

HOBBS OCD

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCT 03 2017

RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER

| | | |
|---|---|---|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | 5. Lease Serial No. NMNM02965A |
| 1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone | | 6. If Indian, Allottee or Tribe Name |
| 2. Name of Operator EOG RESOURCES INCORPORATED | | 7. If Unit or CA Agreement, Name and No. |
| 3a. Address 1111 Bagby Sky Lobby2 Houston TX 77002 | | 8. Lease Name and Well No. BARLOW 34 FED COM 702H |
| 3b. Phone No. (include area code) (713)651-7000 | | 9. API Well No. 30-025-44094 |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface LOT 4 / 300 FSL / 660 FWL / LAT 32.001077 / LONG -103.5665988 At proposed prod. zone NWSW / 2429 FSL / 663 FWL / LAT 32.0138097 / LONG -103.5665857 | | 10. Field and Pool, or Exploratory Rt SANDERS TANK, UPPER UC |
| 11. Sec., T. R. M. or Blk. and Survey or Area SEC 34 / T26S / R33E / NMP | | 12. County or Parish LEA |
| 13. State NM | | 14. Distance in miles and direction from nearest town or post office* 35 miles |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 300 feet | 16. No. of acres in lease 2174.12 | 17. Spacing Unit dedicated to this well 160 |
| 18. Distance from proposed location* to nearest well, drilling, completed, 333 feet applied for, on this lease, ft. | 19. Proposed Depth 12420 feet / 17100 feet | 20. BLM/BIA Bond No. on file FED: NM2308 |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3261 feet | 22. Approximate date work will start* 07/01/2017 | 23. Estimated duration 25 days |

24. Attachments

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

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

| | | |
|--|---|--------------------|
| 25. Signature (Electronic Submission) | Name (Printed/Typed) Stan Wagner / Ph: (432)686-3689 | Date 03/14/2017 |
|--|---|--------------------|

Title

Regulatory Specialist

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

Title

Supervisor Multiple Resources

Office

CARLSBAD

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)

APPROVED WITH CONDITIONS

KZ
10/09/17
Double sided
B.

INSTRUCTIONS

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

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

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

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

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

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

NOTICES

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

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

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

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

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

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

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

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



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

Operator Certification Data Report

09/27/2017

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Stan Wagner

Signed on: 03/14/2017

Title: Regulatory Specialist

Street Address: 5509 Champions Drive

City: Midland

State: TX

Zip: 79702

Phone: (432)686-3689

Email address: Stan_Wagner@eogresources.com

Field Representative

Representative Name: James Barwis

Street Address: 5509 Champions Drive

City: Midland

State: TX

Zip: 79706

Phone: (432)425-1204

Email address: james_barwis@eogresources.com



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

Application Data Report

09/27/2017

APD ID: 10400012016

Submission Date: 03/14/2017

Highlighted data
reflects the most
recent changes

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

APD ID: 10400012016

Tie to previous NOS?

Submission Date: 03/14/2017

BLM Office: CARLSBAD

User: Stan Wagner

Title: Regulatory Specialist

Federal/Indian APD: FED

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

Lease number: NMNM02965A

Lease Acres: 2174.12

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? NO

Permitting Agent? NO

APD Operator: EOG RESOURCES INCORPORATED

Operator letter of designation:

Operator Info

Operator Organization Name: EOG RESOURCES INCORPORATED

Operator Address: 1111 Bagby Sky Lobby2

Zip: 77002

Operator PO Box:

Operator City: Houston

State: TX

Operator Phone: (713)651-7000

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: BARLOW 34 FED COM

Well Number: 702H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: RED HILLS

Pool Name: WC-025 S263327G

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

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

Describe other minerals:

Is the proposed well in a Helium production area? N

Use Existing Well Pad? NO

New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name:

Number: 701H/702H/703H

Well Class: HORIZONTAL

BARLOW 34 FED COM

Number of Legs: 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 35 Miles

Distance to nearest well: 333 FT

Distance to lease line: 300 FT

Reservoir well spacing assigned acres Measurement: 160 Acres

Well plat: Barlow_702H_C_102_05-04-2017.pdf

Well work start Date: 07/01/2017

Duration: 25 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number:

| | NS-Foot | NS Indicator | EW-Foot | EW Indicator | Twsp | Range | Section | Aliquot/Lot/Tract | Latitude | Longitude | County | State | Meridian | Lease Type | Lease Number | Elevation | MD | TVD |
|------------------|---------|--------------|---------|--------------|------|-------|---------|-------------------|----------------|----------------------|--------|-------------------|-------------------|------------|----------------|---------------|-----------|-----------|
| SHL Leg #1 | 300 | FSL | 660 | FWL | 26S | 33E | 34 | Lot 4 | 32.00107 7 | - 103.5665 988 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 02965A | 326 1 | 0 | 0 |
| KOP Leg #1 | 50 | FSL | 661 | FWL | 26S | 33E | 34 | Lot 4 | 32.00039 19 | - 103.5666 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 02965A | - 866 6 | 119 31 | 119 27 |
| PPP Leg #1 | 330 | FSL | 660 | FWL | 26S | 33E | 34 | Lot 4 | 32.00115 92 | - 103.5665 991 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 02965A | - 911 5 | 124 92 | 123 76 |

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

| | NS-Foot | NS Indicator | EW-Foot | EW Indicator | Twsp | Range | Section | Aliquot/Lot/Tract | Latitude | Longitude | County | State | Meridian | Lease Type | Lease Number | Elevation | MD | TVD |
|-------------------|----------|--------------|---------|--------------|------|-------|---------|---------------------|----------------|----------------------|--------|-------------------|-------------------|------------|----------------|---------------|-----------|-----------|
| EXIT Leg #1 | 232 9 | FSL | 664 | FWL | 26S | 33E | 27 | Aliquot NWS W | 32.01353 46 | - 103.5665 848 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 121490 | - 915 9 | 170 00 | 124 20 |
| BHL Leg #1 | 242 9 | FSL | 663 | FWL | 26S | 33E | 27 | Aliquot NWS W | 32.01380 97 | - 103.5665 857 | LEA | NEW MEXI CO | NEW MEXI CO | F | NMNM 121490 | - 915 9 | 171 00 | 124 20 |

Operator Name: EOG RESOURCES INCORPORATED**Well Name:** BARLOW 34 FED COM**Well Number:** 702H**Pressure Rating (PSI):** 10M**Rating Depth:** 12420

Equipment: The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer and an annular preventer (10,000-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 and Gas order No. 2.

Requesting Variance? YES

Variance request: Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line). Variance is requested to wave the centralizer requirements for the 7-5/8" FJ casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" hole interval to maximize cement bond and zonal isolation. Variance is also requested to wave any centralizer requirements for the 5-1/2" FJ casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

Testing Procedure: Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 5000/ 250 psig. The surface casing will be tested to 1500 psi for 30 minutes. Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 5000/ 250 psig. The intermediate casing will be tested to 2000 psi for 30 minutes. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

Choke Diagram Attachment:

10M_Choke_Manifold_06-15-2017.pdf

BOP Diagram Attachment:

10M_BOPE_06-15-2017.pdf

Section 3 - Casing

| Casing ID | String Type | Hole Size | Csg Size | Condition | Standard | Tapered String | Top Set MD | Bottom Set MD | Top Set TVD | Bottom Set TVD | Top Set MSL | Bottom Set MSL | Calculated casing length MD | Grade | Weight | Joint Type | Collapse SF | Burst SF | Joint SF Type | Joint SF | Body SF Type | Body SF |
|-----------|--------------|-----------|----------|-----------|----------|----------------|------------|---------------|-------------|----------------|-------------|----------------|-----------------------------|---------|--------|----------------------|-------------|----------|---------------|----------|--------------|---------|
| 1 | SURFACE | 14.75 | 10.75 | NEW | API | N | 0 | 830 | 0 | 830 | -9115 | -9945 | 830 | J-55 | 40.5 | STC | 1.125 | 1.25 | BUOY | 1.6 | BUOY | 1.6 |
| 2 | INTERMEDIATE | 9.875 | 7.625 | NEW | API | N | 0 | 1000 | 0 | 1000 | -9115 | -10115 | 1000 | HCP-110 | 29.7 | LTC | 1.125 | 1.25 | BUOY | 1.6 | BUOY | 1.6 |
| 3 | INTERMEDIATE | 9.875 | 7.625 | NEW | API | N | 1000 | 3000 | 1000 | 3000 | -10115 | -12115 | 2000 | P-110 | 29.7 | OTHER - SLIJ II | 1.125 | 1.25 | BUOY | 1.6 | BUOY | 1.6 |
| 4 | PRODUCTION | 6.75 | 5.5 | NEW | API | N | 0 | 10800 | 0 | 10800 | -9115 | -19915 | 10800 | P-110 | 20 | OTHER - DWC/C-IS MS | 1.125 | 1.25 | BUOY | 1.6 | BUOY | 1.6 |
| 5 | INTERMEDIATE | 8.75 | 7.625 | NEW | API | N | 3000 | 11300 | 3000 | 11300 | -12115 | -20415 | 8300 | P-110 | 29.7 | OTHER - Flushmax III | 1.125 | 1.25 | BUOY | 1.6 | BUOY | 1.6 |
| 6 | PRODUCTION | 6.75 | 5.5 | NEW | API | N | 10800 | 17100 | 10800 | 12420 | -19915 | -21535 | 6300 | P-110 | 20 | OTHER - VAM SFC | 1.125 | 1.25 | BUOY | 1.6 | BUOY | 1.6 |

