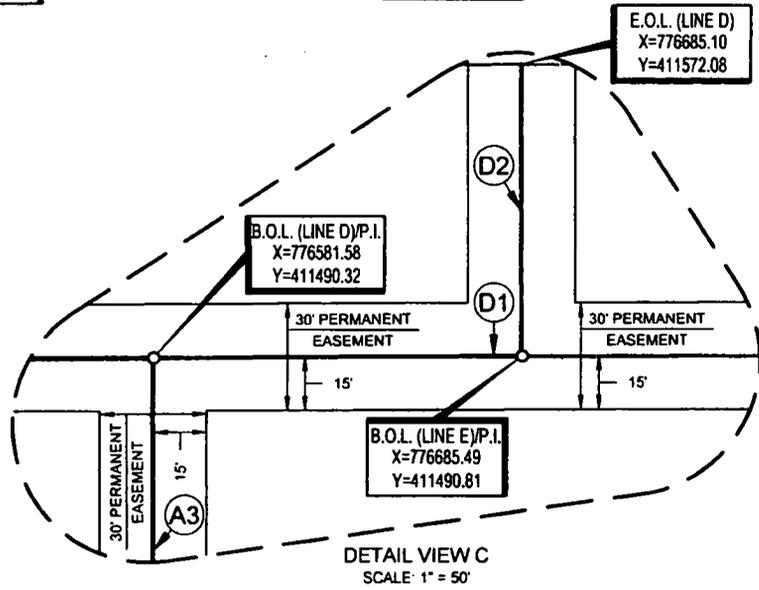
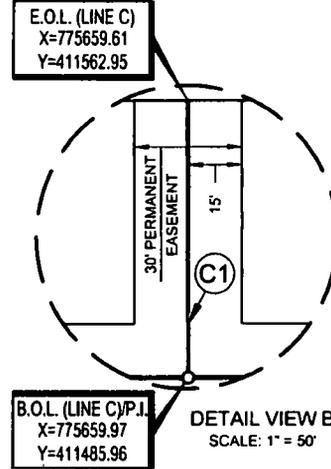
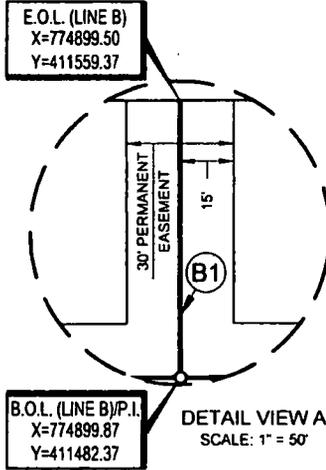


GREEN DRAKE 16 FED COM GAS LIFT LINES	REVISION:		NOTES: 1 ORIGINAL DOCUMENT SIZE 8.5" X 11" 2 ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET 3 CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY EOG RESOURCES, INC. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY. 4. B.O.L./P.O.B. = BEGINNING OF LINE/POINT OF BEGINNING 5. E.O.L./P.O.E. = END OF LINE/POINT OF EXIT 6. P.I. = POINT OF INTERSECTION
	INT	DATE	
DATE:	08/13/18		
FILE:	EP_GREEN_DRAKE_16_FED_COM_GAS_LIFT_LINES_SEC_16		
DRAWN BY:	MML		
SHEET:	1 OF 2		

SECTION 16, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

LEGEND

- SECTION LINE
- - - QUARTER SECTION LINE
- - - SIXTEENTH SECTION LINE
- ===== SURVEYED BASELINE A
- ===== SURVEYED BASELINE B
- ===== SURVEYED BASELINE C
- ===== SURVEYED BASELINE D
- ===== SURVEYED BASELINE E
- - - CONTINUED BASELINE
- ===== TRACT BORDER
- ===== EDGE OF EASEMENT
- ===== ROAD WAY
- X FENCE LINE
- EXISTING PIPELINE
- OHE OVERHEAD ELECTRIC
- MONUMENT
- CALCULATED CORNER
- POINT OF INTERSECTION



LINE A TABLE

LINE	BEARING	DISTANCE
A1	S 89°37'44" W.	37.09'
A2	N 43°51'01" W.	2022.87'
A3	N 00°16'15" W.	98.33'
A4	S 89°43'45" W.	1814.71'
A5	S 46°05'49" W.	583.70'
A6	N 43°54'11" W.	554.13'
A7	N 75°46'24" W.	254.71'
A8	S 89°43'45" W.	301.01'
A9	N 00°16'15" W.	15.00'

LINE B TABLE

LINE	BEARING	DISTANCE
B1	N 00°16'15" W.	77.00'

LINE C TABLE

LINE	BEARING	DISTANCE
C1	N 00°16'15" W.	77.00'

LINE D TABLE

LINE	BEARING	DISTANCE
D1	N 89°43'45" E.	103.91'
D2	N 00°16'15" W.	81.27'

LINE E TABLE

LINE	BEARING	DISTANCE
E1	N 89°43'45" E.	667.75'
E2	N 00°16'15" W.	78.94'

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AUGUST 13, 2018

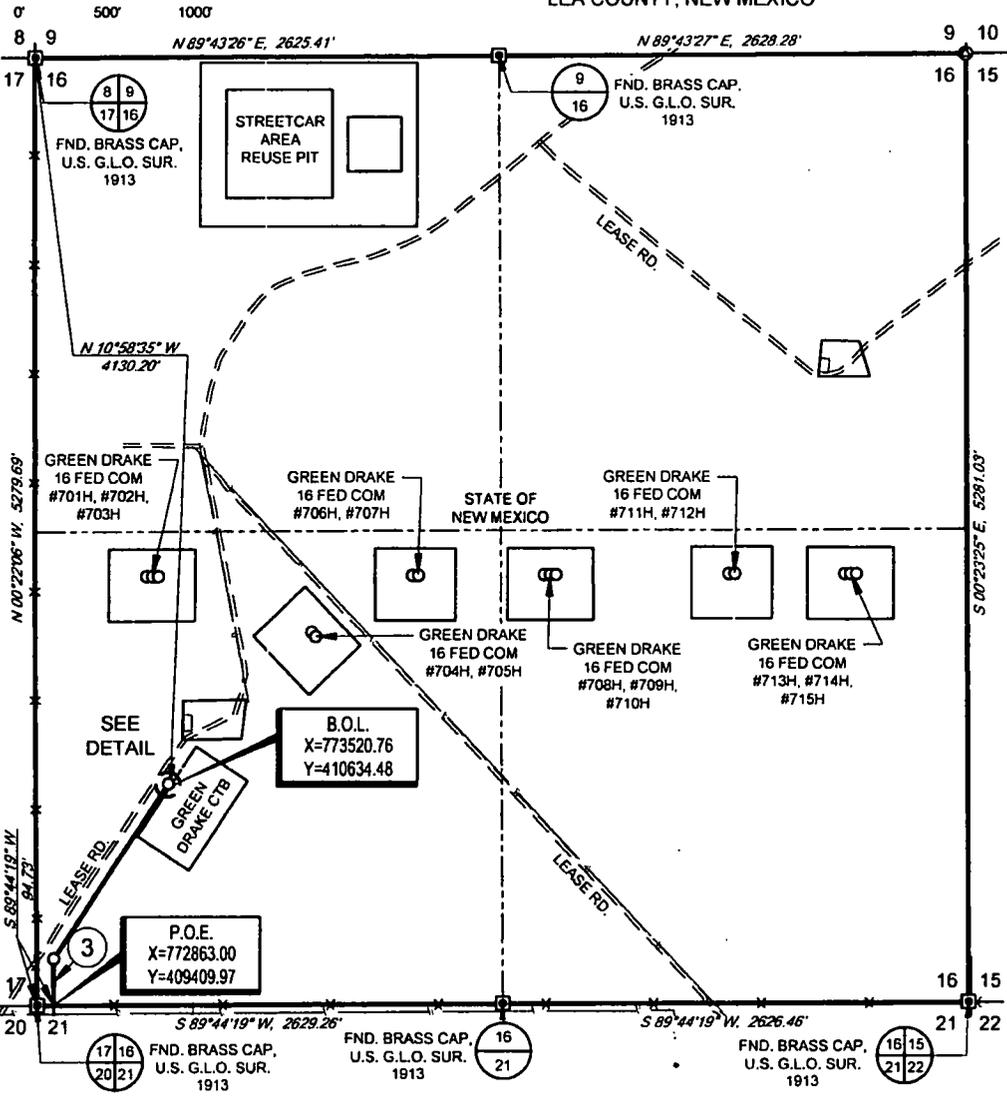


GREEN DRAKE 16 FED COM GAS LIFT LINES	REVISION:	
	INT	DATE
DATE: 08/13/18		
FILE: EP_GREEN DRAKE_16 FED COM GAS LIFT LINES_SEC_15		
DRAWN BY: MML		
SHEET: 2 OF 2		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
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4. B.O.L./P.O.B. = BEGINNING OF LINE/POINT OF BEGINNING
5. E.O.L./P.O.E. = END OF LINE/POINT OF EXIT
6. P.I. = POINT OF INTERSECTION

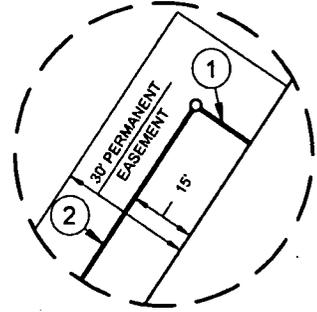
SCALE: 1" = 1000'

SECTION 16, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LINE TABLE

LINE	BEARING	DISTANCE
1	N 56°24'39" W.	15.00'
2	S 33°35'21" W.	1169.40'
3	S 00°22'27" E.	258.67'



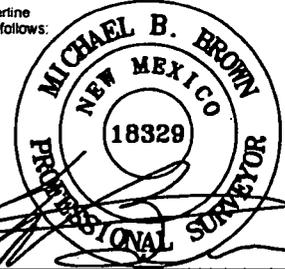
DETAIL VIEW
SCALE: 1" = 40'

