

N.M. Oil Cons. DIV-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210

Form 3160-3  
(August 1999)

FORM APPROVED  
OMB No. 1004-0136  
Expires November 30, 2000

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED

DEC 21 2005

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM 108958
1b. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee 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		8. Lease Name and Well No. Hudson 15 Fed Com. No1H 35325
3b. Phone No. (include area code) (432) 686-3714		9. API Well No. 30-015-34493
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 760 FSL & 660 FEL (U/L P) At proposed prod. Zone 760' FSL & 660' FWL (U/L M)		10. Field and Pool, or Exploratory Undes, Collins Ranch; Wolfcamp, NE Gas 75010
14. Distance in miles and direction from nearest town or post office* 4 mi SW from Loco Hills		11. Sec., T., R., M., or Blk. And Survey or Area Sed 15 T-17-S; R-24-E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. Unit line, if any) 660	16. No. of Acres in lease 1,360	12. County or Parish Eddy
18. Distance from proposed location* to nearest well, drilling, completed applied for, on this lease, ft. 1120'	17. Spacing Unit dedicated to this well S/2	13. State NM
19. Proposed Depth 5400' TMD 8700"	20. BLM/BIA Bond No. on file NM2308	
21. Elevations (Show whether DF, KDB, RT, GL, etc) Gr 3682	22. Approximate date work will start* 11/15/2005	23. Estimated duration 30 days

24. Attachments

The following completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall 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 shall be filed with the appropriate Forest Service Office) | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>Mike Francis</i>	Name (Printed/Typed) Mike Francis	Date 10/10/2005
Title Agent		
Approved by (Signature) <i>/s/ Joe G. Lara</i>	Name (Printed/Typed) <i>/s/ Joe G. Lara</i>	Date DEC 20 2005
Title ACTING FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify 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 1 YEAR

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 reverse)

Roswell Controlled Water Basin

WITNESS 7" CASING CEMENT  
SOB

SD from Santa Fe required to produce from 2 wells in same 320

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

**DISTRICT I**

1625 N. French Dr., Hobbs, NM 88240

State of New Mexico

Form C-102

**DISTRICT II**

1301 W. Grand Avenue, Artesia, NM 88210

Energy, Minerals, and Natural Resources Department

Revised August 15, 2000

Submit to Appropriate District Office

State Lease - 4 copies

Fee Lease - 3 copies

**DISTRICT III**

1000 Rio Brazos Rd., Aztec, NM 87410

1220 South St. Francis Dr.

Santa Fe, New Mexico 87505

**DISTRICT IV**

1220 S. St. Francis Dr., Santa Fe, NM 87505

☐ AMENDED REPORT**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number	<sup>2</sup> Pool Code 75010	<sup>3</sup> Pool Name Collins Ranch Wolfcamp, GAS
<sup>4</sup> Property Code	<sup>5</sup> Property Name HUDSON "15"	<sup>6</sup> Well Number 1H
<sup>7</sup> OGRID No. 7377	<sup>8</sup> Operator Name EOG RESOURCES, INC.	<sup>9</sup> Elevation 3746'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	15	17 SOUTH	24 EAST, N.M.P.M.		760'	SOUTH	660'	EAST	EDDY

<sup>11</sup> 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
M	15	17 SOUTH	24 EAST, N.M.P.M.		760'	SOUTH	660'	WEST	EDDY

<sup>12</sup> Dedicated Acres 320	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
--------------------------------------	-------------------------------	----------------------------------	-------------------------

NO ALLOWABLE WELL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<sup>16</sup>	<sup>17</sup> <b>OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature Mike Francis Printed Name Agent Title 10/20/2005 Date
	<sup>18</sup> <b>SURVEYOR CERTIFICATION</b> 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. SEPTEMBER 19, 2005 Date of Survey  Signature and Seal of Professional Land Surveyor V. LYNN BEZNER NO. 7920 PROFESSIONAL LAND SURVEYOR  Certificate Number V. L. BEZNER R.P.S. #7920 JOB # 106470 / 101 SE / E.U.O.