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Barlow_34_Fed_Com_702H_BLM_Plan_03-14-2017.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Barlow_34_Fed_Com_702H_BLM_Plan_03-14-2017.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Barlow_34_Fed_Com_702H_BLM_Plan_03-14-2017.pdf

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Barlow_34_Fed_Com_702H_BLM_Plan_03-14-2017.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Barlow_34_Fed_Com_702H_BLM_Plan_03-14-2017.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Barlow_34_Fed_Com_702H_BLM_Plan_03-14-2017.pdf

Section 4 - Cement

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|--------------|-----------|------------------|-----------|-----------|--------------|-------|---------|-------|---------|-------------|--|
| INTERMEDIATE | Lead | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PRODUCTION | Lead | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| INTERMEDIATE | Lead | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SURFACE | Lead | | 0 | 830 | 325 | 1.73 | 13.5 | 562 | 25 | Class C | Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl2 + 0.25 lb/sk Cello-Flake (TOC @ Surface) |
| SURFACE | Tail | | 830 | 830 | 200 | 1.34 | 14.8 | 268 | 25 | Class C | Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate |
| INTERMEDIATE | Lead | | 0 | 1130 0 | 2250 | 1.38 | 14.8 | 3105 | 25 | Class C | Class C + 5% Gypsum + 3% CaCl2 pumped via Bradenhead (TOC@Surface) |
| INTERMEDIATE | Tail | | 1130 0 | 1130 0 | 550 | 1.2 | 14.4 | 660 | 25 | Class H | 50-50 0.25% CPT20A + 0.40% CPT49 + 0.20% CPT35 + 0.80% CPT16A + 0.25% CPT503P pumped conventionally |
| PRODUCTION | Lead | | 1080 0 | 1710 0 | 850 | 1.26 | 14.1 | 1070 | 25 | Class H | Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,800') |

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: (A) A Kelly cock will be kept in the drill string at all times. (B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times. (C) H2S monitoring and detection equipment will be utilized from surface casing point to TD.

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

Circulating Medium Table

| Top Depth | Bottom Depth | Mud Type | Min Weight (lbs/gal) | Max Weight (lbs/gal) | Density (lbs/cu ft) | Gel Strength (lbs/100 sqft) | PH | Viscosity (CP) | Salinity (ppm) | Filtration (cc) | Additional Characteristics |
|-----------|--------------|--------------------|----------------------|----------------------|---------------------|-----------------------------|----|----------------|----------------|-----------------|----------------------------|
| 830 | 1130 0 | SALT SATURATED | 8.8 | 10 | | | | | | | |
| 1130 0 | 1710 0 | OIL-BASED MUD | 10 | 14 | | | | | | | |
| 0 | 830 | WATER-BASED MUD | 8.6 | 8.8 | | | | | | | |

Section 6 - Test, Logging, Coring

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

Open-hole logs are not planned for this well.

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

DS

Coring operation description for the well:

None

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7427

Anticipated Surface Pressure: 4694.6

Anticipated Bottom Hole Temperature(F): 181

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

Describe:

Contingency Plans geohazards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Barlow_34_Fed_Com_702H_H2S_Plan_Summary_03-14-2017.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Barlow_34_Fed_Com_702H_Planning_Report_03-14-2017.pdf

Barlow_34_Fed_Com_702H_Wall_Plot_03-14-2017.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Barlow_34_Fed_Com_702H_5.500in_20.00_VST_P110EC_DWC_C_IS_MS_Spec_Sheet_03-14-2017.pdf

Barlow_34_Fed_Com_702H_5.500in_20.00_VST_P110EC_VAM_SFC_Spec_Sheet_03-14-2017.pdf

Barlow_34_Fed_Com_702H_7.625in_29.7_P110EC_VAM_SLIJ_II_03-14-2017.pdf

Barlow_34_Fed_Com_702H_7.625in_29.70_P_110_FlushMax_III_Spec_Sheet_03-14-2017.pdf

Barlow_34_Fed_Com_702H_BLM_Plan_03-14-2017.pdf

Barlow_34_Fed_Com_702H_Proposed_Wellbore_03-14-2017.pdf

Barlow_34_Fed_Com_702H_Rig_Layout_03-14-2017.pdf

Barlow_34_Fed_Com_702H_deficiency_response_05-23-2017.pdf

Other Variance attachment:

Barlow_34_Fed_Com_702H_Co_Flex_Hose_Certification_03-14-2017.PDF

Barlow_34_Fed_Com_702H_Co_Flex_Hose_Test_Chart_03-14-2017.pdf



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

SUPO Data Report

09/27/2017

APD ID: 10400012016

Submission Date: 03/14/2017

Highlighted data
reflects the most
recent changes

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

BARLOW_34_FED_COM_702H vicinity_03-02-2017.pdf

Existing Road Purpose: ACCESS, FLUID TRANSPORT

Row(s) Exist? YES

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

BARLOW_34_FED_COM_702H well site_03-02-2017.pdf

Barlow_34_Fed_Com_infrastructure_revised_03-08-2017.pdf

New road type: RESOURCE

Length: 3793

Feet

Width (ft.): 24

Max slope (%): 2

Max grade (%): 20

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 24

New road access erosion control: Newly constructed or reconstructed roads will be constructed as outlined in the BLM "Gold Book" and to meet the standards of the anticipated traffic flow and all anticipated weather requirements as needed. Construction will include ditching, draining, crowning and capping or sloping and dipping the roadbed as necessary to provide a well-constructed and safe road. We plan to grade and water twice a year.

New road access plan or profile prepared? NO

New road access plan attachment:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

Access road engineering design? NO

Access road engineering design attachment:

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: 6" of Compacted Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: An adequate amount of topsoil/root zone will be stripped by dozer from the proposed well location and stockpiled along the side of the well location as depicted on the well site diagram / survey plat.

Access other construction information:

Access miscellaneous information:

Number of access turnouts:

Access turnout map:

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: No drainage crossings

Road Drainage Control Structures (DCS) description: N/A

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Additional Attachment(s):

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

BARLOW_34_FED_COM_702H radius map_03-02-2017.pdf

Existing Wells description:

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Estimated Production Facilities description:

Production Facilities description: Barlow 34 Fed Com central tank battery is located in NW/4 of section 34

Production Facilities map:

Barlow_34_Fed_Com_infrastructure_revised_03-08-2017.pdf

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

Section 5 - Location and Types of Water Supply

Water Source Table

Water source use type: OTHER

Water source type: RECYCLED

Describe type:

Source latitude:

Source longitude:

Source datum:

Water source permit type: WATER RIGHT

Source land ownership: FEDERAL

Water source transport method: PIPELINE,TRUCKING

Source transportation land ownership: FEDERAL

Water source volume (barrels): 0

Source volume (acre-feet): 0

Source volume (gal): 0

Water source and transportation map:

Barlow 34 Fed Com Water Source and Caliche Map_03-02-2017.pdf

Water source comments:

New water well? NO

New Water Well Info

Well latitude:

Well Longitude:

Well datum:

Well target aquifer:

Est. depth to top of aquifer(ft):

Est thickness of aquifer:

Aquifer comments:

Aquifer documentation:

Well depth (ft):

Well casing type:

Well casing outside diameter (in.):

Well casing inside diameter (in.):

New water well casing?

Used casing source:

Drilling method:

Drill material:

Grout material:

Grout depth:

Casing length (ft.):

Casing top depth (ft.):

Well Production type:

Completion Method:

Water well additional information:

State appropriation permit:

Additional information attachment:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

Section 6 - Construction Materials

Construction Materials description: Caliche will be supplied from pits shown on the attached caliche source map. Caliche utilized for the drilling pad will be obtained either from an existing approved mineral pit, or by benching into a hill, which will allow the pad to be level with existing caliche from the cut, or extracted by "Flipping" the well location. A mineral material permit will be obtained from BLM prior to excavating any caliche on Federal Lands. Amount will vary for each pad. The procedure for "Flipping" a well location is as follows: * -An adequate amount of topsoil/root zone (usually top 6 inches of soil) will be stripped from the proposed well location and stockpiled along the side of the well location as depicted on the well site diagram/survey plat. -An area will be used within the proposed well site dimensions to excavate caliche. Subsoil will be removed and stockpiled within the surveyed well pad dimensions. -Once caliche/surfacing mineral is found, the mineral material will be excavated and stock piled within the approved drilling pad dimensions. -Then, subsoil will be pushed back in the excavated hole and caliche will be spread accordingly across the entire well pad and road (if available). -Neither caliche, nor subsoil will be stock piled outside of the well pad dimensions. Topsoil will be stockpiled along the edge of the pad as depicted in the Well Site Layout or survey plat. * In the event that no caliche is found onsite, caliche will be hauled in from a BLM approved caliche pit or other established mineral pit. A BLM mineral material permit will be acquired prior to obtaining any mineral material from BLM pits or federal land.