LEGEND

- SECTION LINE
- - - QUARTER SECTION LINE
- SIXTEENTH SECTION LINE
- SURVEYED BASELINE
- - - CONTINUED BASELINE
- TRACT BORDER
- EDGE OF EASEMENT
- ROAD WAY
- X FENCE LINE
- EXISTING PIPELINE
- OHE OVERHEAD ELECTRIC
- MONUMENT
- CALCULATED CORNER
- POINT OF INTERSECTION

GREEN DRAKE 16 FED COM CTB
GAS GATHERING SYSTEM

Being a proposed gas gathering system easement being 30 feet in width, 15 feet left, and 15 feet right of the above plated centerline total line footage containing 1443.07 feet or 87.46 rods, containing 0.99 acres more or less and allocated by quarter quarters as follows:
SW/4 SW/4 - 1443.07 feet or 87.46 rods, containing 0.99 acres



Michael Blake Brown, P.S. No. 18329
MAY 17, 2018

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
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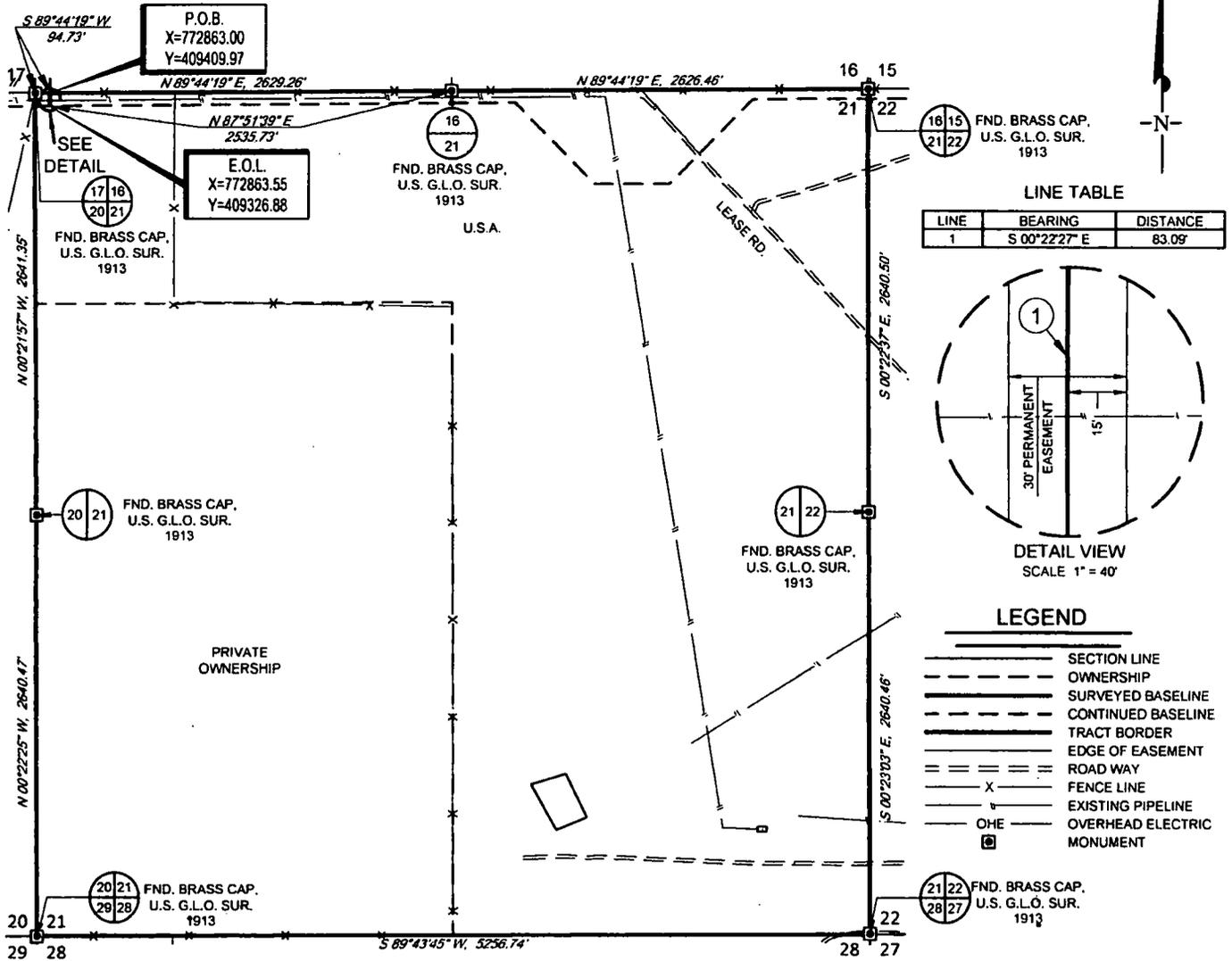


GREEN DRAKE 16 FED COM CTB GAS GATHERING SYSTEM	REVISION:	
	INT	DATE
DATE: 05/17/18		
FILE: RP_GREEN_DRAKE_16_FED_COM_CTB_GGS_SEC_16		
DRAWN BY: MML		
SHEET: 1 OF 1		

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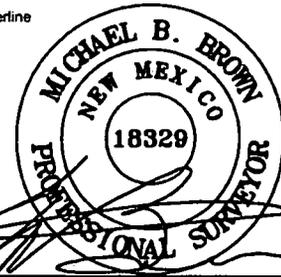
SCALE: 1" = 1000'
 0 500 1000

SECTION 21, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
 LEA COUNTY, NEW MEXICO



**GREEN DRAKE 16 FED COM CTB
 GAS GATHERING SYSTEM**

Being a proposed gas gathering system easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 83.09 feet or 5.04 rods, containing 0.06 acres more or less



Michael Blake Brown, P.S. No. 18329
 MAY 17, 2018

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GREEN DRAKE 16 FED COM CTB GAS GATHERING SYSTEM	REVISION:	
	INT	DATE
DATE: 05/17/18		
FILE: P:\GREEN_DRAKE_16_FED_COM_CTBS_GGS_SEC_21		
DRAWN BY: MML		
SHEET: 1 OF 1		

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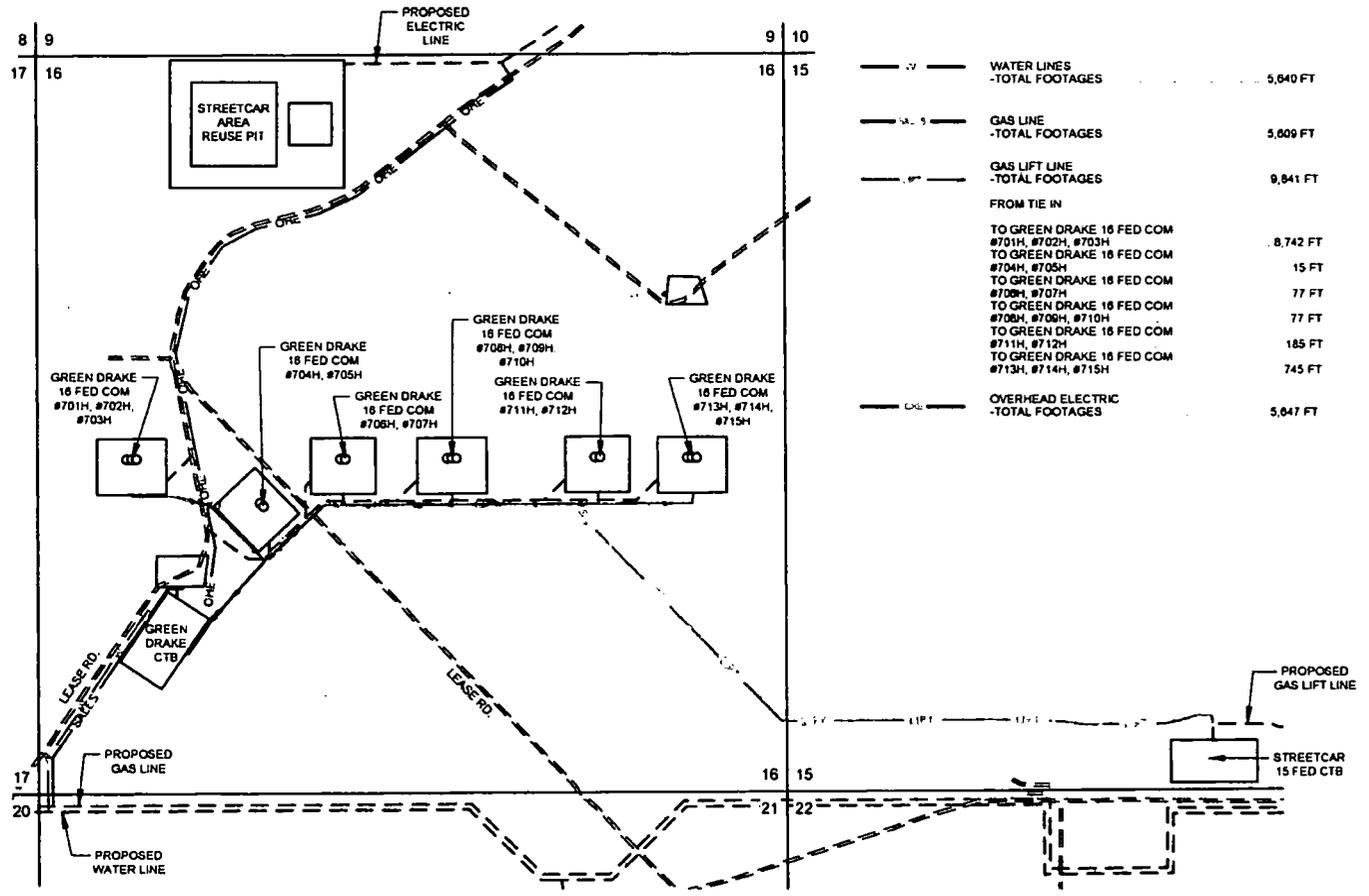
EXHIBIT 5
SECTION 15, 16, & 21, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SCALE: 1" = 1000'
0' 500' 1000'

