

ATS-10-95

OCD-HOBBS

Form 3160-3  
(February 2005)

RECEIVED

FORM APPROVED  
OMB No 1004-0137  
Expires March 31, 2007UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

MAR 17 2010

HOBBSOCD

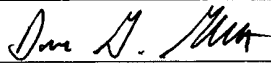
## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7 If Unit or CA Agreement, Name and No	
1b. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. <b>23820</b> <b>TRISTE DRAW 3 FED 4H</b>	
2. Name of Operator <b>EOG Resources, Inc.</b>		9. API Well No. <b>30-025- 39718</b>	
3a. Address <b>P.O. Box 2267 Midland, TX 79702</b>	3b. Phone No. (include area code) <b>432-686-3642</b>	10 Field and Pool, or Exploratory <b>Red Hills Bone Springs North</b>	
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface <b>330' FNL &amp; 1980' FEL (U/L B)</b> At proposed prod. zone <b>330' FSL &amp; 1980' FEL (U/L O)</b>		11 Sec., T. R. M. or Blk. and Survey or Area <b>Section 3, T25S-R33E, N.M.P.M.</b>	
14 Distance in miles and direction from nearest town or post office* <b>Approx 22 miles W from Jal, NM</b>		12 County or Parish <b>Lea</b>	13 State <b>NM</b>
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drg unit line, if any) <b>330'</b>	16 No. of acres in lease <b>640</b>	17 Spacing Unit dedicated to this well <b>W/2 E/2</b>	
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>2,100'</b>	19 Proposed Depth <b>12250'TVD; 16662'TMD</b>	20 BLM/BIA Bond No. on file <b>NM2308</b>	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>GL 3473.4</b>	22. Approximate date work will start* <b>02/01/2010</b>	23 Estimated duration <b>35 days</b>	

## 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.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above) |
| 2. A Drilling Plan.  | 5. Operator certification  |
| 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). | 6. Such other site specific information and/or plans as may be required by the BLM.            |

25. Signature 	Name (Printed/Typed) <b>Donny G. Glanton</b>	Date <b>10/30/2009</b>
Title <b>Sr. Lease Operations ROW Representative</b>		
Approved by (Signature) <b>/s/ Don Peterson</b>	Name (Printed/Typed) <b>CARLSBAD FIELD OFFICE</b>	Date <b>MAR 15 2010</b>
Title <b>FIELD MANAGER</b>	Office	

Application approval does not constitute a guarantee 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.

APPROVAL FOR TWO YEARS

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.

\*(Instructions on page 2)

Carlsbad Controlled Water Basin

Approval Subject to General Requirements  
& Special Stipulations AttachedSEE ATTACHED FOR  
CONDITIONS OF APPROVAL

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

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

Form C-102  
Revised October 12, 2005  
Submit to Appropriate District Office  
State Lease- 4 Copies  
Fee Lease- 3 Copies

☐ AMENDED REPORT

### WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-025-39718</b>	Pool Code <b>5102D</b>	Pool Name <b>Red Hills Bone Springs North</b>
Property Code <b>23820</b>	Property Name <b>TRISTE DRAW "3" FED.</b>	Well Number <b>4H</b>
OGRID No. <b>7377</b>	Operator Name <b>EOG RESOURCES, INC.</b>	Elevation <b>3473.4'</b>

### Surface Location

UL or lot no. <b>B/2</b>	Section <b>3</b>	Township <b>25 SOUTH</b>	Range <b>33 EAST, N.M.P.M.</b>	Lot Idn	Feet from the <b>330'</b>	North/South line <b>NORTH</b>	Feet from the <b>1980'</b>	East/West line <b>EAST</b>	County <b>LEA</b>
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### Bottom Hole Location If Different From Surface

UL or lot no. <b>0</b>	Section <b>3</b>	Township <b>25 SOUTH</b>	Range <b>33 EAST, N.M.P.M.</b>	Lot Idn	Feet from the <b>330'</b>	North/South line <b>SOUTH</b>	Feet from the <b>1980'</b>	East/West line <b>EAST</b>	County <b>LEA</b>
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Dedicated Acres <b>160</b>	Joint or Infill	Consolidation Code	Order No.
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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.