Construction Materials source location attachment:

Barlow 34 Fed Com Water Source and Caliche Map_03-02-2017.pdf

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drill fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility. Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly. Human waste and grey water will be properly contained of and disposed of properly. After drilling and completion operations; trash, chemicals, salts frac sand, and other waste material will be removed and disposed of properly at a state approved disposal facility.

Amount of waste: 0 barrels

Waste disposal frequency : Daily

Safe containment description: Steel Tanks

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Trucked to NMOCD approved disposal facility

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

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

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? YES

Description of cuttings location Closed Loop System. Drill cuttings will be disposed of into steel tanks and taken to an NMOCD approved disposal facility.

Cuttings area length (ft.)

Cuttings area width (ft.)

Cuttings area depth (ft.)

Cuttings area volume (cu. yd.)

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

BARLOW_34_FED_COM_702H pad site_03-02-2017.pdf

BARLOW_34_FED_COM_702H well site_03-02-2017.pdf

Barlow_34_Fed_Com_702H_Rig_Layout_03-14-2017.pdf

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

Section 10 - Plans for Surface Reclamation

Type of disturbance: NEW

Recontouring attachment:

BARLOW_34_FED_COM_702H interim reclamation_03-02-2017.pdf

Drainage/Erosion control construction: Proper erosion control methods will be used on the area to control erosion, runoff, and siltation of the surrounding area.

Drainage/Erosion control reclamation: The interim reclamation will be monitored periodically to ensure that vegetation has reestablished and that erosion is controlled.

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

Wellpad long term disturbance (acres): 3.133609

Wellpad short term disturbance (acres): 4.499541

Access road long term disturbance (acres): 2.089807

Access road short term disturbance (acres): 2.089807

Pipeline long term disturbance (acres): 1.5268595

Pipeline short term disturbance (acres): 2.544766

Other long term disturbance (acres): 0

Other short term disturbance (acres): 0

Total long term disturbance: 6.7502756

Total short term disturbance: 9.134114

Reconstruction method: In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads. Areas planned for interim reclamation will be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.

Topsoil redistribution: Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts and fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.

Soil treatment: Re-seed according to BLM standards. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redistributed, and that erosion is controlled.

Existing Vegetation at the well pad: Grass, forbs, and small woody vegetation, such as mesquite will be excavated as the topsoil is removed. Large woody vegetation will be stripped and stored separately and respreads evenly on the site following topsoil resspreading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils.

Existing Vegetation at the well pad attachment:

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

Existing Vegetation Community at the road attachment:

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

Existing Vegetation Community at the pipeline attachment:

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

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

Seed Summary

Total pounds/Acre:

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

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: Stan

Last Name: Wagner

Phone: (432)686-3689

Email: stan_wagner@eogresources.com

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

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

Weed treatment plan attachment:

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

Monitoring plan attachment:

Success standards: N/A

Pit closure description: NA

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland:

USFS Ranger District:

Fee Owner: Oliver Kiehne

Phone: (575)399-9281

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: surface use agreement

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Fee Owner Address: P.O. Box 135 Orla, TX 75073

Email:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: BARLOW 34 FED COM

Well Number: 702H

Section 12 - Other Information

Right of Way needed? YES

Use APD as ROW? YES

ROW Type(s): 281001 ROW - ROADS

ROW Applications

SUPO Additional Information: An onsite meeting was conducted 2/16/17. Poly lines are planned to transport water for operations. Will truck if necessary. See attached SUPO Plan.

Use a previously conducted onsite? NO

Previous Onsite information:

Other SUPO Attachment

BARLOW_34_FED_COM_702H Combined_03-02-2017.PDF

Barlow 34 Fed Com_702H SUPO_03-02-2017.pdf

Barlow_34_Fed_Com_infrastructure_revised_03-08-2017.pdf

Barlow_34_Fed_Com_702H_deficiency_response_06-15-2017.pdf

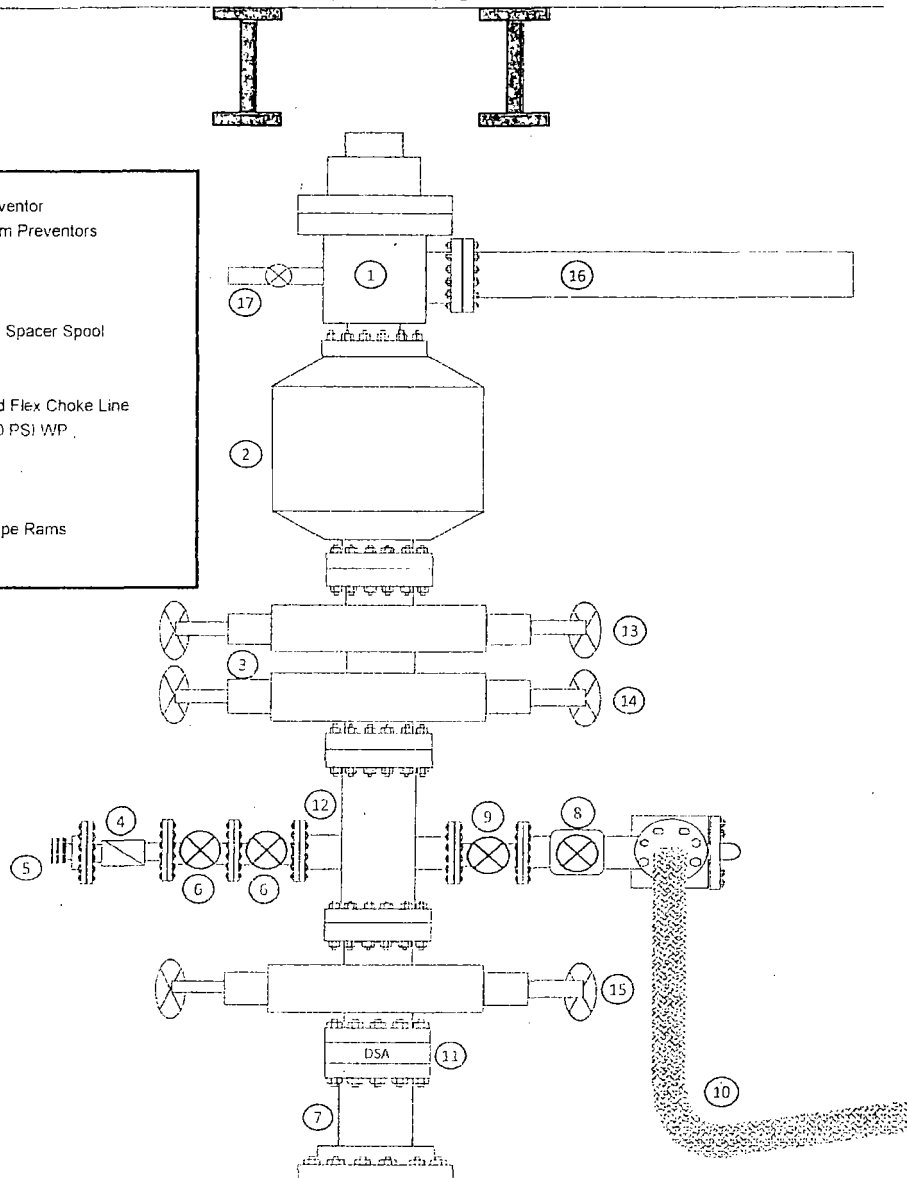
Exhibit 1

EOG Resources

10M BOPE

Rig Floor

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



EOG RESOURCES, INC.
BARLOW 34 FED COM NO. 702H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

| | |
|-----------------------------------|---------|
| Rustler | 805' |
| Top of Salt | 1,135' |
| Base of Salt / Top Anhydrite | 4,765' |
| Base Anhydrite | 5,010' |
| Lamar | 5,010' |
| Bell Canyon | 5,035' |
| Cherry Canyon | 6,080' |
| Brushy Canyon | 7,660' |
| Bone Spring Lime | 9,215' |
| 1 st Bone Spring Sand | 10,155' |
| 2 nd Bone Spring Shale | 10,345' |
| 2 nd Bone Spring Sand | 10,660' |
| 3 rd Bone Spring Carb | 11,130' |
| 3 rd Bone Spring Sand | 11,730' |
| Wolfcamp | 12,200' |
| TD | 12,420' |

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

| | | |
|-----------------------------------|---------|-------------|
| Upper Permian Sands | 0- 400' | Fresh Water |
| Cherry Canyon | 6,080' | Oil |
| Brushy Canyon | 7,660' | Oil |
| 1 st Bone Spring Sand | 10,155' | Oil |
| 2 nd Bone Spring Shale | 10,345' | Oil |
| 2 nd Bone Spring Sand | 10,660' | Oil |
| 3 rd Bone Spring Carb | 11,130' | Oil |
| 3 rd Bone Spring Sand | 11,730' | Oil |
| Wolfcamp | 12,200' | 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 10.75" casing at 830' and circulating cement back to surface.