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

State of New Mexico  
Energy Minerals and Natural Resources

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

Form C-144  
March 12, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe office

**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒

Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator: EOG Resources, Inc. Telephone: 432 686-3714 e-mail address: mike\_francis@eeqresources.com  
Address: P.O. Box 2267 Midland Tx. 79702  
Facility or well name: Hudson 15 Fed Com API #: \_\_\_\_\_ U/L or Qtr/Qtr P Sec 15 T 17 R 24  
County: Eddy Latitude 32.8363157 Longitude 104.5696377 NAD: 1927 ☐ 1983 ☐ Surface Owner Federal ☐ State ☐ Private ☐ Indian ☐

Pit	Below-grade tank
Type: Drilling <input checked="" type="checkbox"/> Production <input type="checkbox"/> Disposal <input type="checkbox"/> Workover <input type="checkbox"/> Emergency <input type="checkbox"/> Lined <input type="checkbox"/> Unlined <input type="checkbox"/> Liner type: Synthetic <input checked="" type="checkbox"/> Thickness <u>12</u> mil Clay <input type="checkbox"/> Volume <u>7000</u> bbl	Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes <input type="checkbox"/> If not, explain why not. _____
Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)	Less than 50 feet (20 points) 50 feet or more, but less than 100 feet (10 points) <u>100 feet or more</u> (0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes (20 points) <u>No</u> (0 points)
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet (20 points) 200 feet or more, but less than 1000 feet (10 points) <u>1000 feet or more</u> (0 points)
Ranking Score (Total Points)	

If this is a pit closure: (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location:

onsite ☐ offsite ☐ If offsite, name of facility \_\_\_\_\_ (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒ a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

Date: 10/16/05

Printed Name/Title Mike Francis

Signature Mike Francis

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval: OCT 14 2005

Date: \_\_\_\_\_ Field Supervisor

Printed Name/Title \_\_\_\_\_

Signature [Signature]

## DRILLING PROGRAM

EOG RESOURCES, INC.  
Hudson 15 Fed Com.No.1H  
Eddy Co. NM

### 1. GEOLOGIC NAME OF SURFACE FORMATION:

Quaternary Alluvium 0-200

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

San Andres	665'
Glorieta	2,035'
Tubb	3,326'
Abo Shale	4,015'
Wolfcamp Pay	5,065'

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

Quaternary Alluvium	0- 200'	Fresh Water
San Andres	665'	Oil
Glorieta	2,035'	Oil/Gas
Tubb	3,326'	Oil/Gas
Abo/Wolfcamp Pay	5,065'	Gas

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 7" casing at 900' and circulating cement back to surface.

### 4. CASING PROGRAM

<u>Hole Size</u>	<u>Interval</u>	<u>OD Casing</u>	<u>Weight</u>	<u>Grade</u>	<u>Jt. Conn. Type</u>
9-7/8"	0-900'	7"	26#	L-80	LT&C
6-1/8"	0-8700'	4-1/2"	11.6/13.5#	N-80	LT&C

#### Cementing Program:

7" Surface Casing:

Cement to surface with 325 sx Prem Plus, 3% Econolite 1/4 pps Flocele, 2% Calcium Chloride, 175 sx Prem Plus, 2% Calcium Chloride, 0.25#/sx Flocele

4-1/2" Production

Cement w/450sx Interfill C, + .25#/sx Flocele; 400 sx Premium Cement, 100% Acid soluble Additive, .6% Halad-344 + .8% Econolite + .2% HR-55.

### 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

## DRILLING PROGRAM

EOG RESOURCES, INC.  
Hudson 15 Fed Com.No.1H  
Eddy Co. NM

WP). Units will be hydraulically operated and the ram-type will be equipped with blind rams on top and drill pipe rams on bottom. All BOP's and accessory equipment will be tested in accordance with Onshore Oil & Gas order No. 2. for a 3M system.

