Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

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

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

8. Lease Name and Well No.

2. Name of Operator

9. API Well No. 30 015 47952

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool, or Exploratory

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

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

12. County or Parish

13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

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	Name *(Printed/Typed)*	Date
Title		
Approved by *(Signature)*	Name *(Printed/Typed)*	Date
Title	Office	

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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 12/31/2020

Entered - KMS NMOCD

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1]API Number	[2]Pool Code	[3]Pool Name
30 015 47952	96718	Loco Hills; Glorieta-Yeso

[4]Property Code	[5]Property Name	[6]Well Number
328974	BONES FEDERAL	5H

[7]OGRID No.	[8]Operator Name	[9]Elevation
7377	EOG RESOURCES, INC.	3747'

[10]Surface Location

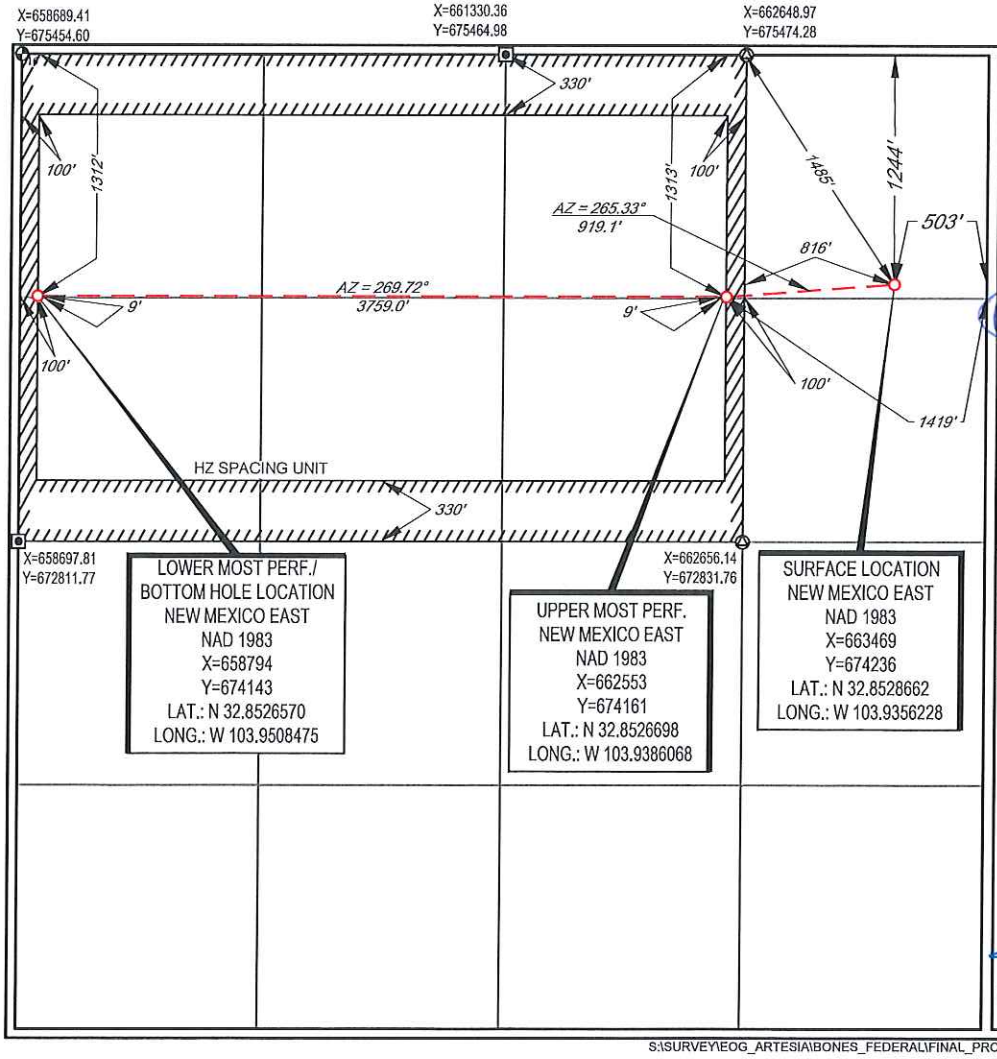
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	11	17-S	30-E	–	1244	NORTH	503	EAST	EDDY

[11]Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	11	17-S	30-E	–	1312	NORTH	100	WEST	EDDY

[12]Dedicated Acres	[13]Joint or Infill	[14]Consolidation Code	[15]Order No.
240.00			

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



[17]OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature 11/6/2018 Date

Tina Huerta
Printed Name

tina_huerta@eogresources.com
E-mail Address

[18]SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief.

08/16/2018
Date of Survey
Signature and Seal of Professional Surveyor:

MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

Certificate Number

S:\SURVEY\EOG_ARTESIA\BONES_FEDERAL\FINAL_PRODUCTS\LO_BONES_FEDERAL_5H.DWG 10/31/2018 2:04:16 PM csmith5

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**EOG RESOURCES INC**
WELL NAME & NO.:	**BONES FEDERAL 5H**
SURFACE HOLE FOOTAGE:	**1244'/N & 503'/E**
BOTTOM HOLE FOOTAGE	**1312'/N & 100'/W**
LOCATION:	**Section 11, T.17 S., R.30 E., NMPM**
COUNTY:	**EDDY County, New Mexico**

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **400** feet (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
    b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to

Approval Date: 12/31/2020

include the lead cement)

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

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

Option 1 (Single Stage):

- Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

Option 2:

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

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.
  Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

3. The minimum required fill of cement behind the **7 X 5 ½** inch production casing is:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout

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preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.

a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
c. Manufacturer representative shall install the test plug for the initial BOP test.
d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

GENERAL REQUIREMENTS

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

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
b. When the operator proposes to set surface casing with Spudder Rig
   - Notify the BLM when moving in and removing the Spudder Rig.
   - Notify the BLM when moving in the 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.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.

d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the

BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

JJP11022020

Approval Date: 12/31/2020

EXIBIT 1a
EOG Resources, Inc.
3M Choke Manifold Equipment

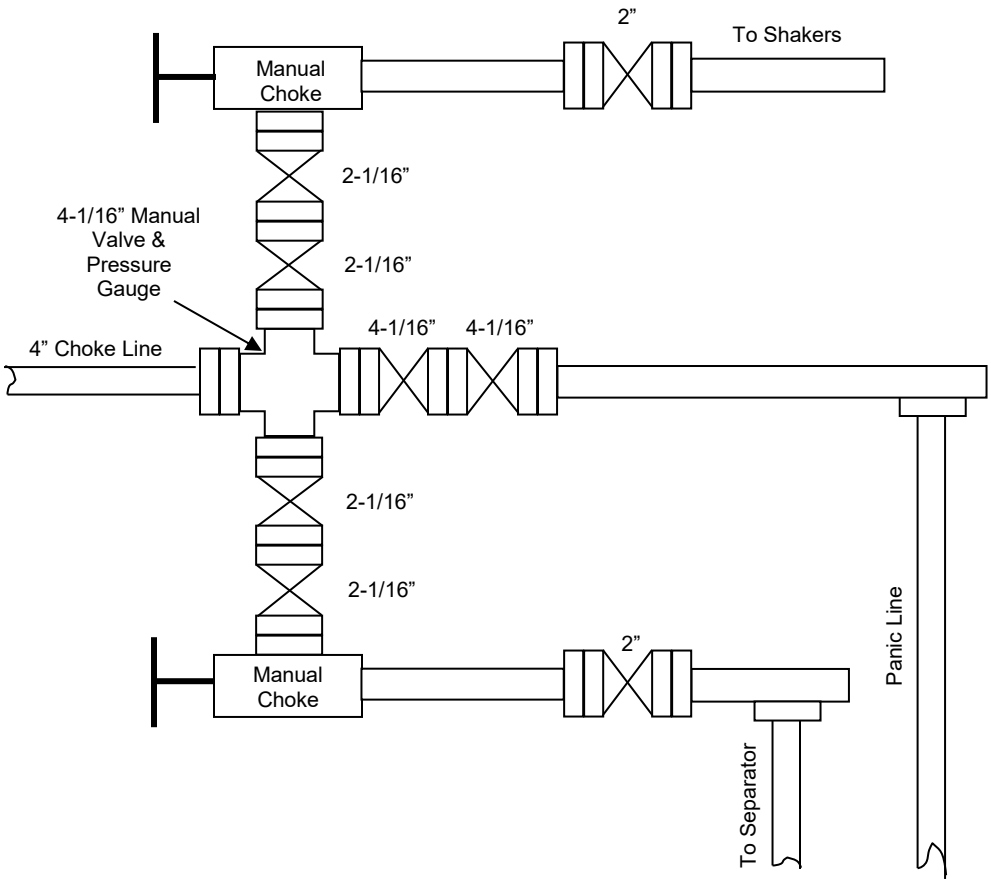
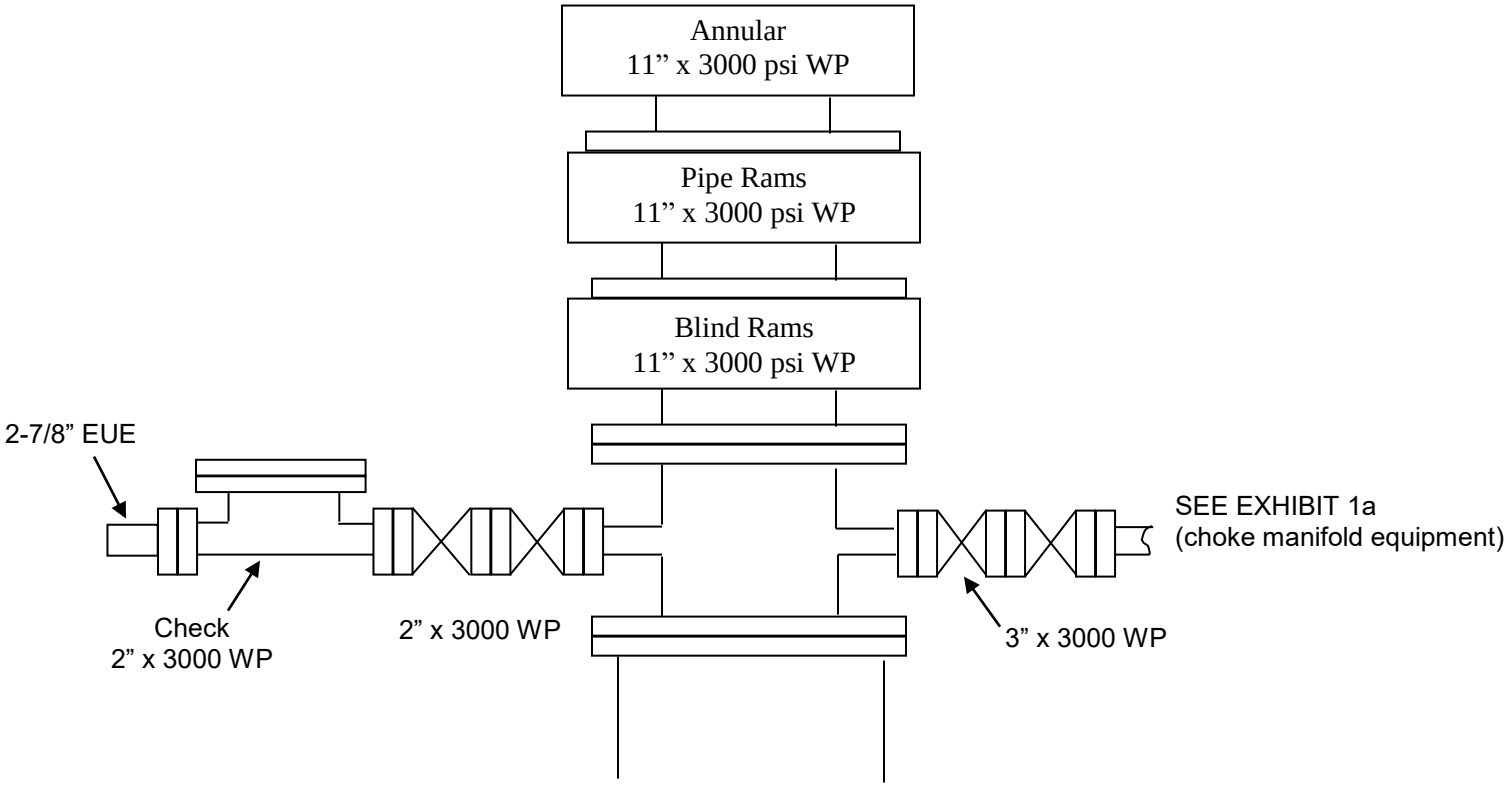
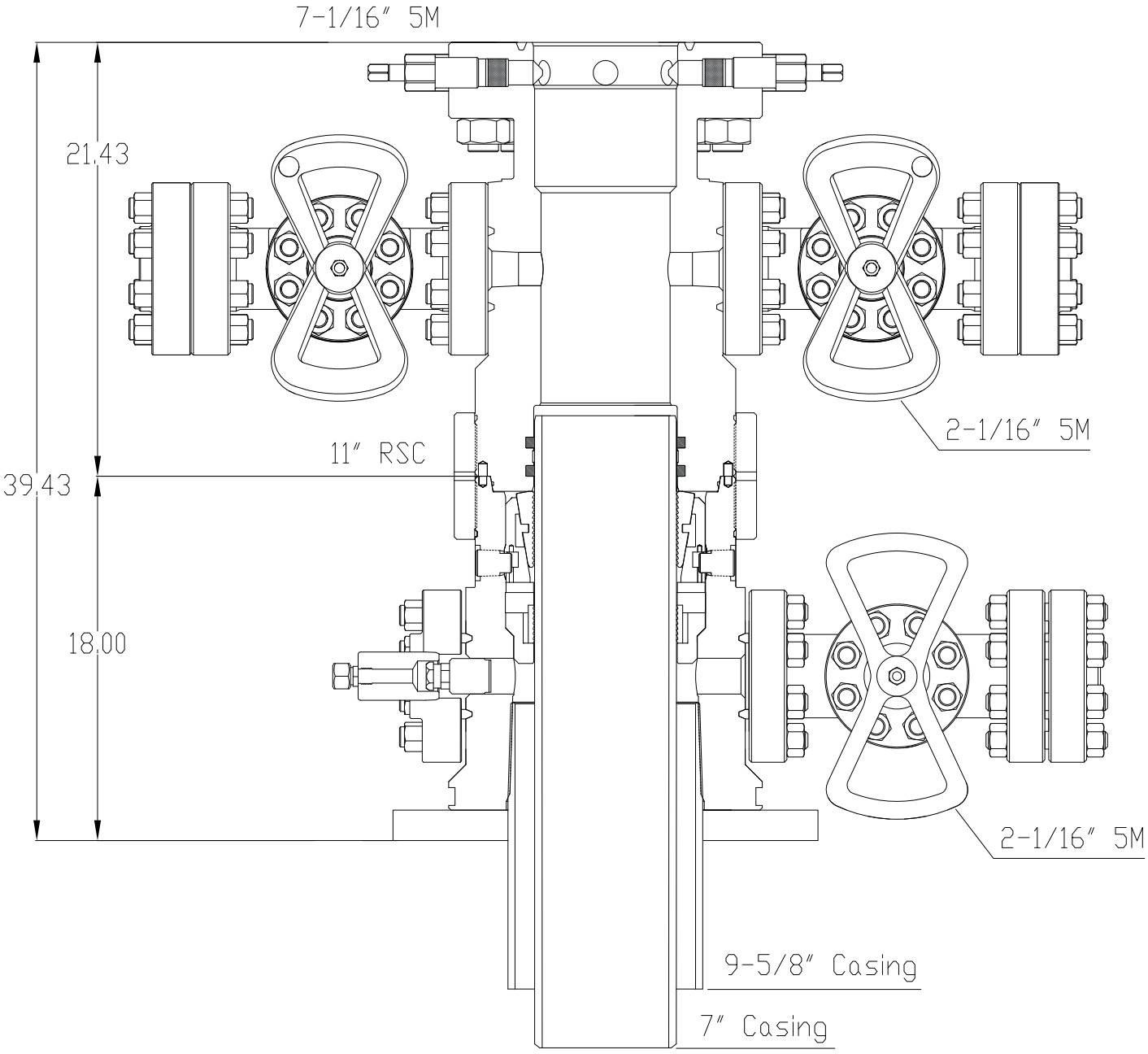


EXHIBIT 1

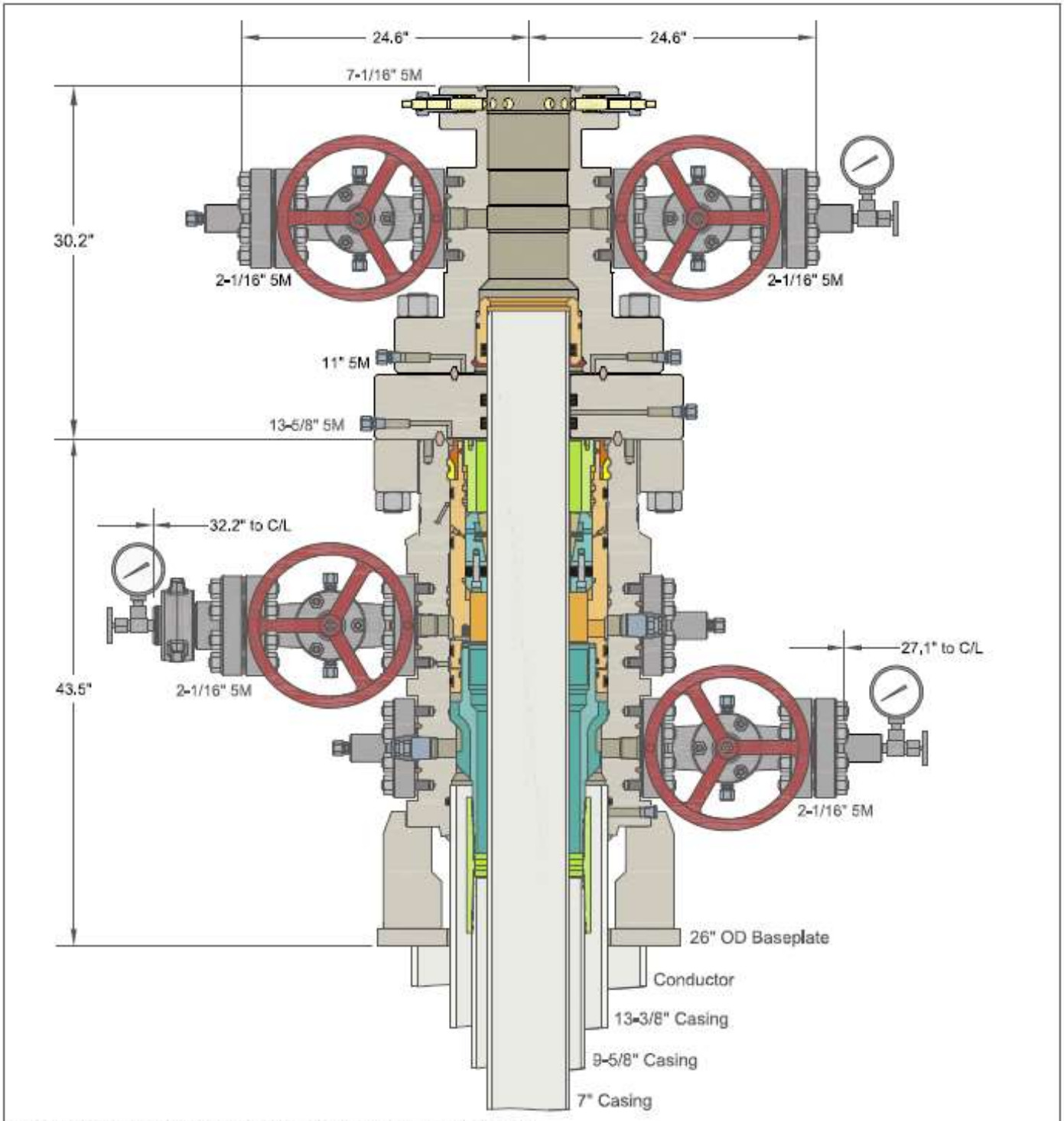
EOG Resources
3000 PSI BOPE





*CONCEPT QUOTE DRAWING

EOG RESOURCES INC. 9-5/8" X 7" 5M HES WELLHEAD SYSTEM QUOTE: HOU - 119274	DWN	CB	1/25/18	Stream Flo Woldwide Expertise - Global Strength	DRAWING NO WH-17830
	CHK				
	APP				
		BY	DATE		