EOG RESOURCES, INC.
BARLOW 34 FED COM NO. 702H

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| 2 nd Bone Spring Sand | 10,660' | Oil |
| 3 rd Bone Spring Carb | 11,130' | Oil |
| 3 rd Bone Spring Sand | 11,730' | Oil |
| Wolfcamp | 12,200' | Oil |

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EOG RESOURCES, INC.
BARLOW 34 FED COM NO. 702H

4. CASING PROGRAM - NEW

| Hole Size | Interval | Csg OD | Weight | Grade | Conn | DF _{min} Collapse | DF _{min} Burst | DF _{min} Tension |
|-----------|------------------|--------|--------|---------|--------------|----------------------------|-------------------------|---------------------------|
| 14.75" | 0 – 830' | 10.75" | 40.5# | J55 | STC | 1.125 | 1.25 | 1.60 |
| 9.875" | 0 – 1,000' | 7.625" | 29.7# | HCP-110 | LTC | 1.125 | 1.25 | 1.60 |
| 9.875" | 1,000' – 3,000' | 7.625" | 29.7# | P-110EC | SLIJ II | 1.125 | 1.25 | 1.60 |
| 8.75" | 3,000' – 11,300' | 7.625" | 29.7# | HCP-110 | FlushMax III | 1.125 | 1.25 | 1.60 |
| 6.75" | 0' – 10,800' | 5.5" | 20# | P-110EC | DWC/C-IS MS | 1.125 | 1.25 | 1.60 |
| 6.75" | 10,800'–17,100' | 5.5" | 20# | P-110EC | VAM SFC | 1.125 | 1.25 | 1.60 |

Variance is requested to wave the centralizer requirements for the 7-5/8" FJ casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to wave any centralizer requirements for the 5-1/2" FJ casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

Cementing Program:

| Depth | No. Sacks | Wt. ppg | Yld Ft ³ /ft | Mix Water Gal/sk | Slurry Description |
|-------------------|-----------|---------|-------------------------|------------------|---|
| 10-3/4" 830' | 325 | 13.5 | 1.73 | 9.13 | Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ Surface) |
| | 200 | 14.8 | 1.34 | 6.34 | Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate |
| 7-5/8" 11,300' | 250 | 14.8 | 1.38 | 6.48 | Class C + 5% Gypsum + 3% CaCl ₂ pumped via Bradenhead (TOC @ Surface) |
| | 2000 | 14.8 | 1.38 | 6.48 | Class C + 5% Gypsum + 3% CaCl ₂ pumped via Bradenhead |
| | 550 | 14.4 | 1.20 | 4.81 | 50:50 Class H:Poz + 0.25% CPT20A + 0.40% CPT49 + 0.20% CPT35 + 0.80% CPT16A + 0.25% CPT503P pumped Conventionally |
| 5-1/2" 17,100' | 850 | 14.1 | 1.26 | 5.80 | Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,800') |

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

EOG RESOURCES, INC.
BARLOW 34 FED COM NO. 702H

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

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

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer and an annular preventer (5000-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 5000/ 250 psig and the annular preventer to 3500/ 250 psig. The surface casing will be tested to 1500 psi for 30 minutes.

Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 3500/ 250 psig. The intermediate casing will be tested to 2000 psi for 30 minutes.

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

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

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 – 830' | Fresh - Gel | 8.6-8.8 | 28-34 | N/c |
| 830' – 11,300' | Brine | 8.8-10.0 | 28-34 | N/c |
| 11,300' – 17,100' Lateral | Oil Base | 10.0-14.0 | 58-68 | 3 - 6 |

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

EOG RESOURCES, INC.
BARLOW 34 FED COM NO. 702H

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

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

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

- (A) A kelly cock will be kept in the drill string at all times.
- (B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.
- (C) H₂S monitoring and detection equipment will be utilized from surface casing point to TD.

8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logs are not planned for this well.

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

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

The estimated bottom-hole temperature (BHT) at TD is 181 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 7427 psig (based on 11.5 ppg MW). No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. Severe loss circulation is expected from 7,300' to Intermediate casing point.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

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

- (A) EOG Resources requests the option to contract a Surface Rig to drill, set surface casing, and cement on the subject well. 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.

EOG RESOURCES, INC.
BARLOW 34 FED COM NO. 702H

11. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the 10-3/4" surface casing, a 13-5/8" BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 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 5000 psi.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Stream Flo FBD100 Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM.

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

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

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

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

EOG RESOURCES, INC.
BARLOW 34 FED COM NO. 702H

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Permian

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| TD | 12,420' |

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

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| 3 rd Bone Spring Carb | 11,130' | Oil |
| 3 rd Bone Spring Sand | 11,730' | Oil |
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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 10.75" casing at 830' and circulating cement back to surface.

EOG RESOURCES, INC.
BARLOW 34 FED COM NO. 702H

4. CASING PROGRAM - NEW

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Variance is requested to wave the centralizer requirements for the 7-5/8" FJ casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to wave any centralizer requirements for the 5-1/2" FJ casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

Cementing Program:

| Depth | No. Sacks | Wt. ppg | Yld Ft ³ /ft | Mix Water Gal/sk | Slurry Description |
|-------------------|-----------|---------|-------------------------|------------------|---|
| 10-3/4" 830' | 325 | 13.5 | 1.73 | 9.13 | Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ Surface) |
| | 200 | 14.8 | 1.34 | 6.34 | Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate |
| 7-5/8" 11,300' | 250 | 14.8 | 1.38 | 6.48 | Class C + 5% Gypsum + 3% CaCl ₂ pumped via Bradenhead (TOC @ Surface) |
| | 2000 | 14.8 | 1.38 | 6.48 | Class C + 5% Gypsum + 3% CaCl ₂ pumped via Bradenhead |
| | 550 | 14.4 | 1.20 | 4.81 | 50:50 Class H:Poz + 0.25% CPT20A + 0.40% CPT49 + 0.20% CPT35 + 0.80% CPT16A + 0.25% CPT503P pumped Conventionally |
| 5-1/2" 17,100' | 850 | 14.1 | 1.26 | 5.80 | Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,800') |

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

EOG RESOURCES, INC.
BARLOW 34 FED COM NO. 702H

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

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

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer and an annular preventer (5000-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 5000/ 250 psig and the annular preventer to 3500/ 250 psig. The surface casing will be tested to 1500 psi for 30 minutes.

Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 3500/ 250 psig. The intermediate casing will be tested to 2000 psi for 30 minutes.

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

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

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 – 830' | Fresh - Gel | 8.6-8.8 | 28-34 | N/c |
| 830' – 11,300' | Brine | 8.8-10.0 | 28-34 | N/c |
| 11,300' – 17,100' Lateral | Oil Base | 10.0-14.0 | 58-68 | 3 - 6 |

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

EOG RESOURCES, INC.
BARLOW 34 FED COM NO. 702H

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

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

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

- (A) A kelly cock will be kept in the drill string at all times.
- (B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.
- (C) H₂S monitoring and detection equipment will be utilized from surface casing point to TD.

8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logs are not planned for this well.

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

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

The estimated bottom-hole temperature (BHT) at TD is 181 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 7427 psig (based on 11.5 ppg MW). No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. Severe loss circulation is expected from 7,300' to Intermediate casing point.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

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

- (A) EOG Resources requests the option to contract a Surface Rig to drill, set surface casing, and cement on the subject well. 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.

EOG RESOURCES, INC.
BARLOW 34 FED COM NO. 702H

11. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the 10-3/4" surface casing, a 13-5/8" BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 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 5000 psi.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Stream Flo FBD100 Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM.

