AFS-10-439

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Form 3160-3
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work. ☑ DRILL ☐ REENTER	5 Lease Serial No. VC2500(SHL) NM122622(BHL)
1b Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone	6 If Indian, Allotee or Tribe Name
2 Name of Operator EOG Resources, Inc. <7377>	7 If Unit or CA Agreement, Name and No
3a Address P.O. Box 2267 Midland, TX 79702	3b Phone No. (include area code) 432-686-3642
4. Location of Well (Report location clearly and in accordance with any State requirements *) At surface 330' FSL & 430' FEL (U/L H) 36-26S-33E At proposed prod zone 330' FNL & 430' FEL (U/L A) 25-26S-33E	8. Lease Name and Well No. <38129> ENDURANCE 36 STATE COM 1H
	9 API Well No 30-025-39744
	10 Field and Pool, or Exploratory ~~Undesignated~~ Wildcat Bone Spring <96036>
	11 Sec, T R M. or Blk and Survey or Area Section 36, T26S-R33E, N.M.P.M.
14 Distance in miles and direction from nearest town or post office* Approx 23 miles SW from Jal, NM	12 County or Parish Lea / 13 State NM
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) 330'	16 No of acres in lease 640 / 17 Spacing Unit dedicated to this well E/2 E/2
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 8,000'	19 Proposed Depth 9,800'TVD;16717'TMD 12,800 VD Pilot Hole / 20 BLM/BIA Bond No. on file NM2308
21 Elevations (Show whether DF, KDB, RT, GL, etc) GL 3350.3'	22 Approximate date work will start* 05/01/2010 / 23 Estimated duration 30 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	Name (Printed/Typed)	Date
Donny G. Glanton	Donny G. Glanton	02/19/2010

Title: Sr. Lease Operations ROW Representative

Approved by (Signature)	Name (Printed/Typed)	Date
/s/ Don Peterson	/s/ Don Peterson	APR 23 2010
Title: FIELD MANAGER	Office: CARLSBAD FIELD OFFICE	

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

APPROVAL FOR TWO YEARS

Title 18 USC Section 1001 and Title 43 USC 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)

KZ

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

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

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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	Pool Code	Pool Name
30-025-39744	96036	~~Undesignated~~ Wildcat; Bone Spring

Property Code	Property Name	Well Number
38129	ENDURANCE "36" STATE COM	1H

OGRID No.	Operator Name	Elevation
7377	EOG RESOURCES, INC.	3350.3'

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	36	26 SOUTH	33 EAST, N.M.P.M.		330	SOUTH	430	EAST	LEA

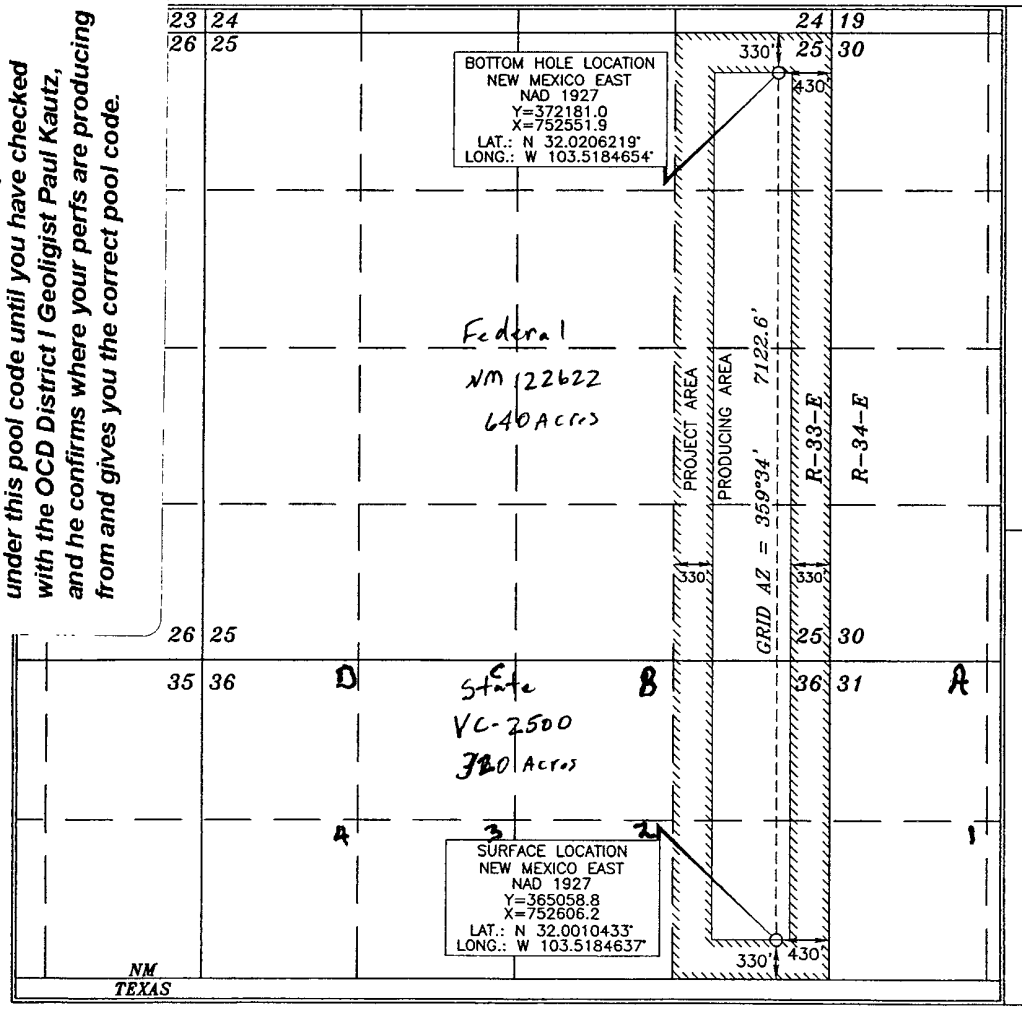
Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	25	26 SOUTH	33 EAST, N.M.P.M.		330	NORTH	430	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
240			

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.

OPERATOR: Please do not report production under this pool code until you have checked with the OCD District I Geoligist Paul Kautz, and he confirms where your perfs are producing from and gives you the correct pool code.



OPERATOR CERTIFICATION

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

Signature — Date: 2/19/2010

Donny G. Glanton
Printed Name

SURVEYOR CERTIFICATION

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

FEBRUARY 2, 2010
Date of Survey

Signature and Seal of Professional Surveyor:

GARY L. JONES — NEW MEXICO — 15079 — REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate Number 15079

WO# 100202WL-a (KA)

EOG RESOURCES, INC.
ENDURANCE 36 STATE COM NO. 1H

1. GEOLOGIC NAME OF SURFACE FORMATION:
   Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	875'
Base of Salt	5,230'
Delaware	5,270'
Base Brushy Canyon	9,170'
Bone Spring Lime	9,470'
1st Bone Spring Sand	10,420'
2nd Bone Spring Sand	10,920'
3rd Bone Spring Sand	11,570'
Pilot hole TD	12,800'

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

Upper Permian Sands	0- 400'	Fresh Water
Delaware	5,270'	Oil
Base Brushy Canyon	9,170'	Oil
Bone Spring Lime	9,470'	Oil
1st Bone Spring Sand	10,420'	Oil
2nd Bone Spring Sand	10,920'	Oil
3rd Bone Spring Sand	11,570'	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 ~~650~~ 1100' and circulating cement back to surface.