**GREEN DRAKE 16 FED COM
INFRASTRUCTURE MAP**



PROPOSED ROAD -TOTAL FOOTAGES	4,583 FT
FROM LEASE RD	
TO GREEN DRAKE 16 FED COM CTB	70 FT
TO GREEN DRAKE 16 FED COM #701H, #702H, #703H	249 FT
TO GREEN DRAKE 16 FED COM #704H, #705H	595 FT
TO GREEN DRAKE 16 FED COM #706H, #707H	1,167 FT
TO GREEN DRAKE 16 FED COM #708H, #709H, #710H	1,778 FT
TO GREEN DRAKE 16 FED COM #711H, #712H	2,820 FT
TO GREEN DRAKE 16 FED COM #713H, #714H, #715H	3,409 FT
FLOWLINE -TOTAL FOOTAGES	14,846 FT
FROM CTB	
TO GREEN DRAKE 16 FED COM #701H, #702H, #703H	1,996 FT
TO GREEN DRAKE 16 FED COM #704H, #705H	1,189 FT
TO GREEN DRAKE 16 FED COM #706H, #707H	1,694 FT
TO GREEN DRAKE 16 FED COM #708H, #709H, #710H	2,425 FT
TO GREEN DRAKE 16 FED COM #711H, #712H	3,454 FT
TO GREEN DRAKE 16 FED COM #713H, #714H, #715H	4,118 FT



WATER LINES -TOTAL FOOTAGES	5,640 FT
GAS LINE -TOTAL FOOTAGES	5,609 FT
GAS LIFT LINE -TOTAL FOOTAGES	9,841 FT
FROM TIE IN	
TO GREEN DRAKE 16 FED COM #701H, #702H, #703H	8,742 FT
TO GREEN DRAKE 16 FED COM #704H, #705H	15 FT
TO GREEN DRAKE 16 FED COM #706H, #707H	77 FT
TO GREEN DRAKE 16 FED COM #708H, #709H, #710H	77 FT
TO GREEN DRAKE 16 FED COM #711H, #712H	185 FT
TO GREEN DRAKE 16 FED COM #713H, #714H, #715H	745 FT
OVERHEAD ELECTRIC -TOTAL FOOTAGES	5,647 FT

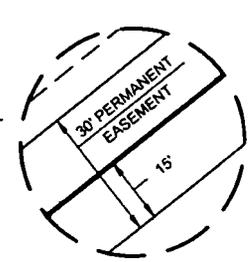
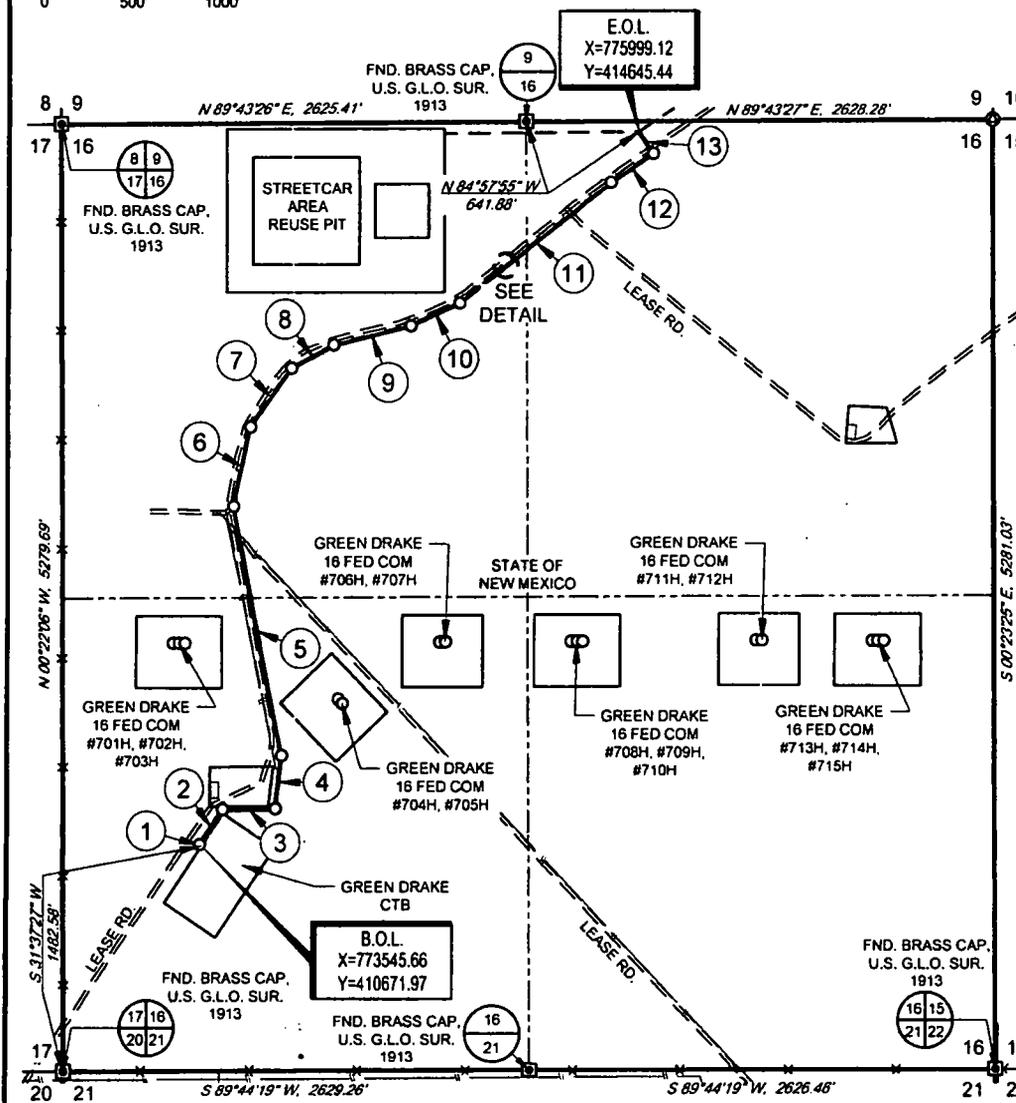


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GREEN DRAKE 16 FED COM INFRASTRUCTURE MAP	MML 08/13/18
DATE: 05/17/18	
FILE: SK_GREEN_DRAKE_16_FED_COM_REV2	
DRAWN BY: MML	
SHEET: 1 OF 1	

SCALE: 1" = 1000'
0 500 1000'

SECTION 16, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



DETAIL VIEW
SCALE: 1" = 40'

LINE TABLE

LINE	BEARING	DISTANCE
1	N 56°24'39" W.	15.00'
2	N 33°35'21" E.	236.42'
3	N 89°09'45" E.	298.54'
4	N 06°31'56" E.	297.26'
5	N 11°21'41" W.	1414.79'
6	N 12°18'43" E.	449.49'
7	N 35°11'51" E.	398.39'
8	N 61°17'07" E.	271.59'
8	N 76°09'21" E.	445.07'
10	N 65°14'39" E.	302.24'
11	N 51°44'20" E.	1085.24'
12	N 58°07'49" E.	287.94'
13	N 33°52'11" W.	144.43'

LEGEND

- SECTION LINE
- - - QUARTER SECTION LINE
- - - SIXTEENTH SECTION LINE
- SURVEYED BASELINE
- - - CONTINUED BASELINE
- TRACT BORDER
- EDGE OF EASEMENT
- ROAD WAY
- X FENCE LINE
- EXISTING PIPELINE
- OHE OVERHEAD ELECTRIC
- ⊕ MONUMENT
- ⊙ CALCULATED CORNER
- POINT OF INTERSECTION

GREEN DRAKE 16 FED COM CTB
OHE LINE

Being a proposed OHE line easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 5847.39 feet or 342.27 rods, containing 3.89 acres more or less and allocated by quarter quarters as follows:

- SW/4 SW/4 - 78.52 feet or 4.76 rods, containing 0.05 acres
- NW/4 SW/4 - 1863.69 feet or 100.84 rods, containing 1.14 acres
- SW/4 NW/4 - 1383.09 feet or 83.82 rods, containing 0.95 acres
- SE/4 NW/4 - 82.03 feet or 4.97 rods, containing 0.06 acres
- NE/4 NW/4 - 1401.83 feet or 84.96 rods, containing 0.97 acres
- NW/4 NE/4 - 1038.23 feet or 62.92 rods, containing 0.72 acres