<p><b>SURFACE LOCATION</b> NEW MEXICO EAST NAD 1927 Y=424907.2 X=740051.0 LAT.: N 32.1658085' LONG.: W 103.5575732'</p> <p><b>BOTTOM HOLE LOCATION</b> NEW MEXICO EAST NAD 1927 Y=420289.9 X=740081.4 LAT.: N 32.1531159' LONG.: W 103.5575824'</p> <p><b>PROJECT AREA</b> <b>PRODUCING AREA</b> <b>GRID AZ = 179°37'</b></p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>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.</p> <p><u>Don N. Munk</u> 10/28/09 Signature Date</p> <p><u>Donny G. Glanton</u> Printed Name</p> <p><b>SURVEYOR CERTIFICATION</b></p> <p>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 and correct to the best of my belief.</p> <p><b>15079</b> SEPTEMBER 9, 2009 Date of Survey</p> <p><u>Terry D. Asel</u> 10/22/2009 Signature and Seal of Professional Surveyor Certificate Number</p> <p>WO# 090909WL-b (KA)</p>
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**Permit Information:**

Well Name: Triste Draw 3 Fed No. 4H

**Location:**

SL: 330' FNL &amp; 1,980' FEL, Section 3, T-25-S, R-33-E, Lea Co., N.M.

BHL: 330' FSL &amp; 1,980' FEL, Section 3, T-25-S, R-33-E, Lea Co., N.M.

**Casing Program:**

Casing	Setting Depth	Hole Size	Casing Size	Casing Weight	Casing Grade	Desired TOC
Surface	1,175'	17-1/2"	13-3/8"	48#	H-40	Surface
Intermediate	4,000'	12-1/4"	9-5/8"	40#	J-55	Surface
	5,100'	12-1/4"	9-5/8"	40#	HCK-55	
Production	16,662'	8-3/4"	5-1/2"	17#	HCP-110	4600'

**Cement Program:**

Depth	No. Sacks	Wt. ppg	Yld Ft <sup>3</sup> /ft	Slurry Description
1175'	705	13.0	1.76	Lead: 40:60 Poz:C Cement + 0.005 lbs/sack Static Free + 5% Sodium Chloride + 0.005 gps FP-6L + 4% Bentonite + 1% SMC+ 5 pps LCM-1 + 0.25 pps Cello Flake
	300	14.8	1.32	Tail: Class C + 0.005 pps Static Free + 2% CaCl <sub>2</sub> + 0.25 pps CelloFlake + 0.005 gps FP-6L
5,100'	1100	12.7	2.01	Lead: Class 'C' + 2.00% SMS + 1.50% R-3 + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
KO Plug	300	18.0	0.90	Class H cement + 0.005 gps FP-6L + 0.005 pps Static Free + 5 % NaCl + 1.2% CD-31 + retarder (as needed). Plug will be set from 11,500' – 12,100' md/tvd.
16,662'	1800	12.0	2.00	Lead: 47:20:17 Class 'H':Poz (Fly Ash):CSE-2 + 1.50% SMS + 0.20% ASA-301 + 1.65% R-21 + 3.00 lb/sk LCM-1
	975	14.2	1.30	Tail: 50:50:2 Class 'H' + 0.30% FL-52A + 0.20% CD-32 + 0.35% SMS + 5.00% Salt (2.454 lb/sk) + 0.45% R-3 + 0.005 lb/sk Static Free

**Mud Program:**

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,175'	Fresh - Gel	8.6-8.8	28-34	N/c
1,175' – 5,100'	Brine	10.0-10.2	28-34	N/c
5,100' – 8,500'	Fresh Water	8.4-8.6	28-34	N/c
8,500' – 12,300'	Cut Brine - XCD	9.0-9.5	40-42	8-10
Pilot hole				
11,772' – 16,662'	Cut Brine - XCD	9.0-9.5	40-42	8-10
Lateral				