4. CASING PROGRAM - NEW

See COA

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
17.5"	0 – ~~900~~ 1100'	13.375"	54.5#	J55	LTC	1.10	1.25	1.60
12.25"	0-4000'	9.625"	40#	J55	LTC	1.10	1.25	1.60
12.25"	4000'-5300'	9.625"	40#	KCK55	LTC	1.10	1.25	1.60
8.75"	0'-16,717'	5.5"	17#	HCP110	LTC	1.10	1.25	1.60

Cementing Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft^3/ft	Slurry Description
~~900~~'	375	13.5	1.74	Lead: Class 'C' + 4.00% Bentonite + 2.00% CaCl2
	200	14.8	1.35	Tail: Class 'C' + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate + 2.0% KCl (1.06 lb/sk)
5,300'	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
12,800	125	18.0	0.90	250' Btm Hole Plug - Class 'H' + 1.20% CD-31 + 0.20% R-3 + 5.00% Salt (1.252 lb/sk)
9,322'	300	18.0	0.90	600' Sidetrack Plug - Class 'H' + 1.20% CD-31 + 0.20% R-3 + 5.00% Salt (1.252 lb/sk)
16,717'	975	11.8	2.37	Lead: 50:50:10 Class 'H' + 0.80% FL-52A + 0.30% ASA-301 + 0.30% SMS + 2.00% Salt (2.259 lb/sk) + 0.20% R-21 + 0.25 lb/sk Cello Flake
	1250	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)

See COA

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.

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:

See COA

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 900'	Fresh - Gel	8.6-8.8	28-34	N/c
900' – 5,300'	Brine	10.0-10.2	28-34	N/c
5,300' – 8,500'	Fresh Water	8.4-8.6	28-34	N/c
8,500'– 12,800' Pilot hole	Cut Brine - XCD	9.0-9.5	40-42	8-10
9,322'– 16,717' Lateral	Cut Brine - XCD	9.0-9.5	40-42	8-10

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 650' to TD.

(D) H_2S monitoring and detection equipment will be utilized from 650' 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

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.

Permit Information:

Well Name: Endurance 36 State Com No. 1H

Location:

SL: 330' FSL & 430' FEL, Section 36, T-26-S, R-33-E, Lea Co., N.M.
BHL: 330' FNL & 430' FEL, Section 36, T-26-S, R-33-E, Lea Co., N.M.

Casing Program:

Casing	Setting Depth	Hole Size	Casing Size	Casing Weight	Casing Grade	Desired TOC
Surface	900'	17-1/2"	13-3/8"	54.5#	J-55	Surface
Intermediate	4,000' 5,300'	12-1/4" 12-1/4"	9-5/8" 9-5/8"	40# 40#	J-55 HCK-55	Surface
Production	16,717'	8-3/4"	5-1/2"	17#	HCP-110	4800'

Cement Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft^3/ft	Slurry Description
900'	375	13.5	1.74	Lead: Class 'C' + 4.00% Bentonite + 2.00% CaCl2
	200	14.8	1.35	Tail: Class 'C' + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate + 2.0% KCl (1.06 lb/sk)
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Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 900'	Fresh - Gel	8.6-8.8	28-34	N/c
900' – 5,300'	Brine	10.0-10.2	28-34	N/c
5,300' – 8,500'	Fresh Water	8.4-8.6	28-34	N/c
8,500'– 12,800' Pilot hole	Cut Brine - XCD	9.0-9.5	40-42	8-10
9,325'– 16,717' Lateral	Cut Brine - XCD	9.0-9.5	40-42	5-10

Endurance 36 State Com #1H
Red Hills
Lea County, New Mexico

330' FSL
430' FEL
Section 36
T-26-S, R-33-E

Proposed Wellbore

API: 30-025-

KB: 3,380.3'
GL: 3,350.3'

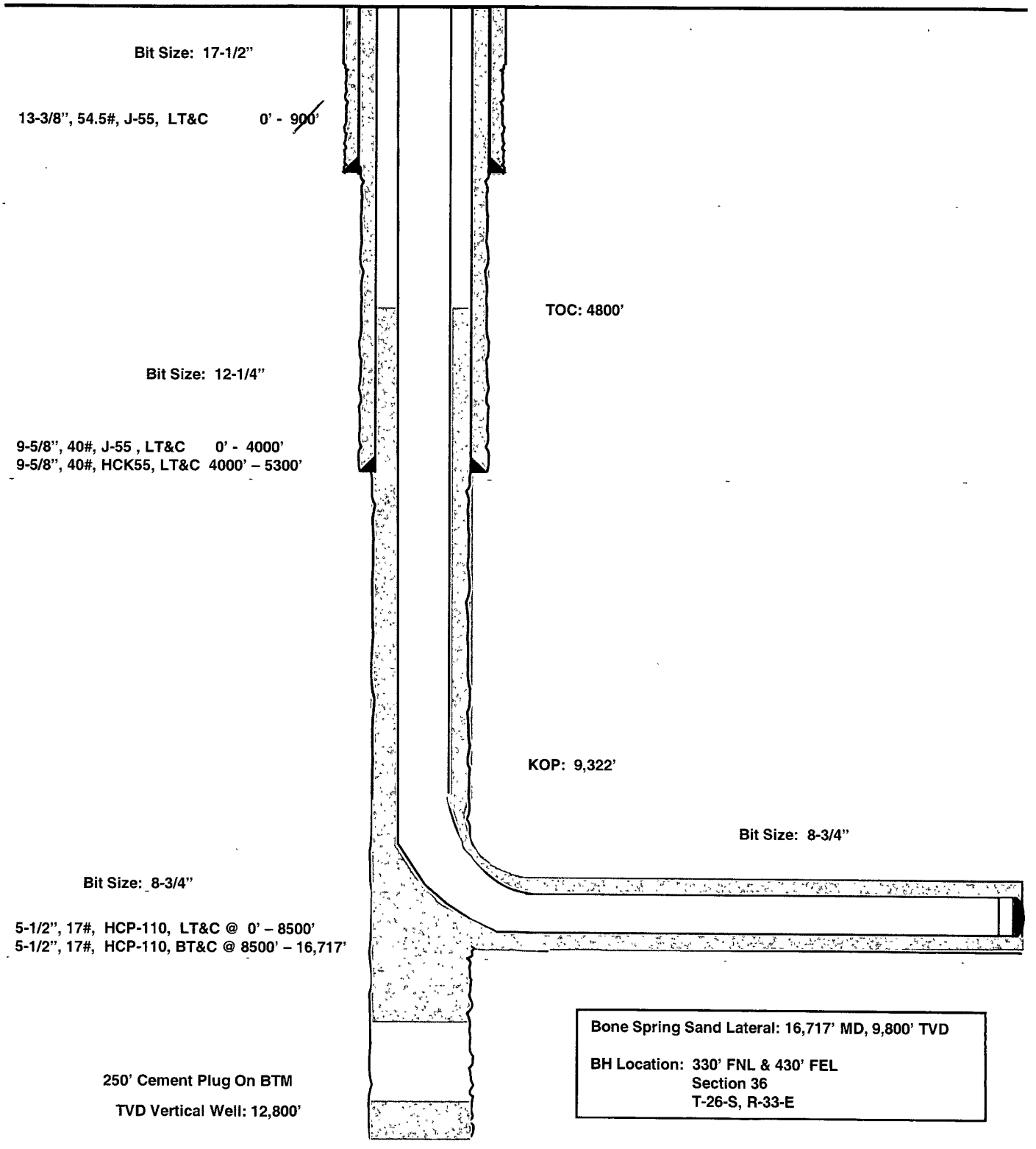
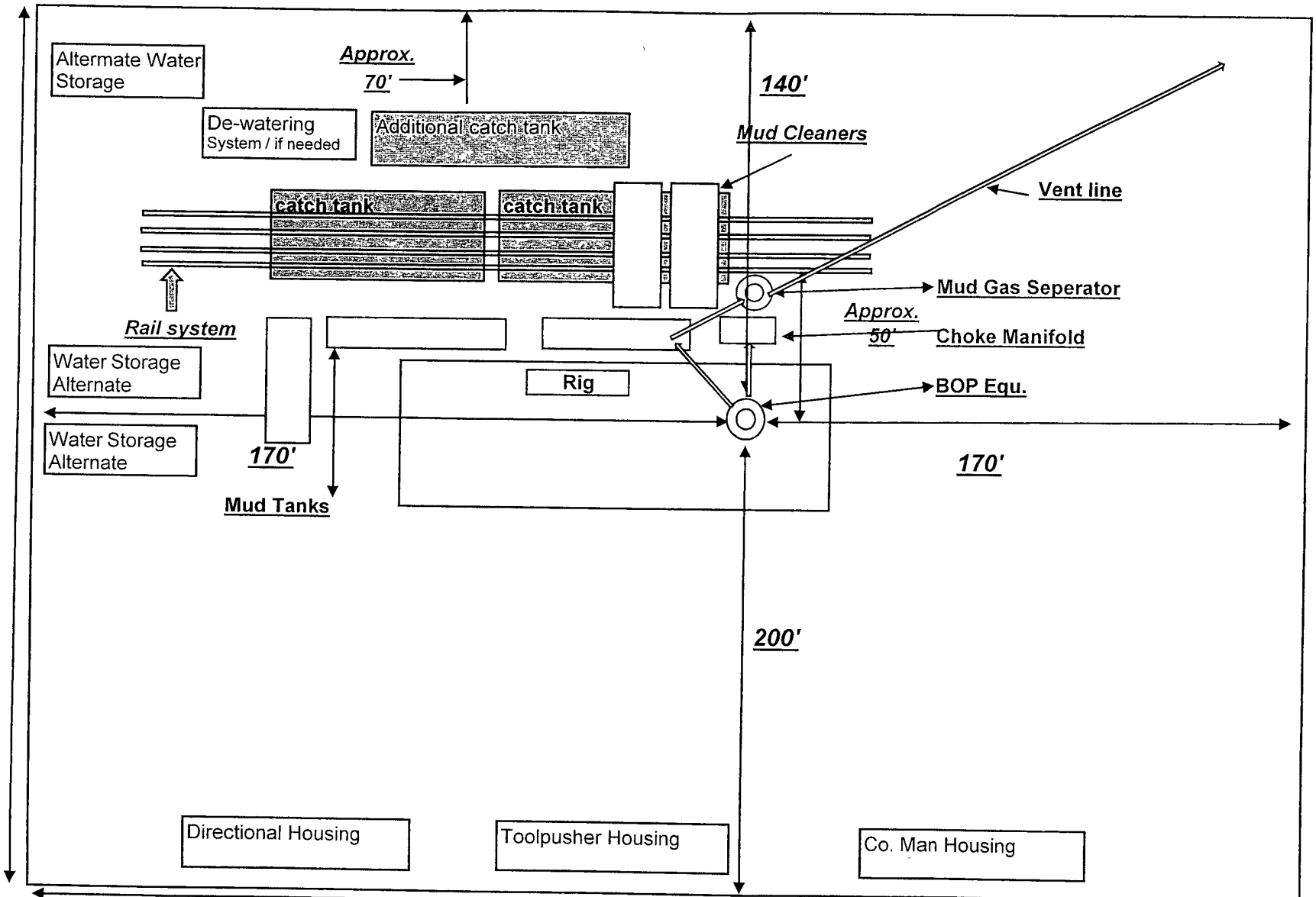


