

If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction

I-06-22  
6/13/06

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

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 108991	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input 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. GUADALUPE 8 FED 4H 35897	
3b. Phone No. (include area code) (432) 686-3642		9. API Well No. 30-015-35046	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 760' FSL & 760' FEL (U/L P) At proposed prod. Zone 760' FSL & 760' FWL (U/L M) <i>Subject to LHO Approval By State</i>		10. Field and Pool, or Exploratory Cottonwood Creek; WC, West (Gas)	
14. Distance in miles and direction from nearest town or post office* 14 miles NW from Artesia		11. Sec., T., R., M., or Blk. And Survey or Area Section 8, T16S-R24E, N.M.P.M.	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. Unit line, if any) 660'		12. County or Parish Eddy	
16. No. of Acres in lease 1,280		13. State New Mexico	
17. Spacing Unit dedicated to this well S/2			
18. Distance from proposed location* to nearest well, drilling, completed applied for, on this lease, ft. 1,120'		20. BLM/BIA Bond No. on file NM2308	
19. Proposed Depth 5,200' TVD 7,978' TMD			
21. Elevations (Show whether DF, KDB, RT, GL, etc) Gr 3672'		22. Approximate date work will start* 8/15/2006	
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:

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

25. Signature <i>Don J. Mott</i>	Name (Printed/Typed) Donny G. Glanton	Date 6/9/2006
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Title

SR ROW LEASE OPERATIONS REPRESENTATIVE

Approved by (Signature) <i>/s/ Don Peterson</i>	Name (Printed/Typed) <i>/s/ Don Peterson</i>	Date JUL 19 2006
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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)

Witness Surface Casing

Roswell Controlled Water Basin

**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
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

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 75260	Pool Name Cottonwood Creek; WC, West (Gas)
Property Code	Property Name GUADALUPE 8 FED.	Well Number 4H
OGRID No. 7377	Operator Name EOG RESOURCES, INC.	Elevation 3672'

Surface Location

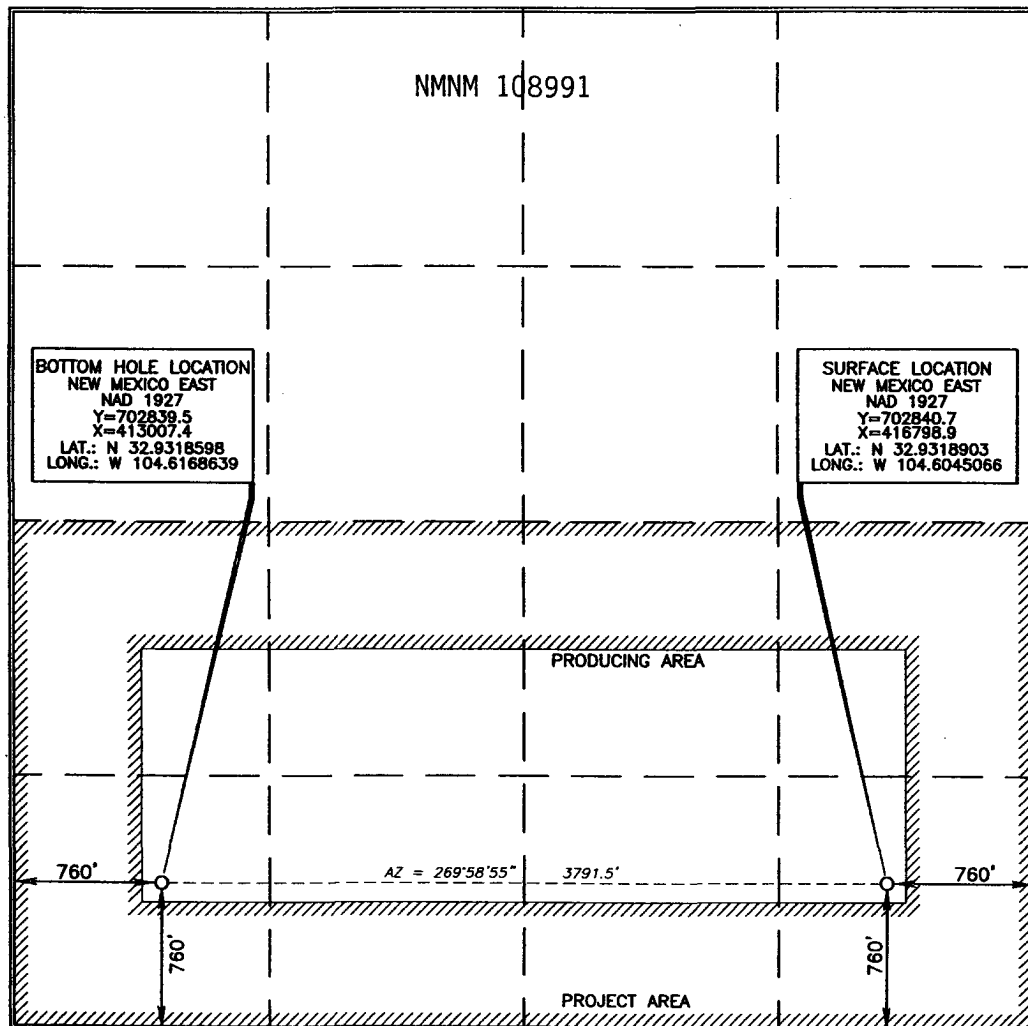
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	8	16 SOUTH	24 EAST, N.M.P.M.		760	SOUTH	760	EAST	EDDY

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	8	16 SOUTH	24 EAST, N.M.P.M.		760	SOUTH	760	WEST	EDDY

Dedicated Acres 320	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.



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.

*Donny G. Glanton* 2/15/06  
Signature Date

Donny G. Glanton  
Printed Name

SURVEYOR CERTIFICATION

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

FEBRUARY 15, 2006  
Date of Survey

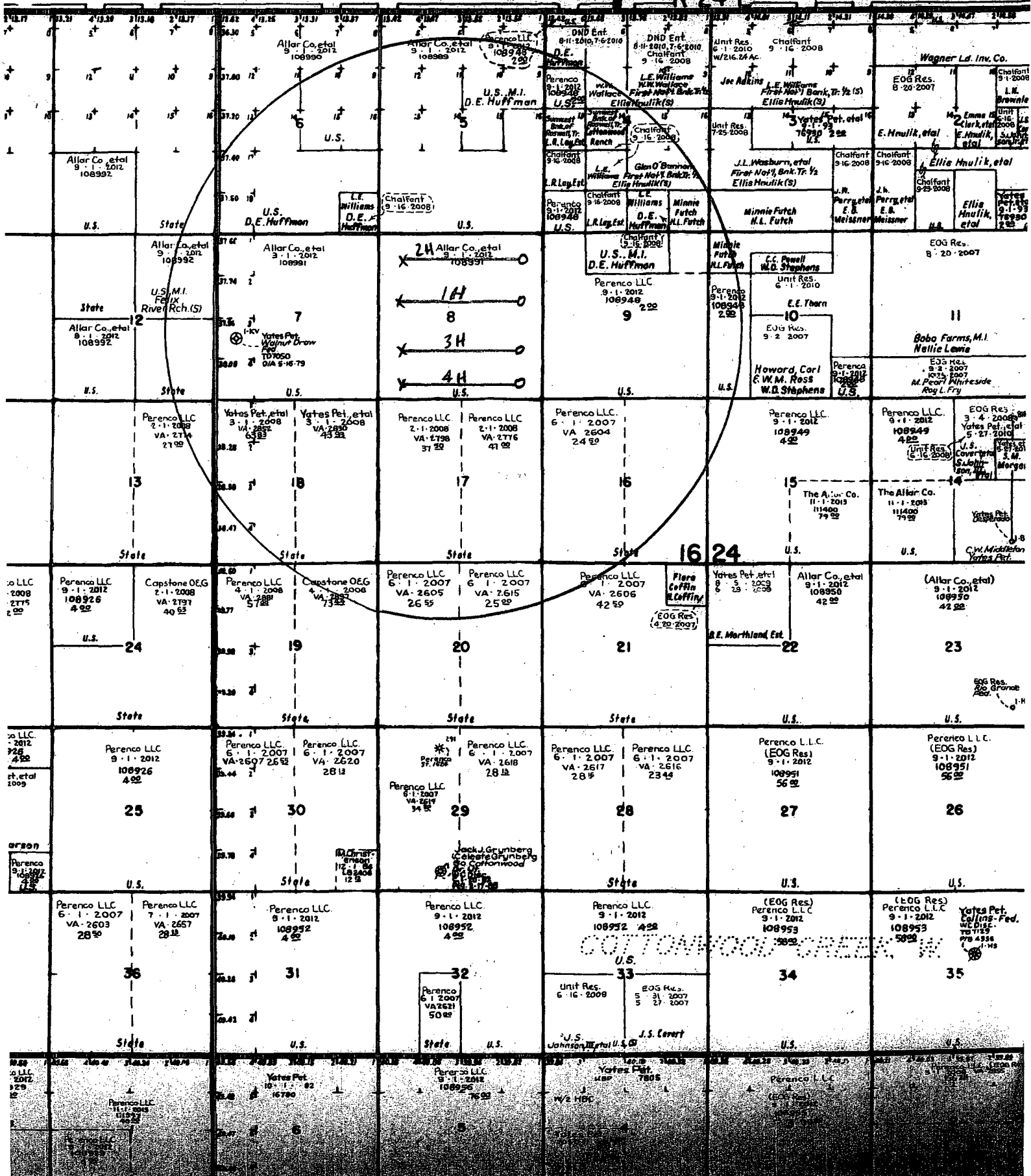
Signature and Seal of Professional Surveyor

*Terry J. Dault* 2/13/2006  
Certificate Number 15079

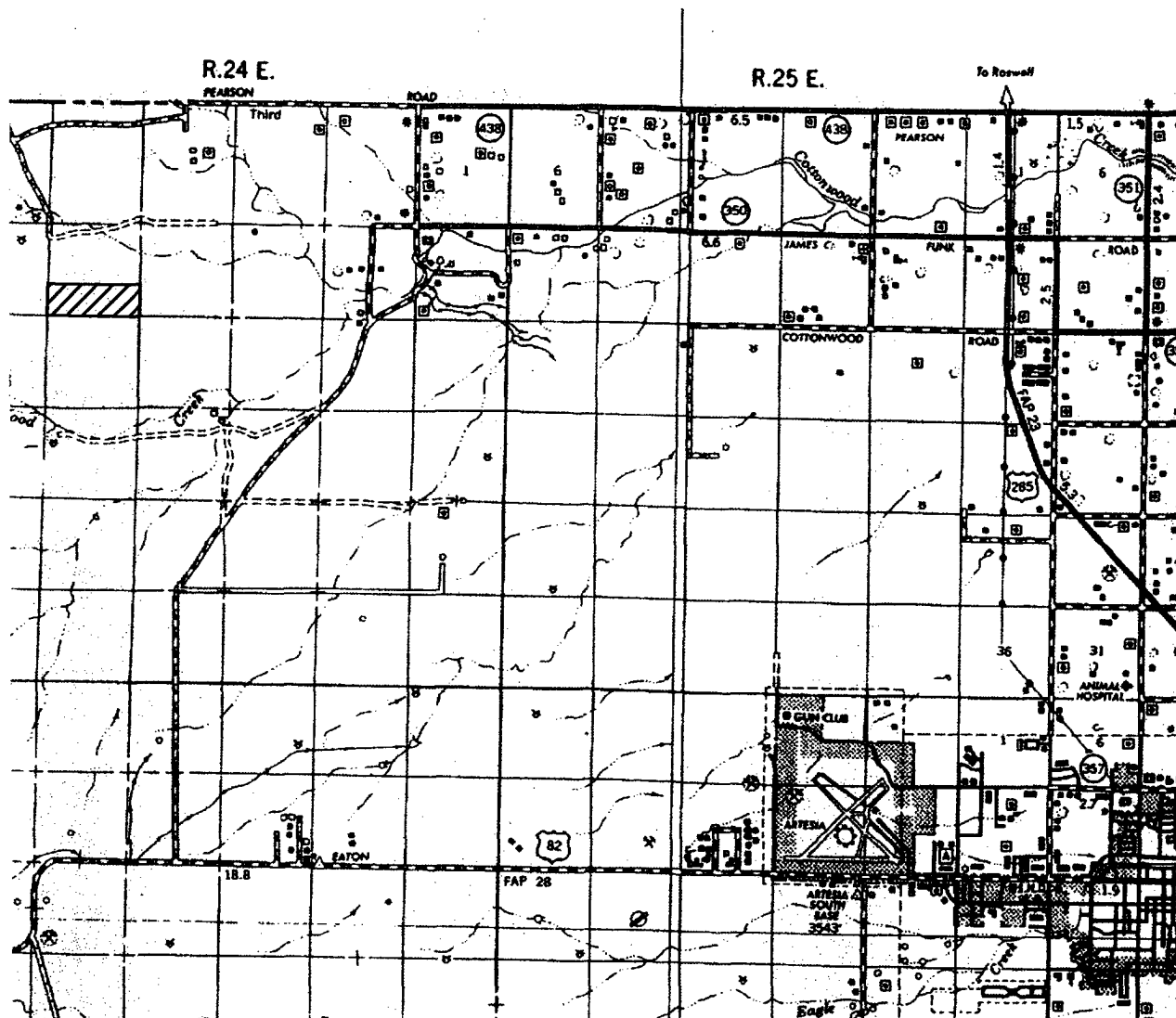
WO# 060207WL-d (cog)

# EXHIBIT "3"

R-24-E

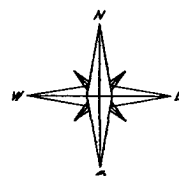


# VICINITY MAP



SEC. 8 TWP. 16-S RGE. 24-E  
 SURVEY N.M.P.M.  
 COUNTY EDDY  
 DESCRIPTION 760' FSL & 760' FEL  
 ELEVATION 3672'  
 OPERATOR EOG RESOURCES, INC  
 LEASE GUADALUPE 8 FED. #4H

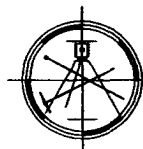
SCALE 1" = 2 MILES



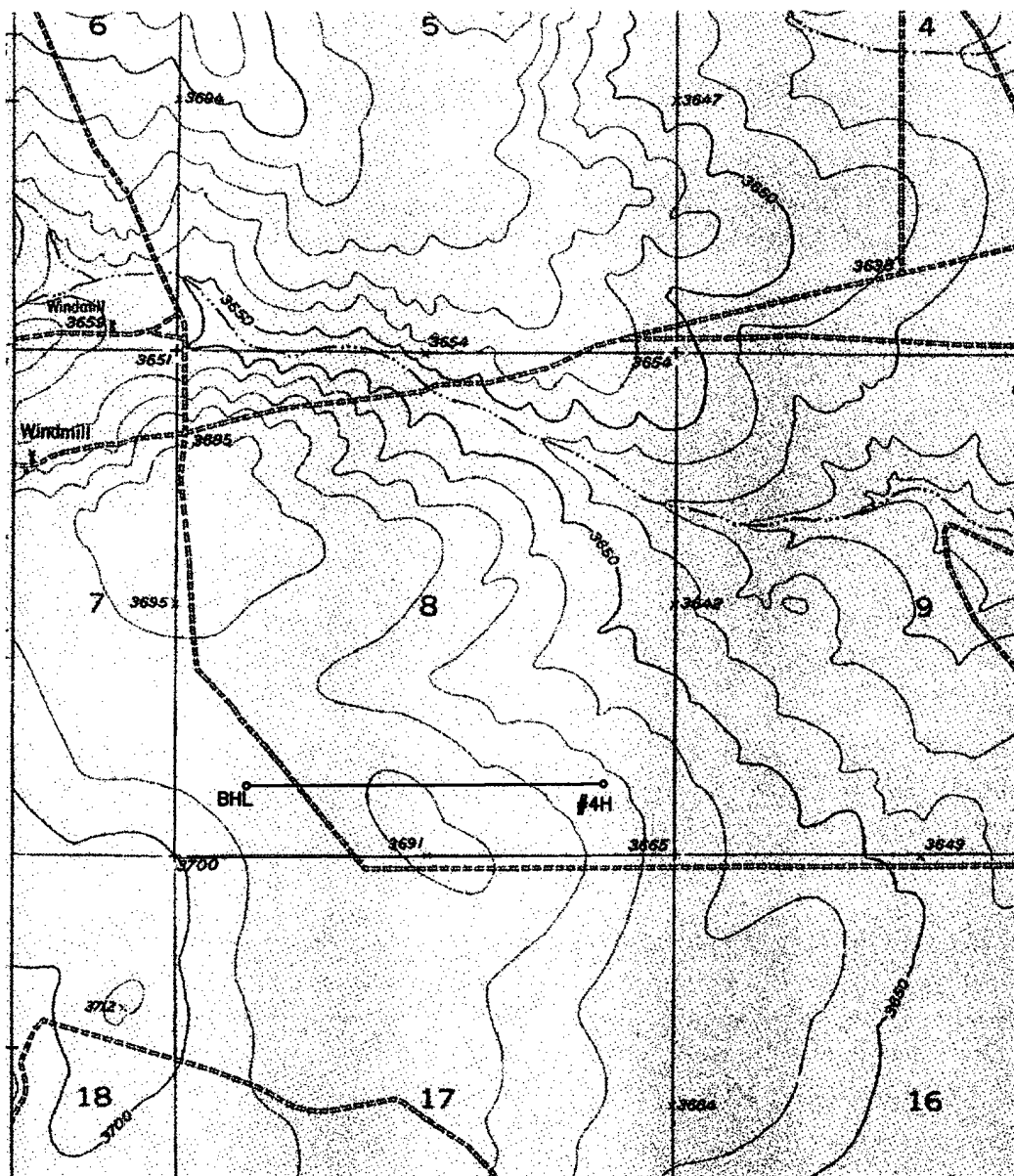
DIRECTIONS: FROM INTERSECTION OF HWY.'S #285 & #82 IN ARTESIA, GO NORTH ON HWY. #285 FOR 7.8 MILES; THENCE WEST ON FUNK ROAD (#121) FOR 7.0 MILES; THENCE SOUTH ON JOY ROAD (#95) FOR 0.7 MILES; THENCE WEST FOR 0.5 MILES; THENCE SOUTH FOR 0.2 MILES; THENCE WEST FOR 2.1 MILES; THENCE NORTH 0.1 MILES TO LOCATION.

Asel Surveying  
& Consulting

P.O. BOX 393 - 310 W. TAYLOR  
 HOBBS, NEW MEXICO - 505-393-9146



# LOCATION VERIFICATION MAP



SEC. 8 TWP. 16-S RGE. 24-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 760' FSL & 760' FEL

ELEVATION 3672'

OPERATOR EOG RESOURCES, INC

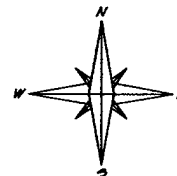
LEASE GUADALUPE 8 FED #4H

U.S.G.S. TOPOGRAPHIC MAP

HOPE NE, NM

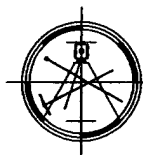
CONTOUR INTERVAL = 10 FEET

SCALE 1" = 2000'



Asel Surveying  
& Consulting

P.O. BOX 393 - 310 W. TAYLOR  
HOBBS, NEW MEXICO - 505-393-9146



EOG Resources, Inc.

Guadalupe 8 Fed No. 4H

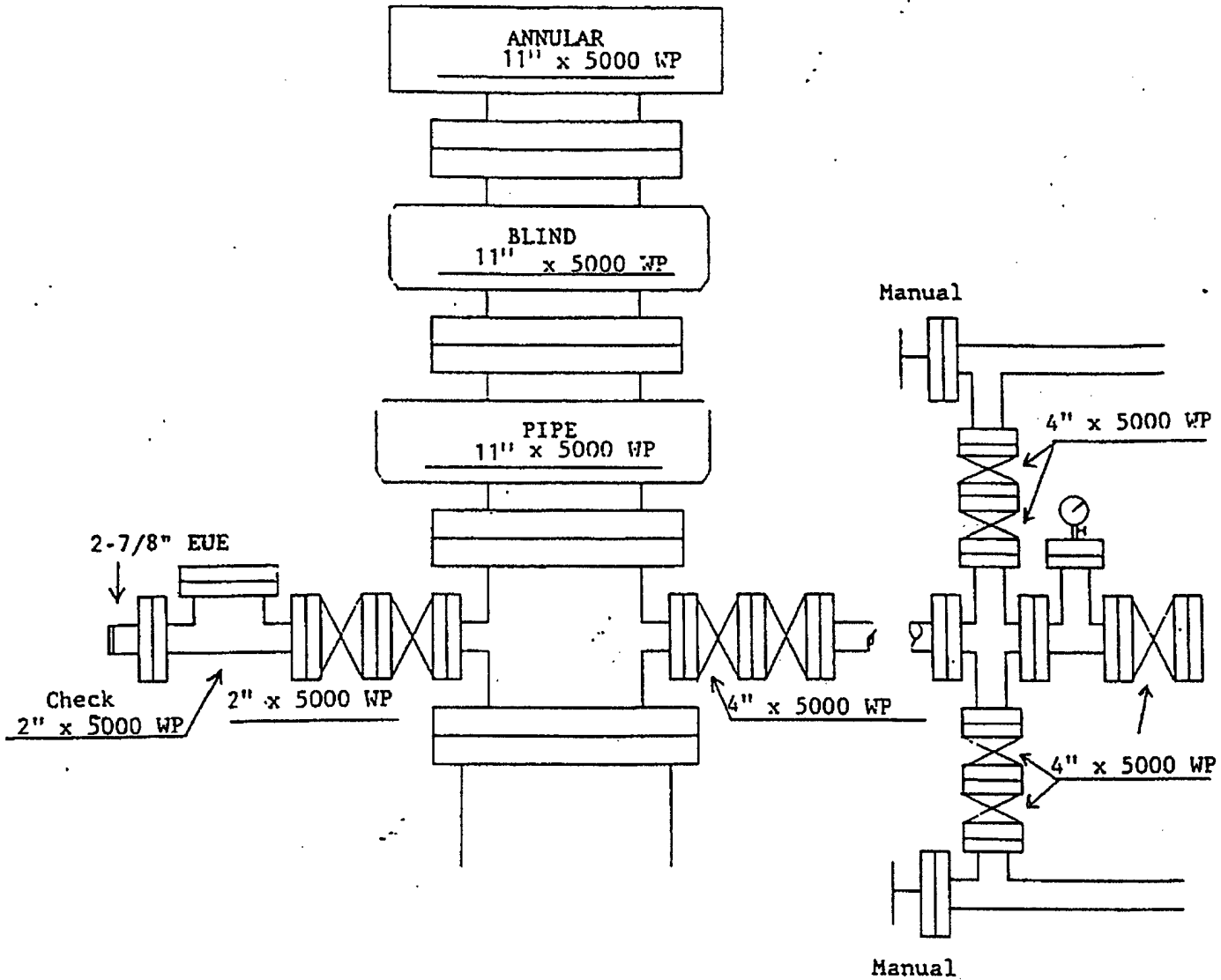


Exhibit 1

## DRILLING PROGRAM

EOG RESOURCES, INC.  
Guadalupe 8 Fed No. 4H  
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 8.625" 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>
12.250"	0-900'	8.625"	32#	J-55	LT&C
7.875"	0-7,978'	5.5"	17#	N-80	LT&C

#### Cementing Program:

8-5/8" Surface Casing:

WITNESS

Cement to surface with 150 sx Prem Plus, 3% Econolite 1/4 pps Flocele, 2% Calcium Chloride, 175 sx Prem Plus, 2% Calcium Chloride, .25#/sx Flocele

5-1/2" Production:

Cement with 400sx Interfill C, + 0.25ppm Flocele; 350 sx Premium Cement, 100% Acid Soluble Additive, + 0.6% Halad-344 + 0.8% Econolite + 0.2% HR-55.

## **DRILLING PROGRAM**

**EOG RESOURCES, INC.**  
**Guadalupe 8 Fed No. 4H**  
**Eddy Co. NM**

### **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 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. as follows:

Under Surface – 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	Viscosity		Waterloss
		<u>(PPG)</u>	<u>(sec)</u>	<u>(cc)</u>	
0-900'	Fresh – Gel	8.6-8.8	28-34	N/c	
900'-4400'	Cut Brine	8.8-9.2	28-34	N/c	
4,400'-5,100'	Cut Brine	8.8-9.2	28-34	10-15	
4,200'-7,978'	Polymer (Lateral)	9.0-9.4	40-45	10-20	

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.

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

Electric logging will consist of GR-Dual Laterlog and GR-Compensated Density-Neutron from +/-900' to TVD.

Possible sidewall cores based on shows.



## **DRILLING PROGRAM**

**EOG RESOURCES, INC.**

**Guadalupe 8 Fed No. 4H**

**Eddy Co. NM**

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

The estimated bottom hole temperature (BHT) at TD is 105 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 3000 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 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.  
Guadalupe 8 Fed No. 4H  
Eddy Co. NM**

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

**Surface is owned by the BLM**

**Directions to Well Site: From the Intersection of U.S. Hwy 82 & U.S. Hwy 285 in Artesia, NM, Go north on Hwy 285 for 7.8 miles, Thence west on County Road No. 121 (Funk Road) for 7.0 miles, Thence south on County Road No. 95 (Joy Road) for 0.7 miles, Thence west on existing lease road constructed to the Guadalupe 8 Federal No. 1.**

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

Utilize existing lease road constructed to the Guadalupe 8 Federal No. 1.  
(NM-115683)

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

The access road to the Guadalupe 8 Federal No. 1 is adjacent to the subject well location. No new access road needed. See Exhibit No. 2

No turnouts necessary.

No culverts or cattle guards are necessary. No 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 to the nearest pipeline.

## **DRILLING PROGRAM**

**EOG RESOURCES, INC.**  
**Guadalupe 8 Fed No. 4H**  
**Eddy Co. NM**

### **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 by temporary water supply lines adjacent and parallel to roads.

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

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.

**DRILLING PROGRAM**

**EOG RESOURCES, INC.**  
**Guadalupe 8 Fed No. 4H**  
**Eddy Co. NM**

**OTHER INFORMATION:**

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

**COMPANY REPRESENTATIVES:**

**Permitting & Land**

Mr. Donny G. Glanton  
Senior ROW Lease Operations Representative  
EOG Resources, Inc.  
P.O. Box 2267  
Midland, TX 79702  
(432) 686-3642 Office

**Drilling**


Mr. Jason LaGrega  
Division Drilling Engineer  
EOG Resources, Inc.  
P.O. Box 2267  
Midland, TX 79702  
(432) 686-3633 Office

**Operations**

Mr. Howard Kemp  
Production Manager  
EOG Resources, Inc.  
P.O. Box 2267  
Midland, TX 79702  
(432) 686-3704 Office

**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 6/8/2006

## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: EOG Resources, Inc.  
Well Name & No. Guadalupe 8 Federal #4H  
SH Location: 760' FSL, 760' FEL, Section 8, T. 16 S., R. 24 E., Eddy County, New Mexico  
BH Location: 760' FSL, 760' FWL, Section 8, T. 16 S., R. 24 E., Eddy County, New Mexico  
Lease: NM-108991

### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County in sufficient time for a representative to witness:
  - A. Well spud
  - B. Cementing casing: 8-5/8 inch 5-1/2 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.

### II. CASING:

1. The 8-5/8 inch surface casing shall be set at approximately 850 feet 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 5-1/2 inch production casing is to be sufficient to reach at least 500 feet above the top of the uppermost hydrocarbon productive 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 13-3/8 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.