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AUGUST 13, 2018

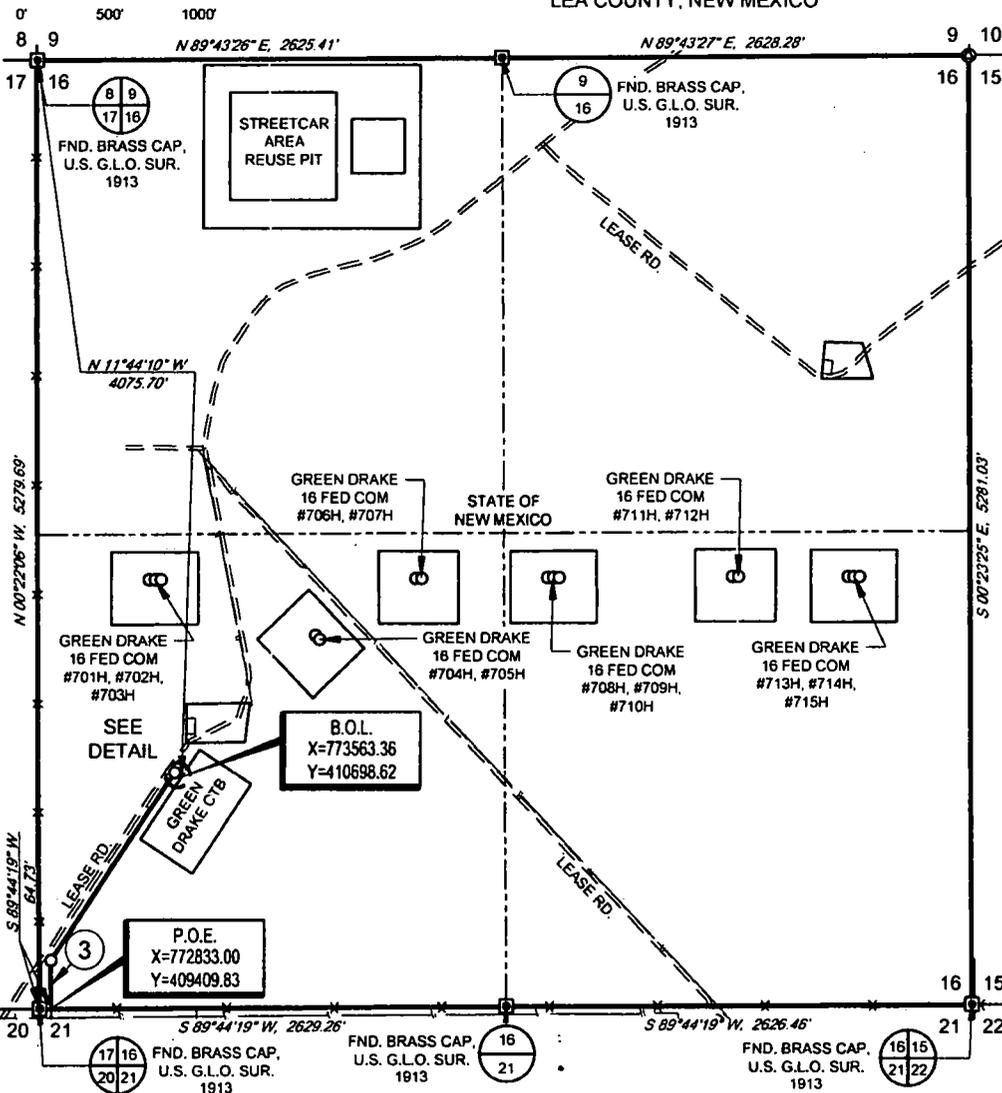


GREEN DRAKE 16 FED COM CTB OHE LINE	REVISION:	
	INT	DATE
DATE: 08/13/18		
FILE: EP_GREEN_DRAKE_16_FED_COM_CTBOHE		
DRAWN BY: MML		
SHEET: 1 OF 1		

- NOTES
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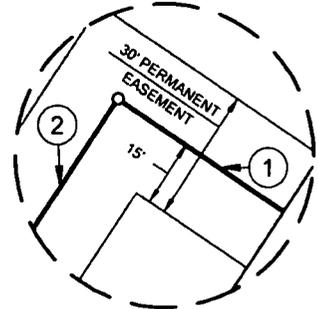
SCALE: 1" = 1000'

SECTION 16, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LINE TABLE

LINE	BEARING	DISTANCE
1	N 56°24'39\" W	45.00'
2	S 33°35'21\" W	1255.57'
3	S 00°22'27\" E	267.77'



DETAIL VIEW
SCALE: 1" = 40'

LEGEND

- SECTION LINE
- - - QUARTER SECTION LINE
- - - SIXTEENTH SECTION LINE
- SURVEYED BASELINE
- - - CONTINUED BASELINE
- TRACT BORDER
- EDGE OF EASEMENT
- == ROAD WAY
- X FENCE LINE
- EXISTING PIPELINE
- OHE OVERHEAD ELECTRIC
- ⊕ MONUMENT
- ⊙ CALCULATED CORNER
- POINT OF INTERSECTION

**GREEN DRAKE 16 FED COM CTB
WATER GATHERING SYSTEM**

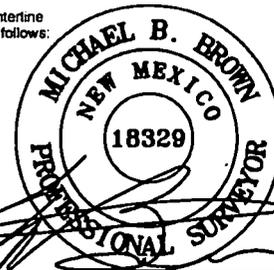
Being a proposed water gathering system easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 1568.34 feet or 95.05 rods, containing 1.08 acres more or less and allocated by quarter quarters as follows:

SW1/4 SW1/4 - 1568.34 feet or 95.05 rods, containing 1.08 acres



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

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Michael Blake Brown, P.S. No. 18329
MAY 17, 2018



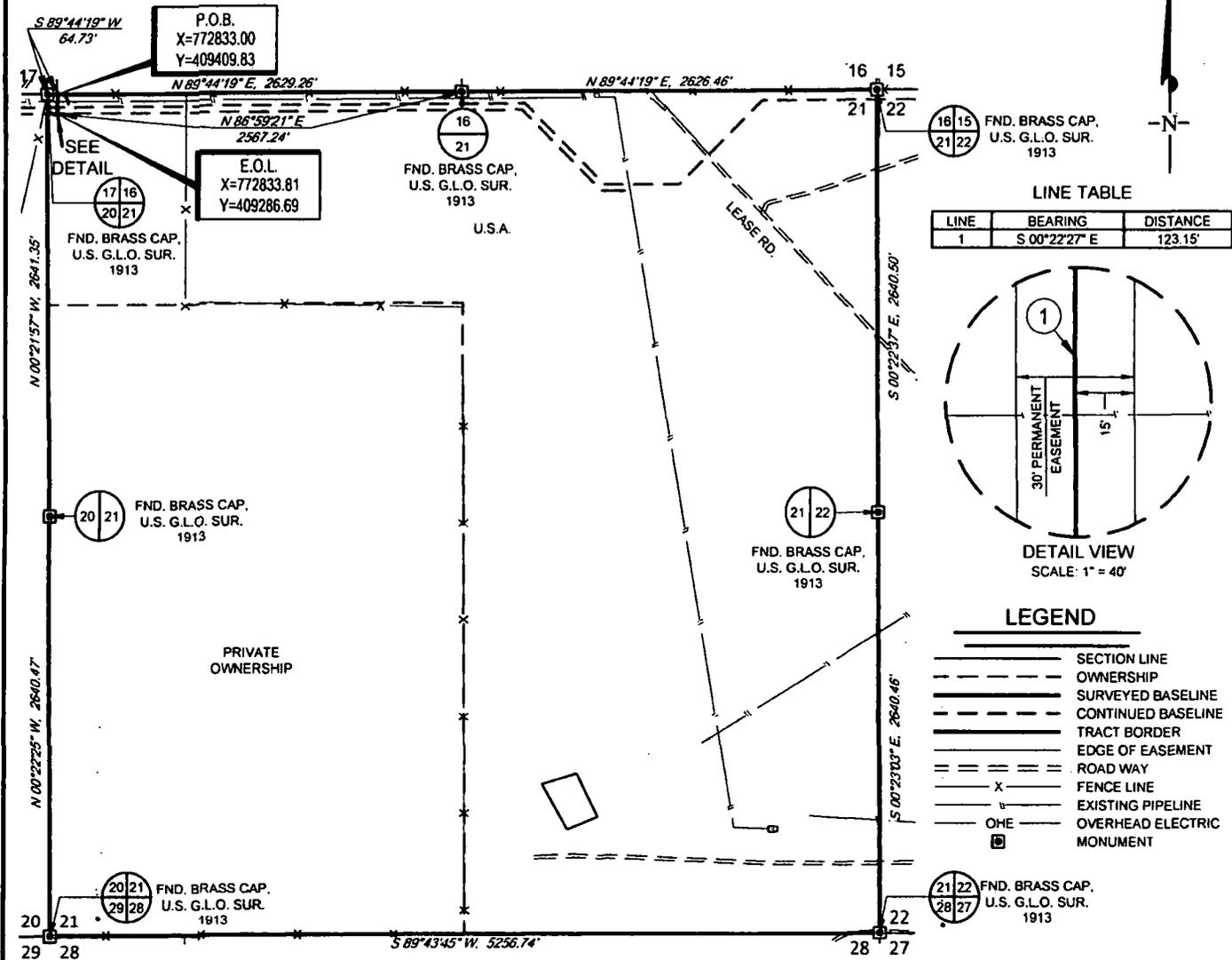
GREEN DRAKE 16 FED COM CTB WATER GATHERING SYSTEM	REVISION:	
	INT	DATE
DATE: 05/17/18		
FILE: EP_GREEN_DRAKE_16_FED_COM_CTBS_SEC_16		
DRAWN BY: MML		
SHEET: 1 OF 1		

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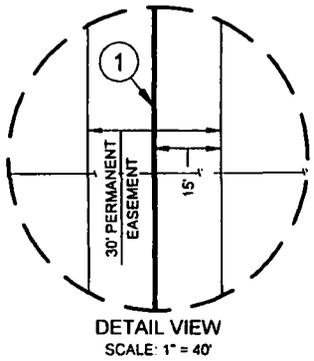
SECTION 21, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SCALE: 1" = 1000'
0 500 1000'



LINE TABLE

LINE	BEARING	DISTANCE
1	S 00°22'27\"/>	

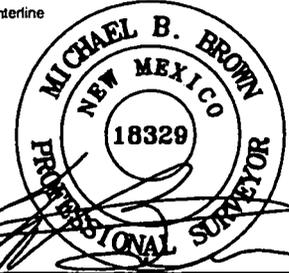


LEGEND

- SECTION LINE
- OWNERSHIP
- SURVEYED BASELINE
- CONTINUED BASELINE
- TRACT BORDER
- EDGE OF EASEMENT
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OVERHEAD ELECTRIC MONUMENT

GREEN DRAKE 16 FED COM CTB
WATER GATHERING SYSTEM

Being a proposed water gathering system easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 123.15 feet or 7.46 rods, containing 0.08 acres more or less.