Exhibit 4

Endurance 36 State Com 1H



EOG Resources / Closed Loop Location Design Plan

6/30/2008

Not to scale

Topsoil

Production Facility Layout

"NOT TO SCALE"

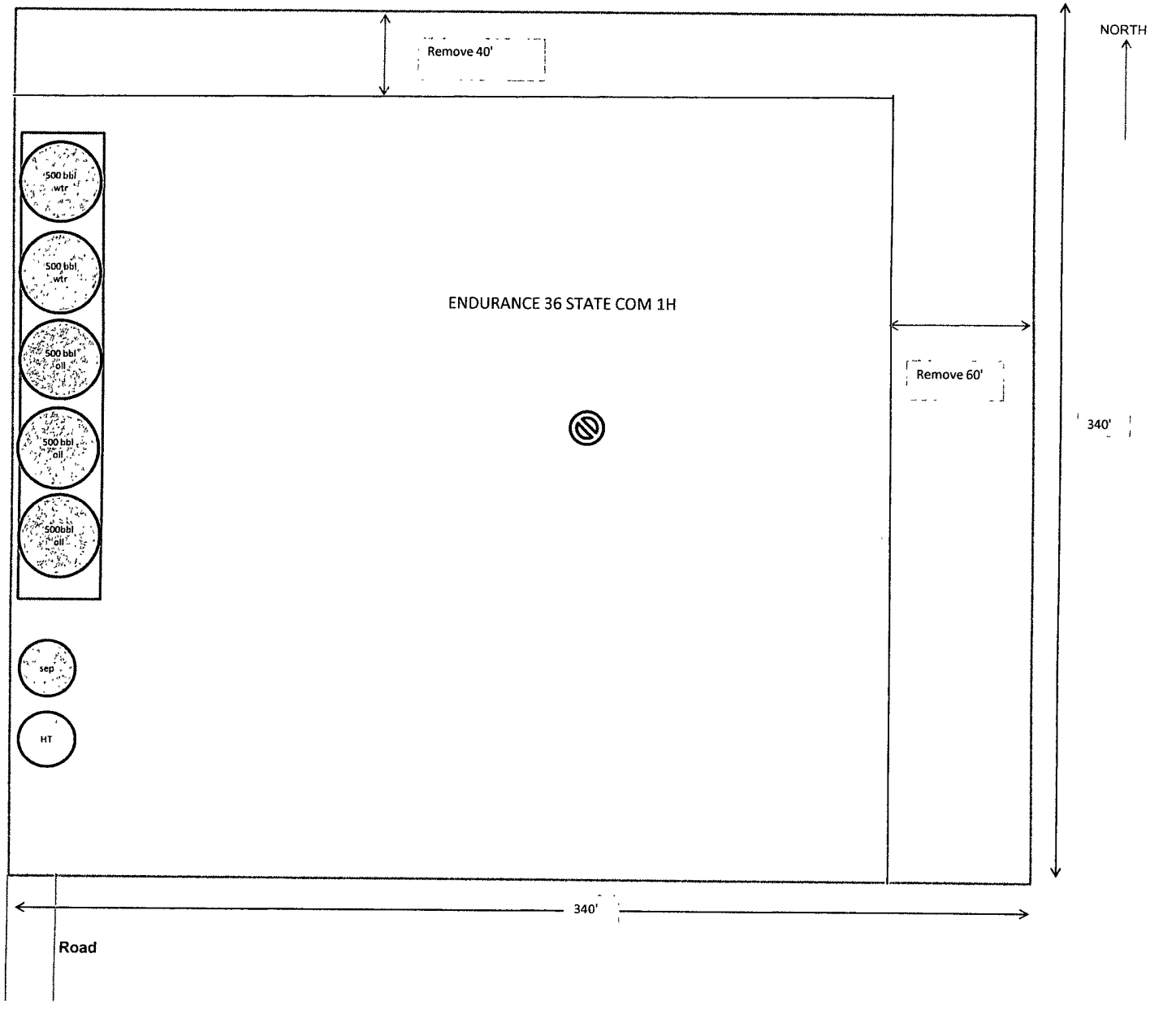


EXHIBIT 1

EOG Resources, Inc.