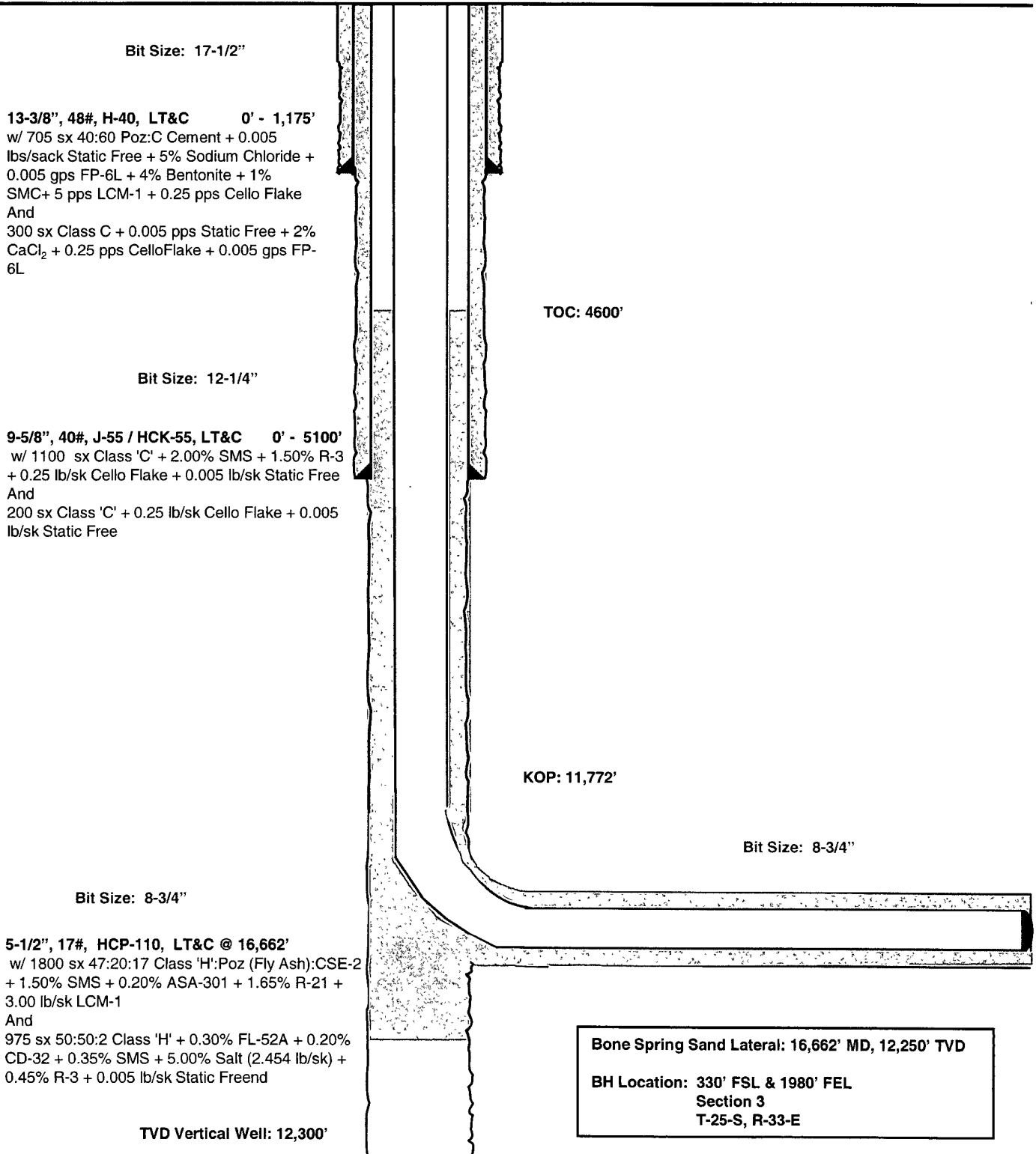
Triste Draw 3 Fed #4H  
Red Hills  
Lea County, New Mexico

330' FNL  
1980' FEL  
Section 3  
T-25-S, R-33-E

Proposed Wellbore

API: 30-025-

KB: 3,492.4'  
GL: 3,473.4'



**EOG RESOURCES, INC.**  
**TRISTE DRAW 3 FED 4H**

**1. GEOLOGIC NAME OF SURFACE FORMATION:**

Permian

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

Rustler	1,143'
Base of Salt	4,900'
Delaware	5,135'
Cherry Canyon	6,210'
1 <sup>st</sup> Bone Spring Sand	10,234'
2 <sup>nd</sup> Bone Spring Sand	10,881'
3 <sup>rd</sup> Bone Spring Sand	12,216'
Pilot hole TD	12,300'