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.

### 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:

<u>Depth</u>	<u>Type</u>	Wt	Viscosit	Waterloss
		(PPG)	(sec)	(cc)
0-900'	Fresh Water (Spud Mud)	8.6-8.8	28-34	N/c
900'-4400'	Cut Brine	8.8-9.2	28-34	N/c
4,400'-5,400'	Cut Brine (Pilot Hole)	8.8-9.2	28-34	10-15
4,400'-8,700'	Polymer (Lateral)	9.0-9.4	40-45	10-25

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 complete with H2S detector will be continuously monitoring drilling penetration rate and hydrocarbon shows from 5000' to TD.

### 8. LOGGING, TESTING AND CORING PROGRAM:

Electric logging will consist of GR-Dual Laterlog-MSFL and GR-Compensated Density-Neutron from TD to intermediate casing with a GR- Compensated Neutron ran from Intermediate casing to surface..

Possible sidewall cores based on shows.

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

The estimated bottom hole temperature (BHT) at TD is 125 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 2000 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered,

**DRILLING PROGRAM**

**EOG RESOURCES, INC.  
Hudson 15 Fed Com.No.1H  
Eddy Co. NM**

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 one month. 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.

## **DRILLING PROGRAM**

**EOG RESOURCES, INC.**  
**Hudson 15 Fed Com.No.1H**  
**Eddy Co. NM**

### **SURFACE USE AND OPERATIONS PLAN**

#### **1. EXISTING ROADS:**

Access to location will be made as shown on Exhibit #2

Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.

#### **2. PROPOSED ACCESS ROAD:**

1606' of new road is required See Exhibit 2a

No turnouts necessary.

No culverts, cattleguards, gates, low-water crossings are necessary.

Surfacing material consists of native caliche to be obtained from the nearest BLM-approved caliche pit. Any additional materials required will be purchased from the dirt contractor.

#### **3. LOCATION OF EXISTING WELLS:**

Exhibit #3 shows all existing wells within a one-mile radius of this well.

#### **4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:**

There are no existing production facilities. If production is encountered, a temporary facility will be established on the drill pad, and if warranted, a production facility would be built at a later date in the immediate area of the drill pad location. If the well is productive, the flowline will be built on lease to the nearest pipeline.

#### **5. LOCATION AND TYPE OF WATER SUPPLY:**

Fresh water and brine water for drilling will come from commercial sources and transported to the well site over the roads as shown on Exhibit #2. and by temporary water supply lines

#### **6. PLANS FOR RESTORATION OF THE SURFACE:**

## **DRILLING PROGRAM**

**EOG RESOURCES, INC.**  
**Hudson 15 Fed Com.No.1H**  
**Eddy Co. NM**

After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. Location will be cleaned of all trash and junk to leave the well in an aesthetically pleasing condition as possible.

Any unguarded pits containing fluid will be fenced until they are dry and back filled.

After abandonment of the well, surface restoration will be in accordance with current federal laws and regulations. Location will be cleaned, and the well pad removed to promote vegetation and disposal of human waste will be complied with. Trash, waste paper, garbage and junk will be hauled to an approved disposal site in an enclosed trash trailer.

All trash and debris will be removed from the well site within 30 days after finishing drilling and/or completion operations.

### **ANCILLARY FACILITIES:**

No airstrip, campsite, or other facilities will be built.

### **WELL SITE LAYOUT:**

Exhibit #4 shows the relative location and dimensions of the well pad.

### **OTHER INFORMATION:**

The area around the well site is grassland and the topsoil is and sandy. The vegetation is native scrub grasses .