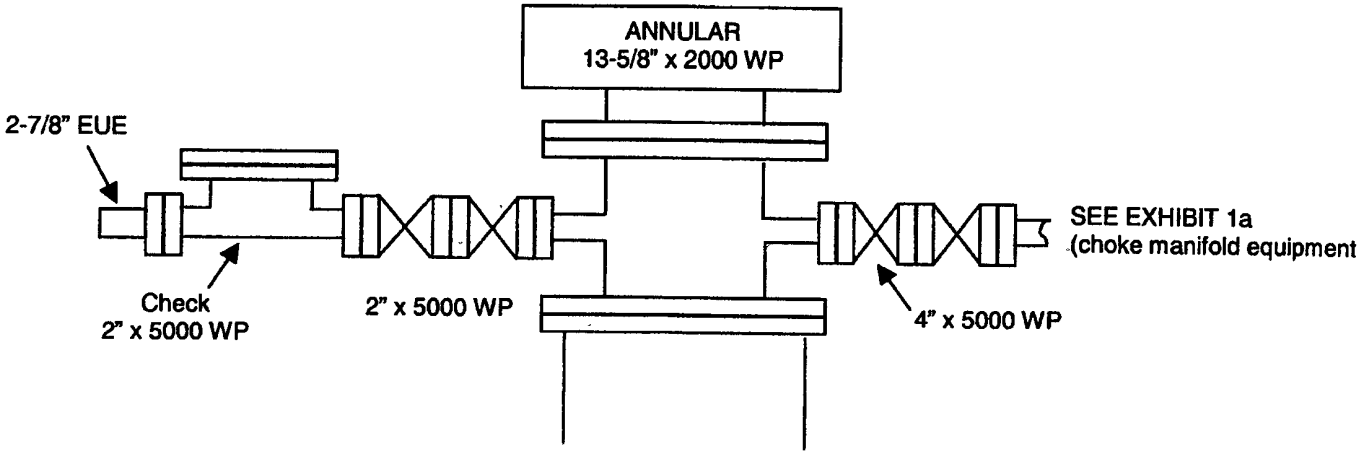
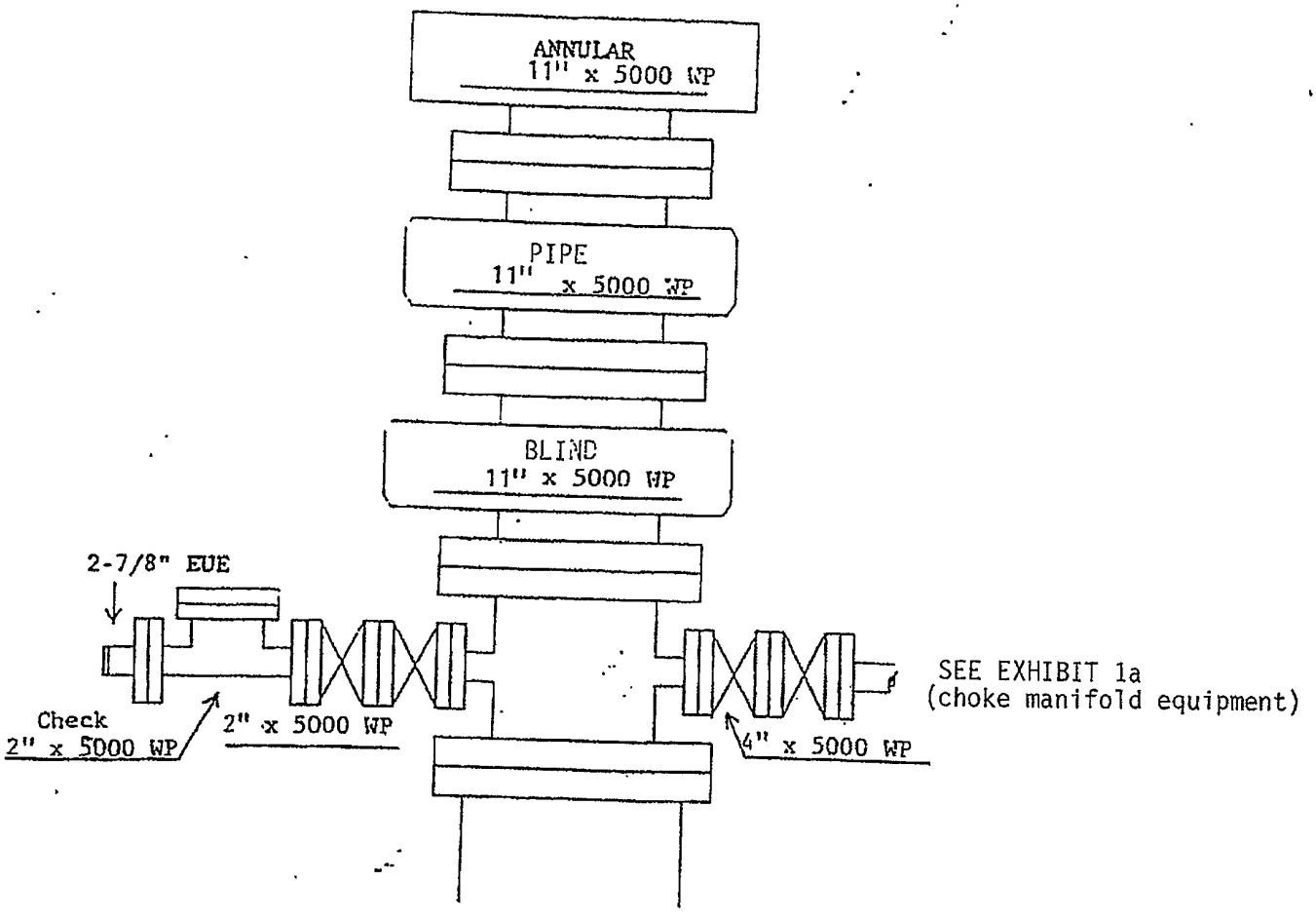


EXHIBIT 1

EOG Resources, Inc.

Endurance 36 State Com 1H

See COA



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.

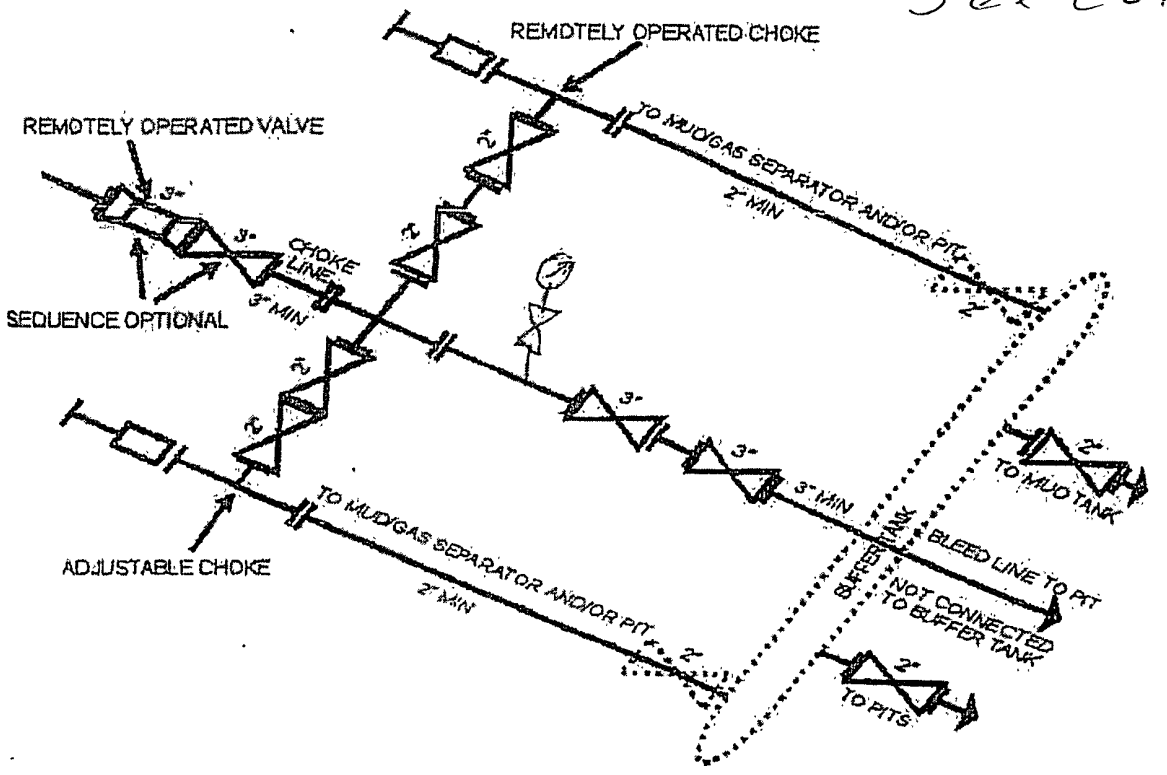
9. Blow out preventer control to be located as close to driller's position as feasible.