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

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

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

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

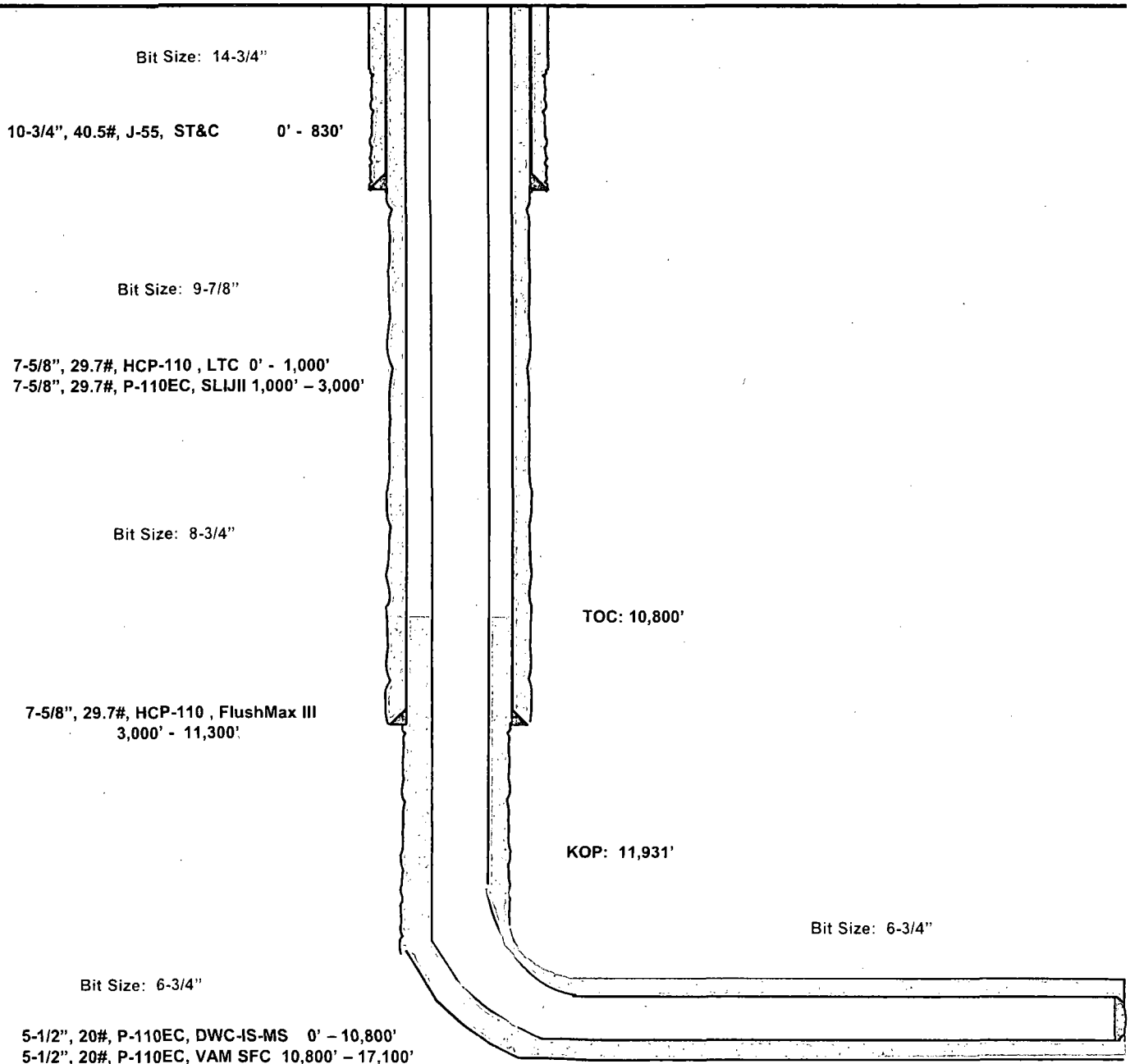
Barlow 34 Fed Com #702H

Lea County, New Mexico
Proposed Wellbore

300' FSL
660' FWL
Section 34
T-26-S, R-33-E

API: 30-025-*****

KB: 3,286'
GL: 3,361'



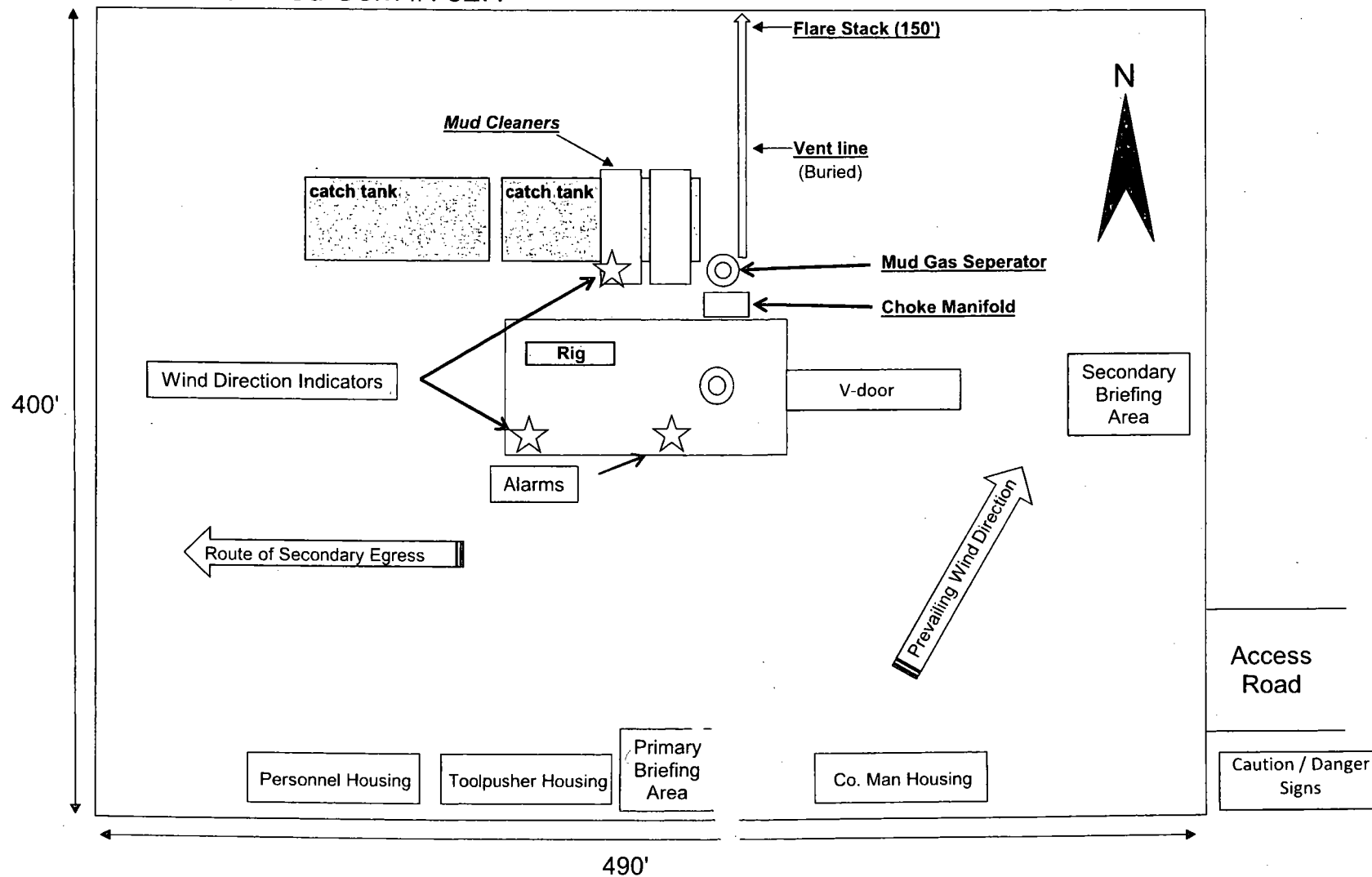
Lateral: 17,100' MD, 12,420' TVD
Upper Most Perf:
330' FSL & 660' FWL Sec. 34
Lower Most Perf:
2329' FSL & 664' FWL Sec. 27
BH Location: 2429' FSL & 663' FWL
Section 27
T-26-S, R-33-E

Exhibit 4

EOG Resources

Barlow 34 Fed Com #702H

Well Site Diagram



BLM APD Waste Minimization Plan Checklist

Well Name: Barlow 34 Fed Com 702H (APD)

Well Location: 300' FSL & 660' FEL, SWNW 34-26S-33E, Lea County

Production Facility Name: Barlow 34 Fed Com Central Tank Battery

Production Facility Location: CTB Located in NW/ 4 of section 19. Gas is gathered at CTB and piped through EOG gathering system to Regency Field Services gas pipeline tie-in.

Anticipated Well Completion Date: Estimated 04/01/2018

- Initial Production Volumes: Estimated ~3000 – 7000 MCFPD initial rate.

In accordance with 3162.3-1(j)(3), one or more third-party, midstream processors have been notified of our development plan. Information provided includes anticipated completion dates and gas production rates.

NMOCD gas capture plan attached.