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

Upper Permian Sands	0- 400'	Fresh Water
Delaware	5,135'	Oil
Cherry Canyon	6,210'	Oil
1 <sup>st</sup> Bone Spring Sand	10,234'	Oil
2 <sup>nd</sup> Bone Spring Sand	10,881'	Oil
3 <sup>rd</sup> Bone Spring Sand	12,216'	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 1175' and circulating cement back to surface. The surface casing will be set a minimum of 25' into the Rustler Anhydrite and above the salt.

**4. CASING PROGRAM - NEW**

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF <sub>min</sub> Collapse	DF <sub>min</sub> Burst	DF <sub>min</sub> Tension
17.5"	0 – 1175'	13.375"	48#	H40	STC	1.10	1.25	1.60
12.25"	0-4000'	9.625"	40#	J55	LTC	1.10	1.25	1.60
12.25"	4000'-5100'	9.625"	40#	KCK55	LTC	1.10	1.25	1.60
8.75"	0'-16,662'	5.5"	17#	HCP110	LTC	1.10	1.25	1.60

**EOG RESOURCES, INC.**  
**TRISTE DRAW 3 FED 4H**

**Cementing Program:**

Depth	No. Sacks	Wt. ppg	Yld Ft <sup>3</sup> /ft	Slurry Description
1175'	705	13.0	1.76	Lead: 40:60 Poz:C Cement + 0.005 lbs/sack Static Free + 5% Sodium Chloride + 0.005 gps FP-6L + 4% Bentonite + 1% SMC+ 5 pps LCM-1 + 0.25 pps Cello Flake
	300	14.8	1.32	Tail: Class C + 0.005 pps Static Free + 2% CaCl <sub>2</sub> + 0.25 pps CelloFlake + 0.005 gps FP-6L
5,100'	1100	12.7	2.01	Lead: Class 'C' + 2.00% SMS + 1.50% R-3 + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
	200	14.8	1.32	Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free
KO Plug	300	18.0	0.90	Class H cement + 0.005 gps FP-6L + 0.005 pps Static Free + 5 % NaCl + 1.2% CD-31 + retarder (as needed). Plug will be set from 11,500' – 12,100' md/tvd.
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	975	14.2	1.30	Tail: 50:50:2 Class 'H' + 0.30% FL-52A + 0.20% CD-32 + 0.35% SMS + 5.00% Salt (2.454 lb/sk) + 0.45% R-3 + 0.005 lb/sk Static Free

**5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:**

(SEE EXHIBIT #1)

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram-type (5000 psi WP) preventer and an annular preventer (5000-psi WP). Units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOP's and accessory equipment will be tested in accordance with Onshore Oil & Gas order No. 2. EOG Resources request authorization to use a 2M system, providing for an annular preventer to be used prior to drilling out of the surface casing shoe and while drilling the intermediate section. 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 2500/ 250 psig.

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.

Hydraulically operated choke will not be installed prior to the setting and cementing of the intermediate casing string, but will be installed prior to drilling out of the intermediate casing shoe.

**EOG RESOURCES, INC.**  
**TRISTE DRAW 3 FED 4H**

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

The well will be drilled to TD with a combination of brine, cut brine, and polymer mud system. The applicable depths and properties of this system are as follows:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,175'	Fresh - Gel	8.6-8.8	28-34	N/c
1,175' – 5,100'	Brine	10.0-10.2	28-34	N/c
5,100' – 8,500'	Fresh Water	8.4-8.6	28-34	N/c
8,500' – 12,300'	Cut Brine - XCD	9.0-9.5	40-42	8-10
Pilot hole				
11,772' – 16,662'	Cut Brine - XCD	9.0-9.5	40-42	8-10
Lateral				

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) A mud logging unit will be continuously monitoring drill penetration rate and hydrocarbon shows from 1,175' to TD.

(D) H<sub>2</sub>S monitoring and detection equipment will be utilized from 1,175' to TD.