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.

WELL NAME: Endurance 36 State Com 1H

Exhibit 1a

See COA

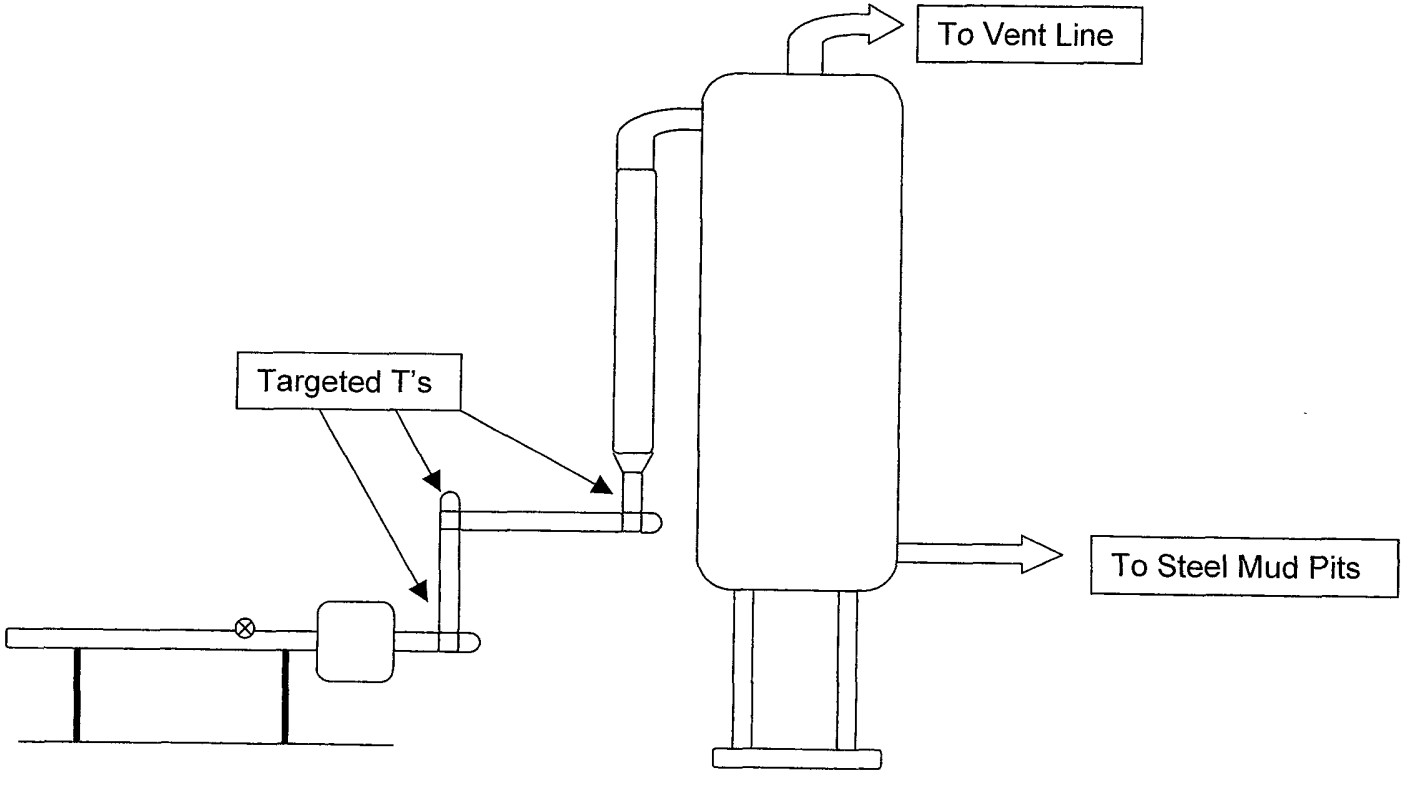


5M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

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.

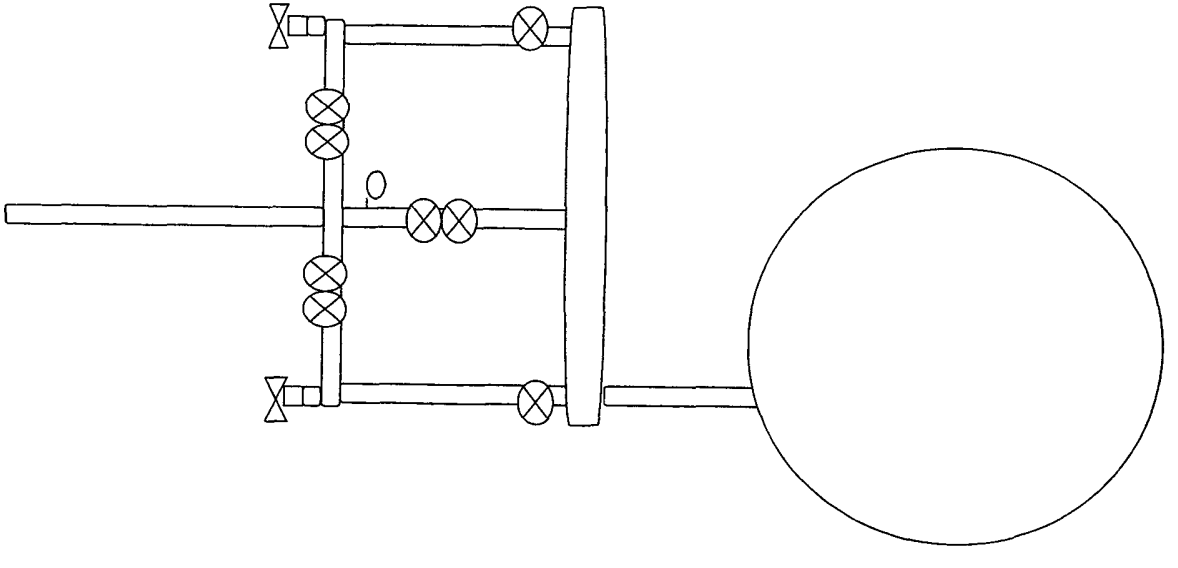
[54 FR 39528, Sept. 27, 1989]