MIDWEST
HOSE AND SPECIALTY INC.

| INTERNAL HYDROSTATIC TEST REPORT | | | |
|---|------------------------------------|--|-----------------------------------|
| Customer: CACTUS | | P.O. Number: RIG #123 Asset # M10761 | |
| HOSE SPECIFICATIONS | | | |
| Type: CHOKER LINE | | Length: 35' | |
| I.D. 4" INCHES | | O.D. 8" INCHES | |
| WORKING PRESSURE 10,000 PSI | TEST PRESSURE 15,000 PSI | BURST PRESSURE PSI | |
| COUPLINGS | | | |
| Type of End Fitting 4 1/16 10K FLANGE | | | |
| Type of Coupling: SWEDGED | | MANUFACTURED BY MIDWEST HOSE & SPECIALTY | |
| PROCEDURE | | | |
| <i>Hose assembly pressure tested with water at ambient temperature.</i> | | | |
| TIME HELD AT TEST PRESSURE 1 MIN. | | ACTUAL BURST PRESSURE: 0 PSI | |
| COMMENTS: SN#90067 M10761 Hose is covered with stainless steel armour cover and wrapped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting eyes | | | |
| Date: 6/6/2011 | Tested By: BOBBY FINK | | Approved: MENDI JACKSON |



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Graph

Customer: CACTUS

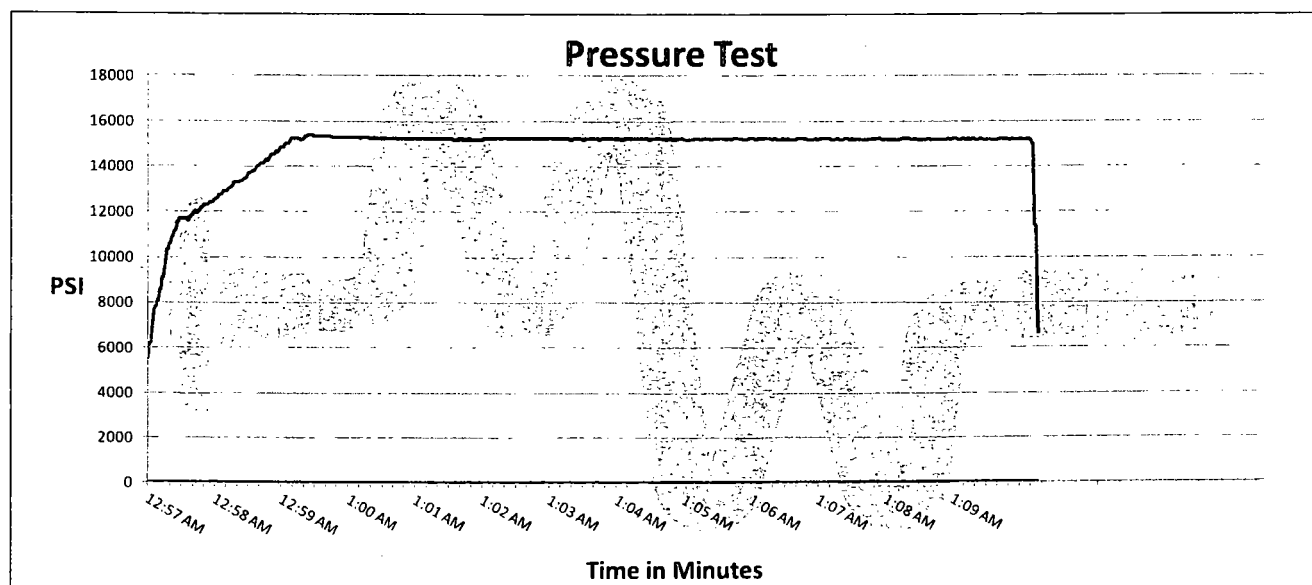
SALES ORDER# 90067

Hose Specifications

| | |
|-------------------------|------------------------------------|
| <u>Hose Type</u> | <u>Length</u> |
| C & K | 35' |
| <u>I.D.</u> | <u>O.D.</u> |
| 4" | 8" |
| <u>Working Pressure</u> | <u>Burst Pressure</u> |
| 10000 PSI | Standard Safety Multiplier Applies |

Verification

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



Test Pressure
15000 PSI

Time Held at Test Pressure
11 1/4 Minutes

Actual Burst Pressure

Peak Pressure
15439 PSI

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

Tested By: Bobby Fink

Approved By: Mendi Jackson

Bobby Fink

Mendi Jackson



United States Department of the Interior



BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

620 E. GREENE ST.

CARLSBAD, NM 88220

BLM_NM_CFO_APD@BLM.GOV

In Reply To:

3160 (Office Code)

[NMNM02965A]

05/18/2017

Attn: STAN WAGNER

EOG RESOURCES INC

1111 BAGBY SKY LOBBY2

HOUSTON, TX 77002

Re: Receipt and Acceptability of Application for Permit to Drill (APD)

FEDERAL - NMNM02965A

Well Name / Number: **BARLOW 34 FED COM / 702H**

Legal Description: T26S, R33E, SEC 34, LOT 4

County, State: LEA, NM

Date APD Received: 03/14/2017

Dear Operator:

The BLM received your Application for Permit to Drill (APD), for the referenced well, on 03/14/2017. The BLM reviewed the APD package pursuant to part III.D of Onshore Oil and Gas Order No.1 and it is:

- I. ☒ Incomplete/Deficient (*The BLM cannot process the APD until you submit the identified items within 45 calendar days of the date of this notice or the BLM will return your APD.*)

- ☐ Well Plat
- ☒ Drilling Plan
- ☒ Surface Use Plan of Operations (SUPO)
- ☐ Certification of Private Surface Owner Access Agreement
- ☐ Bonding
- ☐ Onsite (The BLM has scheduled the onsite to be on _____)
This requirement is exempt of the 45-day timeframe to submit deficiencies. This requirement will be satisfied on the date of the onsite.
- ☐ Other

[Please See Addendum for further clarification of deficiencies]

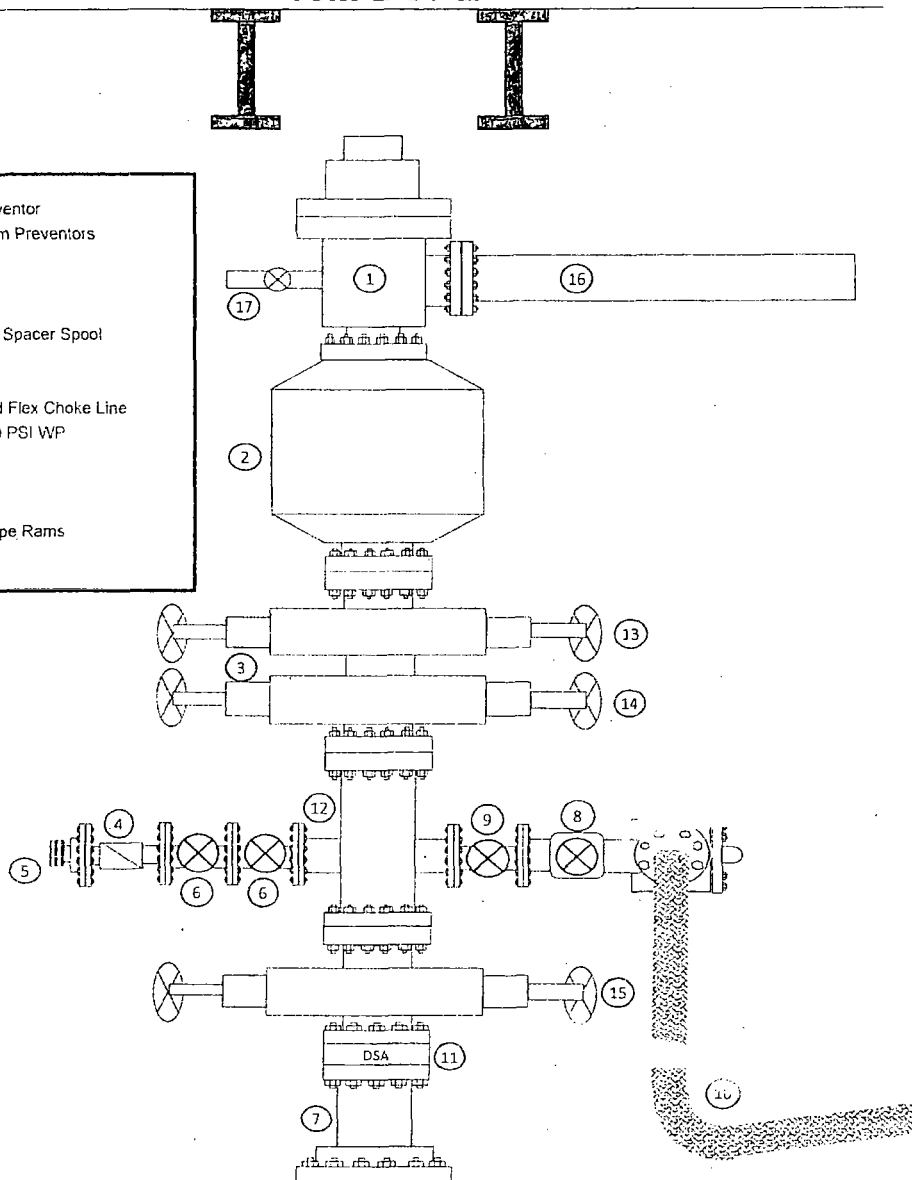
Exhibit 1

EOG Resources

10M BOPE

Rig Floor

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



NOTE: The BLM will return your APD package to you, unless you correct all deficiencies identified above (item 1) within 45 calendar days.