ALL DIMENSIONS APPROXIMATE

CACTUS WELLHEAD LLC	EOG RESOURCES ARTESIA		
13-3/8" x 9-5/8" x 7" 5M MBU-3T Wellhead System With 11" 5M x 7-1/16" 5M CTH-HPS Tubing Head, 9-5/8" Mandrel Casing Hanger & 7" C22 Slip Casing Hanger	DRAWN	DLE	17JAN19
	APPRV		
	DRAWING NO.	HBE0000060	

Manufacturer: Midwest Hose & Specialty

Serial Number: SN#90067

Length: 35'

Size: OD = 8" ID = 4"

Ends: Flanges Size: 4-1/16"

WP Rating: 10,000 psi Anchors required by manfacturer: No

MIDWEST

HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT

Customer:	P.O. Number:
CACTUS	RIG #123
	Asset # M10761

HOSE SPECIFICATIONS

Type: CHOKE LINE	Length: 35'
I.D. 4" *INCHES*	O.D. 8" *INCHES*

WORKING PRESSURE	TEST PRESSURE	BURST PRESSURE
10,000 *PSI*	15,000 *PSI*	*PSI*

COUPLINGS

Type of End Fitting
4 1/16 10K FLANGE

Type of Coupling:	MANUFACTURED BY
SWEDGED	MIDWEST HOSE & SPECIALTY

PROCEDURE

Hose assembly pressure tested with water at ambient temperature.

TIME HELD AT TEST PRESSURE	ACTUAL BURST PRESSURE:
1 *MIN.*	0 *PSI*

COMMENTS:
SN#90067 M10761
Hose is covered with stainless steel armour cover and wraped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting eyes

Date:	Tested By:	Approved:
6/6/2011	BOBBY FINK	MENDI JACKSON

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

Customer: CACTUS

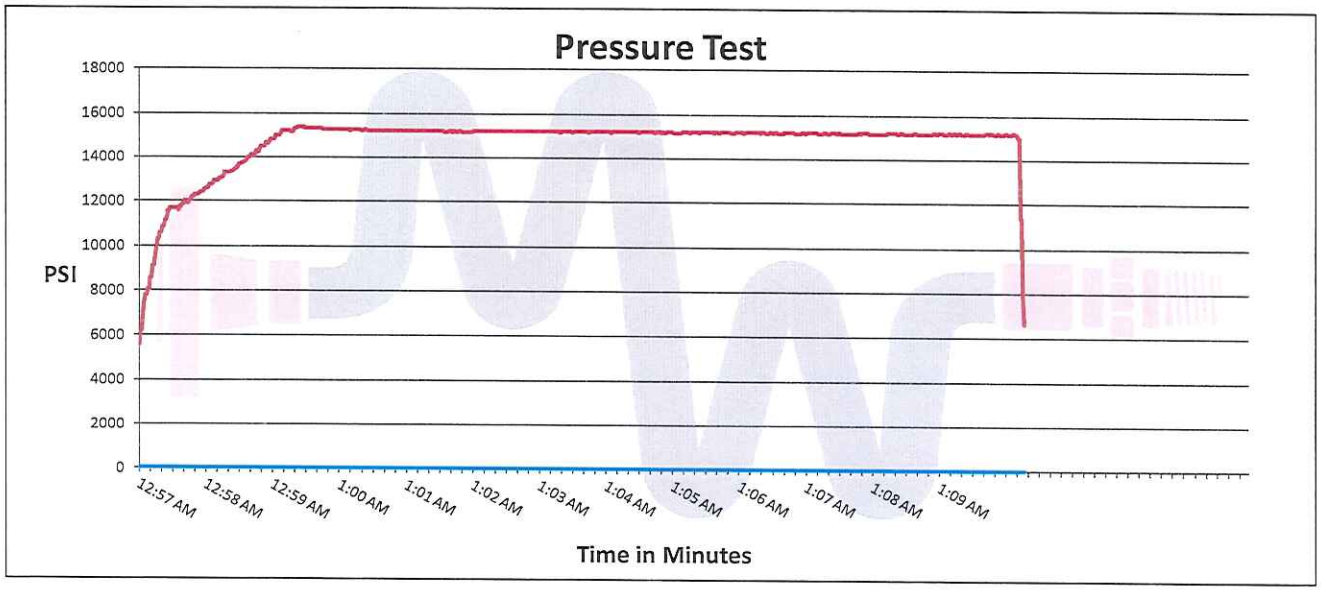
SALES ORDER# 90067

Hose Specifications

Hose Type	Length
C & K	35'
I.D.	**O.D.**
4"	8"
Working Pressure	**Burst Pressure**
10000 PSI	Standard Safety Multiplier Applies

Verification

Type of Fitting	Coupling Method
4 1/16 10K	Swage
Die Size	**Final O.D.**
6.62"	6.68"
Hose Serial #	**Hose Assembly Serial #**
	90067



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	11 1/4 Minutes		15439 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: *Bobby Fink*

Approved By: *Mendi Jackson*

Mendi Jackson

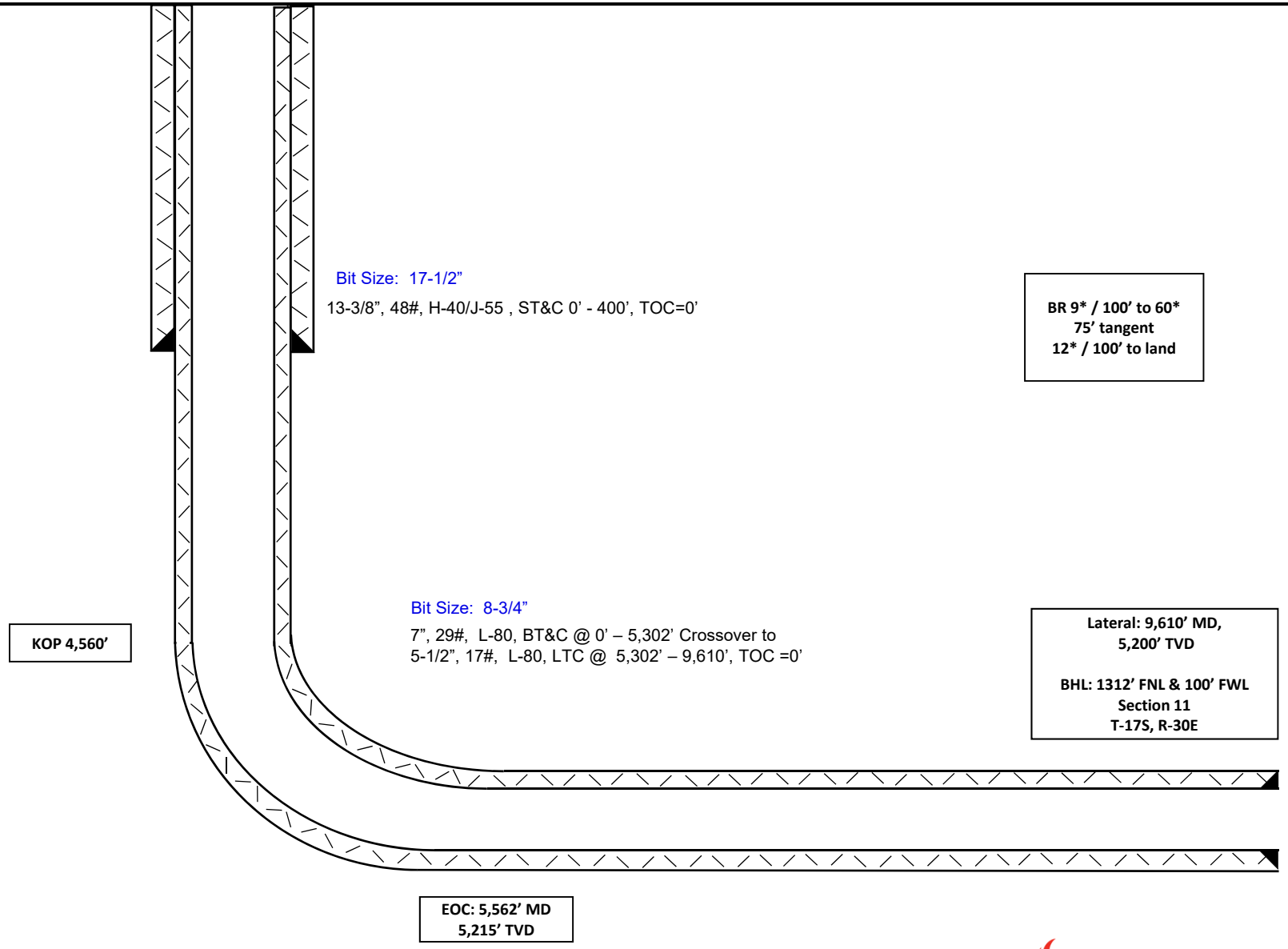
1244' FNL
503' FEL
Section 11
T-17S, R-30E

Bones Federal #5H

Proposed Wellbore

API: 30-015-*****

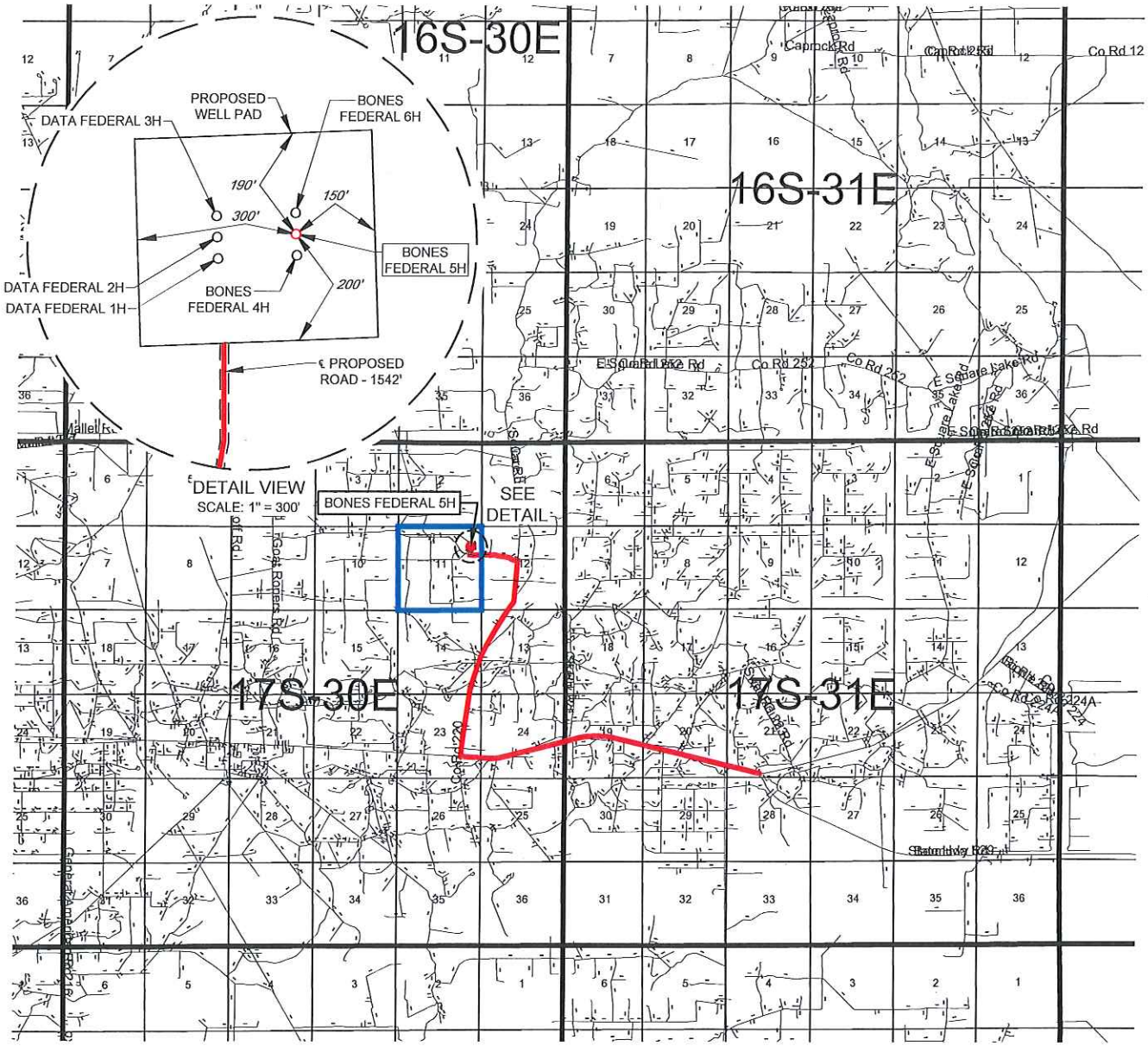
KB: 3,765'
GL: 3,747'



eog resources

EXHIBIT 2

VICINITY MAP



eog resources, inc.

LEASE NAME & WELL NO.: BONES FEDERAL 5H

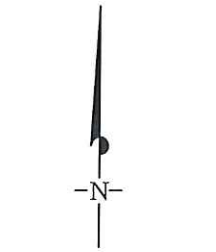
SECTION 11 TWP 17-S RGE 30-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 1244 FNL & 503 FEL

DISTANCE & DIRECTION

FROM INT. OF NM-529, & US-82, GO WEST ON US-82 ±3.7 MILES, THENCE NORTH (RIGHT) ON SQUARE LAKE RD. ±2.5 MILES, THENCE WEST (LEFT) ON A LEASE RD. ±0.3 MILES, THENCE CONTINUE WEST ON A PROPOSED RD. ±1524 FEET TO A POINT ±245 FEET SOUTHWEST OF THE LOCATION.

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

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



TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
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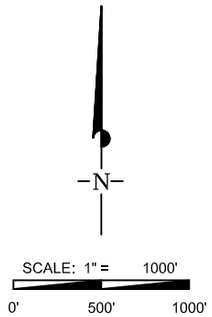
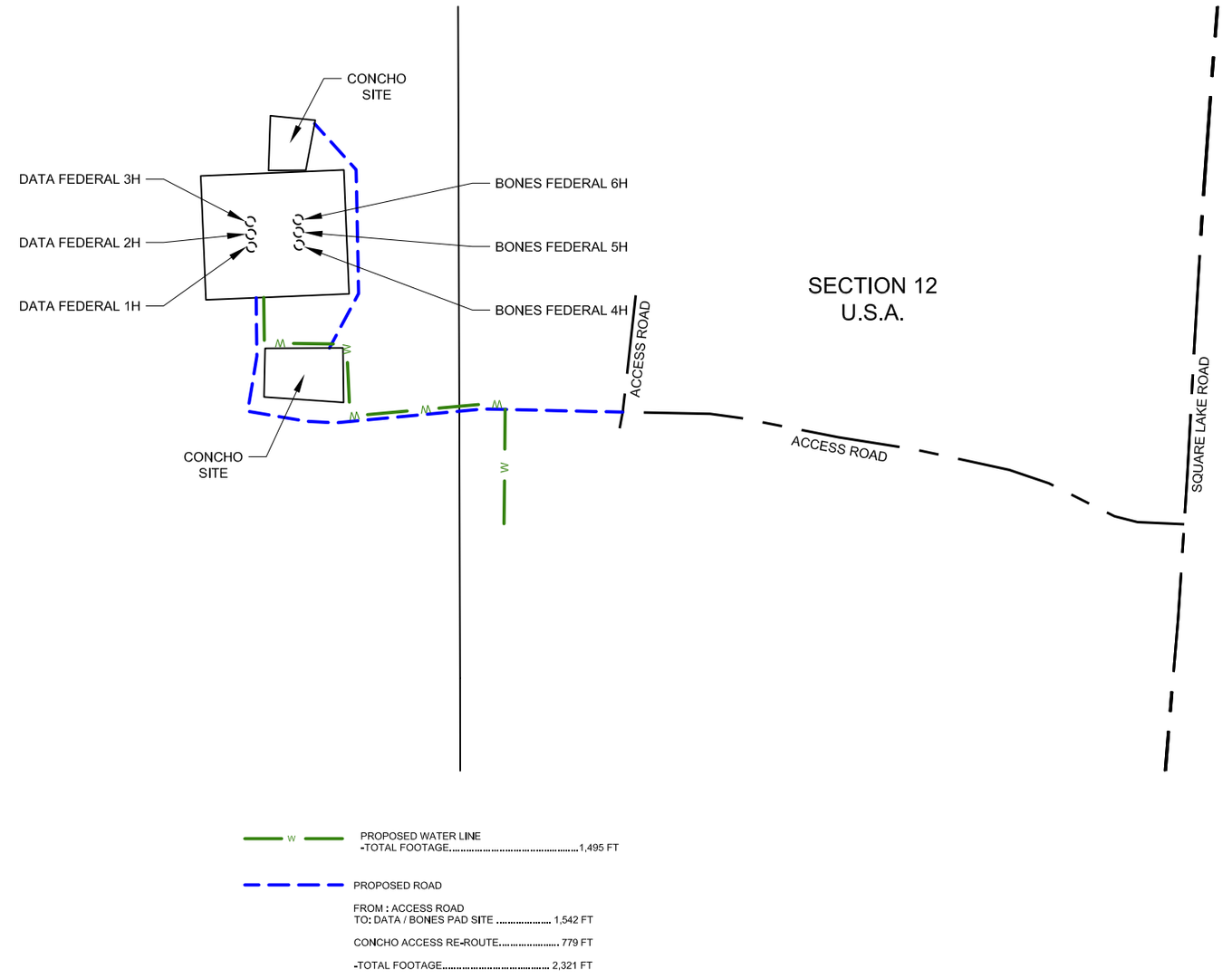
EXHIBIT 5

SECTIONS 11 & 12, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DATA FEDERAL 1H-3H / BONES FEDERAL 4H-6H INFRASTRUCTURE





eog resources, inc.