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

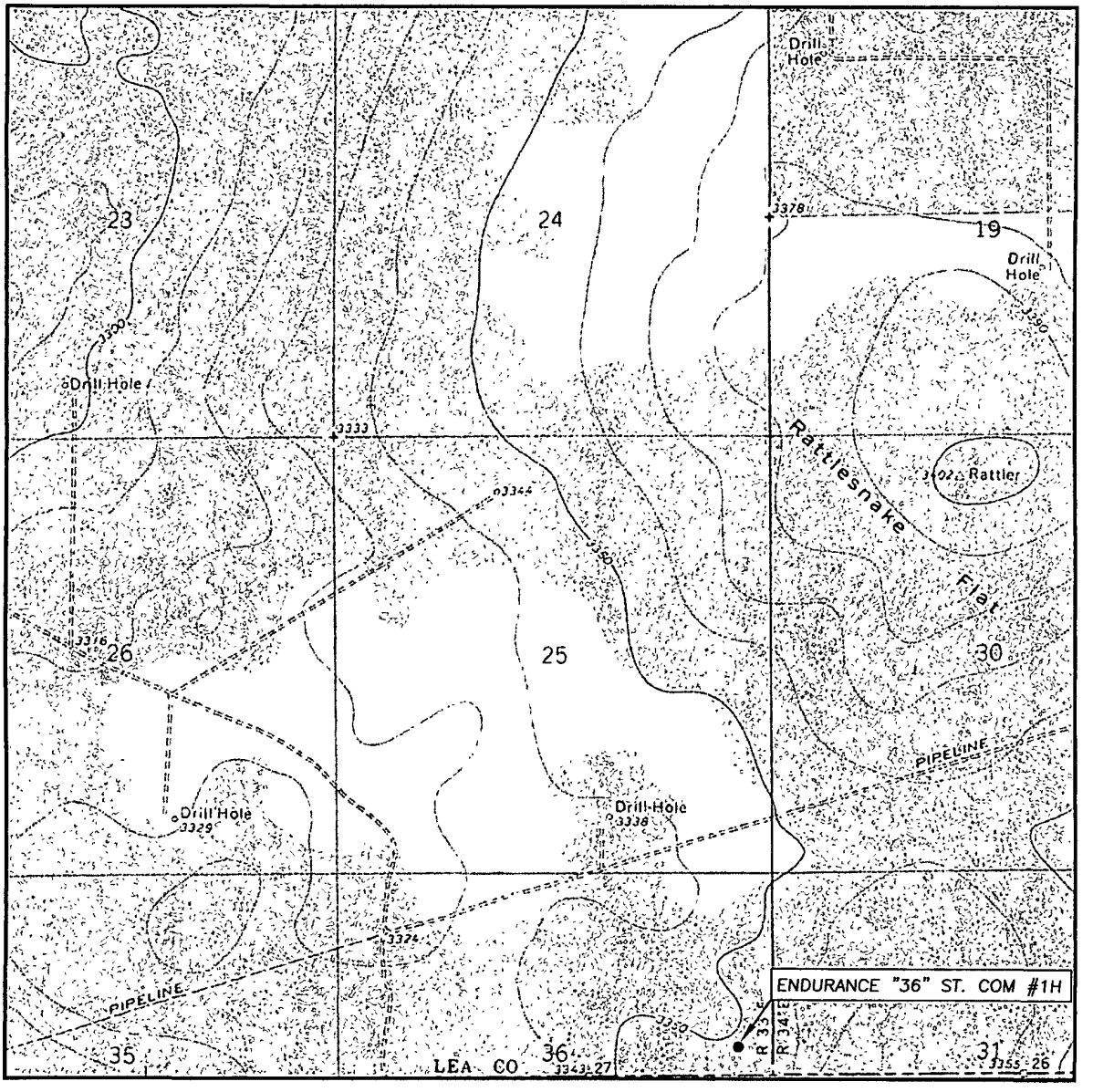


Page 1 of 2

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



LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'

SEC. 36 TWP. 26-S RGE. 33-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 330' FSL & 430' FEL

ELEVATION 3350.3'

OPERATOR EOG RESOURCES, INC.

LEASE ENDURANCE "36" ST. COM #1H

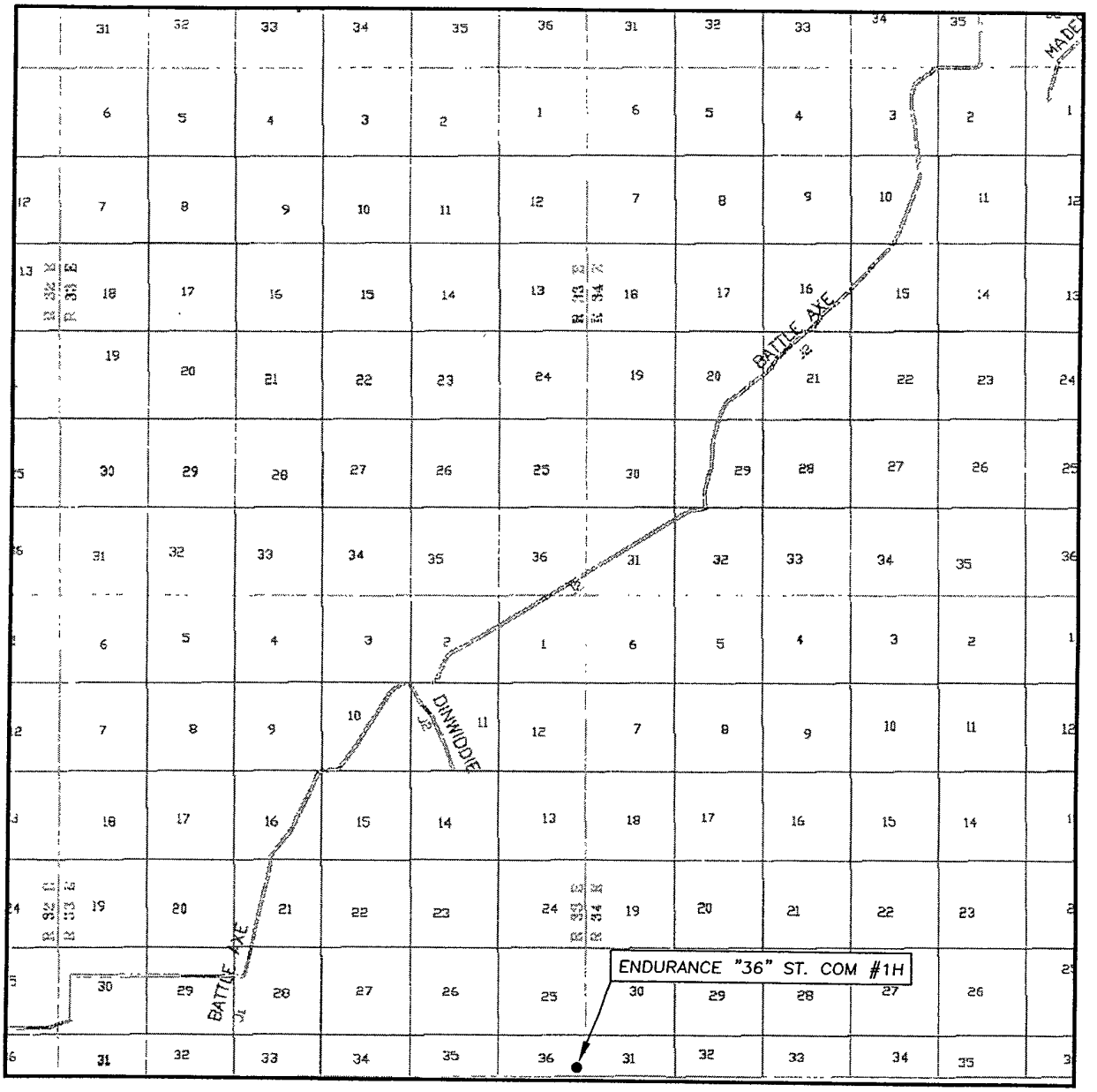
U.S.G.S. TOPOGRAPHIC MAP
PADUCA BREAKS EAST, N.M.