### **CERTIFICATION:**

I HEREBY CERTIFY that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by EOG Resources, Inc. and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

  
\_\_\_\_\_  
Jason LaGrega  
Division Drilling Engineer

DATE 10/10/2005



**DRILLING PROGRAM**

**EOG RESOURCES, INC.  
Hudson 15 Fed Com.No.1H  
Eddy Co. NM**

**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, 3000 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 3000 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.

EOG Resources, Inc.

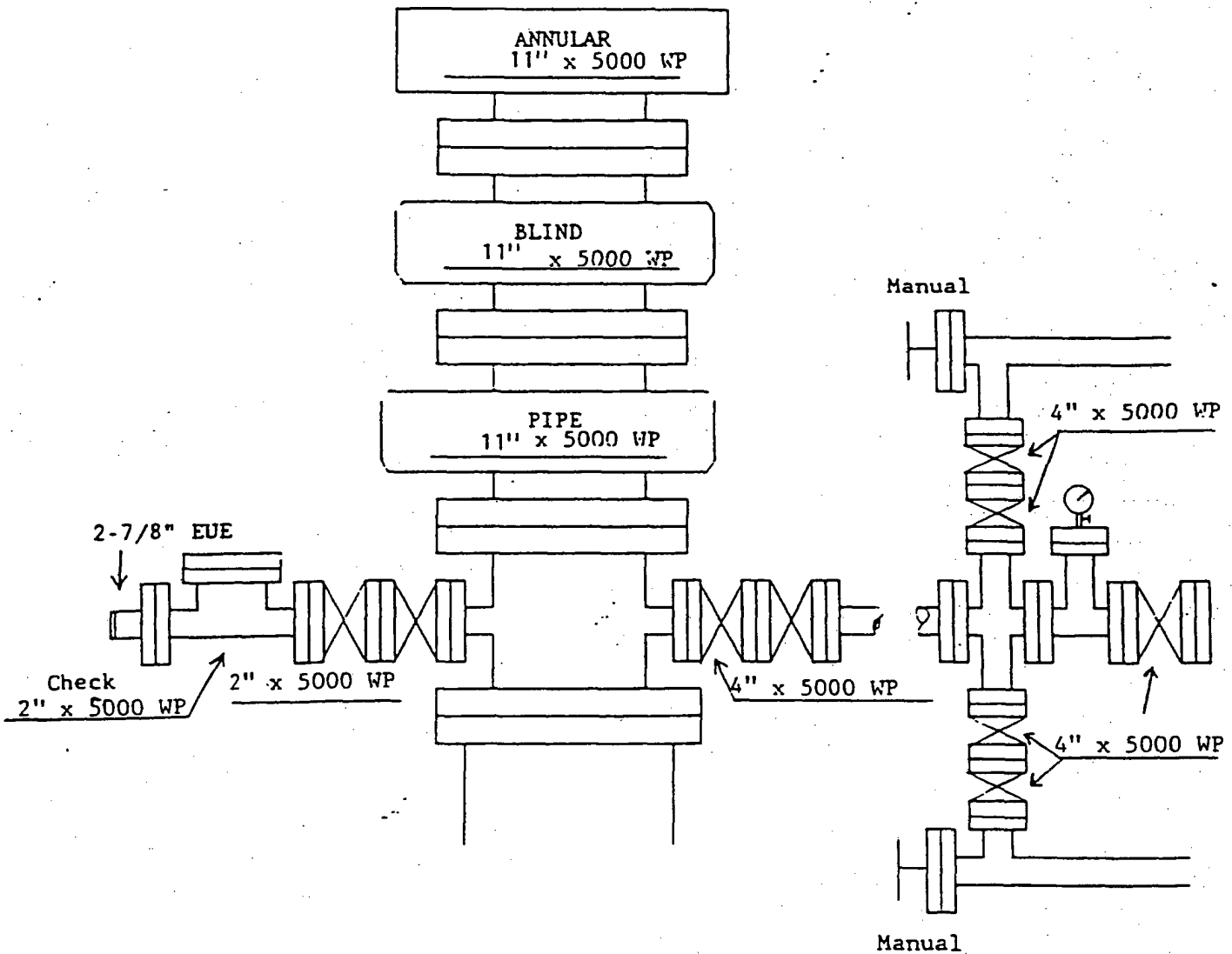


Exhibit 1

SECTION 15, TOWNSHIP 17 SOUTH, RANGE 24 EAST, N.M.P.M.,  
EDDY COUNTY NEW MEXICO

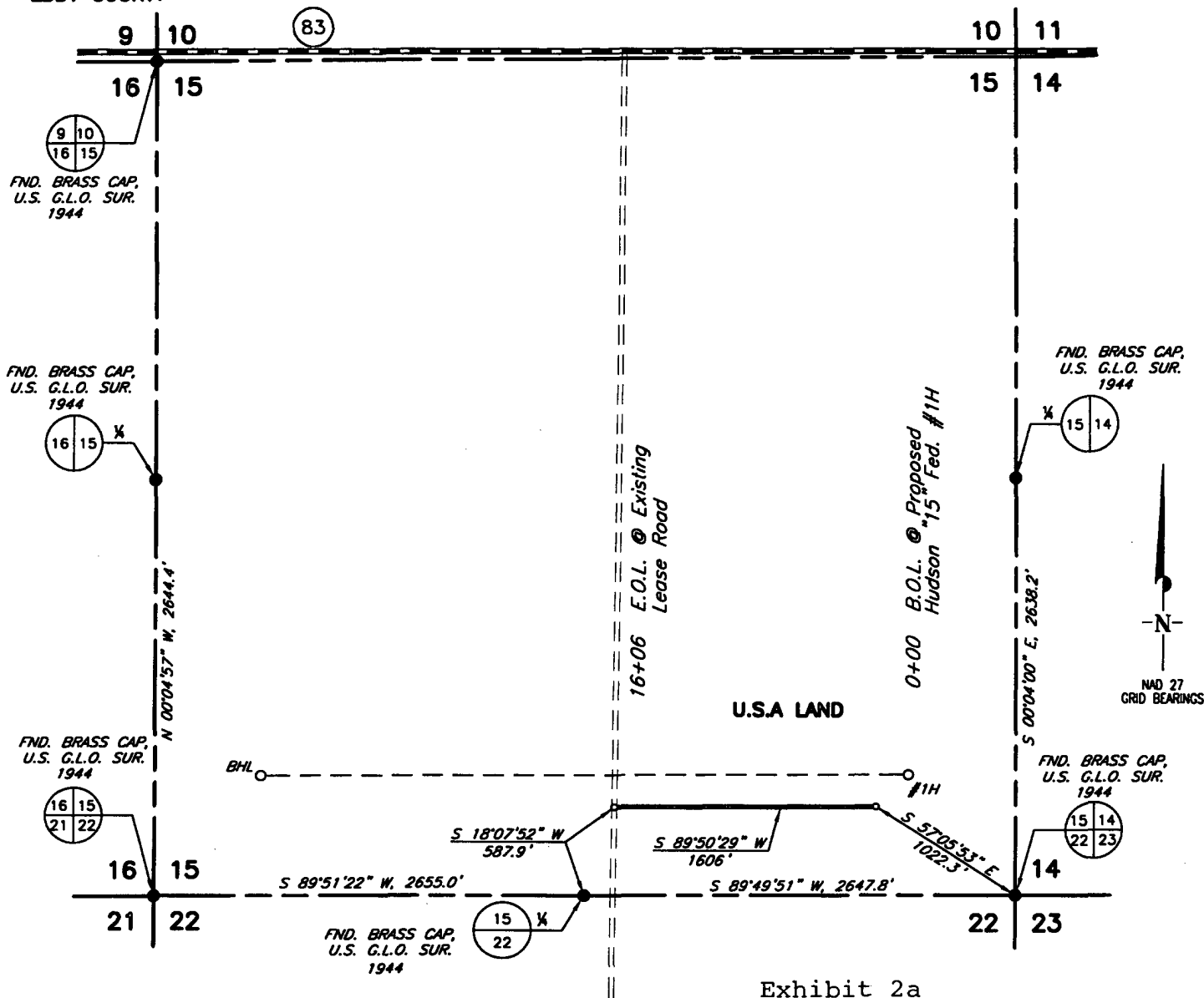


Exhibit 2a

LEGAL DESCRIPTION

A strip of land 30.0 feet wide 1606 feet or 0.304 miles in length and being 15.0 feet Left and 15.0 feet Right of the above centerline survey.

I HEREBY CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

V. Lynn Bezner

**EOG RESOURCES, INC.**

SURVEYING AND MAPPING BY  
**TOPOGRAPHIC LAND SURVEYORS**  
MIDLAND, TEXAS

SCALE: 1" = 1000'