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Michael Blake Brown, P.S. No. 18329
MAY 17, 2018



GREEN DRAKE 16 FED COM CTB WATER GATHERING SYSTEM	REVISION:	
	INT	DATE
DATE: 05/17/18		
FILE: P:\GREEN DRAKE 16 FED COM CTB WGS SEC 21		
DRAWN BY: MML		
SHEET: 1 OF 1		

- NOTES:
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Green Drake 16 Fed Com water & Caliche map

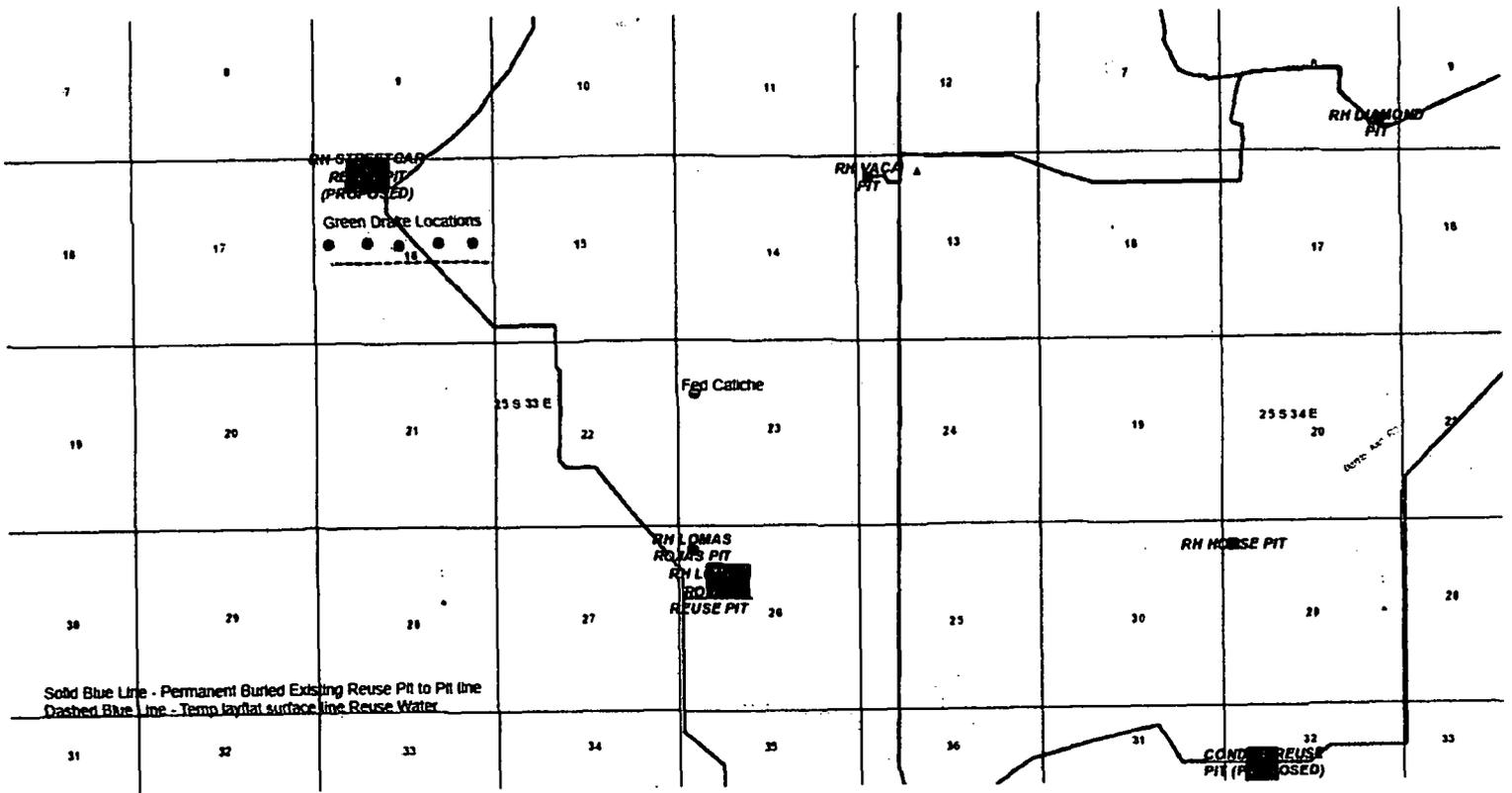
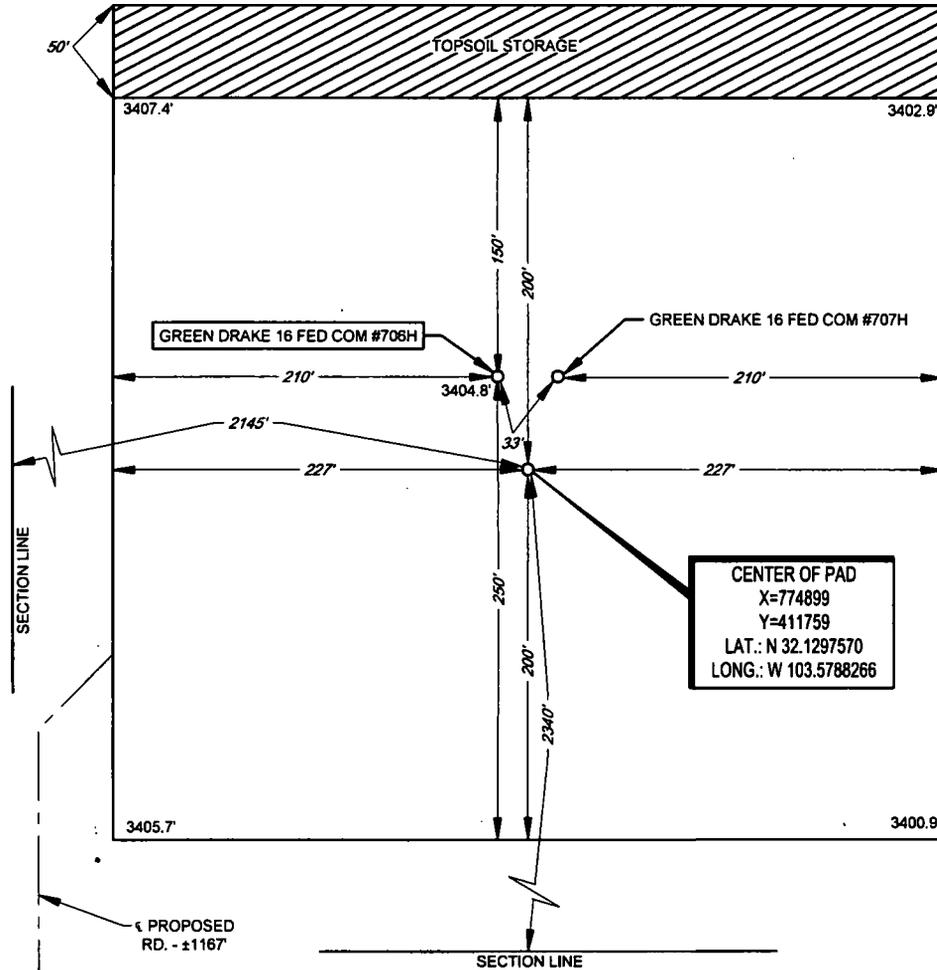




EXHIBIT 2B

SECTION 16, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'

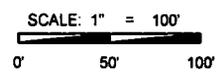


LEASE NAME & WELL NO.: GREEN DRAKE 16 FED COM #706H
 #706H LATITUDE N 32.1298945 #706H LONGITUDE W 103.5788795

CENTER OF PAD IS 2340' FSL & 2145' FWL

LEGEND

--- PROPOSED ROAD



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.



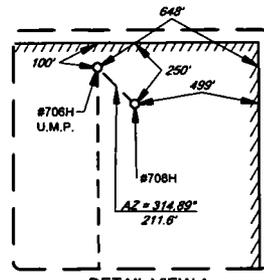
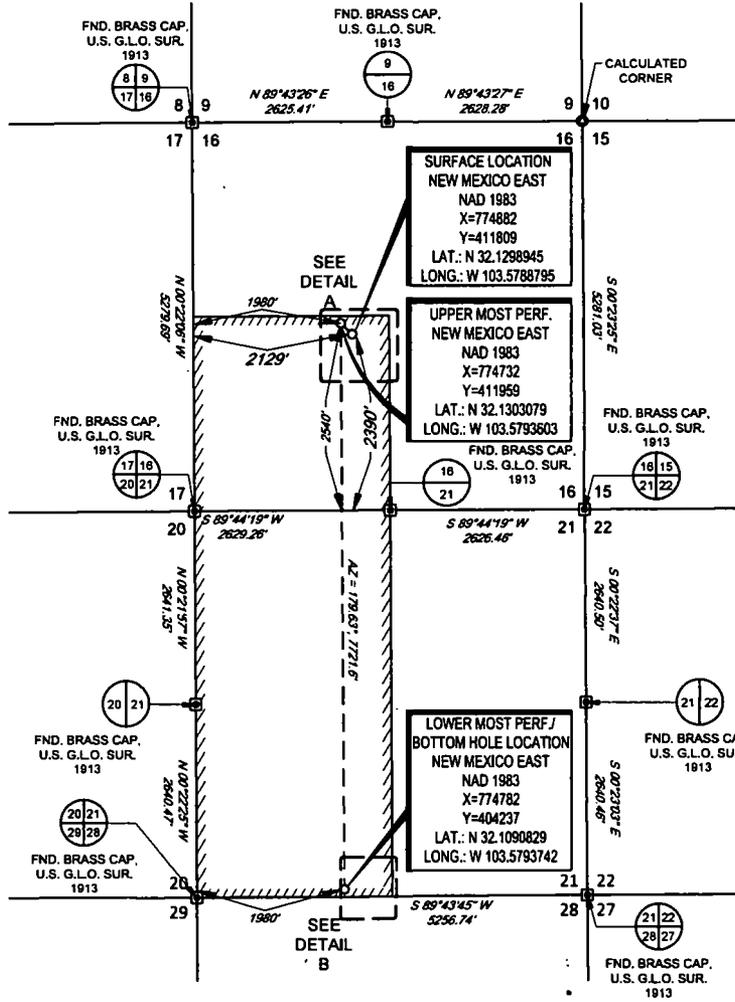
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ORIGINAL DOCUMENT SIZE: 8.5" X 11"