- The BLM will not refund an APD processing fee or apply it to another APD for any returned APD.

Extension Requests:

- If you know you will not be able to meet the 45-day timeframe for reasons beyond your control, you must submit a written request through email/standard mail for extension prior to the 45th calendar day from this notice, **07/02/2017**.
- The BLM will consider the extension request if you can demonstrate your diligence (providing reasons and examples of why the delay is occurring beyond your control) in attempting to correct the deficiencies and can provide a date by which you will correct the deficiencies. If the BLM determines that the request does not warrant an extension, the BLM will return the APD as incomplete after the 45 calendar days have elapsed.
 - The BLM will determine whether to grant an extension beyond the required 45 calendar days and will document this request in the well file. If you fail to submit deficiencies by the date defined in the extension request, the BLM will return the APD.

APDs remaining Incomplete:

- If the APD is still not complete, the BLM will notify you and allow 10 additional business days to submit a written request to the BLM for an extension. The request must describe how you will address all outstanding deficiencies and the timeframe you request to complete the deficiencies.
 - The BLM will consider the extension request if you can prove your diligence (providing reasons and examples of why the delay is occurring) in attempting to correct the deficiencies and you can provide a date by which you will correct the deficiencies. If the BLM determines that the request does not warrant an additional extension, the BLM will return the APD as incomplete.

If you have any questions, please contact Alana Baker at (575) 234-5922.

Sincerely,

Cody Layton
Assistant Field Manager
Lands and Minerals

cc: Official File

ADDENDUM - Deficient

Surface Comments

- Well Site Layout Deficiency:

The well location needs a cut and fill diagram due to a greater than 10 foot elevation change.

Attached

Engineering Comments

- BOP requirements are not met

1. BOP Schematic must have a 10M Annular. Please resubmit with correction.

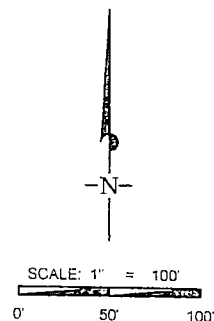
Attached

- Engineering Review: Other identified drilling plan deficiencies

Not a deficiency but cannot approve APD without a waste minimization plan. Please attach state submitted gas capture plan (this will be a sufficient substitute for waste minimization plan).

Attached

SECTION 34, TOWNSHIP 26-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



Top of pad elevation: 3260.1408
Cut Slope: 33.33% 3.000:1 18.43°
Fill Slope: 33.33% 3.000:1 18.43°
Balance Tolerance (C.Y.): 0.00
Cut Swell Factor: 1.00
Fill Shrink Factor: 1.00

Pad Earthwork Volumes
Cut : 220,759.5 C.F., 8,176.28 C.Y.
Fill: 220,759.5 C.F., 8,176.28 C.Y.
Area: 212776.6 Sq.Ft., 4.885 Acres



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TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

BARLOW 34
FED COM
#701H-#703H
SITE

DATE: 03/22/17

FILE:CD_BARLOW_34_FED COM 701H-703H SITE PRO

DRAWN BY: GJU

SHEET : 1 OF 2

REVISION:

| INT | DATE |
|-----|------|
|-----|------|

NOTES:

1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATES VALUED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1977.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF EASEMENT IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, AND NOT TO THE EASEMENT UNDER MY SUPERVISION, AND USING DOCUMENTATION OF FEDERAL EASEMENTS, INC. ONLY OF THIS SURVEY. WITHIN ADJOINING THIS EASEMENT, HAVE BEEN AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS TRANSACTION. AND MADE FOR THIS TRANSACTION ONLY.

CONTAINED HEREIN ARE GRID
E SYSTEM, EAST ZONE, U.S.
EASEMENT. IN RELATION TO THE
E GROUND, UNDER MY
Y EOG RESOURCES, INC. ONLY
Y OF THIS SURVEY,
J AS SHOWN HEREON OF WHICH I
OSE PERSONS OR ENTITIES
RABLE, AND MADE FOR THIS

Michael Blake Brown, P.S. No. 18329

MARCH 22, 2017

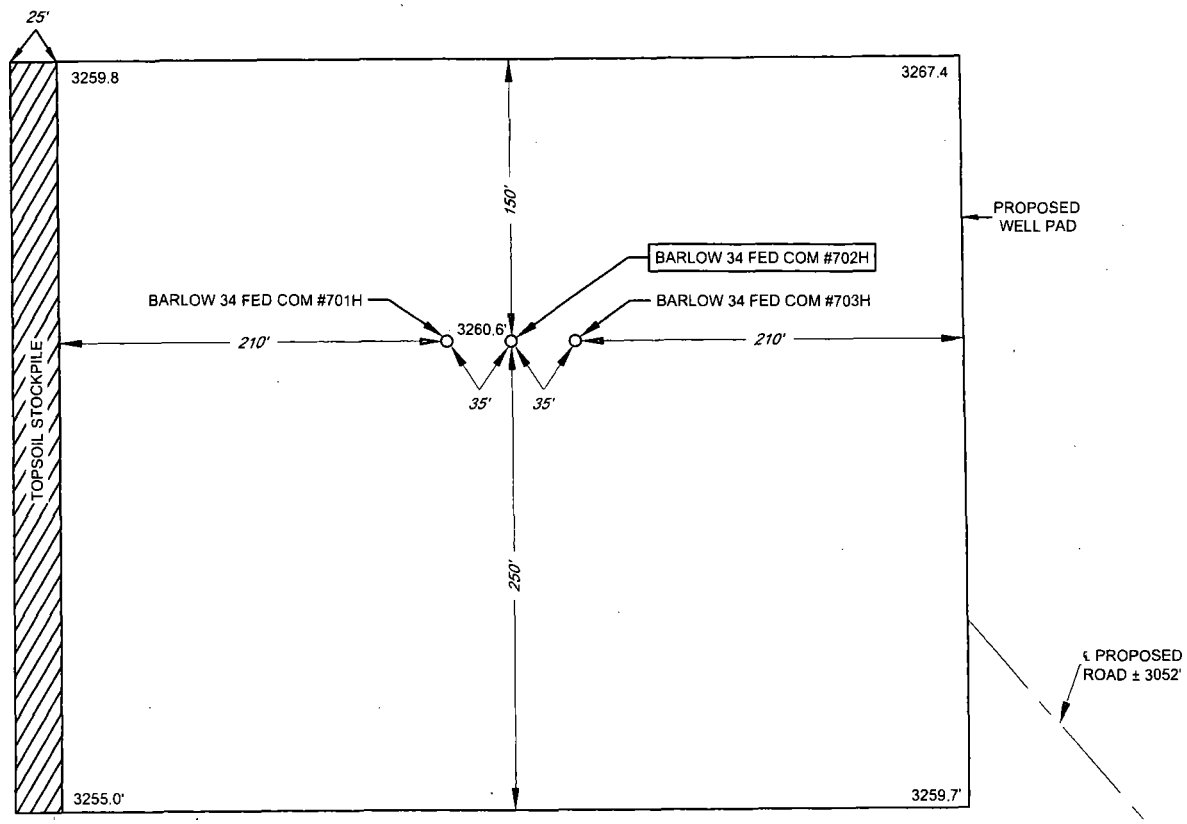
Field note description of even date accompanies this plat.

EXHIBIT 2B

Geog resources, Inc.