Asel Surveying

P.O. BOX 393 - 310 W. TAYLOR
HOBBS, NEW MEXICO - 575-393-9146

Exhibit 2

VICINITY MAP



SEC. 36 TWP. 26-S RGE. 33-E
SURVEY N.M.P.M.
COUNTY LEA
DESCRIPTION 330' FSL & 430' FEL
ELEVATION 3350.3'
OPERATOR EOG RESOURCES, INC.
LEASE ENDURANCE "36" ST. COM #1H

SCALE: 1" = 2 MILES

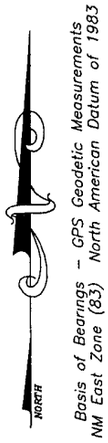
Asel Surveying

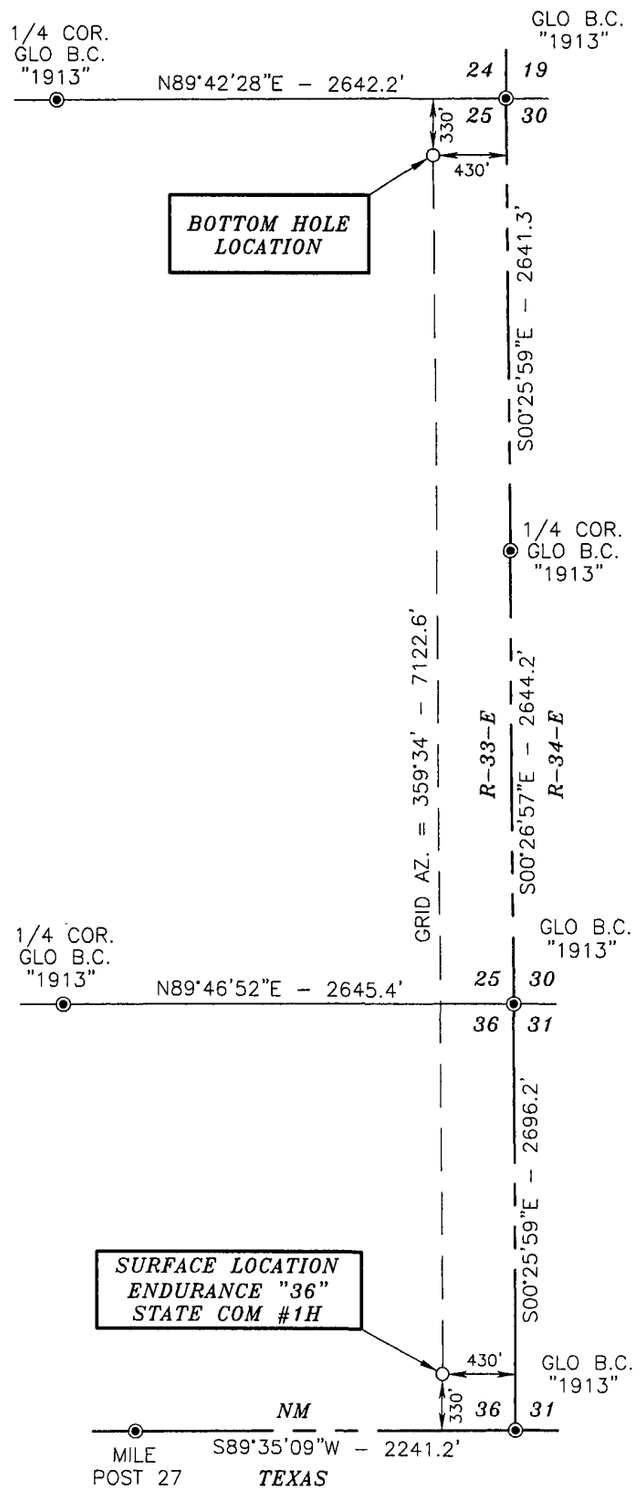
P.O. BOX 393 - 310 W. TAYLOR
HOBBS, NEW MEXICO - 575-393-9146

DIRECTIONS BEGINNING IN JAL AT THE INTERSECTION OF N.M. STATE HWY. #18 AND N.M. STATE HWY. #128, GO WEST ON N.M. STATE HWY. #128 FOR 14.1 MILES TO COUNTY ROAD #2 (BATTLE AXE ROAD), TURN LEFT AND GO SOUTH/SOUTHWEST FOR 13.3 MILES, TURN LEFT ON PIPELINE ROAD AND GO EAST FOR 0.8 MILES, TURN RIGHT AND GO SOUTH ON PROPOSED NEW ROAD FOR 4.5 MILES, TURN LEFT AND GO EAST FOR 0.9 MILES, TURN LEFT AND GO NORTH FOR 145 FEET TO LOCATION.

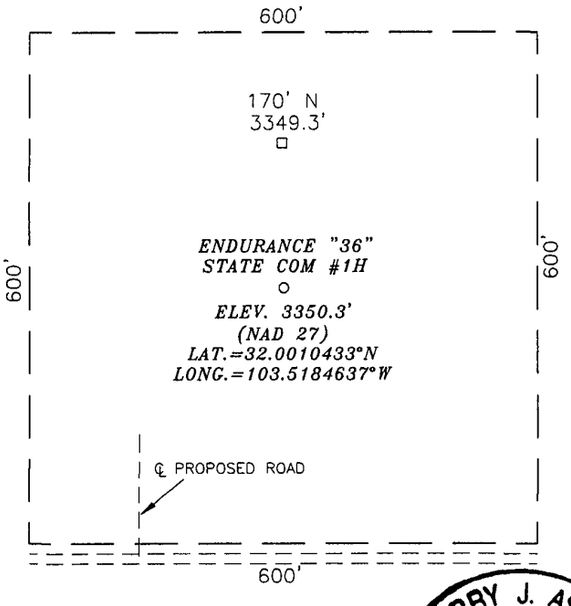
SECTION 36, TOWNSHIP 26 SOUTH, RANGE 33 EAST, N.M.P.M.,
LEA COUNTY NEW MEXICO

Exhibit 2a

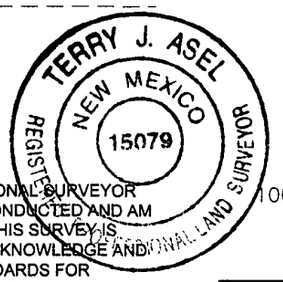




DIRECTIONS:
BEGINNING IN JAL AT THE INTERSECTION OF N.M. STATE HWY. #18 AND N.M. STATE HWY. #128, GO WEST ON N.M. STATE HWY. #128 FOR 14.1 MILES TO COUNTY ROAD #2 (BATTLE AXE ROAD), TURN LEFT AND GO SOUTH/SOUTHWEST FOR 13.3 MILES, TURN LEFT ON PIPELINE ROAD AND GO EAST FOR 0.8 MILES, TURN RIGHT AND GO SOUTH ON PROPOSED NEW ROAD FOR 4.5 MILES, TURN LEFT AND GO EAST FOR 0.9 MILES, TURN LEFT AND GO NORTH FOR 145 FEET TO LOCATION.



SCALE-1"=200'



LEGEND
◉ - DENOTES FOUND MONUMENT AS NOTED

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

SURVEYORS CERTIFICATE

I, TERRY J. ASEL, NEW MEXICO PROFESSIONAL SURVEYOR NO. 15079, DO HEREBY CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND MEETS THE "MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO" AS ADOPTED BY THE NEW MEXICO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND SURVEYORS.