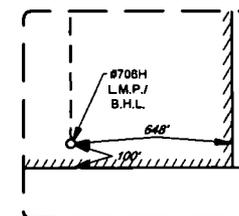
S:\SURVEY\EOG_MIDLAND\GREEN_DRAKE_16_FED_COM\FINAL_PRODUCTS\SLO_GREEN_DRAKE_16_FED_COM_706H_REV1.DWG 7/19/2018 5:26:34 PM csmilh5

EXHIBIT 2A

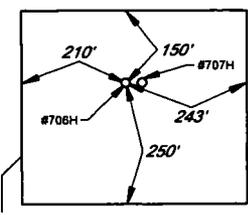
SECTION 16, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



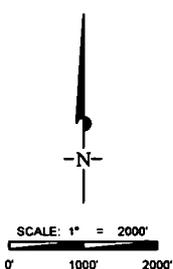
DETAIL VIEW A
SCALE: 1" = 600'



DETAIL VIEW B
SCALE: 1" = 600'



DETAIL VIEW
SCALE: 1" = 300'



LEASE NAME & WELL NO.: GREEN DRAKE 16 FED COM #706H

SECTION 16 TWP 25-S RGE 33-E SURVEY N.M.P.M.
COUNTY LEA STATE NM

DESCRIPTION 2390' FSL & 2129' FWL

DISTANCE & DIRECTION
FROM INT. OF NM-18 & NM-128. GO WEST ON NM-128 FOR ±23.9 MILES. THENCE SOUTH (LEFT) ON DIAMOND RD. FOR ±2.5 MILES. THENCE SOUTHEAST (LEFT) ON COUNTY RD. 2 FOR ±0.2 MILES. THENCE SOUTHEAST (RIGHT) ON VACA RD. ±1.8 MILES. THENCE SOUTHWEST (RIGHT) ON LEASE RD. ±2.1 MILES. THENCE SOUTHEAST (LEFT) PROPOSED RD. FOR ±1167 FEET TO A POINT ±258 FEET SOUTHWEST OF THIS 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 FEET.

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.



Michael Blake Brown, P.S. No. 18329
JULY 19, 2018

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Exhibit 4
EOG Resources
Green Drake 16 Fed Com #706H

Well Site Diagram

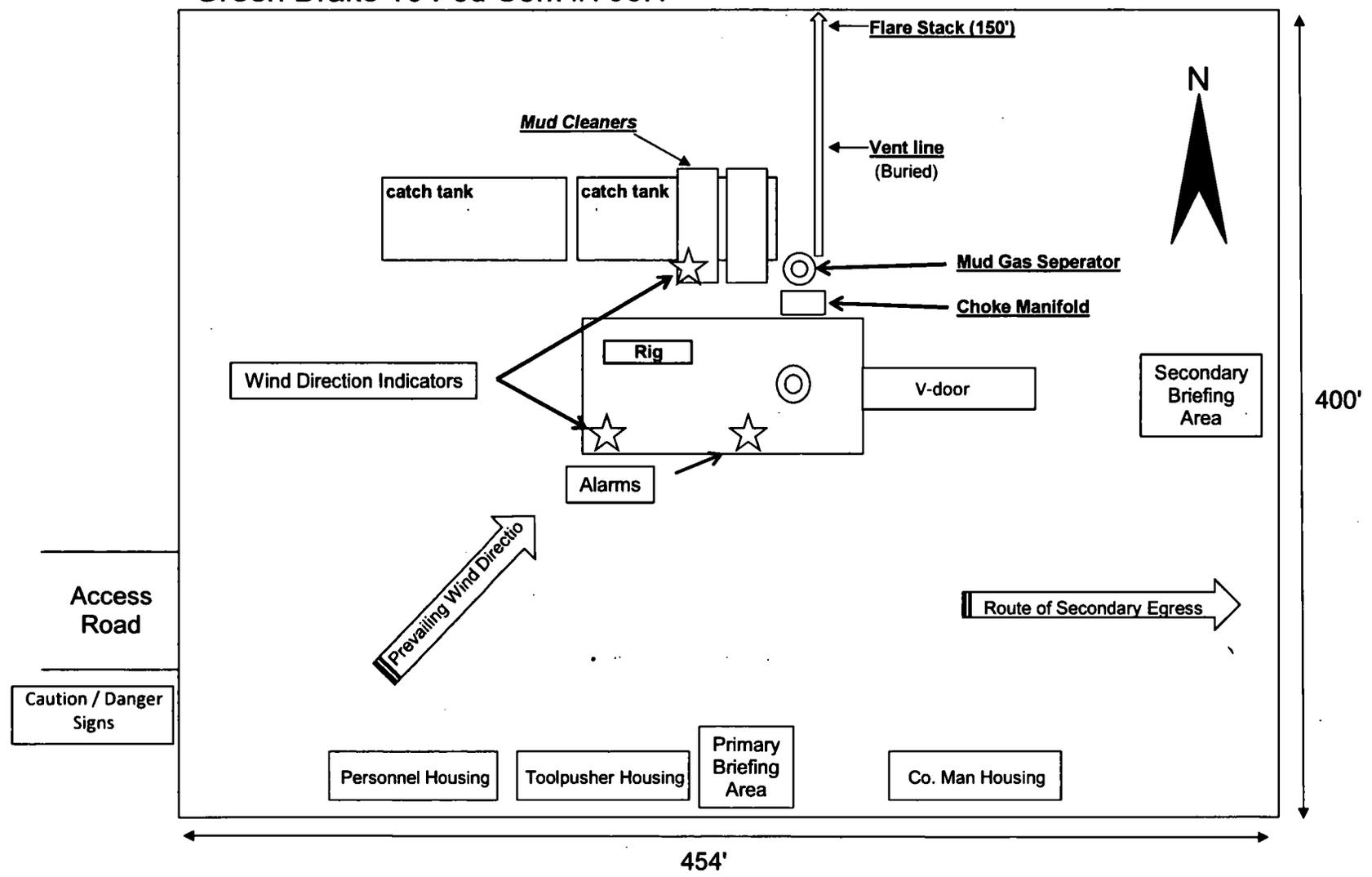
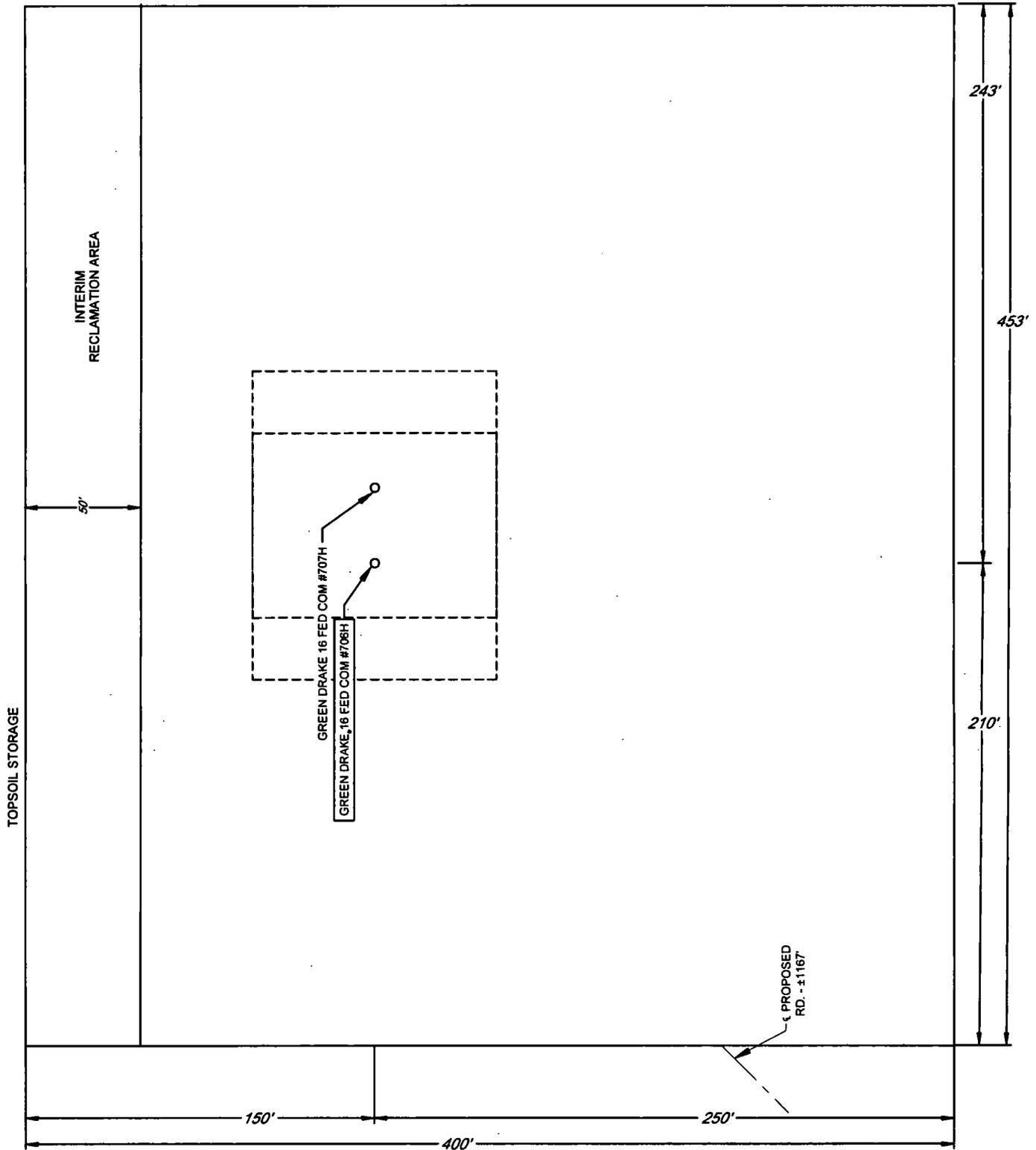