**8. LOGGING, TESTING AND CORING PROGRAM:** See COA

Open-hole logging is anticipated in the 8-3/4" hole section. The logging suites for this hole section are listed below:

NGT–CNL–LDT w/ Pe	From TD to previous casing shoe. At casing pull GR – Neutron to surface.
HR Laterolog Array	From TD to previous casing shoe.
FMI	Possible in the production hole

**EOG RESOURCES, INC.**  
**TRISTE DRAW 3 FED 4H**

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

The estimated bottom hole temperature (BHT) at TD is 185 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 5000 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

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

The drilling operation should be finished in approximately two months. If the well is productive, an additional 30-60 days will be required for completion and testing before a decision is made to install permanent facilities.

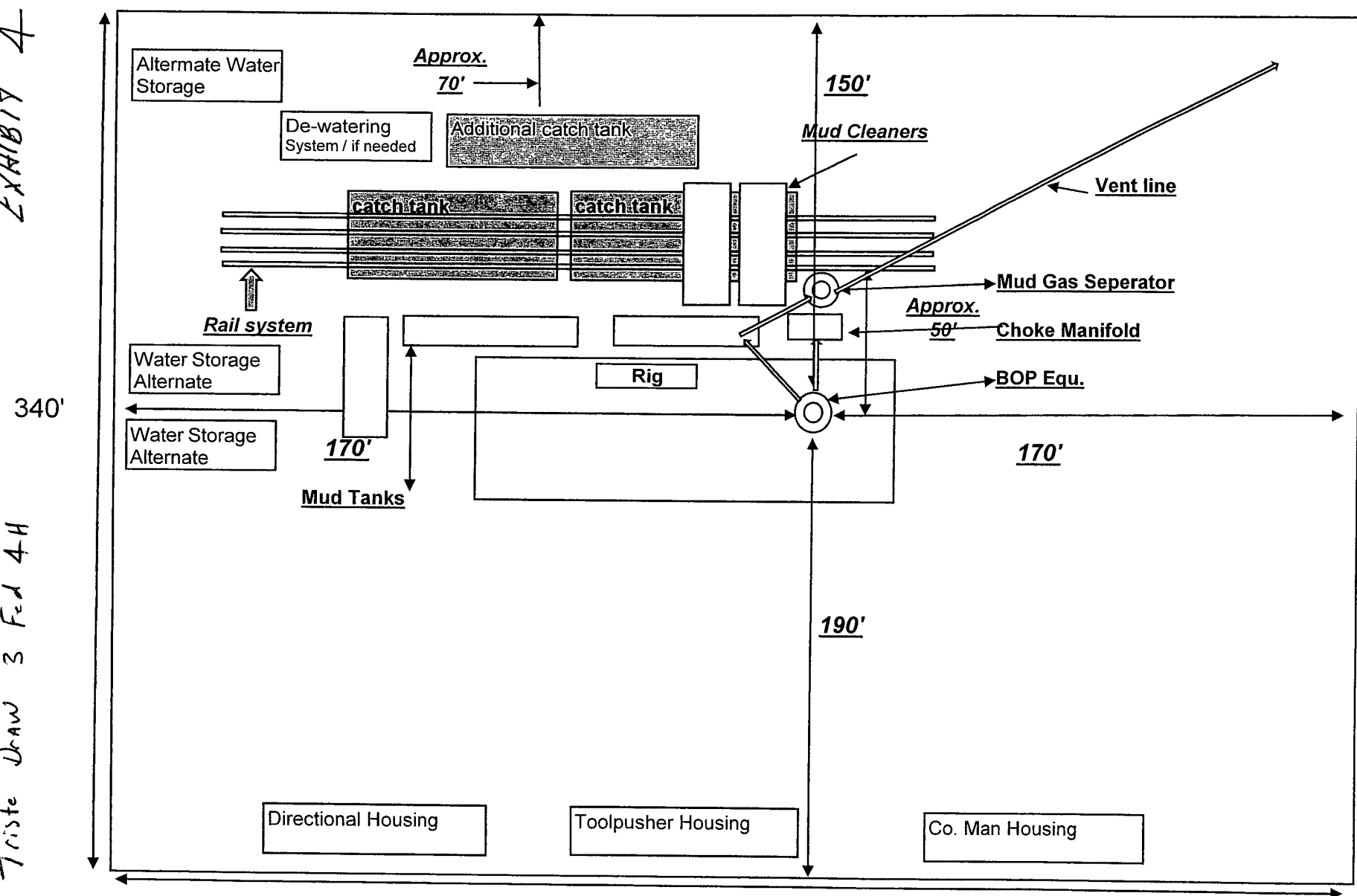


POAA

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EXHIBIT 4

Triste Draw 3 Fed 4H



EOG Resources / Closed Loop Location Design Plan

**EOG RESOURCES, INC.**  
**TRISTE DRAW 3 FED 4H**

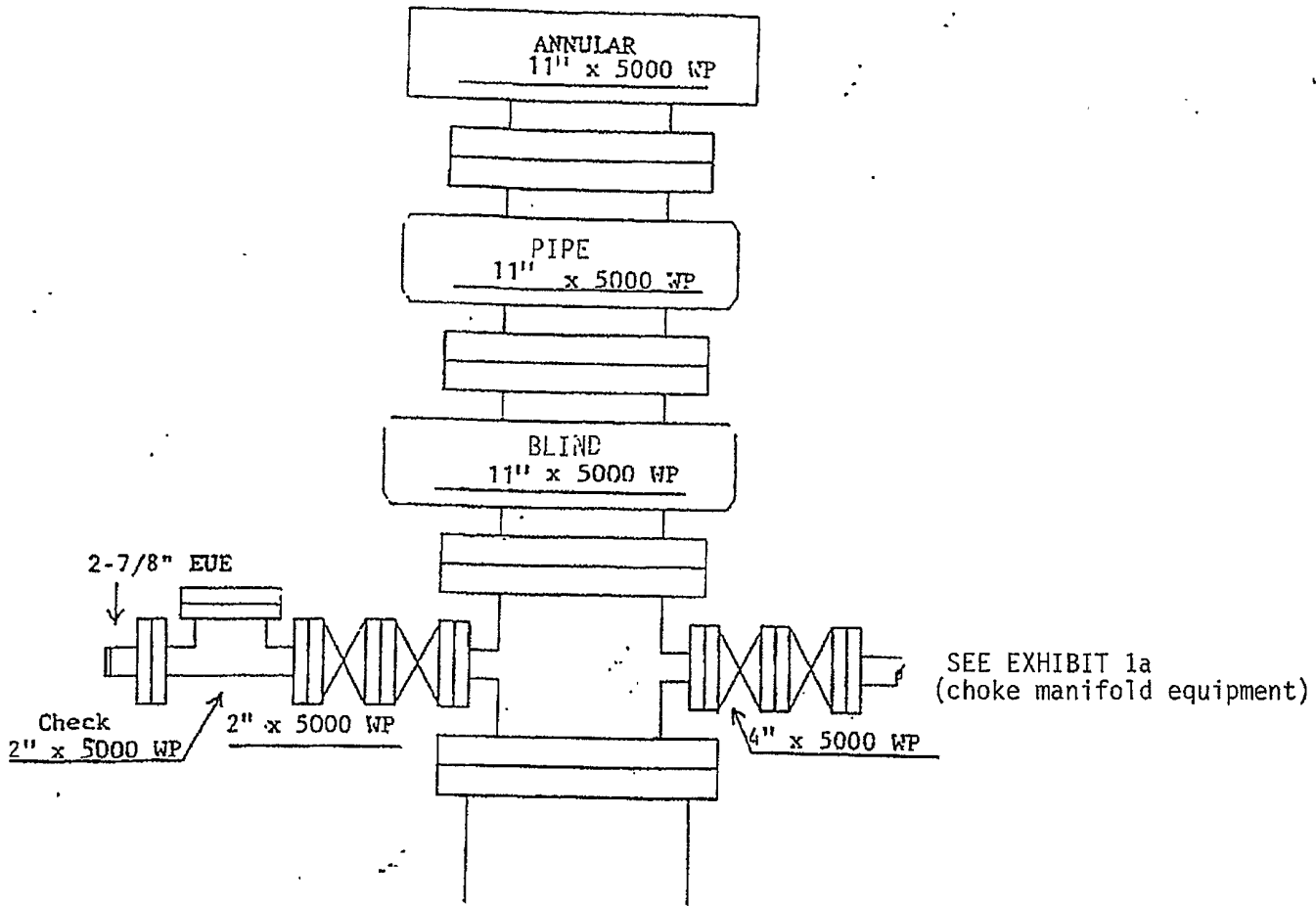
**ATTACHMENT TO EXHIBIT #1**

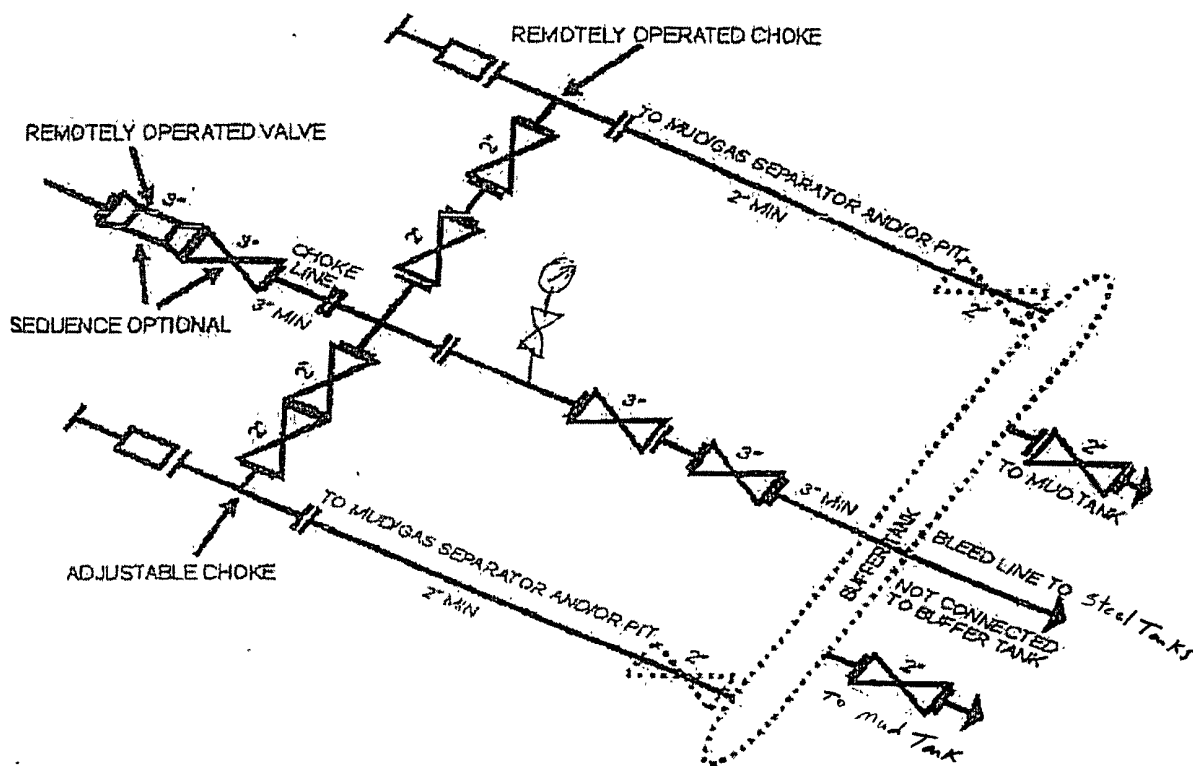
1. Wear ring to be properly installed in head.
2. Blow out preventer and all fittings must be in good condition, 5000 psi W.P. minimum. Exhibit #1.
3. All fittings to be flanged
4. Safety valve must be available on rig floor at all times with proper connections, valve to be full bore 5000 psi W.P. minimum.
5. All choke and fill lines to be securely anchored especially ends of choke lines.
6. Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
7. Kelly cock on kelly.
8. Extension wrenches and hand wheels to be properly installed.
9. Blow out preventer control to be located as close to driller's position as feasible.
10. Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit installation, and meet all API specifications.

EXHIBIT 1

EOG Resources, Inc.