Terry J. Asel 2/10/2010
Terry J. Asel, N.M. R.P.S. No. 15079

Asel Surveying

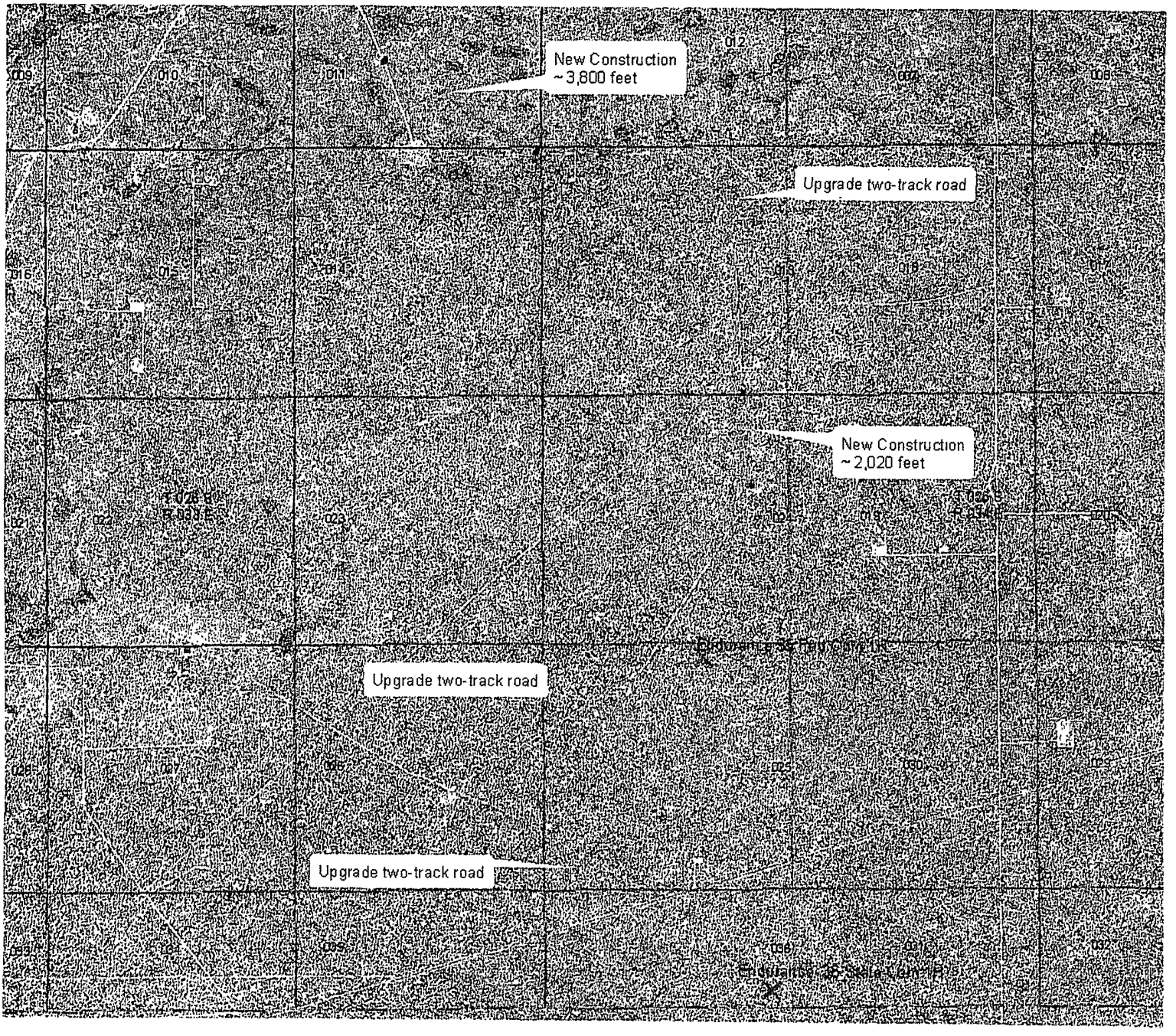
P.O. BOX 393 - 310 W. TAYLOR
HOBBS, NEW MEXICO - 575-393-9146

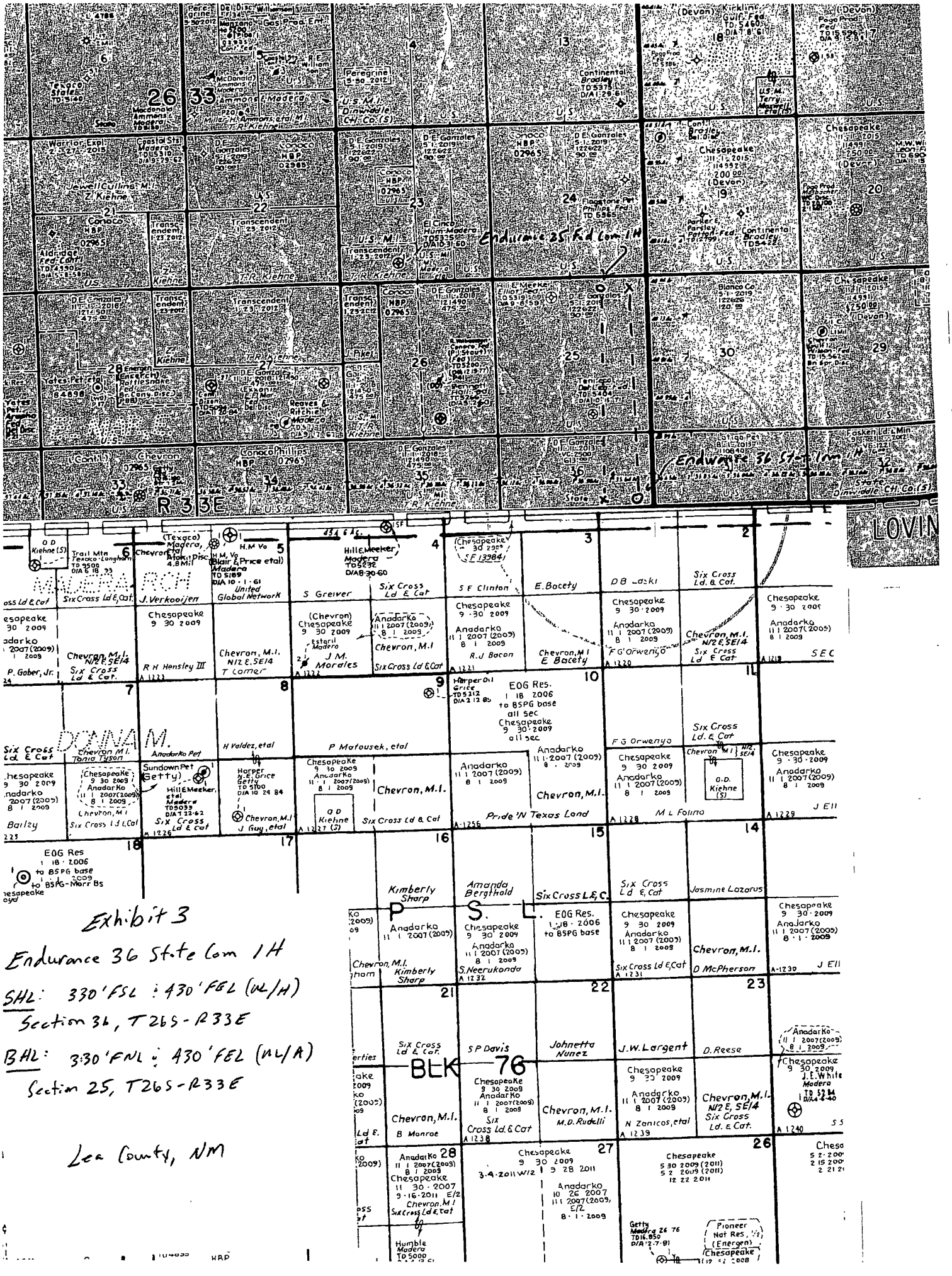
EOG RESOURCES, INC.

ENDURANCE "36" STATE COM #1H LOCATED AT 330' FSL & 430' FEL IN SECTION 36, TOWNSHIP 26 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO

Survey Date: 02/02/10	Sheet 1 of 1 Sheets	
W.O. Number: 100202WL-a	Drawn By: KA	Rev:
Date: 02/04/10	100202WL-a	Scale:1"=1000'

Exhibit 2b


New Construction
~3,800 feet
Upgrade two-track road
New Construction
~2,020 feet
Upgrade two-track road
Upgrade two-track road


Endurance 25 Fed Com 1H
Endurance 36 State Com 1H
R 33 E
BLK 76
Exhibit 3
Endurance 36 State Com 1H
SHL: 330' FSL & 430' FEL (NE/4)
Section 36, T26S-R33E
BHL: 330' FNL & 430' FEL (NE/4)
Section 25, T26S-R33E
Lea County, NM