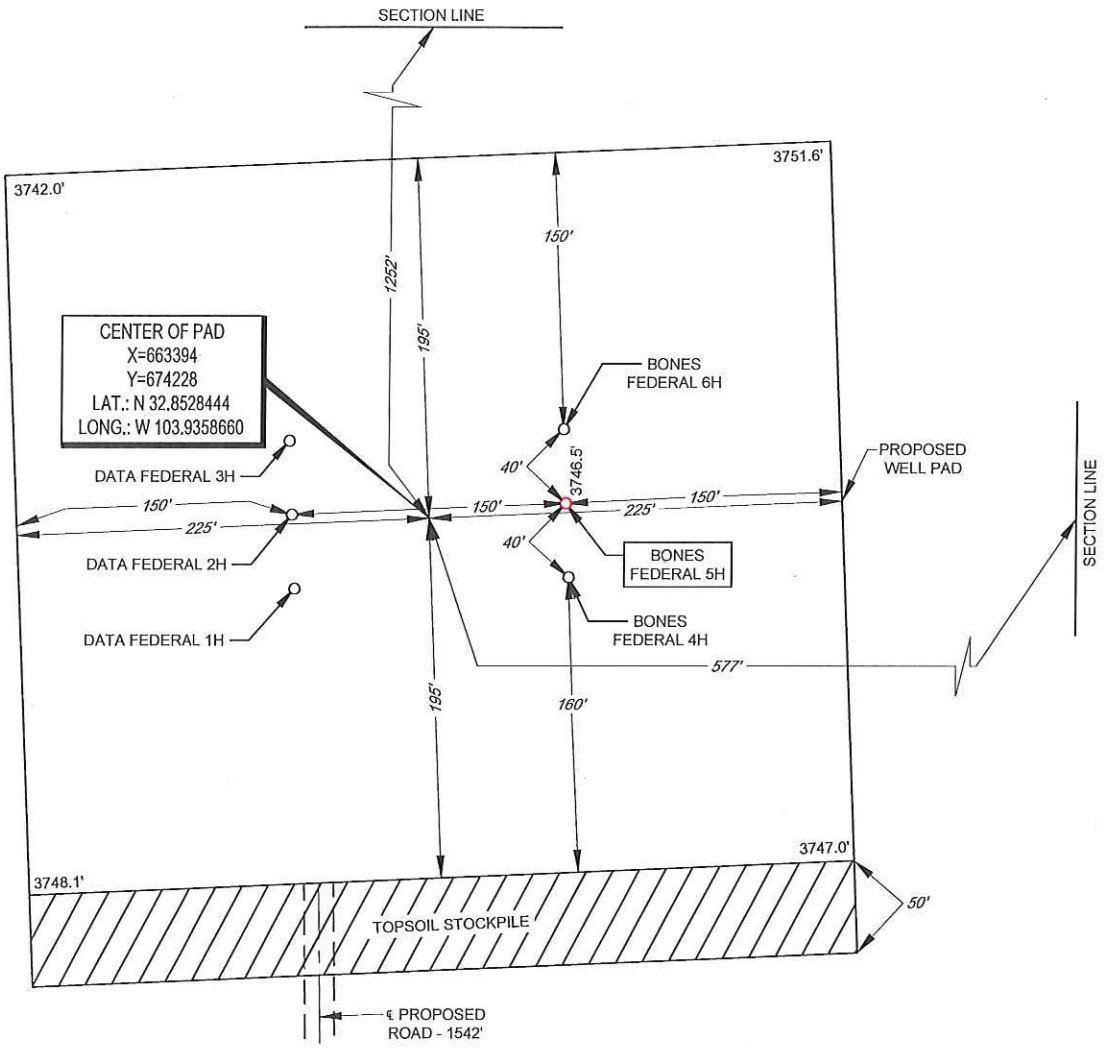
DATA FEDERAL 1H-3H / BONES FEDERAL 4H-6H INFRASTRUCTURE	REVISION:	
	C.E.S.	3/15/19
DATE: 1/23/2019		
FILE: SK_DATA_BONES_FEDERAL_COM_INFRASTRUCTURE_REV1		
DRAWN BY: C.E.S.		
SHEET : 1 OF 1		

EXHIBIT 2B

eog resources, inc.

SECTION 11, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



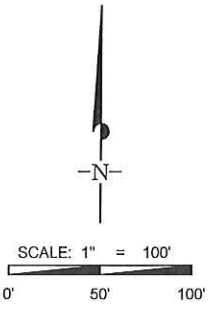
LEASE NAME & WELL NO.: BONES FEDERAL 5H

5H LATITUDE N 32.8528662 5H LONGITUDE W 103.9356228

CENTER OF PAD IS 1252' FNL & 577' FEL

LEGEND

SECTION LINE
PROPOSED ROAD
ROAD WAY



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

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

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

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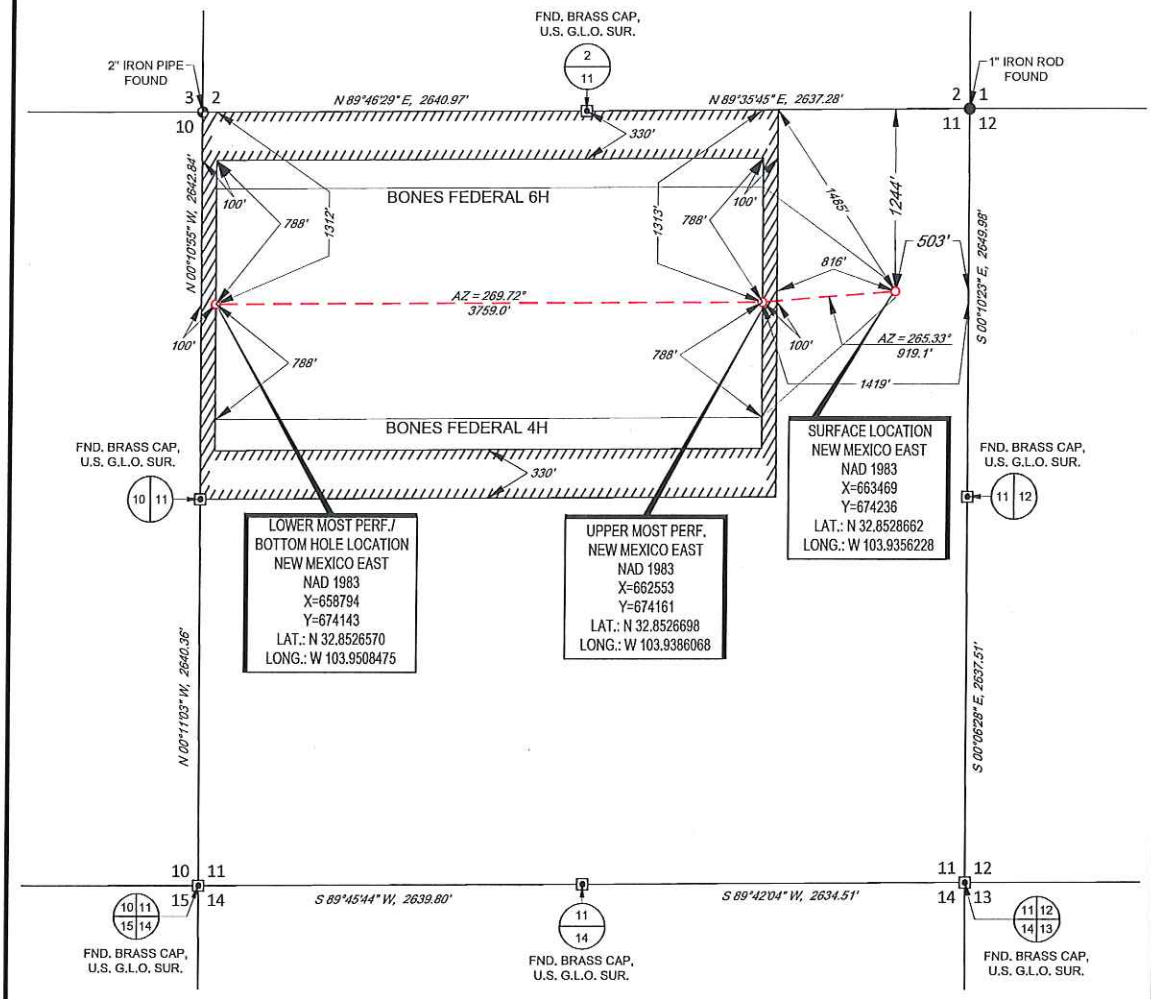
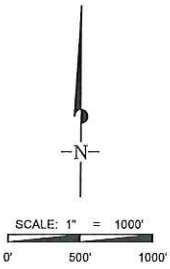
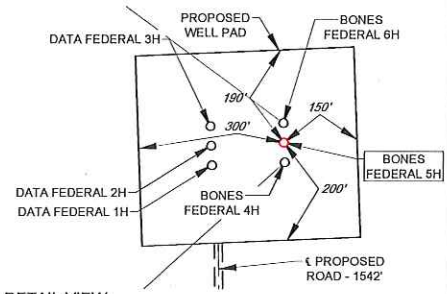
EXHIBIT 2A

SECTION 11, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO







DETAIL VIEW
SCALE: 1" = 300'

LEASE NAME & WELL NO.: BONES FEDERAL 5H

SECTION 11 TWP 17-S RGE 30-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 1244 FNL & 503 FEL

DISTANCE & DIRECTION

FROM INT. OF NM-529. & US-82, GO WEST ON US-82 ±3.7 MILES, THENCE NORTH (RIGHT) ON SQUARE LAKE RD. ±2.5 MILES, THENCE WEST (LEFT) ON A LEASE RD. ±0.3 MILES, THENCE CONTINUE WEST ON A PROPOSED RD. ±1524 FEET TO A POINT ±245 FEET SOUTHWEST OF THE LOCATION.

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

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Michael Blake Brown, P.S. No. 18329
OCTOBER 31, 2018

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TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
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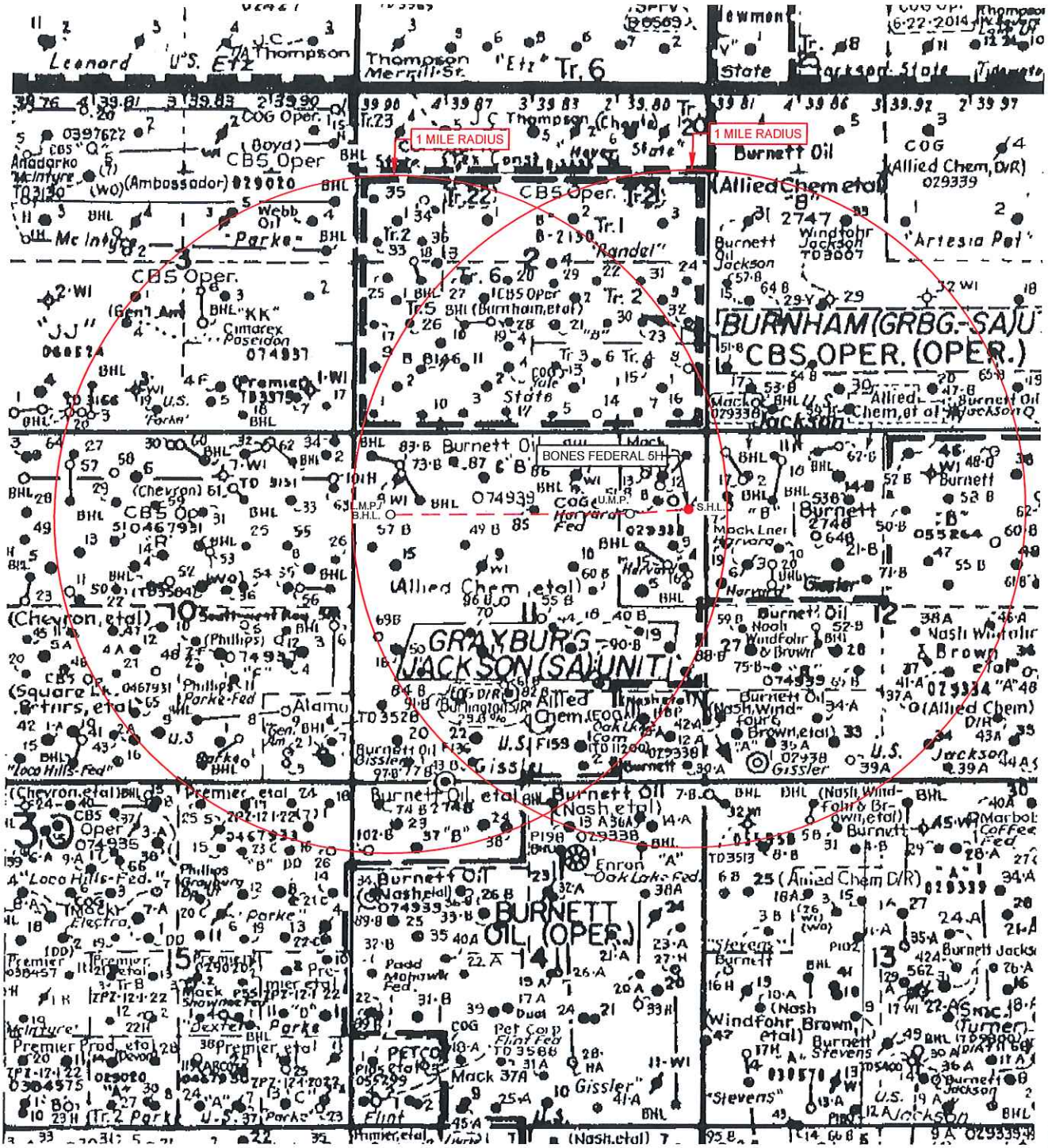
EXHIBIT 3

eog resources, inc.

SECTION 11, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: BONES FEDERAL 5H

SCALE: NTS

5H LATITUDE N 32.8528662 5H LONGITUDE W 103.9356228

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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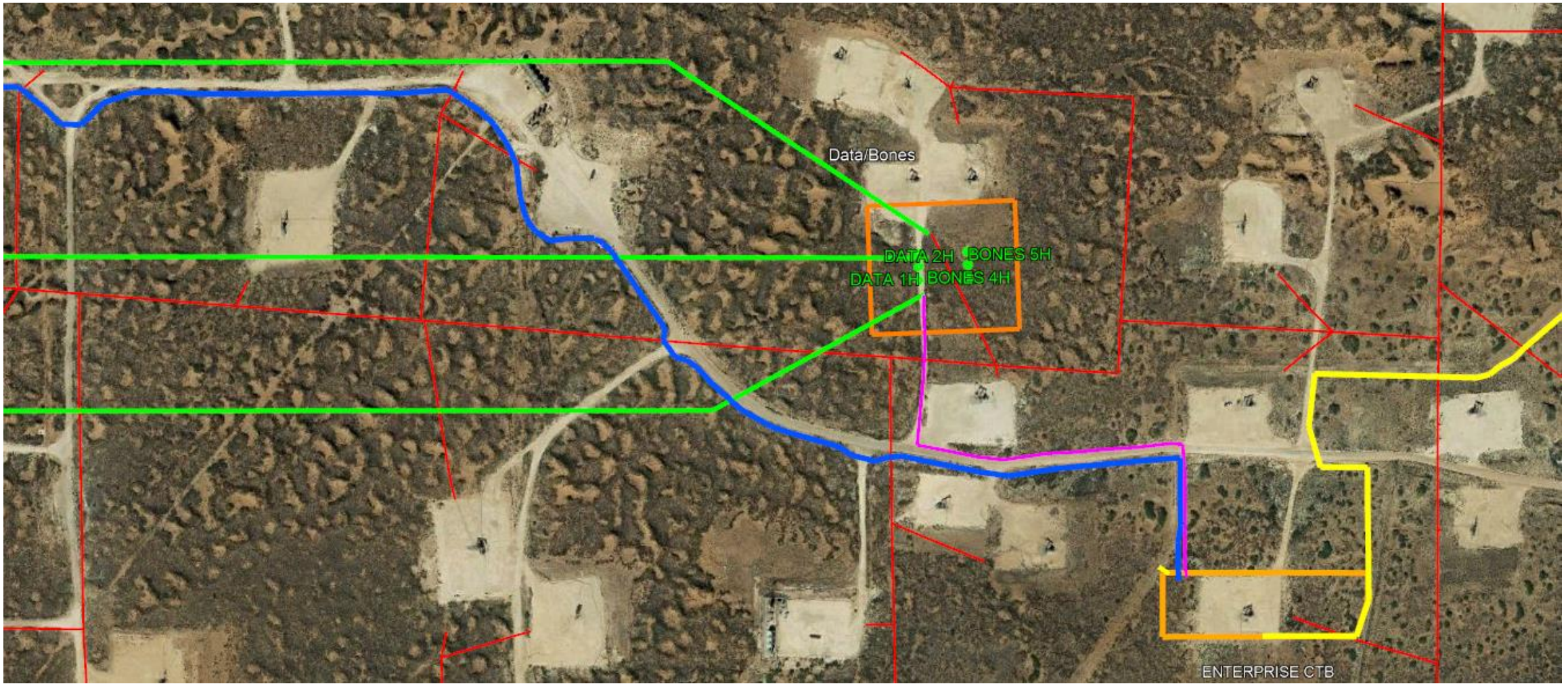
Data & Bones Wells Overview