Triste Draw 3 Fed 4H



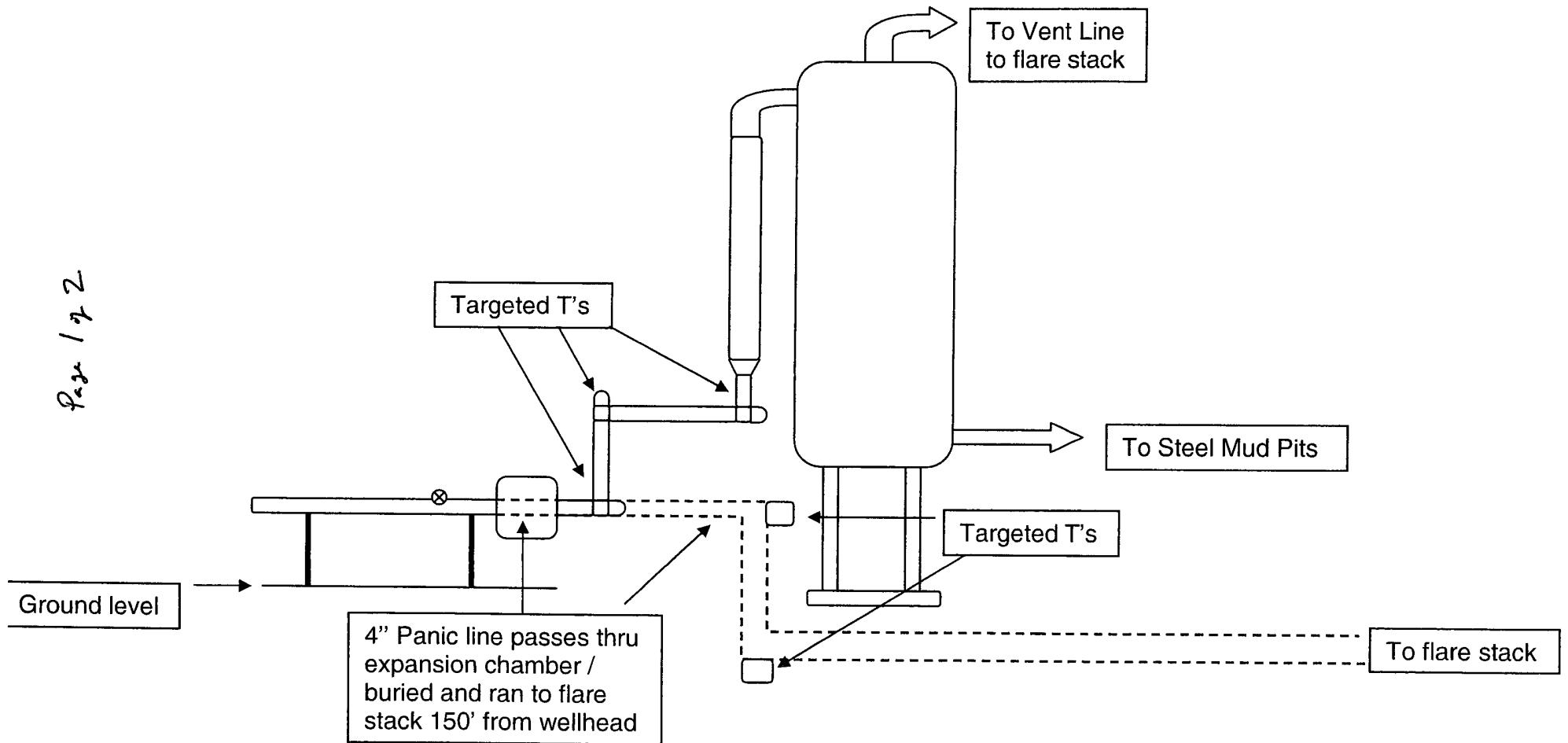


#### 5M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

Although not required for any of the choke manifold systems, buffer tanks are sometimes installed downstream of the choke assemblies for the purpose of manifolding the bleed lines together. When buffer tanks are employed, valves shall be installed upstream to isolate a failure or malfunction without interrupting flow control. Though not shown on 2M, 3M, 10M, OR 15M drawings, it would also be applicable to those situations.

[54 FR 39528, Sept. 27, 1989]

Profile View of Piping from Choke Manifold  
to the Mud Gas Separator



Aerial View of the Piping from the Choke  
Manifold to the Mud Gas Separator