EXHIBIT 2C
RECLAMATION AND FACILITY DIAGRAM - PRODUCTION FACILITIES DIAGRAM

SECTION 16, TOWNSHIP 25-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

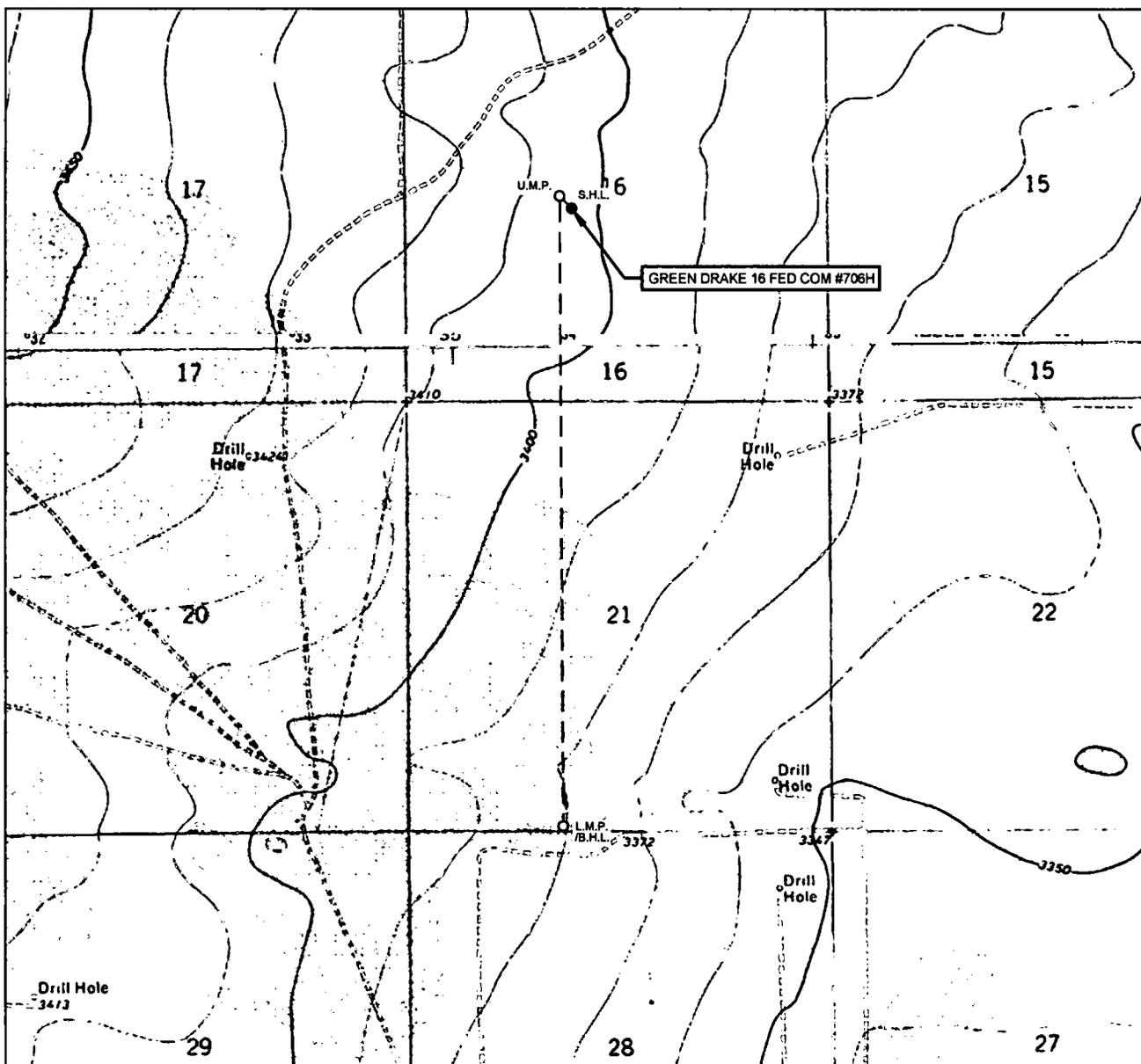


DETAIL VIEW
SCALE: 1" = 60'



LEASE NAME & WELL NO.: GREEN DRAKE 16 FED COM #706H
#706H LATITUDE N 32.1298945 #706H LONGITUDE W 103.5788795

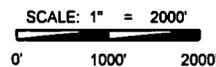
LOCATION & ELEVATION VERIFICATION MAP



LEASE NAME & WELL NO.: GREEN DRAKE 16 FED COM #706H

SECTION 16 TWP 25-S RGE 33-E SURVEY N.M.P.M.
 COUNTY LEA STATE NM ELEVATION 3405'
 DESCRIPTION 2390' FSL & 2129' FWL

LATITUDE N 32.1298945 LONGITUDE W 103.5788795



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District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87400
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Submit Original
to Appropriate
District Office

HOBBS OGD
APR 25 2019

RECEIVED

GAS CAPTURE PLAN

Date: 09/17/2018

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, recomple 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
Green Drake 16 Fed Com 708H	30-025-***	J-16-25S-33E	2390 FSL & 2382 FEL	±3500	None Planned	APD Submission
Green Drake 16 Fed Com 709H	30-025-***	J-16-25S-33E	2390 FSL & 2349 FEL	±3500	None Planned	APD Submission
Green Drake 16 Fed Com 710H	30-025-***	J-16-25S-33E	2390 FSL & 2316 FEL	±3500	None Planned	APD Submission
Green Drake 16 Fed Com 711H	30-025-***	J-16-25S-33E	2395 FSL & 1340 FEL	±3500	None Planned	APD Submission
Green Drake 16 Fed Com 712H	30-025-***	I-16-25S-33E	2395 FSL & 1307 FEL	±3500	None Planned	APD Submission
Green Drake 16 Fed Com 713H	30-025-***	I-16-25S-33E	2390 FSL & 689 FEL	±3500	None Planned	APD Submission
Green Drake 16 Fed Com 714H	30-025-***	I-16-25S-33E	2390 FSL & 656 FEL	±3500	None Planned	APD Submission
Green Drake 16 Fed Com 715H	30-025-***	I-16-25S-33E	2390 FSL & 623 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 **Enterprise Field Services** and will be connected to **EOG Resources** low/high pressure gathering system located in Eddy/Lea County, New Mexico. **EOG Resources** provides (periodically) to **Enterprise Field Services** a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, **EOG Resources** and **Enterprise Field Services** have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at **Enterprise Field Services** Processing Plant located in **Lea** 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 **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
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

Surface Use Plan of Operations

Introduction

The following surface use plan of operations will be followed and carried out once the APD is approved. No other disturbance will be created other than what was submitted in this surface use plan. If any other surface disturbance is needed after the APD is approved, a BLM approved sundry notice or right of way application will be acquired prior to any new surface disturbance.

Before any surface disturbance is created, stakes or flagging will be installed to mark boundaries of permitted areas of disturbance, including soils storage areas. As necessary, slope, grade, and other construction control stakes will be placed to ensure construction in accordance with the surface use plan. All boundary markers will be maintained in place until final construction cleanup is completed. If disturbance boundary markers are disturbed or knocked down, they will be replaced before construction proceeds.

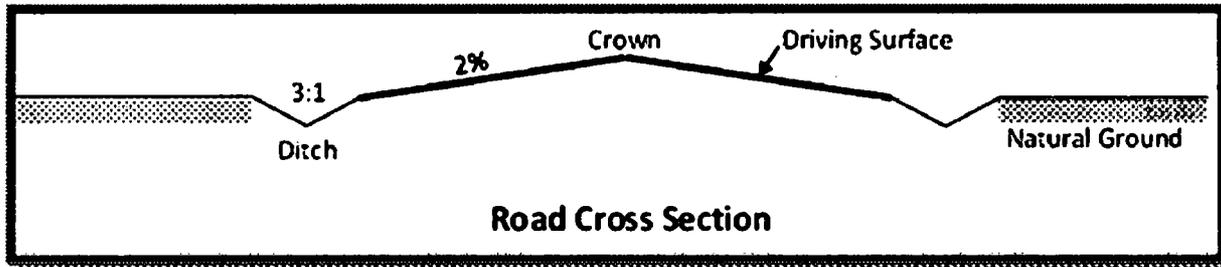
If terms and conditions are attached to the approved APD and amend any of the proposed actions in this surface use plan, we will adhere to the terms and conditions.

1. Existing Roads

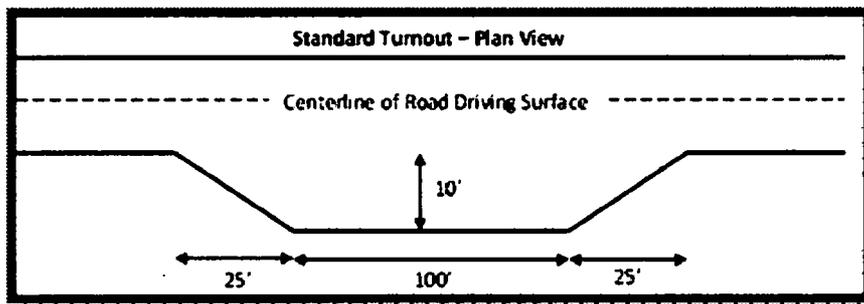
- a. The existing access road route to the proposed project is depicted on Green Drake 16 Fed Com 706H vicinity. Improvements to the driving surface will be done where necessary. No new surface disturbance will be done, unless otherwise noted in the New or Reconstructed Access Roads section of this surface use plan.
- b. The existing access road route to the proposed project does cross lease boundaries and a BLM road right-of-way will be acquired from the BLM prior to construction activities.
- c. The operator will improve or maintain existing roads in a condition the same as or better than before operations begin. The operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures on the entire access route such as cattleguards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use.
- d. We will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or wind events. BLM written approval will be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.