Legend		Comments
	Proposed Pad	
	Water Transfer Line	Enterprise CTB Water Transfer Line - Four 4" poly flowlines on surface. Total footage per line = 6,500'
	Gas Gathering	
	Electrical Grid	Current CVE system in the field. Power supply will come from CVE.
	Well Flowlines	Two 4" poly and two 4" Flexsteel lines on surface. Working pressure will not exceed 125psi. Estimated length @ 1800'.
	Well Paths	



Legend		Comments
	Proposed Pad	
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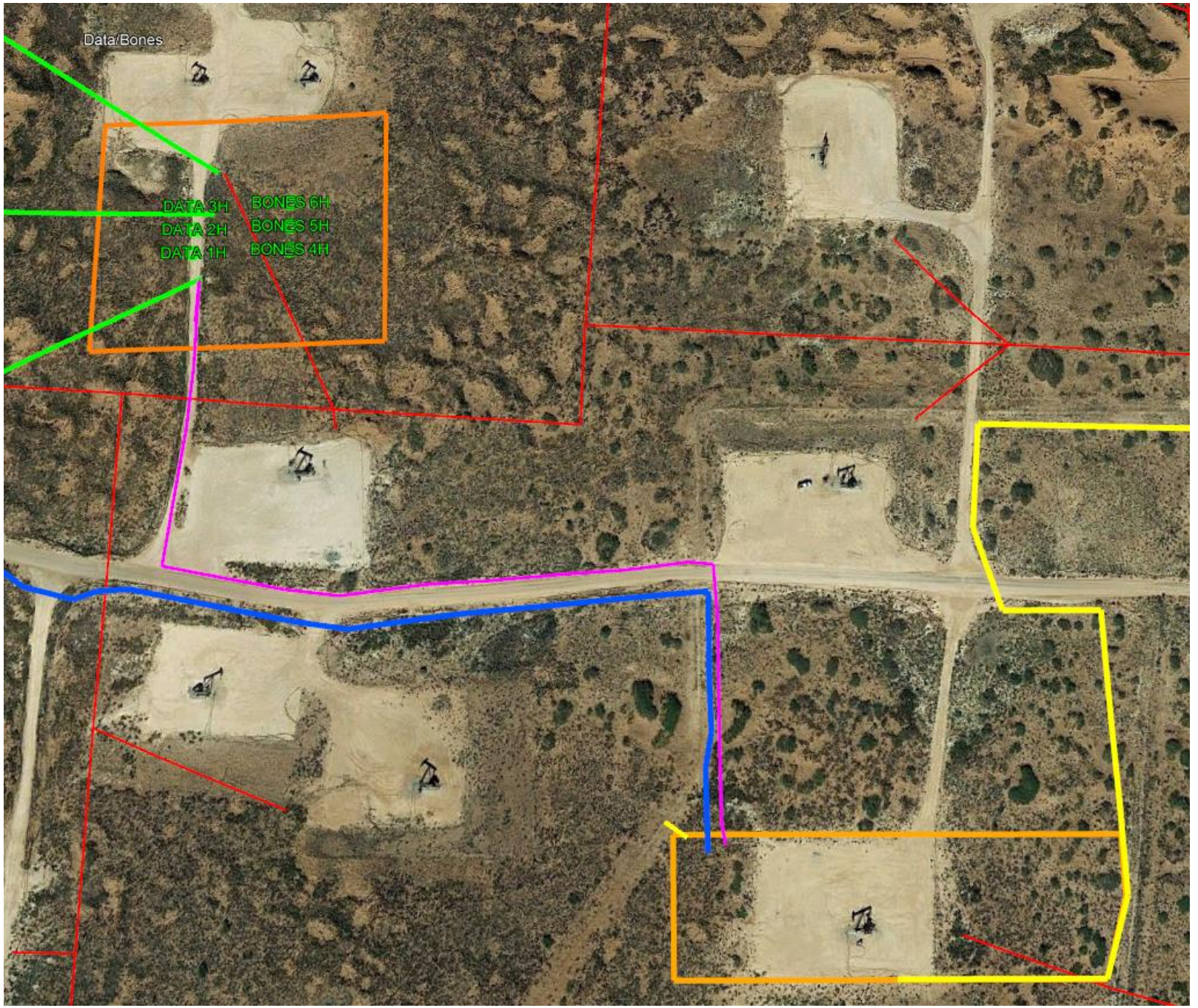
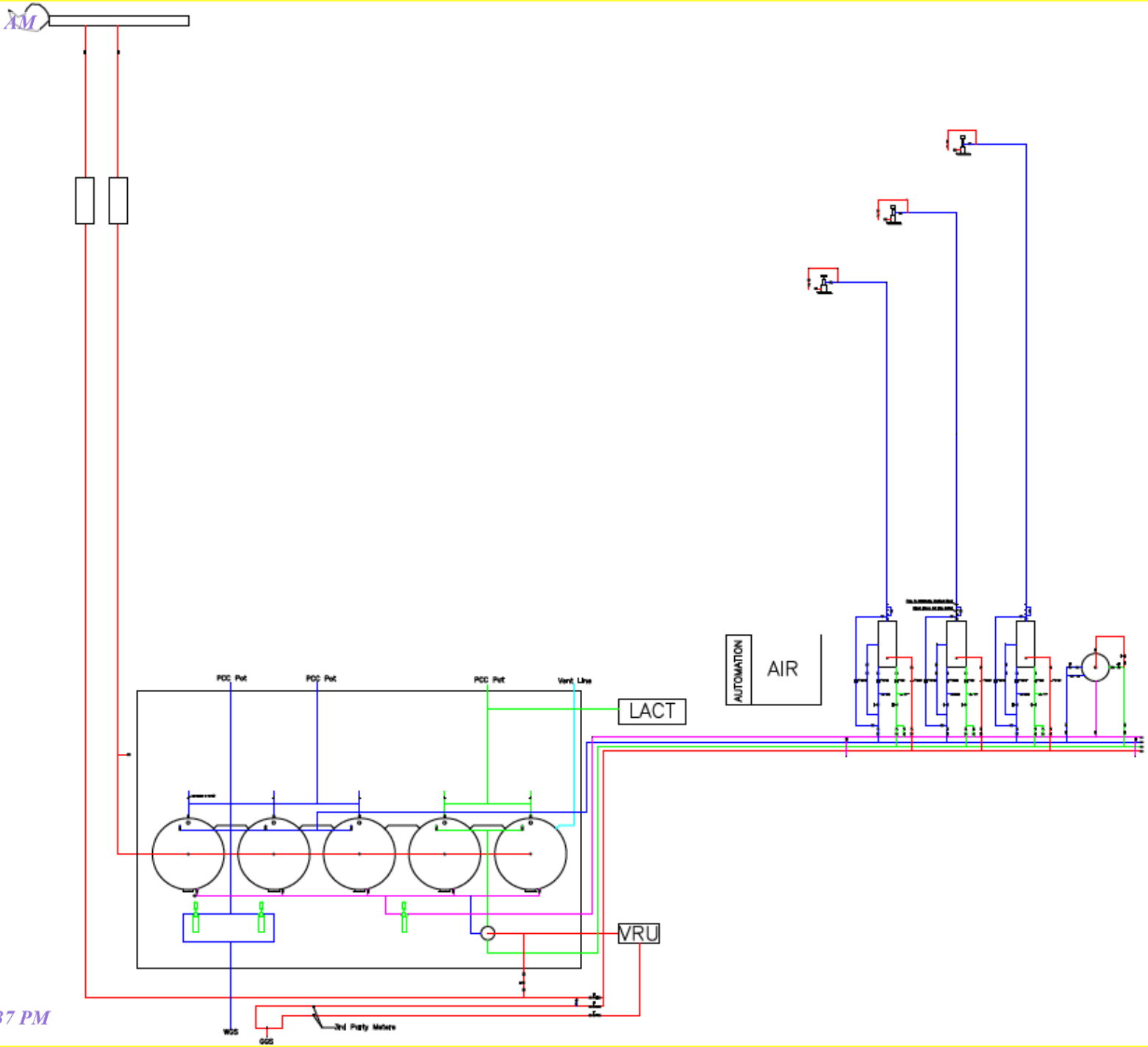
	Well Pads	

Legend	
	Proposed Pad
	Water Transfer Line
	Gas Gathering
	Electrical Grid
	Well Flowlines
	Well Paths

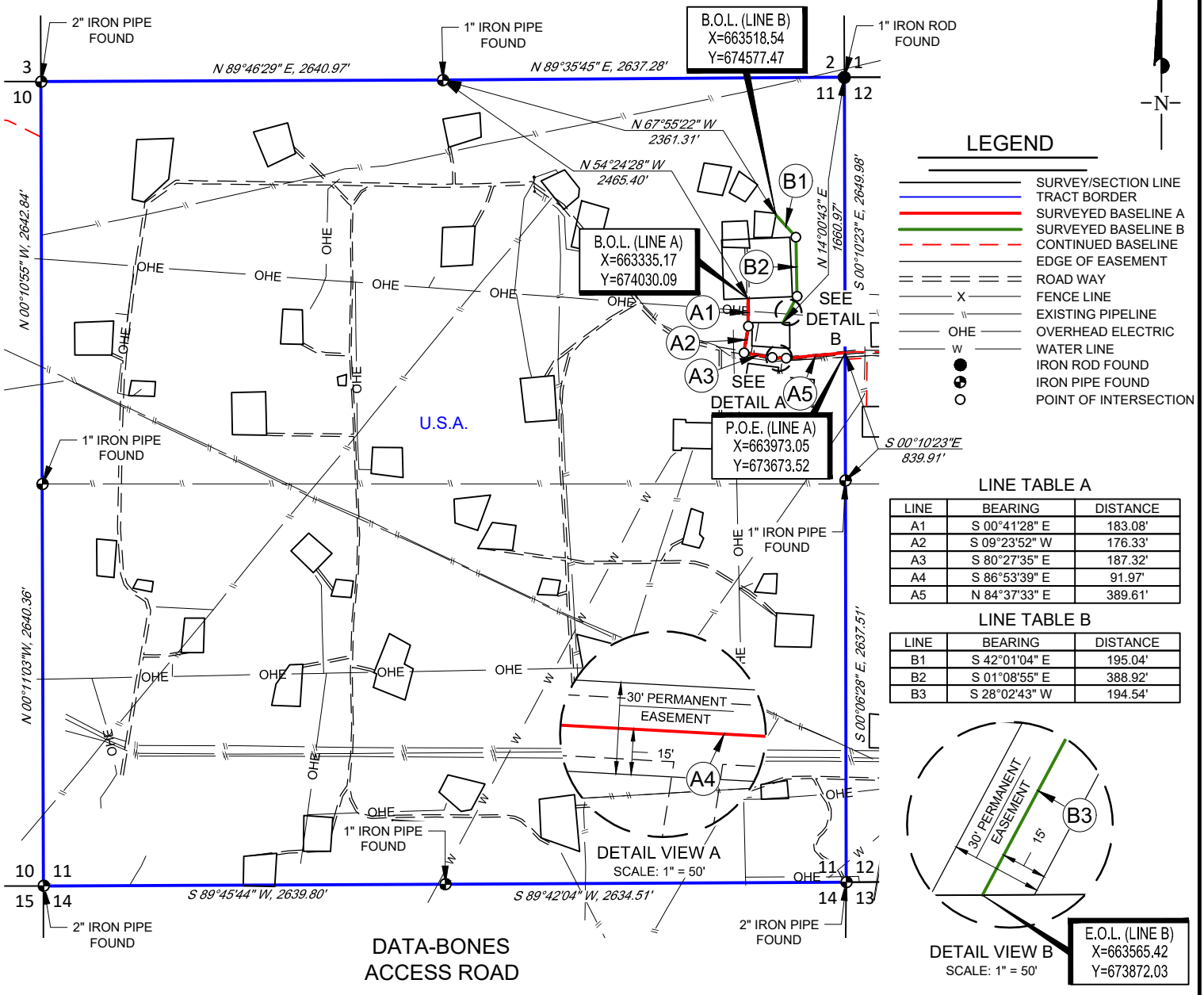



PCC Pot
PCC Pot
PCC Pot
Vent Line
LACT
VRU
AUTOMATION
AIR
WDS
3rd Party Meters

SCALE: 1" = 1000'

0' 500' 1000'

SECTION 11, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



DATA-BONES
ACCESS ROAD

LEGEND

- SURVEY/SECTION LINE
- TRACT BORDER
- SURVEYED BASELINE A
- SURVEYED BASELINE B
- CONTINUED BASELINE
- EDGE OF EASEMENT
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OVERHEAD ELECTRIC
- WATER LINE
- IRON ROD FOUND
- IRON PIPE FOUND
- POINT OF INTERSECTION

LINE TABLE A

LINE	BEARING	DISTANCE
A1	S 00°41'28" E	183.08'
A2	S 09°23'52" W	176.33'
A3	S 80°27'35" E	187.32'
A4	S 86°53'39" E	91.97'
A5	N 84°37'33" E	389.61'

LINE TABLE B

LINE	BEARING	DISTANCE
B1	S 42°01'04" E	195.04'
B2	S 01°08'55" E	388.92'
B3	S 28°02'43" W	194.54'

Being a proposed road easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 1806.81 feet or 109.50 rods, containing 1.24 acres more or less.

MICHAEL B. BROWN NEW MEXICO 18329 PROFESSIONAL SURVEYOR

Michael Blake Brown, P.S. No. 18329
NOVEMBER 14, 2018

eog resources, inc.

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DATA-BONES ACCESS ROAD	REVISION: INT	DATE
DATE: 10/26/2018		
FILE: EP_DATA_BONES_ACCESS_RD_SEC11		
DRAWN BY: IMU		
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.
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. ADJOINER INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.

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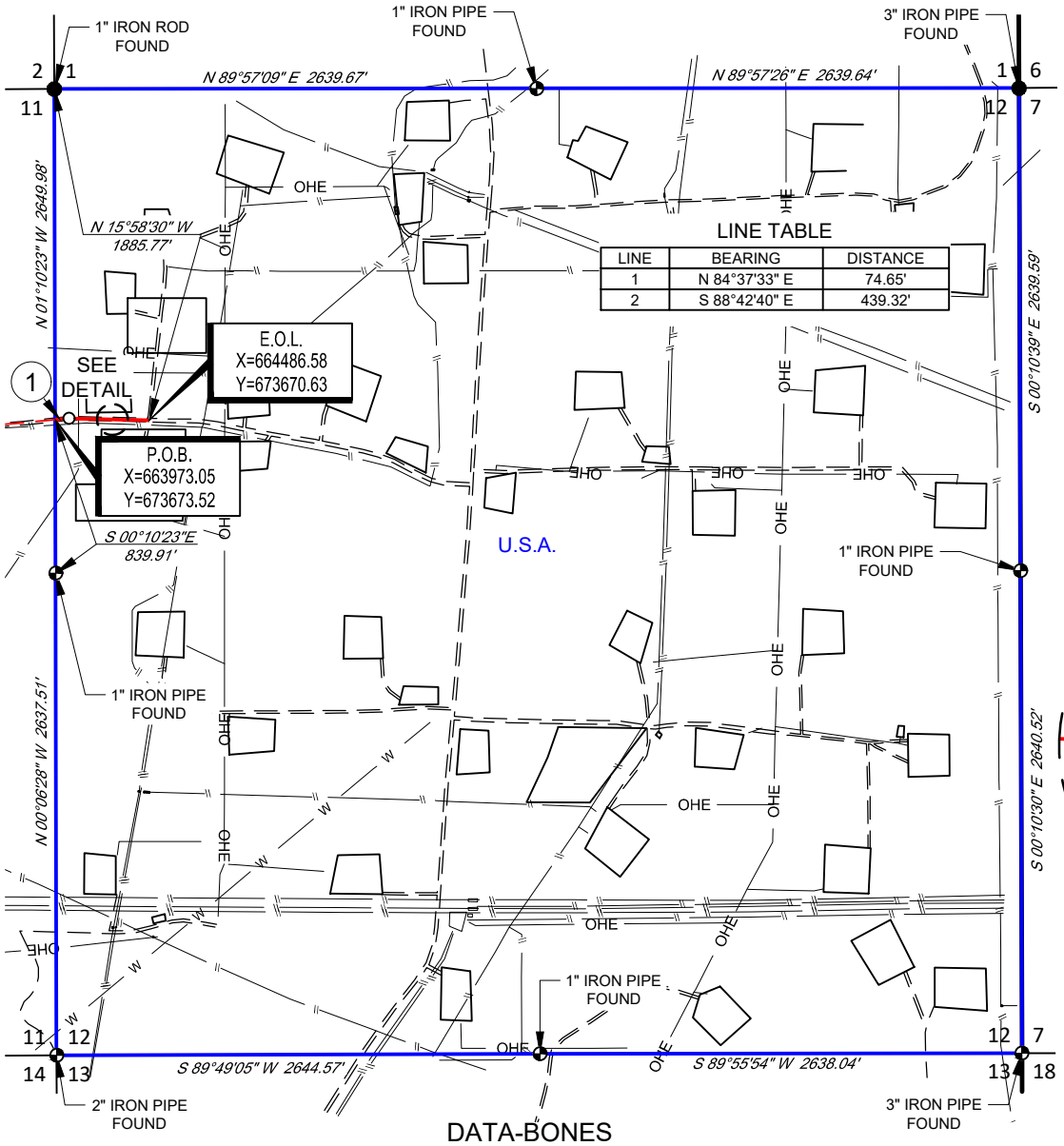
SCALE: 1" = 1000'

0' 500' 1000'

SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

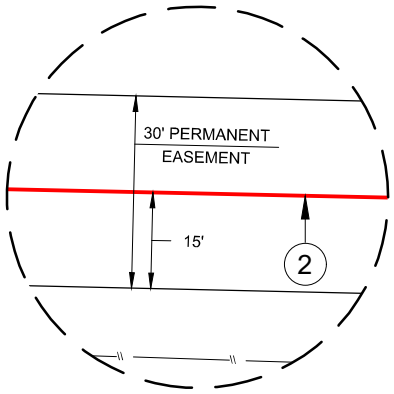


LINE TABLE

LINE	BEARING	DISTANCE
1	N 84°37'33" E	74.65'
2	S 88°42'40" E	439.32'

LEGEND

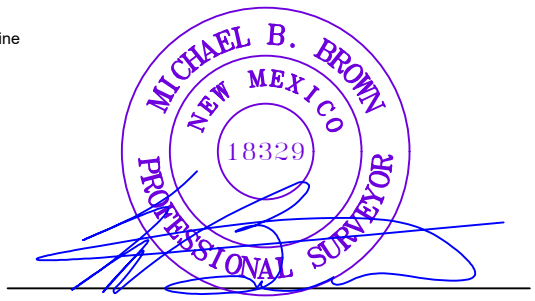
- SURVEY/SECTION LINE
- RANGE/TOWNSHIP LINE
- TRACT BORDER
- SURVEYED BASELINE
- EDGE OF EASEMENT
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OVERHEAD ELECTRIC
- WATER LINE
- IRON ROD FOUND
- IRON PIPE FOUND
- POINT OF INTERSECTION



DETAIL VIEW
SCALE: 1" = 30'

DATA-BONES ACCESS ROAD

Being a proposed road easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 513.97 feet or 31.15 rods, containing 0.35 acres more or less.