DATE: OCTOBER 10, 2005

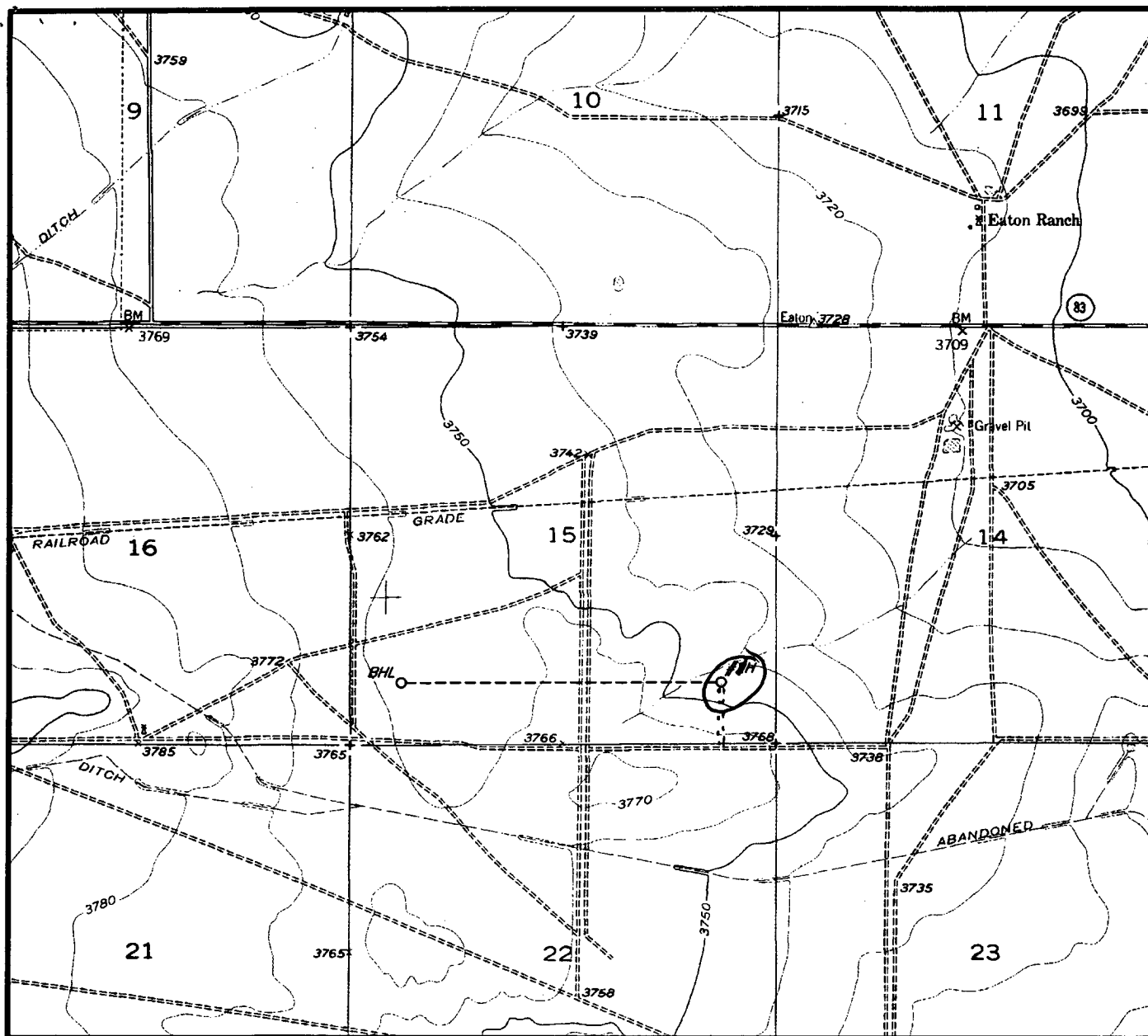
JOB NO.: 106470-RD

QUAD NO.: 101SE

SHEET : 1 OF 1

NO.	REVISION	DATE	BY
SURVEYED BY:	R.M.		
DRAWN BY:	J.C.P.		
APPROVED BY:	V.L.B.		

# LOCATION & ELEVATION VERIFICATION MAP



SCALE : 1" = 2000'      CONTOUR INTERVAL 5 FEET

SECTION 15 TWP 17-S RGE 24-E  
 SURVEY NEW MEXICO PRINCIPAL MERIDIAN  
 COUNTY EDDY STATE NM  
 DESCRIPTION 760' FSL & 660' FEL  
 ELEVATION 3694'

OPERATOR EOG RESOURCES INC.  
 LEASE HUDSON "15" #1H

U.S.G.S. TOPOGRAPHIC MAP  
HOPE SE, NEW MEXICO  
 LAT. LAT.: N 32.8303187  
 LONG. LONG.: W 104.5696377



## TOPOGRAPHIC LAND SURVEYORS

*Surveying & Mapping for the Oil & Gas Industry*

This location has been very carefully staked on the ground according to the best official survey records, maps, and other data available to us.

Review this plat and notify us immediately of any possible discrepancy.

1307 N. HOBART  
 PAMPA, TX. 79065  
 (800) 658-6382

6709 N. CLASSEN BLVD.  
 OKLAHOMA CITY, OK. 73116  
 (800) 654-3219

2903 N. BIG SPRING  
 MIDLAND, TX. 79705  
 (800) 767-1653

## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: EOG RESOURCES, INC.  
Well Name & No. 1H - HUDSON 15 FEDERAL COM  
Location: 760' FSL & 660' FEL - SEC 15 - T17S - R24E - EDDY COUNTY (SHL)  
760' FSL & 660' FWL - SEC 15 - T17S - R24E - EDDY COUNTY (BHL)  
Lease: NM-108958

### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 234-5909 or (505) 361-2822 (After hours) - for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:
  - A. Spudding
  - B. Cementing casing: 7 inch 4-1/2 inch
  - C. BOP tests
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
3. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing ( size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.
4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.
5. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

### II. CASING:

1. The 7 inch surface casing shall be set at 900 feet, below usable water and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.
2. The minimum required fill of cement behind the 4-1/2 inch production casing is cement shall extend upward a minimum of 500 feet above the uppermost hydrocarbon bearing interval.

### **III. PRESSURE CONTROL:**

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 8-5/8 inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 2000 psi.
3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.
  - The tests shall be done by an independent service company.
  - The results of the test shall be reported to the appropriate BLM office.
  - Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
  - Testing must be done in a safe workman-like manner. Hard line connections shall be required.
  - BOPE must be tested prior to drilling into the Wolfcamp Formation by an independent service company.

### **IV. DRILLING MUD:**

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

1. Recording pit level indicator to indicate volume gains and losses.
2. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
3. Flow-sensor on the flow line to warn of abnormal mud returns from the well.