SECTION 34, TOWNSHIP 26-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



SECTION LINE

LEASE NAME & WELL NO.: BARLOW 34 FED COM #702H
#702H LATITUDE N 32.0009516 #702H LONGITUDE W 103.5661344

LEGEND

— SECTION LINE
- - - PROPOSED ROAD



SCALE: 1" = 100'
0' 50' 100'

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

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

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

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

S:\SURVEY\EOG_MIDLAND\BARLOW_34_FED_COM\FINAL_PRODUCTS\ILO_BARLOW_34_FED_COM_702H.DWG 2/21/2017 8:47:44 AM ghornbeck

| OD | Weight | Wall Th. | Grade | API Drift | Connection |
|-----------|-------------|-----------|-----------|-----------|--------------|
| 7 5/8 in. | 29.70 lb/ft | 0.375 in. | VM 110 HC | 6.750 in. | VAM® SLIJ-II |

| PIPE PROPERTIES | |
|--------------------------------|---------------|
| Nominal OD | 7.625 in. |
| Nominal ID | 6.875 in. |
| Nominal Cross Section Area | 8.541 sqin. |
| Grade Type | High Collapse |
| Min. Yield Strength | 110 ksi |
| Max. Yield Strength | 140 ksi |
| Min. Ultimate Tensile Strength | 125 ksi |

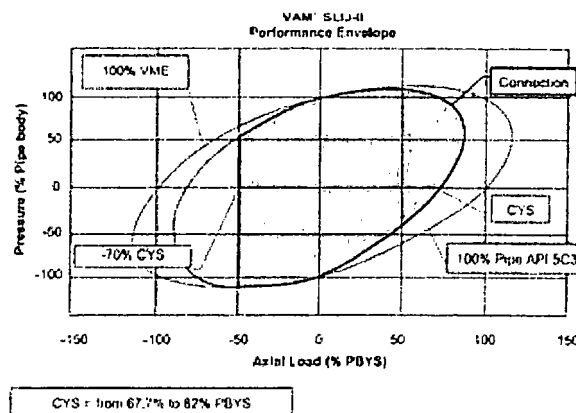
| CONNECTION PROPERTIES | |
|------------------------------|-----------------------------|
| Connection Type | Premium integral semi-flush |
| Connection OD (nom) | 7.711 in. |
| Connection ID (nom) | 6.820 in. |
| Make-up Loss | 4.822 in. |
| Critical Cross Section | 5.912 sqin. |
| Tension Efficiency | 69.2 % of pipe |
| Compression Efficiency | 48.5 % of pipe |
| Internal Pressure Efficiency | 100 % of pipe |
| External Pressure Efficiency | 100 % of pipe |

| CONNECTION PERFORMANCES | |
|------------------------------|-------------|
| Tensile Yield Strength | 651 klb |
| Compression Resistance | 455 klb |
| Internal Yield Pressure | 9470 psi |
| Uniaxial Collapse Pressure | 7890 psi |
| Max. Bending Capacity | TDB |
| Max Bending with Sealability | 20 °/100 ft |

| FIELD TORQUE VALUES | |
|----------------------|-------------|
| Min. Make-up torque | 113 |
| Opti. Make-up torque | 12600 ft.lb |
| Max. Make-up torque | 13900 ft.lb |

VAM® SLIJ-II is a semi-flush integral premium connection for all casing applications. It combines a near flush design with high performances in tension, compression and gas sealability.

VAM® SLIJ-II has been validated according to the most stringent tests protocols, and has an excellent performance history in the world's most prolific HPHT wells.



Do you need help on this product? - Remember no one knows VAM® like VAM

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usa@vamfieldservice.com
mexico@vamfieldservice.com
brazil@vamfieldservice.com

uk@vamfieldservice.com
dubai@vamfieldservice.com
nigeria@vamfieldservice.com
angola@vamfieldservice.com

china@vamfieldservice.com
baku@vamfieldservice.com
singapore@vamfieldservice.com
australia@vamfieldservice.com

Over 140 VAM® Specialists available worldwide 24/7 for Rig Site Assistance

Other Connection Data Sheets are available at www.vamservices.com

Vallourec Group

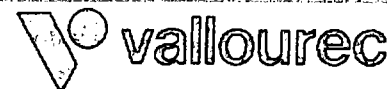
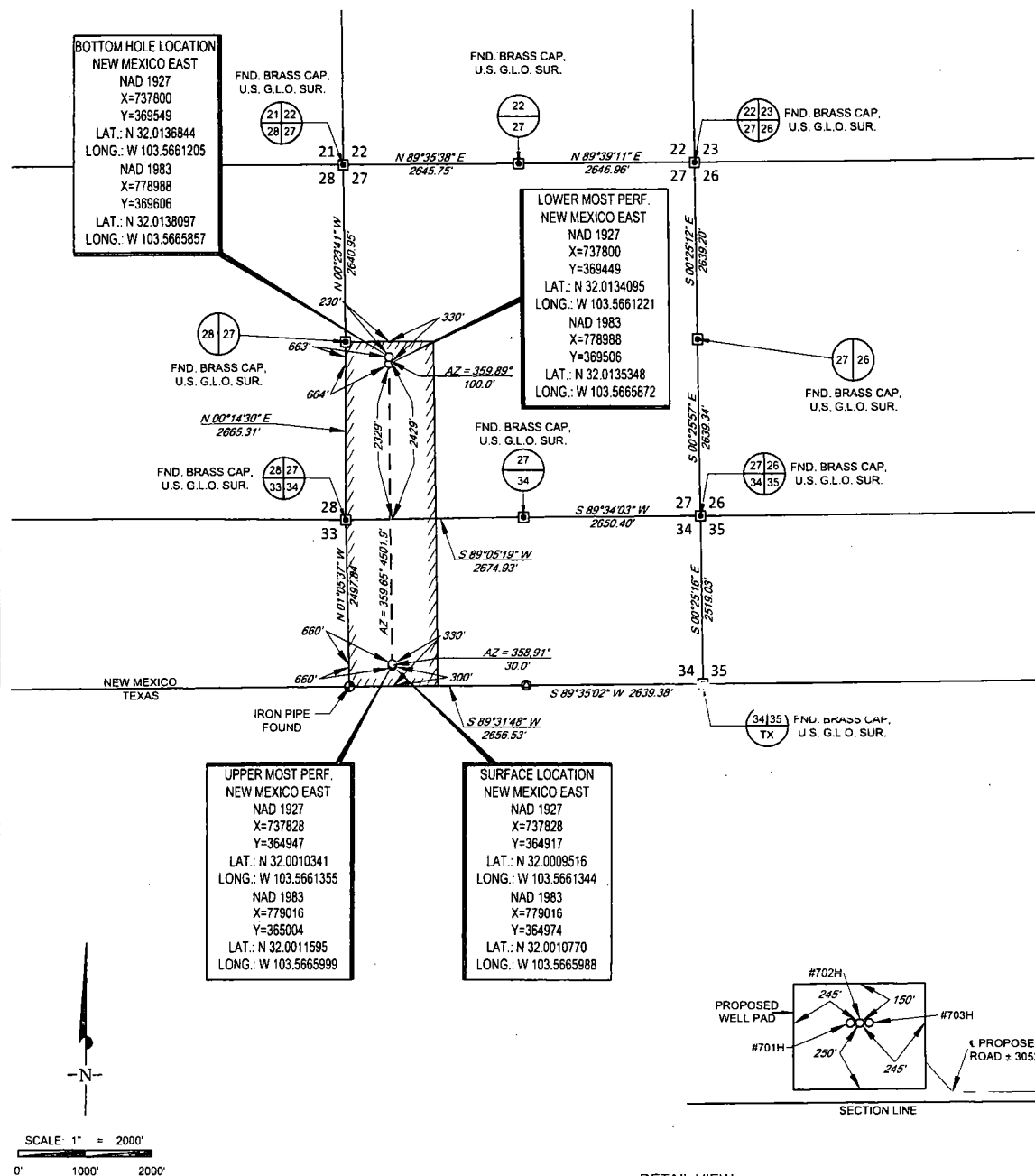


EXHIBIT 2A

SECTION 34, TOWNSHIP 26-S, RANGE 33-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: BARLOW 34 FED COM #702H

SECTION 34 TWP 26-S RGE 33-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 300' FSL & 660' FWL

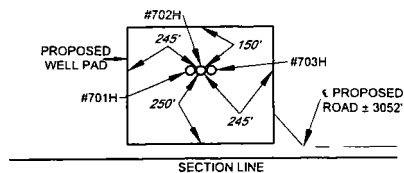
DISTANCE & DIRECTION

FROM INT. OF NM-18 N. & NM-128, GO WEST ON NM-128W ±14.1 MILES, THENCE SOUTHWEST (LEFT) ON BATTLE AXE RD. ±13.2 MILES, THENCE WEST (RIGHT) ON BATTLE AXE RD./J-2 ±3.9 MILES, THENCE EAST (LEFT) ON LEASE RD. ±1.0 MILES, THENCE SOUTH (RIGHT) ON LEASE RD. ±1.6 MILES, WEST (RIGHT) ON PROPOSED RD. ±3,052 FEET TO A POINT ±318 FEET SOUTHEAST OF THE LOCATION.

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

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.

DETAIL VIEW
SCALE: 1" = 500'



"PRELIMINARY, THIS DOCUMENT SHALL NOT
BE RECORDED FOR ANY PURPOSE."

Michael Blake Brown, P.S. No. 18329
AUGUST 08, 2016

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WWW.TOPOGRAPHIC.COM

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 manufacturer: No