Michael Blake Brown, P.S. No. 18329
NOVEMBER 14, 2018

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DATA-BONES ACCESS ROAD	REVISION: INT	DATE
DATE: 10/26/2018		
FILE: EP_DATA_BONES_ACCESS_RD_SEC12		
DRAWN BY: IMU		
SHEET : 1 OF 1		

NOTES:
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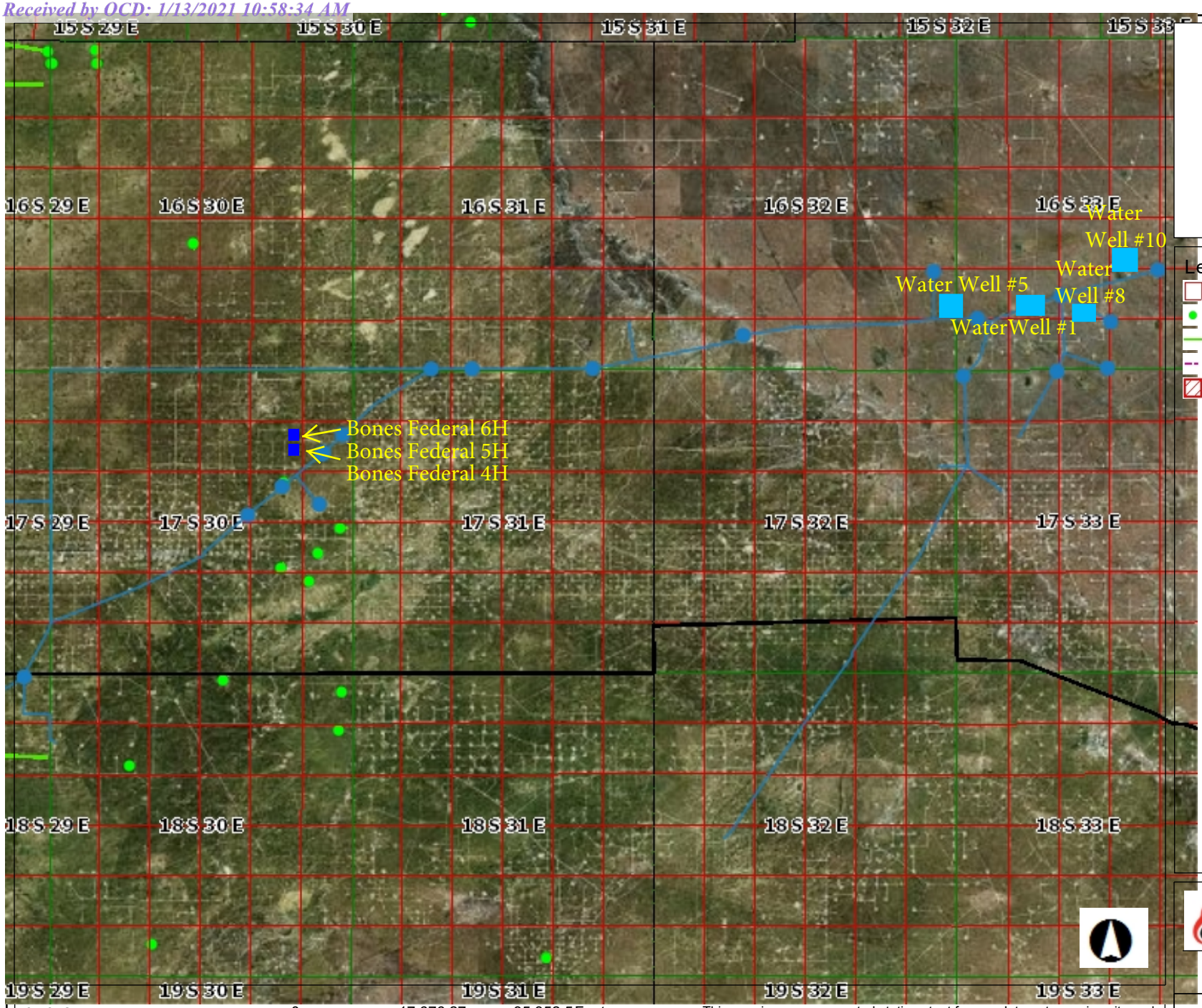


Legend

- Jeffersonian Sections
- Artesia SHL Directional
- Artesia Well Path
- Well Plans
- Well Pad Areas
- Land Calendar Legend
  - EXPIRATION
  - OBLIGATION
  - PAYMENT

35,352.5 0 17,676.27 35,352.5 Feet

1: 212,115

Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Date: 7/19/2018

eog resources

ARTESIA DIVISION

Water Source Map
Bones Federal 4H, 5H, 6H

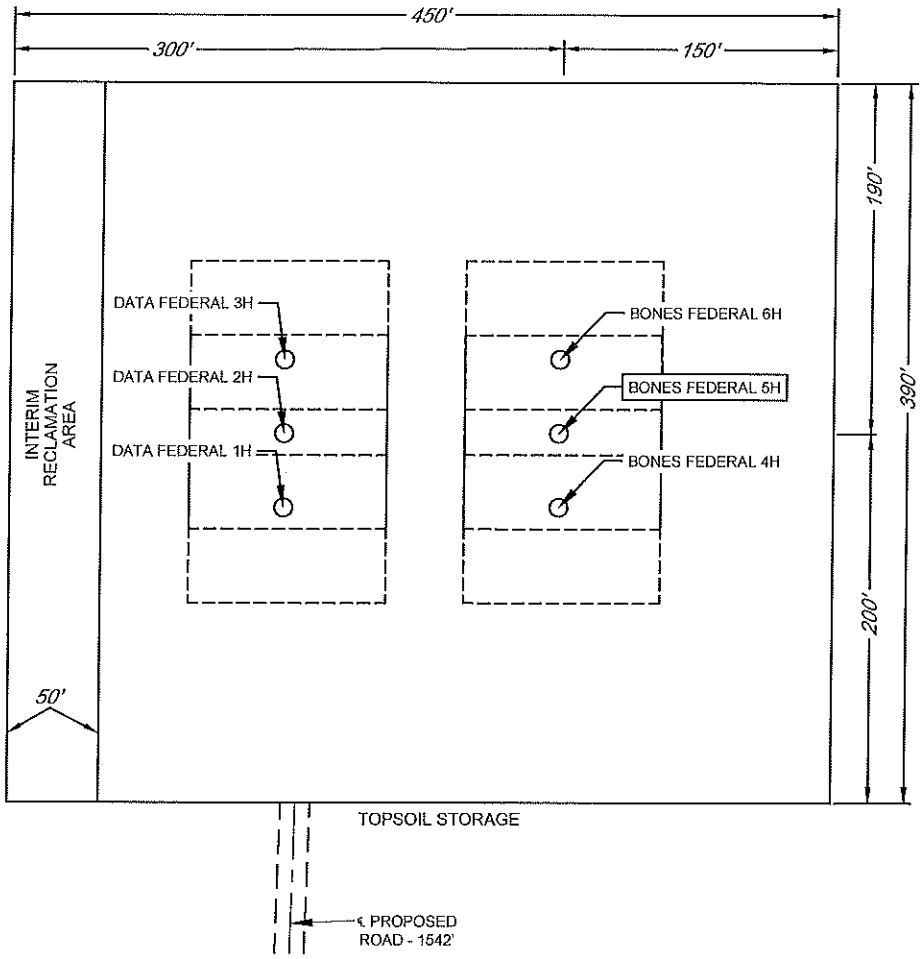
Author: Trixy Duke

EXHIBIT 2C

RECLAMATION AND FACILITY DIAGRAM - PRODUCTION FACILITIES DIAGRAM

SECTION 11, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: BONES FEDERAL 5H

5H LATITUDE N 32.8528662 5H LONGITUDE W 103.9356228

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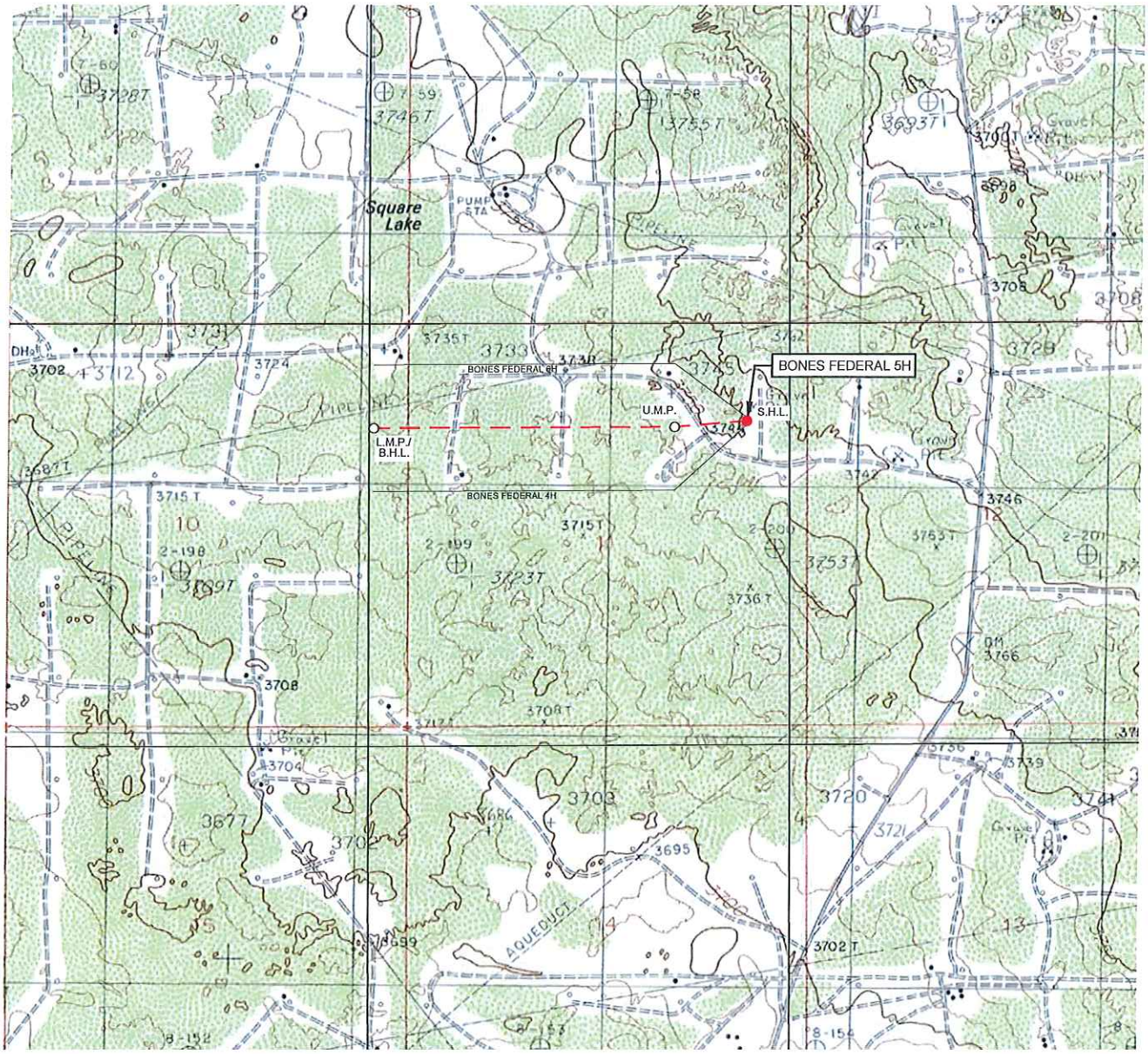
LOCATION & ELEVATION VERIFICATION MAP



eog resources, inc.

LEASE NAME & WELL NO.: BONES FEDERAL 5H

SECTION 11 TWP 17-S RGE 30-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM ELEVATION 3747'
DESCRIPTION 1244 FNL & 503 FEL

LATITUDE N 32.8528662 LONGITUDE W 103.9356228

N

SCALE: 1" = 2000'
0' 1000' 2000'

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.

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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

GAS CAPTURE PLAN

Date: December 5, 2018

☒ Original
☐ Amended - Reason for Amendment:

Operator & OGRID No.: EOG Resources, Inc. 7377

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

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

Well(s)/Production Facility – Name of facility

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Data Federal 1H		11–17S-30E	1289' FNL 651' FEL	500	0	
Data Federal 2H		11–17S-30E	1249' FNL 653' FEL	500	0	
Data Federal 3H		11–17S-30E	1209' FNL 654' FEL	500	0	
Bones Federal 4H		11–17S-30E	1284' FNL 501' FEL	500	0	
Bones Federal 5H		11–17S-30E	1244' FNL 503' FEL	500	0	
Bones Federal 6H		11–17S-30E	1204' FNL 504' FEL	500	0	
Mr. Scott Federal Com 1H		12–17S-30E	1567'FSL 2401' FEL	500	0	
La Forge Federal Com 2H		12–17S-30E	1591'FSL 2832' FEL	500	0	

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 DCP Midstream and will be connected to DCP Midstream low pressure gathering system located in Eddy County, New Mexico. It will require 27' of pipeline to connect the facility to low/high pressure gathering system. EOG provides (periodically) to DCP Midstream a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, EOG and DCP Midstream have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at DCP Midstream Processing Plant located in 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 DCP Midstream system at that time. Based on current information, it is EOG's 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

EOG RESOURCES, INC.
BONES FEDERAL NO. 5H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	436’
Tansill	1,292’
Yates	1,465’
Seven Rivers	1,720’
Queen	2,329’
Grayburg	2,737’
San Andres	3,052’
Glorieta	4,492’
Yeso	4,599’
TD	9,610’

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

Rustler	436’	Fresh Water, Oil
Grayburg	2,737’	Oil
San Andres	3,052’	Oil
Glorieta	4,492’	Oil
Yeso	4,599’	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 400’ and circulating cement back to surface.

4. CASING PROGRAM - NEW

Hole & Casing String:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
17.5”	0’-400’	13.375”	48#	H-40/ J-55	STC	1.125	1.25	1.60
12.25”	0’ –100’	9.625	40#	J-55	LTC	1.125	1.25	1.60
12.25”	100’ – 3,300’	9.625	36#	J-55	LTC	1.125	1.25	1.60
12.25”	3,300’ – 3,500’	9.625	40#	J-55	LTC	1.125	1.25	1.60
8.75”	0’ – 5,302’	7”	29#	L-80	BTC	1.125	1.25	1.60
8.75”	5,302’-9,610’	5 ½”	17#	L-80	BTC	1.125	1.25	1.60

EOG RESOURCES, INC.
BONES FEDERAL NO. 5H

Cementing Program:
Note: Cement volumes based on bit size plus at least 100% excess on surface, 100% excess in Contingency Intermediate and 35% excess in production string.

Cement Design:

Depth	No. Sacks	Wt. lb/gal	Yld Ft^3/ft	Volume Ft^3	Slurry Description
400’	415	14.8	1.34	95	Tail: Class 'C' + 2%PF1(Calcium Chloride) (100% excess)
3500’*	1075	12.8	1.79	343	Lead: 35:65 Poz C + .02 gal/sk Anti Foam + 1% Extender + .13 lb/sk Lost Circulation (TOC @ Surface)
	200	14.8	1.33	47	Tail: Class C + 0.13% Anti Foam
9610’	190	11.9	2.47	84	Lead: Class 50/50 PozC + 5%PF44(BWOW)(Salt) + 10% PF20(Bentonite Gel) +.2%PF153(Anti Settling Agent(+ 3#/sk OF42(Kolseal) + 0.125#/sk PF29 (celloflake) + 0.4#/sk PF45 (Defoamer) (TOC @ 500’ into previous casing string) 35% Excess
	995	13	1.48	262	Tail: Class PVL + 1.3% PF44(BWOW)(Salt) + 5% PF174 (Expanding Cement) + 0.5% PF606 (Fluid Loss) + 0.1% PF153 (Anti Settling Agent) + 0.4#/sk PF45 (Defoamer) 35% Excess
*Cement will be done in 2 stages if water flow is encountered. DV Tool placement will be placed above water flow depth. Cement volumes will be adjusted accordingly.					

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

A variance is requested to use a co-flex line between the BOP and choke manifold, dependent on rig selection (instead of using a steel line). Certification and specs are attached.

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a double rams with blind rams & pipe rams preventer (3,000 psi WP) and an annular preventer (3,000-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.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 3,000/ 250 psig and the annular preventer to 1,500/ 250 psig. The surface casing will be tested to 1200 psi for 30 minutes.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

A hydraulically operated choke will be installed prior to drilling out of the surface casing shoe.

EOG RESOURCES, INC.
BONES FEDERAL NO. 5H

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

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

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

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 400’	Fresh Water	8.6-8.8	28-32	N/c
400’ – 9,610’ Vertical/Curve/Lateral	Cut Brine	8.8-10.2	30-34	N/c

The highest mud weight needed to balance formation is expected to be 10.2 ppg. In order to maintain hole stability, mud weights up to 10.2 ppg may be utilized.

An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.

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

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

(A) A kelly cock will be kept in the drill string at all times.

(B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

(C) H_2S 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–Directional surveys will be run in open hole during drilling phase of operations.

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

The estimated bottom-hole temperature (BHT) at TD is 110 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 2766 psig (based on 10.2 ppg MW). Hydrogen sulfide has been encountered, reported or are known to exist at this depth in this area. Severe loss circulation is expected from spud to surface casing point.

EOG RESOURCES, INC.
BONES FEDERAL NO. 5H

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

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

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

11. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the 13-3/8" surface casing, a 13 3/8" BOP/BOPE system with a minimum working pressure of 3,000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3,000 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 3,000 psi.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Stream Flo HES 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.

The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

EOG Resources - Artesia

Eddy County (NAD83)
Bones
Bones Federal #5H

Lateral
Plan #1

Anticollision Report

03 January, 2019

eog resources

Anticollision Report

Company:	EOG Resources - Artesia	**Local Co-ordinate Reference:**	Well Bones Federal #5H
Project:	Eddy County (NAD83)	**TVD Reference:**	KB @ 3765.000usft (Planning Rig)
Reference Site:	Bones	**MD Reference:**	KB @ 3765.000usft (Planning Rig)
Site Error:	0.000 usft	**North Reference:**	Grid
Reference Well:	Bones Federal #5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.000 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	EDM 5000.14
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Plan #1

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 9,999.980 usft	**Error Surface:**	Combined Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 1/3/2019

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.000	9,609.740	Plan #1 (Lateral)	MWD	OWSG MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Data						
Data Federal #2H - Lateral - Plan #1	4,100.000	4,104.000	150.120	129.624	7.324	ES
Data Federal #2H - Lateral - Plan #1	4,102.328	4,101.671	150.120	129.624	7.324	CC
Data Federal #2H - Lateral - Plan #1	4,200.000	4,186.300	151.747	130.831	7.255	SF

Offset Design Data - Data Federal #2H - Lateral - Plan #1

Survey Program: 0-MWD

Offset Site Error: 0.000 usft

Offset Well Error: 0.000 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.000	0.000	4.000	-4.000	0.000	0.006	-92.29	-6.000	-150.000	150.120				
100.000	100.000	104.000	96.000	0.147	0.161	-92.29	-6.000	-150.000	150.120	149.902	0.22	687.908	
200.000	200.000	204.000	196.000	0.505	0.520	-92.29	-6.000	-150.000	150.120	149.395	0.73	207.057	
300.000	300.000	304.000	296.000	0.864	0.878	-92.29	-6.000	-150.000	150.120	148.888	1.23	121.856	
400.000	400.000	404.000	396.000	1.222	1.237	-92.29	-6.000	-150.000	150.120	148.381	1.74	86.331	
500.000	500.000	504.000	496.000	1.581	1.595	-92.29	-6.000	-150.000	150.120	147.874	2.25	66.844	
600.000	600.000	604.000	596.000	1.939	1.954	-92.29	-6.000	-150.000	150.120	147.367	2.75	54.534	
700.000	700.000	704.000	696.000	2.298	2.312	-92.29	-6.000	-150.000	150.120	146.860	3.26	46.053	
800.000	800.000	804.000	796.000	2.656	2.671	-92.29	-6.000	-150.000	150.120	146.353	3.77	39.855	
900.000	900.000	904.000	896.000	3.015	3.029	-92.29	-6.000	-150.000	150.120	145.846	4.27	35.127	
1,000.000	1,000.000	1,004.000	996.000	3.373	3.388	-92.29	-6.000	-150.000	150.120	145.339	4.78	31.402	
1,100.000	1,100.000	1,104.000	1,096.000	3.732	3.746	-92.29	-6.000	-150.000	150.120	144.832	5.29	28.391	
1,200.000	1,200.000	1,204.000	1,196.000	4.090	4.104	-92.29	-6.000	-150.000	150.120	144.325	5.79	25.907	
1,300.000	1,300.000	1,304.000	1,296.000	4.449	4.463	-92.29	-6.000	-150.000	150.120	143.818	6.30	23.823	
1,400.000	1,400.000	1,404.000	1,396.000	4.807	4.821	-92.29	-6.000	-150.000	150.120	143.312	6.81	22.049	
1,500.000	1,500.000	1,504.000	1,496.000	5.166	5.180	-92.29	-6.000	-150.000	150.120	142.805	7.32	20.521	
1,600.000	1,600.000	1,604.000	1,596.000	5.524	5.538	-92.29	-6.000	-150.000	150.120	142.298	7.82	19.191	
1,700.000	1,700.000	1,704.000	1,696.000	5.883	5.897	-92.29	-6.000	-150.000	150.120	141.791	8.33	18.023	
1,800.000	1,800.000	1,804.000	1,796.000	6.241	6.255	-92.29	-6.000	-150.000	150.120	141.284	8.84	16.989	
1,900.000	1,900.000	1,904.000	1,896.000	6.599	6.614	-92.29	-6.000	-150.000	150.120	140.777	9.34	16.067	
2,000.000	2,000.000	2,004.000	1,996.000	6.958	6.972	-92.29	-6.000	-150.000	150.120	140.270	9.85	15.240	
2,100.000	2,100.000	2,104.000	2,096.000	7.316	7.331	-92.29	-6.000	-150.000	150.120	139.763	10.36	14.494	
2,200.000	2,200.000	2,204.000	2,196.000	7.675	7.689	-92.29	-6.000	-150.000	150.120	139.256	10.86	13.818	
2,300.000	2,300.000	2,304.000	2,296.000	8.033	8.048	-92.29	-6.000	-150.000	150.120	138.749	11.37	13.202	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

eog resources

Anticollision Report

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Reference Well:	Bones Federal #5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.000 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	EDM 5000.14
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Data - Data Federal #2H - Lateral - Plan #1

Offset Site Error: 0.000 usft

Survey Program: 0-MWD

Offset Well Error: 0.000 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,400.000	2,400.000	2,404.000	2,396.000	8.392	8.406	-92.29	-6.000	-150.000	150.120	138.242	11.88	12.639	
2,500.000	2,500.000	2,504.000	2,496.000	8.750	8.765	-92.29	-6.000	-150.000	150.120	137.735	12.38	12.121	
2,600.000	2,600.000	2,604.000	2,596.000	9.109	9.123	-92.29	-6.000	-150.000	150.120	137.228	12.89	11.645	
2,700.000	2,700.000	2,704.000	2,696.000	9.467	9.482	-92.29	-6.000	-150.000	150.120	136.721	13.40	11.204	
2,800.000	2,800.000	2,804.000	2,796.000	9.826	9.840	-92.29	-6.000	-150.000	150.120	136.214	13.91	10.796	
2,900.000	2,900.000	2,904.000	2,896.000	10.184	10.199	-92.29	-6.000	-150.000	150.120	135.707	14.41	10.416	
3,000.000	3,000.000	3,004.000	2,996.000	10.543	10.557	-92.29	-6.000	-150.000	150.120	135.200	14.92	10.062	
3,100.000	3,100.000	3,104.000	3,096.000	10.901	10.915	-92.29	-6.000	-150.000	150.120	134.693	15.43	9.731	
3,200.000	3,200.000	3,204.000	3,196.000	11.260	11.274	-92.29	-6.000	-150.000	150.120	134.186	15.93	9.422	
3,300.000	3,300.000	3,304.000	3,296.000	11.618	11.632	-92.29	-6.000	-150.000	150.120	133.679	16.44	9.131	
3,400.000	3,400.000	3,404.000	3,396.000	11.977	11.991	-92.29	-6.000	-150.000	150.120	133.172	16.95	8.858	
3,500.000	3,500.000	3,504.000	3,496.000	12.335	12.349	-92.29	-6.000	-150.000	150.120	132.665	17.45	8.601	
3,600.000	3,600.000	3,604.000	3,596.000	12.693	12.708	-92.29	-6.000	-150.000	150.120	132.159	17.96	8.358	
3,700.000	3,700.000	3,704.000	3,696.000	13.052	13.066	-92.29	-6.000	-150.000	150.120	131.652	18.47	8.128	
3,800.000	3,800.000	3,804.000	3,796.000	13.410	13.425	-92.29	-6.000	-150.000	150.120	131.145	18.98	7.911	
3,900.000	3,900.000	3,904.000	3,896.000	13.769	13.783	-92.29	-6.000	-150.000	150.120	130.638	19.48	7.705	
4,000.000	4,000.000	4,004.000	3,996.000	14.127	14.142	-92.29	-6.000	-150.000	150.120	130.131	19.99	7.510	
4,100.000	4,100.000	4,104.000	4,096.000	14.486	14.500	-92.29	-6.000	-150.000	150.120	129.624	20.50	7.324	ES
4,102.328	4,102.328	4,101.671	4,098.328	14.494	14.492	-92.29	-6.000	-150.000	150.120	129.624	20.50	7.324	CC
4,200.000	4,200.000	4,186.300	4,186.272	14.844	14.787	-92.34	-6.181	-151.309	151.747	130.831	20.92	7.255	SF
4,300.000	4,300.000	4,265.885	4,265.164	15.203	15.059	-92.68	-7.556	-161.284	164.379	143.305	21.07	7.800	
4,400.000	4,400.000	4,341.845	4,338.736	15.561	15.321	-93.22	-10.112	-179.826	188.994	168.026	20.97	9.014	
4,500.000	4,500.000	4,412.455	4,404.680	15.920	15.574	-93.79	-13.546	-204.731	224.583	203.938	20.64	10.878	
4,560.028	4,560.028	4,450.000	4,438.496	16.135	15.715	-94.08	-15.772	-220.879	250.699	230.388	20.31	12.343	
4,600.000	4,599.974	4,477.149	4,462.320	16.274	15.824	4.01	-17.550	-233.771	268.766	248.601	20.17	13.328	
4,650.000	4,649.701	4,508.535	4,489.141	16.444	15.955	3.70	-19.775	-249.914	290.214	270.351	19.86	14.611	
4,700.000	4,698.875	4,539.641	4,514.898	16.615	16.094	3.45	-22.157	-267.185	310.330	290.804	19.53	15.893	
4,750.000	4,747.193	4,570.501	4,539.579	16.786	16.245	3.24	-24.686	-285.530	329.075	309.919	19.16	17.179	
4,800.000	4,794.357	4,600.000	4,562.307	16.962	16.395	3.08	-27.254	-304.155	346.418	327.703	18.71	18.511	
4,850.000	4,840.077	4,631.601	4,585.660	17.144	16.581	2.95	-30.161	-325.241	362.318	343.989	18.33	19.768	
4,900.000	4,884.069	4,661.893	4,607.029	17.337	16.772	2.84	-33.093	-346.507	376.756	358.879	17.88	21.076	
4,950.000	4,926.065	4,692.044	4,627.259	17.547	16.981	2.76	-36.146	-368.650	389.702	372.300	17.40	22.394	
5,000.000	4,965.803	4,722.074	4,646.334	17.783	17.215	2.70	-39.313	-391.623	401.135	384.226	16.91	23.723	
5,050.000	5,003.040	4,750.000	4,663.073	18.052	17.443	2.65	-42.366	-413.763	411.042	394.713	16.33	25.173	
5,100.000	5,037.545	4,781.843	4,680.943	18.366	17.747	2.61	-45.965	-439.869	419.382	403.496	15.89	26.399	
5,150.000	5,069.106	4,812.478	4,696.332	18.732	18.052	2.60	-49.411	-464.865	426.165	410.804	15.36	27.743	
5,200.000	5,097.529	4,861.221	4,721.243	19.161	18.613	2.61	-55.304	-507.606	430.233	414.668	15.57	27.640	
5,226.694	5,111.357	4,887.907	4,734.586	19.419	18.922	2.64	-58.460	-530.501	430.802	415.124	15.68	27.477	
5,301.694	5,148.857	4,925.000	4,751.843	20.233	19.406	2.72	-62.555	-563.067	433.973	419.312	14.66	29.601	
5,325.000	5,160.031	4,939.531	4,757.923	20.513	19.611	2.40	-64.005	-576.184	435.630	421.167	14.46	30.122	
5,350.000	5,170.934	4,950.000	4,762.061	20.834	19.759	2.08	-64.994	-585.750	436.856	422.781	14.07	31.038	
5,375.000	5,180.687	4,965.911	4,767.956	21.176	19.998	1.79	-66.407	-600.460	437.450	423.569	13.88	31.514	
5,400.000	5,189.262	4,975.000	4,771.108	21.539	20.135	1.53	-67.166	-608.951	437.496	424.031	13.47	32.491	
5,425.000	5,196.637	4,992.289	4,776.666	21.922	20.409	1.28	-68.509	-625.266	436.869	423.538	13.33	32.771	
5,450.000	5,202.790	5,005.480	4,780.517	22.324	20.623	1.06	-69.445	-637.847	435.677	422.606	13.07	33.330	
5,475.000	5,207.705	5,018.673	4,784.028	22.745	20.843	0.84	-70.303	-650.535	433.886	421.061	12.83	33.830	
5,500.000	5,211.369	5,031.869	4,787.197	23.182	21.068	0.64	-71.083	-663.321	431.498	418.903	12.59	34.260	
5,525.000	5,213.771	5,045.070	4,790.021	23.633	21.299	0.45	-71.785	-676.197	428.514	416.132	12.38	34.609	
5,550.000	5,214.905	5,058.276	4,792.498	24.097	21.535	0.26	-72.407	-689.153	424.937	412.749	12.19	34.864	
5,561.626	5,215.000	5,064.420	4,793.531	24.316	21.647	0.18	-72.669	-695.203	423.072	410.966	12.11	34.945	
5,600.000	5,214.858	5,084.836	4,796.417	25.059	22.023	0.09	-73.415	-715.399	417.500	405.631	11.87	35.176	
5,700.000	5,214.487	5,138.916	4,799.973	27.128	23.064	-0.02	-74.455	-769.323	410.537	398.958	11.58	35.457	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

eog resources

Anticollision Report

Company:	EOG Resources - Artesia	**Local Co-ordinate Reference:**	Well Bones Federal #5H
Project:	Eddy County (NAD83)	**TVD Reference:**	KB @ 3765.000usft (Planning Rig)
Reference Site:	Bones	**MD Reference:**	KB @ 3765.000usft (Planning Rig)
Site Error:	0.000 usft	**North Reference:**	Grid
Reference Well:	Bones Federal #5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.000 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	EDM 5000.14
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Data - Data Federal #2H - Lateral - Plan #1

Offset Site Error: 0.000 usft

Survey Program: 0-MWD

Offset Well Error: 0.000 usft

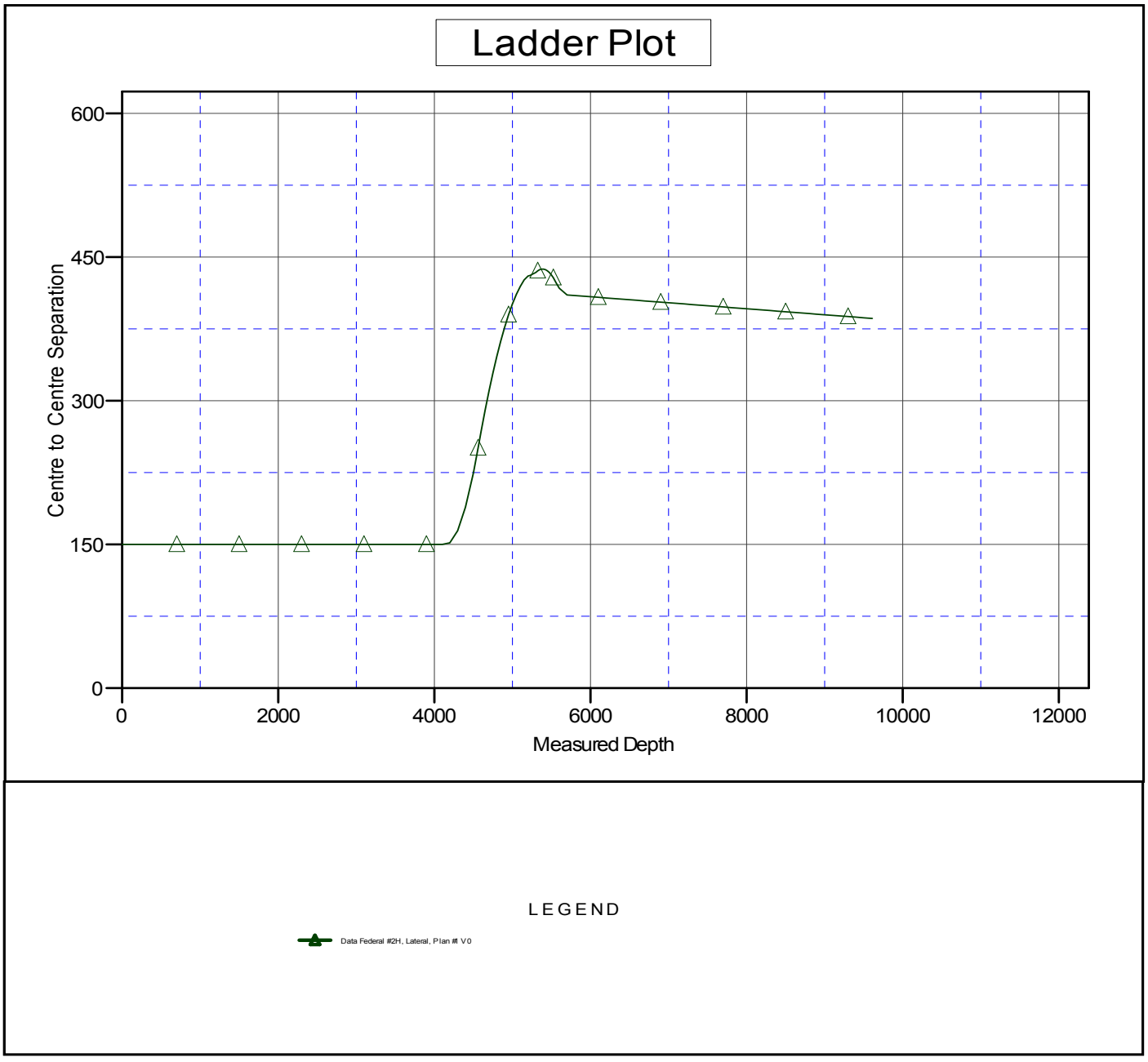
Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,800.000	5,214.117	5,235.595	4,800.237	29.357	25.084	-0.02	-74.918	-866.001	409.881	397.715	12.17	33.691	
5,900.000	5,213.746	5,335.593	4,800.494	31.712	27.318	-0.02	-75.393	-965.997	409.254	396.396	12.86	31.828	
6,000.000	5,213.376	5,435.591	4,800.750	34.167	29.687	-0.02	-75.867	-1,065.994	408.627	395.021	13.61	30.033	
6,100.000	5,213.005	5,535.589	4,801.006	36.702	32.160	-0.02	-76.342	-1,165.990	408.000	393.600	14.40	28.332	
6,200.000	5,212.635	5,635.587	4,801.262	39.301	34.715	-0.02	-76.817	-1,265.987	407.374	392.139	15.23	26.740	
6,300.000	5,212.264	5,735.585	4,801.519	41.953	37.336	-0.02	-77.292	-1,365.983	406.747	390.645	16.10	25.261	
6,400.000	5,211.894	5,835.583	4,801.775	44.648	40.009	-0.02	-77.766	-1,465.980	406.120	389.122	17.00	23.893	
6,500.000	5,211.523	5,935.581	4,802.031	47.379	42.725	-0.02	-78.241	-1,565.977	405.493	387.576	17.92	22.631	
6,600.000	5,211.153	6,035.579	4,802.288	50.140	45.476	-0.02	-78.716	-1,665.973	404.866	386.009	18.86	21.470	
6,700.000	5,210.782	6,135.577	4,802.544	52.926	48.255	-0.02	-79.190	-1,765.970	404.239	384.424	19.82	20.401	
6,800.000	5,210.412	6,235.575	4,802.800	55.734	51.059	-0.02	-79.665	-1,865.966	403.613	382.825	20.79	19.416	
6,900.000	5,210.041	6,335.573	4,803.056	58.560	53.883	-0.01	-80.140	-1,965.963	402.986	381.212	21.77	18.508	
7,000.000	5,209.671	6,435.571	4,803.313	61.402	56.725	-0.01	-80.614	-2,065.959	402.359	379.588	22.77	17.669	
7,100.000	5,209.300	6,535.569	4,803.569	64.257	59.581	-0.01	-81.089	-2,165.956	401.732	377.954	23.78	16.895	
7,200.000	5,208.929	6,635.567	4,803.825	67.125	62.451	-0.01	-81.564	-2,265.953	401.105	376.311	24.79	16.177	
7,300.000	5,208.559	6,735.565	4,804.082	70.003	65.331	-0.01	-82.039	-2,365.949	400.479	374.660	25.82	15.511	
7,400.000	5,208.188	6,835.563	4,804.338	72.890	68.221	-0.01	-82.513	-2,465.946	399.852	373.002	26.85	14.892	
7,500.000	5,207.818	6,935.561	4,804.594	75.786	71.120	-0.01	-82.988	-2,565.942	399.225	371.339	27.89	14.316	
7,600.000	5,207.447	7,035.559	4,804.851	78.689	74.026	-0.01	-83.463	-2,665.939	398.598	369.670	28.93	13.779	
7,700.000	5,207.077	7,135.557	4,805.107	81.598	76.938	-0.01	-83.937	-2,765.936	397.971	367.996	29.98	13.277	
7,800.000	5,206.706	7,235.555	4,805.363	84.514	79.857	-0.01	-84.412	-2,865.932	397.345	366.318	31.03	12.806	
7,900.000	5,206.336	7,335.553	4,805.619	87.434	82.781	-0.01	-84.887	-2,965.929	396.718	364.636	32.08	12.366	
8,000.000	5,205.965	7,435.551	4,805.876	90.359	85.710	-0.01	-85.361	-3,065.925	396.091	362.950	33.14	11.952	
8,100.000	5,205.595	7,535.549	4,806.132	93.289	88.643	-0.01	-85.836	-3,165.922	395.464	361.261	34.20	11.562	
8,200.000	5,205.224	7,635.547	4,806.388	96.222	91.580	-0.01	-86.311	-3,265.918	394.837	359.569	35.27	11.195	
8,300.000	5,204.854	7,735.546	4,806.645	99.159	94.520	-0.01	-86.786	-3,365.915	394.211	357.875	36.34	10.849	
8,400.000	5,204.483	7,835.544	4,806.901	102.100	97.464	-0.01	-87.260	-3,465.912	393.584	356.178	37.41	10.522	
8,500.000	5,204.113	7,935.542	4,807.157	105.043	100.411	-0.01	-87.735	-3,565.908	392.957	354.478	38.48	10.212	
8,600.000	5,203.742	8,035.540	4,807.413	107.989	103.360	-0.01	-88.210	-3,665.905	392.330	352.777	39.55	9.919	
8,700.000	5,203.372	8,135.538	4,807.670	110.938	106.312	-0.01	-88.684	-3,765.901	391.703	351.074	40.63	9.641	
8,800.000	5,203.001	8,235.536	4,807.926	113.889	109.266	0.00	-89.159	-3,865.898	391.077	349.369	41.71	9.377	
8,900.000	5,202.631	8,335.534	4,808.182	116.842	112.222	0.00	-89.634	-3,965.894	390.450	347.662	42.79	9.125	
9,000.000	5,202.260	8,435.532	4,808.439	119.797	115.180	0.00	-90.108	-4,065.891	389.823	345.954	43.87	8.886	
9,100.000	5,201.890	8,535.530	4,808.695	122.753	118.139	0.00	-90.583	-4,165.888	389.196	344.245	44.95	8.658	
9,200.000	5,201.519	8,635.528	4,808.951	125.712	121.101	0.00	-91.058	-4,265.884	388.569	342.534	46.04	8.441	
9,300.000	5,201.149	8,735.526	4,809.207	128.672	124.064	0.00	-91.533	-4,365.881	387.943	340.822	47.12	8.233	
9,400.000	5,200.778	8,835.524	4,809.464	131.634	127.028	0.00	-92.007	-4,465.877	387.316	339.109	48.21	8.034	
9,500.000	5,200.408	8,935.522	4,809.720	134.597	129.994	0.00	-92.482	-4,565.874	386.689	337.395	49.29	7.844	
9,600.000	5,200.037	9,035.520	4,809.976	137.561	132.960	0.00	-92.957	-4,665.870	386.062	335.679	50.38	7.663	
9,610.119	5,200.000	9,045.639	4,810.002	137.748	133.261	0.00	-93.005	-4,675.989	385.999	335.526	50.47	7.648	

eog resources

Anticollision Report

Company:	EOG Resources - Artesia	**Local Co-ordinate Reference:**	Well Bones Federal #5H
Project:	Eddy County (NAD83)	**TVD Reference:**	KB @ 3765.000usft (Planning Rig)
Reference Site:	Bones	**MD Reference:**	KB @ 3765.000usft (Planning Rig)
Site Error:	0.000 usft	**North Reference:**	Grid
Reference Well:	Bones Federal #5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.000 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	EDM 5000.14
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 3765.000usft (Planning Rig)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W
Coordinates are relative to: Bones Federal #5H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.22°



eog resources

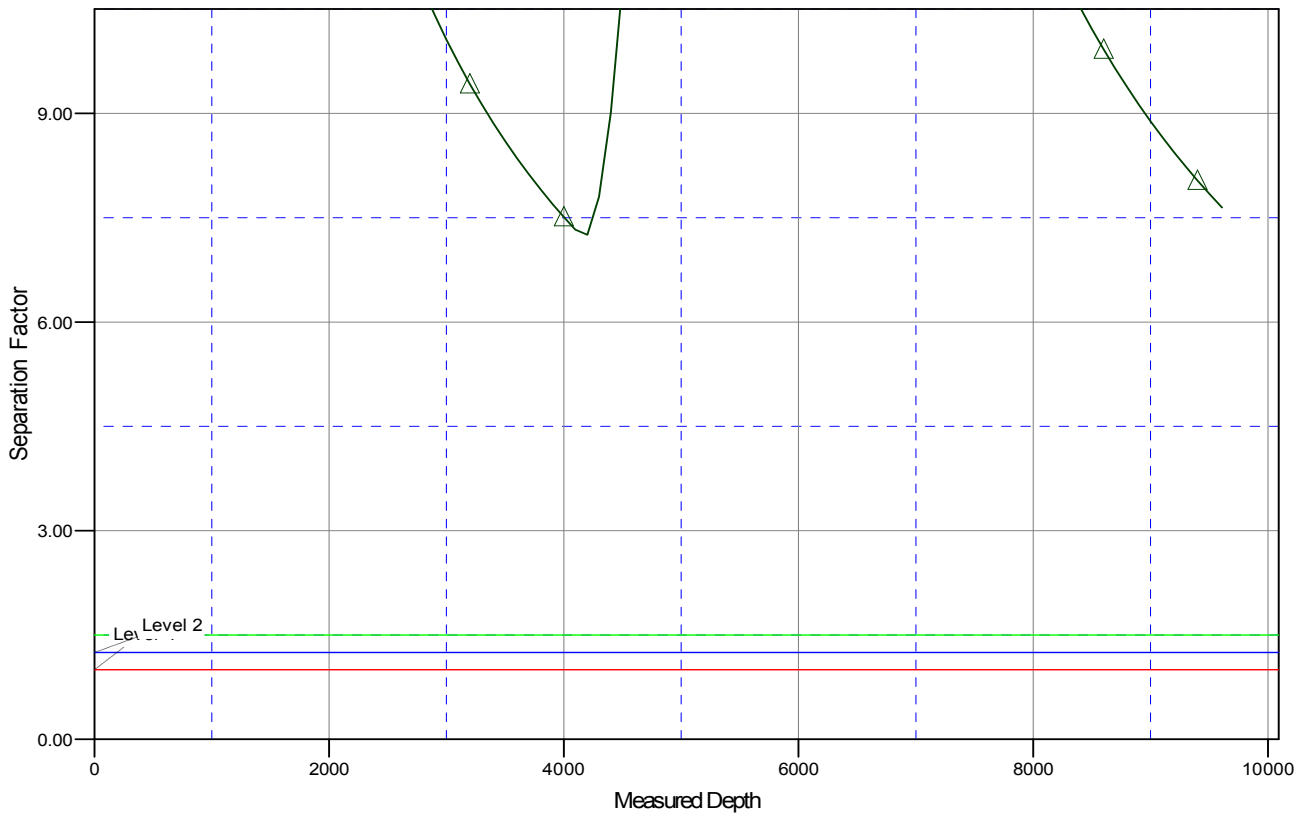
Anticollision Report

Company:	EOG Resources - Artesia	**Local Co-ordinate Reference:**	Well Bones Federal #5H
Project:	Eddy County (NAD83)	**TVD Reference:**	KB @ 3765.000usft (Planning Rig)
Reference Site:	Bones	**MD Reference:**	KB @ 3765.000usft (Planning Rig)
Site Error:	0.000 usft	**North Reference:**	Grid
Reference Well:	Bones Federal #5H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.000 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	EDM 5000.14
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 3765.000usft (Planning Rig)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Bones Federal #5H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.22°

Separation Factor Plot



LEGEND

Data Federal #2H, Lateral, Plan #1 V0

EOG Resources - Artesia

Eddy County (NAD83)
Bones
Bones Federal #5H

Lateral

Plan: Plan #1

Standard Planning Report

03 January, 2019

eog resources

Planning Report

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well Bones Federal #5H
Company:	EOG Resources - Artesia	**TVD Reference:**	KB @ 3765.000usft (Planning Rig)
Project:	Eddy County (NAD83)	**MD Reference:**	KB @ 3765.000usft (Planning Rig)
Site:	Bones	**North Reference:**	Grid
Well:	Bones Federal #5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Project Eddy County (NAD83)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Bones

Site Position:		**Northing:**	674,196.00 usft	**Latitude:**	32° 51' 9.923 N
From:	Map	**Easting:**	663,470.00 usft	**Longitude:**	103° 56' 8.227 W
Position Uncertainty:	0.000 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.22 °

Well Bones Federal #5H

Well Position	**+N/-S**	40.000 usft	**Northing:**	674,236.00 usft	**Latitude:**	32° 51' 10.319 N
	+E/-W	-1.000 usft	**Easting:**	663,469.00 usft	**Longitude:**	103° 56' 8.237 W
Position Uncertainty		0.000 usft	**Wellhead Elevation:**	3,765.000 usft	**Ground Level:**	3,747.000 usft

Wellbore Lateral

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	11/27/2018	7.01	60.56	48,119.74997259

Design Plan #1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.000

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.000	0.000	0.000	268.860

Plan Survey Tool Program **Date** 1/3/2019

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.000	9,609.740	Plan #1 (Lateral)	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
0.000	0.00	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.00	
400.000	0.00	0.000	400.000	0.000	0.000	0.00	0.00	0.00	0.00	
3,500.000	0.00	0.000	3,500.000	0.000	0.000	0.00	0.00	0.00	0.00	
4,560.028	0.00	0.000	4,560.028	0.000	0.000	0.00	0.00	0.00	0.00	
5,226.694	60.00	261.584	5,111.357	-46.588	-314.882	9.00	9.00	0.00	261.58	
5,301.694	60.00	261.584	5,148.857	-56.094	-379.135	0.00	0.00	0.00	0.00	
5,561.626	90.21	269.726	5,215.000	-73.624	-626.582	12.00	11.62	3.13	15.87	
9,610.119	90.21	269.726	5,200.000	-93.000	-4,675.000	0.00	0.00	0.00	0.00	[BF#5H]BHL1

eog resources

Planning Report

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well Bones Federal #5H
Company:	EOG Resources - Artesia	**TVD Reference:**	KB @ 3765.000usft (Planning Rig)
Project:	Eddy County (NAD83)	**MD Reference:**	KB @ 3765.000usft (Planning Rig)
Site:	Bones	**North Reference:**	Grid
Well:	Bones Federal #5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #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)
0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00	0.00
100.000	0.00	0.000	100.000	0.000	0.000	0.000	0.00	0.00	0.00
200.000	0.00	0.000	200.000	0.000	0.000	0.000	0.00	0.00	0.00
300.000	0.00	0.000	300.000	0.000	0.000	0.000	0.00	0.00	0.00
400.000	0.00	0.000	400.000	0.000	0.000	0.000	0.00	0.00	0.00
500.000	0.00	0.000	500.000	0.000	0.000	0.000	0.00	0.00	0.00
600.000	0.00	0.000	600.000	0.000	0.000	0.000	0.00	0.00	0.00
700.000	0.00	0.000	700.000	0.000	0.000	0.000	0.00	0.00	0.00
800.000	0.00	0.000	800.000	0.000	0.000	0.000	0.00	0.00	0.00
900.000	0.00	0.000	900.000	0.000	0.000	0.000	0.00	0.00	0.00
1,000.000	0.00	0.000	1,000.000	0.000	0.000	0.000	0.00	0.00	0.00
1,100.000	0.00	0.000	1,100.000	0.000	0.000	0.000	0.00	0.00	0.00
1,200.000	0.00	0.000	1,200.000	0.000	0.000	0.000	0.00	0.00	0.00
1,300.000	0.00	0.000	1,300.000	0.000	0.000	0.000	0.00	0.00	0.00
1,400.000	0.00	0.000	1,400.000	0.000	0.000	0.000	0.00	0.00	0.00
1,500.000	0.00	0.000	1,500.000	0.000	0.000	0.000	0.00	0.00	0.00
1,600.000	0.00	0.000	1,600.000	0.000	0.000	0.000	0.00	0.00	0.00
1,700.000	0.00	0.000	1,700.000	0.000	0.000	0.000	0.00	0.00	0.00
1,800.000	0.00	0.000	1,800.000	0.000	0.000	0.000	0.00	0.00	0.00
1,900.000	0.00	0.000	1,900.000	0.000	0.000	0.000	0.00	0.00	0.00
2,000.000	0.00	0.000	2,000.000	0.000	0.000	0.000	0.00	0.00	0.00
2,100.000	0.00	0.000	2,100.000	0.000	0.000	0.000	0.00	0.00	0.00
2,200.000	0.00	0.000	2,200.000	0.000	0.000	0.000	0.00	0.00	0.00
2,300.000	0.00	0.000	2,300.000	0.000	0.000	0.000	0.00	0.00	0.00
2,400.000	0.00	0.000	2,400.000	0.000	0.000	0.000	0.00	0.00	0.00
2,500.000	0.00	0.000	2,500.000	0.000	0.000	0.000	0.00	0.00	0.00
2,600.000	0.00	0.000	2,600.000	0.000	0.000	0.000	0.00	0.00	0.00
2,700.000	0.00	0.000	2,700.000	0.000	0.000	0.000	0.00	0.00	0.00
2,800.000	0.00	0.000	2,800.000	0.000	0.000	0.000	0.00	0.00	0.00
2,900.000	0.00	0.000	2,900.000	0.000	0.000	0.000	0.00	0.00	0.00
3,000.000	0.00	0.000	3,000.000	0.000	0.000	0.000	0.00	0.00	0.00
3,100.000	0.00	0.000	3,100.000	0.000	0.000	0.000	0.00	0.00	0.00
3,200.000	0.00	0.000	3,200.000	0.000	0.000	0.000	0.00	0.00	0.00
3,300.000	0.00	0.000	3,300.000	0.000	0.000	0.000	0.00	0.00	0.00
3,400.000	0.00	0.000	3,400.000	0.000	0.000	0.000	0.00	0.00	0.00
3,500.000	0.00	0.000	3,500.000	0.000	0.000	0.000	0.00	0.00	0.00
3,600.000	0.00	0.000	3,600.000	0.000	0.000	0.000	0.00	0.00	0.00
3,700.000	0.00	0.000	3,700.000	0.000	0.000	0.000	0.00	0.00	0.00
3,800.000	0.00	0.000	3,800.000	0.000	0.000	0.000	0.00	0.00	0.00
3,900.000	0.00	0.000	3,900.000	0.000	0.000	0.000	0.00	0.00	0.00
4,000.000	0.00	0.000	4,000.000	0.000	0.000	0.000	0.00	0.00	0.00
4,100.000	0.00	0.000	4,100.000	0.000	0.000	0.000	0.00	0.00	0.00
4,200.000	0.00	0.000	4,200.000	0.000	0.000	0.000	0.00	0.00	0.00
4,300.000	0.00	0.000	4,300.000	0.000	0.000	0.000	0.00	0.00	0.00
4,400.000	0.00	0.000	4,400.000	0.000	0.000	0.000	0.00	0.00	0.00
4,500.000	0.00	0.000	4,500.000	0.000	0.000	0.000	0.00	0.00	0.00
4,560.028	0.00	0.000	4,560.028	0.000	0.000	0.000	0.00	0.00	0.00
KOP 9°/100' BR									
4,600.000	3.60	261.584	4,599.974	-0.184	-1.241	1.244	9.00	9.00	0.00
4,650.000	8.10	261.584	4,649.701	-0.929	-6.279	6.296	9.00	9.00	0.00
4,700.000	12.60	261.584	4,698.875	-2.243	-15.161	15.202	9.00	9.00	0.00
4,750.000	17.10	261.584	4,747.193	-4.118	-27.832	27.908	9.00	9.00	0.00
4,800.000	21.60	261.584	4,794.357	-6.542	-44.214	44.335	9.00	9.00	0.00
4,850.000	26.10	261.584	4,840.077	-9.499	-64.206	64.383	9.00	9.00	0.00

eog resources

Planning Report

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well Bones Federal #5H
Company:	EOG Resources - Artesia	**TVD Reference:**	KB @ 3765.000usft (Planning Rig)
Project:	Eddy County (NAD83)	**MD Reference:**	KB @ 3765.000usft (Planning Rig)
Site:	Bones	**North Reference:**	Grid
Well:	Bones Federal #5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #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)
4,900.000	30.60	261.584	4,884.069	-12.973	-87.686	87.926	9.00	9.00	0.00
4,950.000	35.10	261.584	4,926.065	-16.942	-114.507	114.821	9.00	9.00	0.00
5,000.000	39.60	261.584	4,965.803	-21.380	-144.505	144.902	9.00	9.00	0.00
5,050.000	44.10	261.584	5,003.040	-26.261	-177.495	177.982	9.00	9.00	0.00
5,100.000	48.60	261.584	5,037.545	-31.554	-213.273	213.858	9.00	9.00	0.00
5,150.000	53.10	261.584	5,069.106	-37.228	-251.619	252.310	9.00	9.00	0.00
5,200.000	57.60	261.584	5,097.529	-43.246	-292.296	293.099	9.00	9.00	0.00
5,226.695	60.00	261.584	5,111.357	-46.588	-314.882	315.747	9.00	9.00	0.00
START 75' TANGENT									
5,301.695	60.00	261.584	5,148.857	-56.094	-379.135	380.176	0.00	0.00	0.00
END 60° TANGENT/BEGIN 12°/100' BR									
5,325.000	62.69	262.444	5,160.031	-58.933	-399.386	400.479	12.00	11.55	3.69
5,350.000	65.59	263.322	5,170.934	-61.718	-421.706	422.851	12.00	11.58	3.51
5,375.000	68.49	264.160	5,180.687	-64.225	-444.586	445.775	12.00	11.60	3.35
5,400.000	71.39	264.966	5,189.262	-66.448	-467.960	469.189	12.00	11.61	3.22
5,425.000	74.30	265.744	5,196.637	-68.381	-491.767	493.029	12.00	11.63	3.11
5,450.000	77.20	266.501	5,202.790	-70.019	-515.939	517.230	12.00	11.64	3.03
5,475.000	80.12	267.240	5,207.705	-71.356	-540.412	541.724	12.00	11.64	2.96
5,500.000	83.03	267.966	5,211.369	-72.390	-565.117	566.445	12.00	11.65	2.90
5,525.000	85.94	268.683	5,213.771	-73.117	-589.988	591.326	12.00	11.66	2.87
5,550.000	88.86	269.395	5,214.905	-73.535	-614.956	616.297	12.00	11.66	2.85
5,561.627	90.21	269.726	5,215.000	-73.624	-626.582	627.923	12.00	11.66	2.84
[BF#5H]EOC 5562' MD (5215' TVD)									
5,600.000	90.21	269.726	5,214.858	-73.808	-664.954	666.291	0.00	0.00	0.00
5,700.000	90.21	269.726	5,214.487	-74.287	-764.953	766.279	0.00	0.00	0.00
5,800.000	90.21	269.726	5,214.117	-74.765	-864.951	866.267	0.00	0.00	0.00
5,851.046	90.21	269.726	5,213.928	-75.009	-915.996	917.307	0.00	0.00	0.00
[BF#5H]UMP 5851' MD (5214' TVD)									
5,900.000	90.21	269.726	5,213.746	-75.244	-964.949	966.255	0.00	0.00	0.00
6,000.000	90.21	269.726	5,213.376	-75.722	-1,064.947	1,066.242	0.00	0.00	0.00
6,100.000	90.21	269.726	5,213.005	-76.201	-1,164.945	1,166.230	0.00	0.00	0.00
6,200.000	90.21	269.726	5,212.635	-76.680	-1,264.943	1,266.218	0.00	0.00	0.00
6,300.000	90.21	269.726	5,212.264	-77.158	-1,364.942	1,366.206	0.00	0.00	0.00
6,400.000	90.21	269.726	5,211.894	-77.637	-1,464.940	1,466.194	0.00	0.00	0.00
6,500.000	90.21	269.726	5,211.523	-78.115	-1,564.938	1,566.182	0.00	0.00	0.00
6,600.000	90.21	269.726	5,211.153	-78.594	-1,664.936	1,666.170	0.00	0.00	0.00
6,700.000	90.21	269.726	5,210.782	-79.072	-1,764.934	1,766.158	0.00	0.00	0.00
6,800.000	90.21	269.726	5,210.412	-79.551	-1,864.932	1,866.146	0.00	0.00	0.00
6,900.000	90.21	269.726	5,210.041	-80.030	-1,964.931	1,966.134	0.00	0.00	0.00
7,000.000	90.21	269.726	5,209.671	-80.508	-2,064.929	2,066.122	0.00	0.00	0.00
7,100.000	90.21	269.726	5,209.300	-80.987	-2,164.927	2,166.109	0.00	0.00	0.00
7,200.000	90.21	269.726	5,208.929	-81.465	-2,264.925	2,266.097	0.00	0.00	0.00
7,300.000	90.21	269.726	5,208.559	-81.944	-2,364.923	2,366.085	0.00	0.00	0.00
7,400.000	90.21	269.726	5,208.188	-82.423	-2,464.921	2,466.073	0.00	0.00	0.00
7,500.000	90.21	269.726	5,207.818	-82.901	-2,564.920	2,566.061	0.00	0.00	0.00
7,600.000	90.21	269.726	5,207.447	-83.380	-2,664.918	2,666.049	0.00	0.00	0.00
7,700.000	90.21	269.726	5,207.077	-83.858	-2,764.916	2,766.037	0.00	0.00	0.00
7,800.000	90.21	269.726	5,206.706	-84.337	-2,864.914	2,866.025	0.00	0.00	0.00
7,900.000	90.21	269.726	5,206.336	-84.816	-2,964.912	2,966.013	0.00	0.00	0.00
8,000.000	90.21	269.726	5,205.965	-85.294	-3,064.910	3,066.001	0.00	0.00	0.00
8,100.000	90.21	269.726	5,205.595	-85.773	-3,164.909	3,165.988	0.00	0.00	0.00
8,200.000	90.21	269.726	5,205.224	-86.251	-3,264.907	3,265.976	0.00	0.00	0.00
8,300.000	90.21	269.726	5,204.854	-86.730	-3,364.905	3,365.964	0.00	0.00	0.00

eog resources

Planning Report

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well Bones Federal #5H
Company:	EOG Resources - Artesia	**TVD Reference:**	KB @ 3765.000usft (Planning Rig)
Project:	Eddy County (NAD83)	**MD Reference:**	KB @ 3765.000usft (Planning Rig)
Site:	Bones	**North Reference:**	Grid
Well:	Bones Federal #5H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,400.000	90.21	269.726	5,204.483	-87.208	-3,464.903	3,465.952	0.00	0.00	0.00
8,500.000	90.21	269.726	5,204.113	-87.687	-3,564.901	3,565.940	0.00	0.00	0.00
8,600.000	90.21	269.726	5,203.742	-88.166	-3,664.899	3,665.928	0.00	0.00	0.00
8,700.000	90.21	269.726	5,203.372	-88.644	-3,764.898	3,765.916	0.00	0.00	0.00
8,800.000	90.21	269.726	5,203.001	-89.123	-3,864.896	3,865.904	0.00	0.00	0.00
8,900.000	90.21	269.726	5,202.631	-89.601	-3,964.894	3,965.892	0.00	0.00	0.00
9,000.000	90.21	269.726	5,202.260	-90.080	-4,064.892	4,065.880	0.00	0.00	0.00
9,100.000	90.21	269.726	5,201.890	-90.559	-4,164.890	4,165.867	0.00	0.00	0.00
9,200.000	90.21	269.726	5,201.519	-91.037	-4,264.888	4,265.855	0.00	0.00	0.00
9,300.000	90.21	269.726	5,201.149	-91.516	-4,364.886	4,365.843	0.00	0.00	0.00
9,400.000	90.21	269.726	5,200.778	-91.994	-4,464.885	4,465.831	0.00	0.00	0.00
9,500.000	90.21	269.726	5,200.408	-92.473	-4,564.883	4,565.819	0.00	0.00	0.00
9,600.000	90.21	269.726	5,200.037	-92.952	-4,664.881	4,665.807	0.00	0.00	0.00
9,610.119	90.21	269.726	5,200.000	-93.000	-4,675.000	4,675.925	0.00	0.00	0.00
[BF#5H]BHL 9610' MD (5200' TVD)									

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
[BF#5H]BHL1 - plan hits target center - Point	0.00	0.000	5,200.000	-93.000	-4,675.000	674,143.00	658,794.00	32° 51' 9.569 N	103° 57' 3.046 W
[BF#5H]UMP1 - plan misses target center by 1.072usft at 5851.046usft MD (5213.928 TVD, -75.009 N, -915.996 E) - Point	0.00	0.000	5,215.000	-75.000	-916.000	674,161.00	662,553.00	32° 51' 9.611 N	103° 56' 18.979 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
4,560.028	4,560.028	0.000	0.000	KOP 9°/100' BR
5,226.695	5,111.357	-46.588	-314.882	START 75' TANGENT
5,301.695	5,148.857	-56.094	-379.135	END 60° TANGENT/BEGIN 12°/100' BR
5,561.627	5,215.000	-73.624	-626.582	[BF#5H]EOC 5562' MD (5215' TVD)
5,851.046	5,213.928	-75.009	-915.996	[BF#5H]UMP 5851' MD (5214' TVD)
9,610.119	5,200.000	-93.000	-4,675.000	[BF#5H]BHL 9610' MD (5200' TVD)

Project: Eddy County (NAD83)
Site: Bones
Well: Bones Federal #5H
Wellbore: Lateral
Design: Plan #1
Ground Elevation 3747.000
Northing 674236.00
Easting 663469.00
KB @ 3765.000usft (Planning Rig)

PROJECT DETAILS: Eddy County (NAD83)

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

System Datum: Mean Sea Level

eog resources

T G M

Azimuths to Grid North
True North: -0.22°
Magnetic North: 6.80°

Magnetic Field
Strength: 48119.7snT
Dip Angle: 60.56°
Date: 11/27/2018
Model: IGRF2015

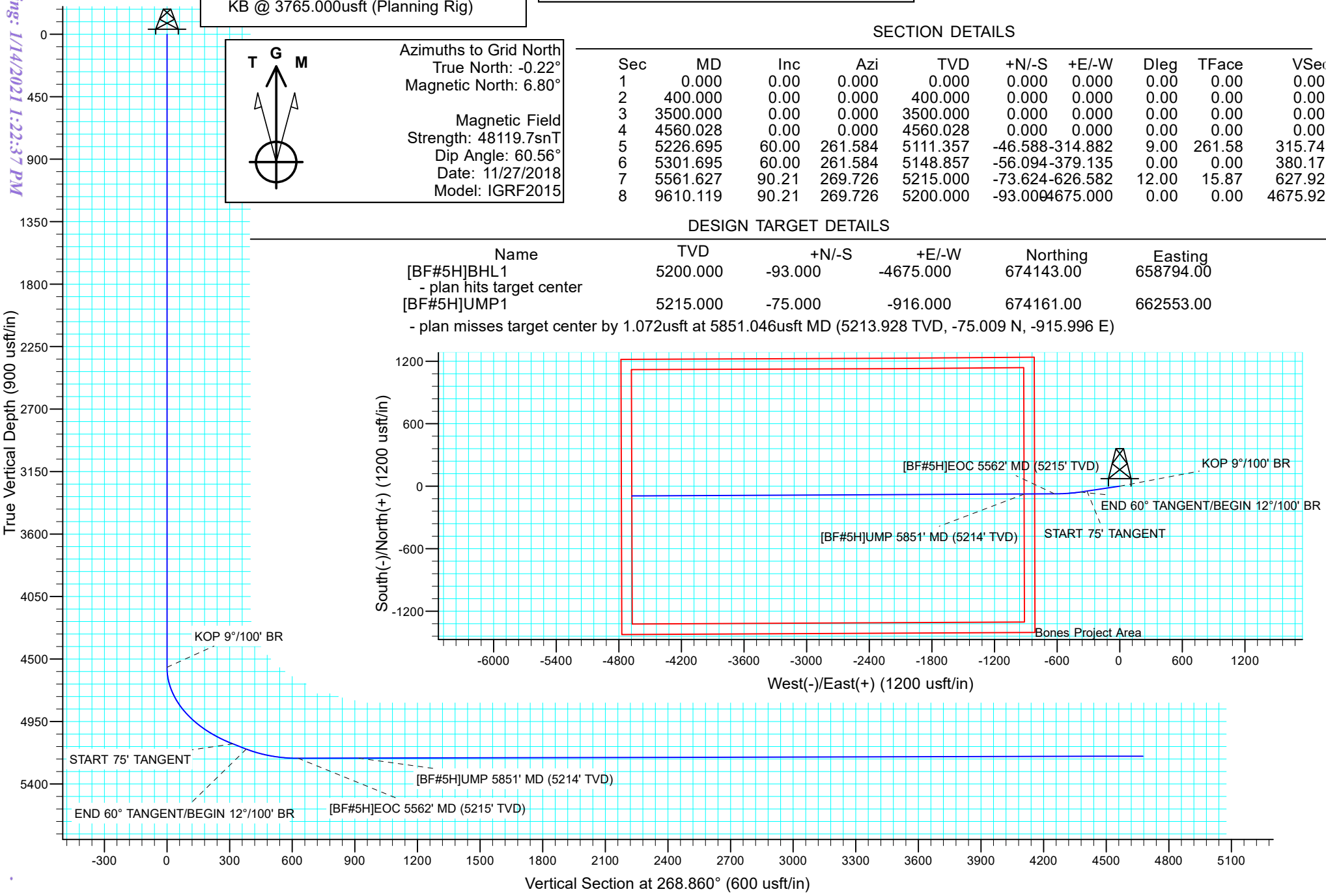
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec
1	0.000	0.00	0.000	0.000	0.000	0.000	0.00	0.00	0.000
2	400.000	0.00	0.000	400.000	0.000	0.000	0.00	0.00	0.000
3	3500.000	0.00	0.000	3500.000	0.000	0.000	0.00	0.00	0.000
4	4560.028	0.00	0.000	4560.028	0.000	0.000	0.00	0.00	0.000
5	5226.695	60.00	261.584	5111.357	-46.588	-314.882	9.00	261.58	315.747
6	5301.695	60.00	261.584	5148.857	-56.094	-379.135	0.00	0.00	380.173
7	5561.627	90.21	269.726	5215.000	-73.624	-626.582	12.00	15.87	627.921
8	9610.119	90.21	269.726	5200.000	-93.000	-4675.000	0.00	0.00	4675.925

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
[BF#5H]BHL1	5200.000	-93.000	-4675.000	674143.00	658794.00
- plan hits target center					
[BF#5H]UMP1	5215.000	-75.000	-916.000	674161.00	662553.00

- plan misses target center by 1.072usft at 5851.046usft MD (5213.928 TVD, -75.009 N, -915.996 E)



MULTI-POINT SURFACE USE PLAN OF OPERATIONS

EOG Resources, Inc.

Bones Federal 5H

1244' FNL and 503' FEL Section 11, T17S-R30E - Surface Hole Location
1312' FNL and 100' FWL Section 11, T17S-R30E -Bottom Hole Location
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

The County map showing the well and roads in the vicinity of the proposed location. The access route to the location is indicated on Exhibit 2. Operator will maintain existing roads in condition the same or better than before operations begin. Operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures along the entire access route such as cattle guards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use. Operator will reasonably prevent and abate fugitive dust as needed when created by vehicular traffic and equipment caused by the operator. The BLM's written approval will be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.

DIRECTIONS:

Distance and Directions are detailed on Exhibit 2.

2. PLANNED ACCESS ROAD.

A. The road will be crowned and ditched to a 2% slope from the tip of the crown to the edge of the driving surface.
B. The road will be 14 feet in width (driving surface) and will be adequately drained to control runoff and soil erosion. Ditches will be 3' wide with a 3:1 slopes.
C. The road will be bladed with drainage on one side. A traffic turnout may be built.
D. Existing roads will be maintained in the same or better condition.
E. The route of road is visible.

3. LOCATION OF EXISTING WELL

Exhibit 3 shows existing wells within a one-mile radius of the proposed well site.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

   A. There are no production facilities on this lease at the present time.
   B. Central tank battery will be the Enterprise battery located at the Kirk Federal Com 1H well.

5. LOCATION AND TYPE OF WATER SUPPLY:

   It is planned to drill the proposed well with a fresh water system. The water will be obtained from commercial sources and will be hauled to the location by truck and pipeline over the existing and proposed roads shown in Exhibit 2.

6. SOURCE OF CONSTRUCTION MATERIALS:

   Dirt contractor will locate closest pit and obtain any permits and materials needed for construction of the well location.

7. METHODS OF HANDLING WASTE DISPOSAL:

   A. This well will be drilled with a closed loop system
   B. The closed loop system will be constructed, maintained, and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division – the "Pit Rule" 19.15.17 NMAC.
   C. Drilling fluids will be removed after drilling and completions are completed.
   D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.
   E. Oil produced during operations will be stored in tanks until sold.
   F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
   G. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not approved.

8. ANCILLARY FACILITIES: None.

9. WELLSITE LAYOUT:

   Exhibits 2A and 2B show the relative location and dimensions of the well pad, the closed loop mud system, location of the drilling equipment. All of the location will be constructed within the staked and flagged area.

10. PLANS FOR RESTORATION:

    A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible. The location will be reduced as shown in Exhibit 2C after completion operations have been conducted. At this point the surfacing material will be removed and topsoil will be redistributed. The area will be contoured as closely as possible to its original state and reseeded.

EOG RESOURCES, INC.
Bones Federal 5H

Emergency Assistance Telephone List

PUBLIC SAFETY:		**911 or**
Eddy County Sheriff's Department		(575) 887-7551
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 / Artesia	Office	(575) 748-1471
Company Drilling Consultants:		
Brent Patterson	Cell	(575) 365-7032
Drilling Engineer		
Jeremiah Mullen	Office	(575) 748-4378
	Cell	(575) 703-5467
Drilling Manager		
Tim Bussell	Office	(575) 748-4221
	Cell	(575) 365-5695
Safety		
Brian Chandler (HSE Manager)	Office	(432) 686-3695
	Cell	(817) 239-0251

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

COMMENTS

Action 14599

COMMENTS

Operator:			OGRID:	Action Number:	Action Type:
EOG RESOURCES INC	P.O. Box 2267	Midland, TX79702	7377	14599	FORM 3160-3

Created By	Comment	Comment Date
kpickford	KP GEO Review 1/14/2020	01/14/2021

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 14599

CONDITIONS OF APPROVAL

Operator:	OGRID:	Action Number:	Action Type:
EOG RESOURCES INC P.O. Box 2267 Midland, TX79702	7377	14599	FORM 3160-3

OCD Reviewer	Condition
kpickford	Notify OCD 24 hours prior to casing & cement
kpickford	Will require a File As Drilled C-102 and a Directional Survey with the C-104
kpickford	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
kpickford	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system