2. New or Reconstructed Access Roads

- a. An access road will be needed for this proposed project. See the survey plat for the location of the access road.
- b. The length of access road needed to be constructed for this proposed project is about 1167 feet.
- c. The maximum driving width of the access road will be 25 feet. The maximum width of surface disturbance when constructing the access road will not exceed 25 feet. All areas outside of the driving surface will be revegetated.
- d. The access road will be constructed with 6 inches of compacted caliche.
- e. When the road travels on fairly level ground, the road will be crowned and ditched with a 2% slope from the tip of the road crown to the edge of the driving surface. The ditches will be 3 feet wide with 3:1 slopes. See Road Cross Section diagram below.



- f. The access road will be constructed with a ditch on each side of the road.
- g. The maximum grade for the access road will be 20 percent.
- h. Turnouts will be constructed for the proposed access road and will be constructed to the dimensions shown in the diagram below. See survey plat or map for location of the turnouts.



- i. No cattleguards will be installed for this proposed access road.
- j. No BLM right-of-way grant is needed for the construction of this access road.
- k. No culverts will be constructed for this proposed access road.
- l. No low water crossings will be constructed for the access road.
- m. Since the access road is on level ground, no lead-off ditches will be constructed for the proposed access road.
- n. Newly constructed or reconstructed roads, on surface under the jurisdiction of the Bureau of Land Management, 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.

3. Location of Existing Wells

- a. Green Drake 16 FC 706H radius of the APD depicts all known wells within a one mile radius of the proposed well.
- b. There is no other information regarding wells within a one mile radius.

4. Location of Existing and/or Proposed Production Facilities

- a. All permanent, lasting more than 6 months, above ground structures including but not limited to pumpjacks, storage tanks, barrels, pipeline risers, meter housing, etc. that are not subject to safety requirements will be painted a non-reflective paint color, Shale Green, from the BLM Standard Environmental Colors chart, unless another

color is required in the APD Conditions of Approval.

- b. If any type of production facilities are located on the well pad, they will be strategically placed to allow for maximum interim reclamation, recontouring, and revegetation of the well location.
- c. A production facility is proposed to be installed off the proposed well location. Production from the well will be processed at this production facility. Green Drake 16 FC infrastructure depicts the location of the production facilities.
- d. The proposed production facility will have a secondary containment structure that is constructed to hold the capacity of 1-1/2 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.
- e. Green Drake 16 FC CTB depicts the production facility as well.
- f. A pipeline to transport production from the proposed well to the production facility will be installed.
 - i. We plan to install a 4 inch buried flex steel pipeline from the proposed well to the offsite production facility. The proposed length of the pipeline will be 1664 feet. The working pressure of the pipeline will be about 1440 psi. A 50 feet wide work area will be needed to install the buried pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.
 - ii. Green Drake 16 FC Infrastructure depicts the proposed production pipeline route from the well to the existing production facility.
 - iii. Since the proposed pipeline crosses lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

If any plans change regarding the production facility or other infrastructure (pipeline, electric line, etc.), we will submit a sundry notice or right of way (if applicable) prior to installation or construction.

Additional Pipeline(s)

We propose to install 3 additional pipeline(s):

- 1. Buried gas lift gas pipeline:
 - a. We plan to install a 8 inch buried flex steel pipeline from the proposed well to the central battery. The proposed length of the pipeline will be 77 feet. The working pressure of the pipeline will be about 1440 psi. A 50 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.
 - b. Green Drake 16 FC infrastructure depicts the proposed gas lift gas pipeline route.
 - c. Since the proposed pipeline crosses lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.
- 2. Buried gas sales pipeline:

- a. We plan to install a 16 inch buried steel pipeline from the central battery to the gas sales tie-in. The proposed length of the pipeline will be 5609 feet. The working pressure of the pipeline will be about 1440 psi. A 50 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.
 - b. Green Drake 16 FC infrastructure depicts the proposed gas sales pipeline route.
 - c. Since the proposed pipeline crosses lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.
3. Buried produced water pipeline:
- a. We plan to install a 16 inch buried poly pipeline from the central battery to the water disposal tie-in. The proposed length of the pipeline will be 5640 feet. The working pressure of the pipeline will be about 225 psi. A 50 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.
 - b. Green Drake 16 FC infrastructure depicts the proposed produced water pipeline route.
 - c. Since the proposed pipeline crosses lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

Electric Line(s)

- a. We plan to install an overhead electric line for the proposed well. The proposed length of the electric line will be 5647 feet. Green Drake 16 Fed Com Infrastructure depicts the location of the proposed electric line route. The electric line will be construction to provide protection from raptor electrocution.
- b. Since the proposed electric line crosses lease boundaries, a right of way grant will be acquired prior to installation of the proposed electric line.

5. Location and Types of Water

- a. The source and location of the water supply are as follows: Water will be supplied from the frac pond as shown on the attached water source map. This location will be drilled using a combination of water mud systems (outlined in the drilling program). The water will be obtained from commercial water stations in the area or recycled treated water and hauled to location by trucks or poly pipelines using existing and proposed roads depicted on the proposed existing access road maps. In these cases where a poly pipeline is used to transport fresh water for drilling purposes, proper authorizations will be secured by the contractor.
- b. Green Drake 16 FC water and caliche map depicts the proposed route for a 12 inch poly temporary (<90 days) water pipeline supplying water for drilling operations.

6. Construction Material

- a. 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.

7. Methods for Handling Waste

a. Drilling 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.

b. Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around the well site will be collected for disposal.

c. Human waste and grey water will be properly contained and disposed of properly at a state approved disposal facility.

d. 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.

e. The well will be drilled utilizing a closed loop system. Drill cutting will be properly disposed of into steel tanks and taken to an NMOCD approved disposal facility.

8. Ancillary Facilities

a. No ancillary facilities will be needed for this proposed project.

9. Well Site Layout

a. The following information is presented in the well site survey plat or diagram:

i. reasonable scale (near 1":50')

ii. well pad dimensions

iii. well pad orientation

iv. drilling rig components

v. proposed access road

vi. elevations of all points

- vii. topsoil stockpile
 - viii. reserve pit location/dimensions if applicable
 - ix. other disturbances needed (flare pit, stinger, frac farm pad, etc.)
 - x. existing structures within the 600' x 600' archaeological surveyed area (pipelines, electric lines, well pads, etc)
- b. The proposed drilling pad was staked and surveyed by a professional surveyor. The attached survey plat of the well site depicts the drilling pad layout as staked.
- c. A title of a well site diagram is Green Drake 16 FC 706H rig layout. This diagram depicts the rig layout.
- d. Topsoil Salvaging
- i. 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 respread 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. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging.

10. Plans for Surface Reclamation

Reclamation Objectives

- i. The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; control erosion; and minimize habitat and forage loss, visual impact, and weed infestation, during the life of the well or facilities.
- ii. The long-term objective of final reclamation is to return the land to a condition similar to what existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats. To ensure that the long-term objective will be reached through human and natural processes, actions will be taken to ensure standards are met for site stability, visual quality, hydrological functioning, and vegetative productivity.
- iii. The BLM will be notified at least 3 days prior to commencement of any reclamation procedures.
- iv. If circumstances allow, interim reclamation and/or final reclamation actions will be completed no later than 6 months from when the final well on the location has been completed or plugged. We will gain written permission from the BLM if more time is needed.
- v. Interim reclamation will be performed on the well site after the well is drilled and completed. Green Drake 16 FC 706H reclamation depicts the location and dimensions of the planned interim reclamation for the well site.

Interim Reclamation Procedures (If performed)

1. Within 30 days of well completion, the well location and surrounding areas will be cleared of, and maintained free of, all materials, trash, and equipment not required for production.
2. 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.
3. The areas planned for interim reclamation will then 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.

4. Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts & 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.

5. Proper erosion control methods will be used on the area to control erosion, runoff and siltation of the surrounding area.

6. The interim reclamation will be monitored periodically to ensure that vegetation has reestablished and that erosion is controlled.

Final Reclamation (well pad, buried pipelines, etc.)

1. Prior to final reclamation procedures, the well pad, road, and surrounding area will be cleared of material, trash, and equipment.

2. All surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.

3. All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be recontoured to the contour existing prior to 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.

4. After all the disturbed areas have been properly prepared, the areas will be seeded with the proper BLM seed mixture, free of noxious weeds. 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.

5. Proper erosion control methods will be used on the entire area to control erosion, runoff and siltation of the surrounding area.

6. All unused equipment and structures including pipelines, electric line poles, tanks, etc. that serviced the well will be removed.

7. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion is controlled.

11. Surface Ownership

- a. The surface ownership of the proposed project is State.

12. Other Information

- a. An onsite meeting was conducted 05/03/18.

We plan to use 2, 12-inch lay flat hoses to transport water with an option to use 7, 4-inch poly lines for drilling

and frac operations.

We are asking for 4 associated pipelines all depicted on the attached Green Drake 16 Fed Com infrastructure sketch:

One 8-inch flex steel gas lift line servicing all wells

One 4-inch flex steel production flowline per well

One 16-inch poly produced water disposal line from the CTB to the existing disposal line.

One 16-inch steel gas sales line from the CTB to the gas sales tie-in.

The well is planned to be produced using gas lift as the artificial lift method.

Produced water will be transported via pipeline to the EOG produced water gathering system.

13. Maps and Diagrams

Green Drake 16 Fed Com 706H vicinity - Existing Road

Green Drake 16 FC 706H radius - Wells Within One Mile

Green Drake 16 FC infrastructure - Production Facilities Diagram

Green Drake 16 FC CTB - Additional Production Facilities Diagram

Green Drake 16 FC Infrastructure - Production Pipeline

Green Drake 16 FC infrastructure - gas lift gas Pipeline

Green Drake 16 FC infrastructure - gas sales Pipeline

Green Drake 16 FC infrastructure - produced water Pipeline

Green Drake 16 Fed Com Infrastructure - Electric Line

Green Drake 16 FC water and caliche map - Drilling Water Pipeline

Green Drake 16 FC 706H rig layout - Well Site Diagram

Green Drake 16 FC 706H reclamation - Interim Reclamation

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Describe 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:

Assigned 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:

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:

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

Injection well name:

Injection well API number:

PWD disturbance (acres):

PWD disturbance (acres):



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

Bond Info Data Report

04/01/2019

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: