

N. M. Oil Cons. Division  
811 S. 1ST ST.  
ARTESIA, NM 88210-2084

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

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANGEMENT

RECEIVED  
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. NM 028775
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. 7257		7. If Unit or CA Agreement, Name and No.
3a. Address P.O. Box 2267, Midland, TX 79702		8. Lease Name and Well No. 2650 Arco "34" Federal Com No. 1
3b. Phone No. (include area code) (915)686-3714		9. API Well No. 30-015-31290
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface <del>1.307 FNL &amp; 1.233 FEL</del> 1817/N 1055/E W. A At proposed prod. Zone Same as surface		10. Field and Pool, or Exploratory Wildcat
11. Sec., T., R., M., or Blk. And Survey or Area Sec 34-T17S-R29E		
14. Distance in miles and direction from nearest town or post office* 4.5 miles SW from Loco Hills		12. County or Parish Eddy
15. Distance from proposed* location to nearest property or lease line, ft. 1,255' (Also to nearest drlg. Unit line, if any) 1,255'		13. State NM
16. No. of Acres in lease 1080		17. Spacing Unit dedicated to this well E/2 320
18. Distance from proposed location* to nearest well, drilling, completed applied for, on this lease, ft. 600		20. BLM/BIA Bond No. on file NM-2308
19. Proposed Depth 11,500'		21. Elevations (Show whether DF, KDB, RT, GL, etc) GL-3536 3546'
22. Approximate date work will start* 8/15/2000		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 Sytem Lands, the SUPO shall be filed with the appropriate Forest Service Office)

ROSWELL CONTROLLED WATER BASIN

- 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>Mike Francis</i>	Name (Printed/Typed) Mike Francis	Date 6/22/2000
Title Agent		
Approved by (Signature) <i>LARRY D. BRAY</i>	Name (Printed/Typed) LARRY D. BRAY	Date AUG 07 2000
Title Assistant Field Manager, Lands And Minerals	Office ROSWELL FIELD OFFICE	APPROVED FOR LEAD

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

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)

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
PO Drawer DD, Artesia, NM 88211-0719  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-102  
Revised February 21, 1994  
Instructions on back  
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 Wildcat	
*Property Code		*Property Name ARCO "34" FEDERAL COM			*Well Number 1
*OGRID No. 7377		*Operator Name EOG RESOURCES INC.			*Elevation 3546

<sup>10</sup> Surface Location

UL or lot no. H	Section 34	Township 17-S	Range 29-E	Lot Idn	Feet from the 1817	North/South line NORTH	Feet from the 1055	East/West line EAST	County EDDY
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<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
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*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

<div>16</div> <div></div>	<div>17 OPERATOR CERTIFICATION</div> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>Mike Francis</i> Signature Mike Francis Printed Name Agent Title 7-13-00 Date</p>	
	<div>18 SURVEYOR CERTIFICATION</div> <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 best of my belief.</p> <p>JULY 11, 2000 Date of Survey Signature and Seal of Professional Surveyor: <i>James E. Tompkins</i> Certificate Number 14729</p>	

## DRILLING PROGRAM

EOG RESOURCES, INC.  
ARCO "34" FEDERAL COM NO. 1  
1,967' FNL & 1,255' FEL  
SEC. 34, T17S, R29E  
EDDY COUNTY, NM

### 1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

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

Queen	2500'
San Andres	3300'
Abo	6,500'
Wolfcamp	8000'
Lower Strawn	9875'
Atoka	10175'
Morrow Clastics	10600'
Chester	11000'

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

Upper Permian Sands	Above 250'	Fresh Water
Grayburg/San Andres	3000'	Oil
Strawn	10200'	Oil
Atoka	10525'	Gas
Morrow	10925'	Gas

### 4. CASING PROGRAM

<u>Hole Size</u>	<u>Interval</u>	<u>OD Casing</u>	<u>Weight Grade Jt.</u>	<u>Cond. Type</u>
14 3/4"	0-650'	11 3/4"	42# H-40	ST&C
11"	0-4000'	8 5/8"	32# J-55	LT&C
7 7/8"	0-11500'	5 1/2"	17# N80/S95	L&TC

#### Cementing Program:

11 3/4" Surface Casing:

**WITNESS**

Cement to surface with 200 sx Prem Plus, 3% Econolite, 25 Calcium Chloride, 0.25#/sx Flocele, 150 sx Prem Plus, 2% Calcium Chloride

8 5/8" Intermediate:

Cement to surface with 800 sx Interfill C, .25#/sx flocele, 250 sx Premium Plus, 2% Calcium Chloride

5 1/2" Production:

Cement w/930 sx Premium, 3% Econolite, 5#/sx Salt (3%), 0.2% HR5, .25#/sk Flocele, 250 sx Prem 50/50 Poz mix 'A', 2% Halliburton-Gel First 2%, 0.5% Halad-322. This is designed to bring TOC to 4500'.

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EDDY COUNTY, 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 to 600 psi before drilling out of surface casing. Before drilling out of 1st intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000/1000 psi and the annular to 3500/5000-psi pressure.

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/KCL mud system. The applicable depths and properties of this system are as follows:

<u>Depth</u>	<u>Type</u>	<u>Wt (PPG)</u>	<u>Viscosity (sec)</u>	<u>Waterloss (cc)</u>
0-650'	Fresh Water (spud)	8.5	40-45	N.C.
650'-4000'	Brine Water	10.0	30	N.C.
4000'- TD	Cut Brine + Polymer/KCL	8.8 - 9.2	32	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 complete with H<sub>2</sub>S detector will be continuously monitoring drilling penetration rate and hydrocarbon shows from 5000' to TD.

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EDDY COUNTY, NM**

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

Electric logging will consist of GR-Dual Induction Focused and GR-Compensated Density-Neutron from TD to intermediate casing with a GR-Compensated Neutron run from intermediate casing to surface and optional Sonic from TD to Intermediate casing.

Possible sidewall cores based on shows.

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

The estimated bottom hole temperature (BHT) at TD is 175 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 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.

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SEC. 34, T17S, R29E  
EDDY COUNTY, 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:**

0' of new road is required. 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 would also be located on the drill-pad site and no additional disturbance will occur.

### **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.

## **DRILLING PROGRAM**

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SEC. 34, T17S, R29E  
EDDY COUNTY, NM**

### **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 wellpad 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.

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SEC. 34, T17S, R29E  
EDDY COUNTY, NM**

**OTHER INFORMATION:**

The area around the well site is grassland and the topsoil is duned and sandy. The vegetation is native scrub grasses with abundant oakbrush, sagebrush, yucca, and prickly pear.

**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.

W. Dewey Smeltzer  
Division Drilling Manager



Date: 6-23-00



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SEC. 34, T17S, R29E  
EDDY COUNTY, 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, 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.

EQG Resources, Inc.

Arco "34" Federal Com No. 1

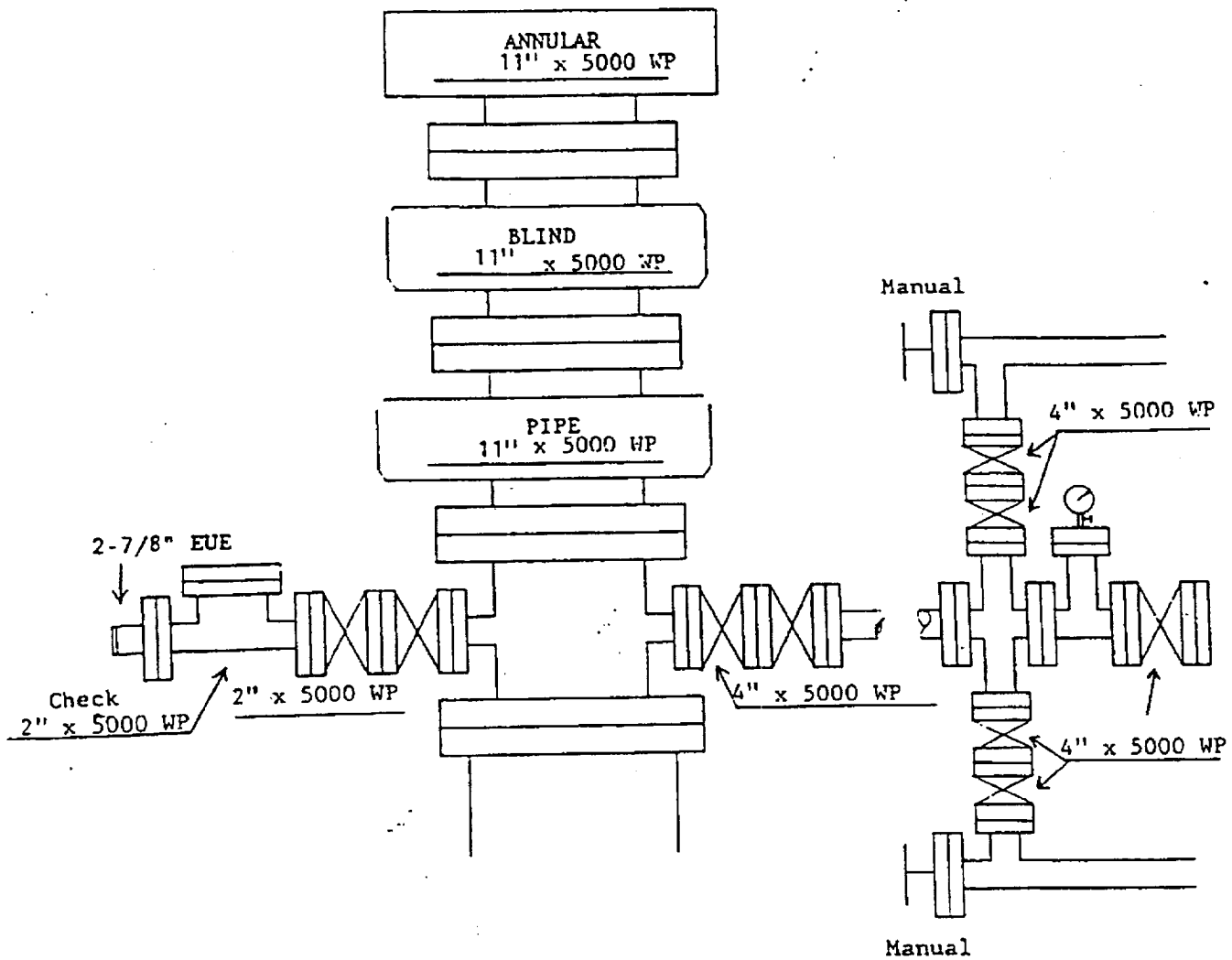
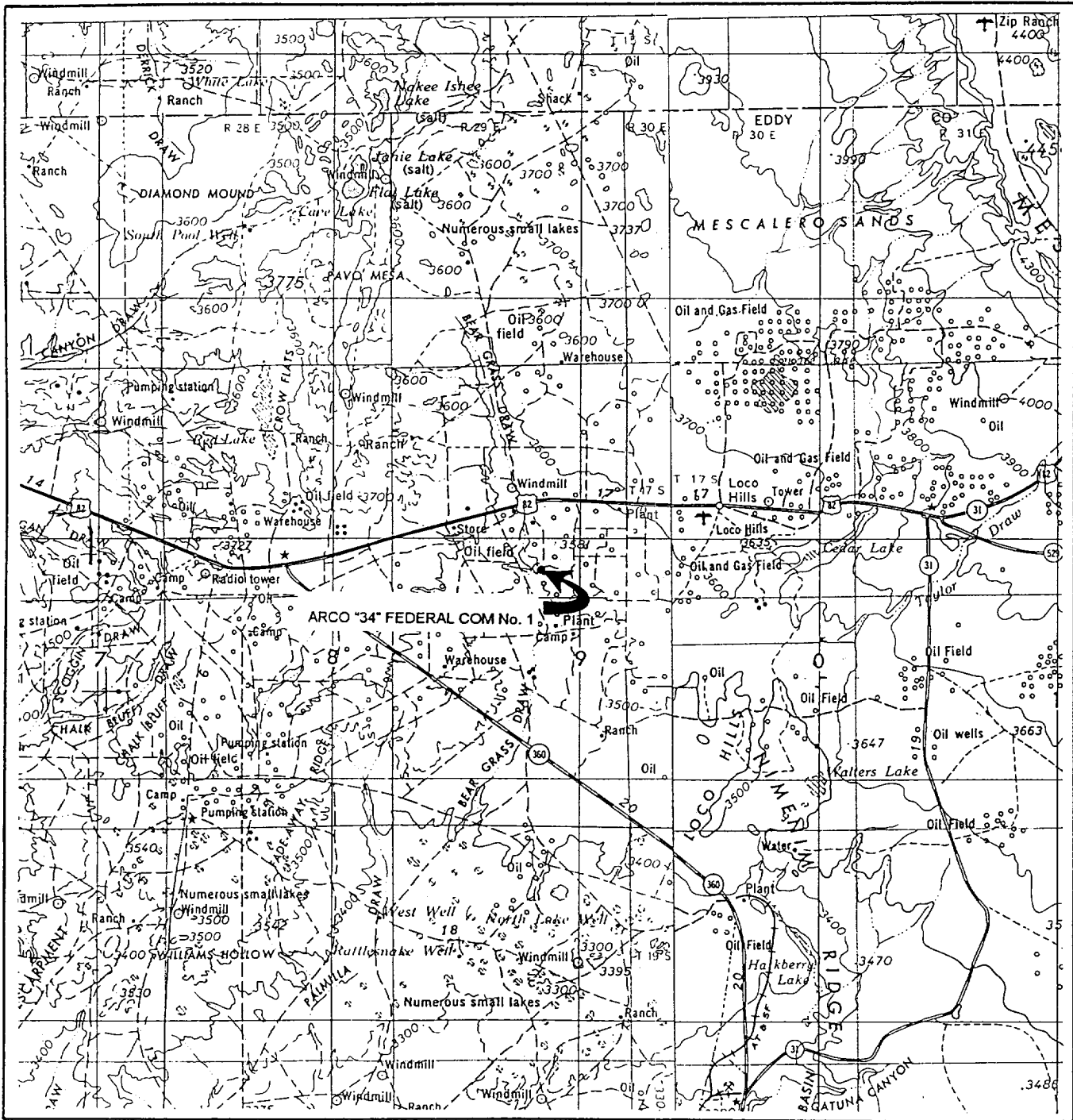


Exhibit 1

# VICINITY MAP



SCALE: 1" = 4 MILES

WTC 45953

SEC. 34 TWP. 17-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NM

DESCRIPTION 1817' FNL & 1055' FEL

ELEVATION 3546'

OPERATOR EOG RESOURCES, INC.

LEASE ARCO "34" FEDERAL COM No. 1

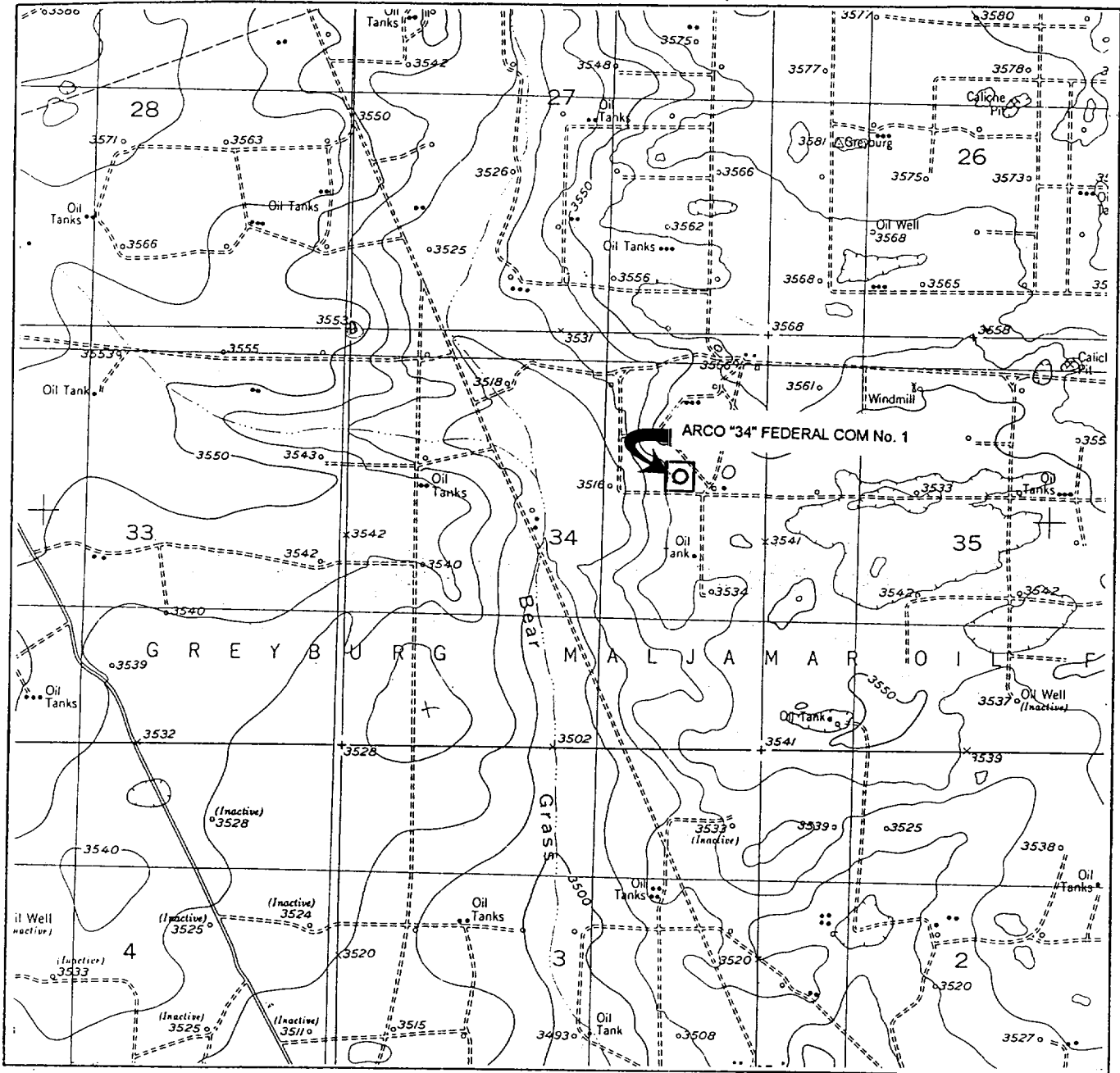
WEST TEXAS CONSULTANTS, INC.

ENGINEERS-PLANNERS-SURVEYORS

MIDLAND, TEXAS

915-685-3800

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'  
WTC 45953

SEC. 34 TWP. 17-S RGE. 29-E

SURVEY N.M.P.M

COUNTY EDDY STATE NM

DESCRIPTION 1817' FNL & 1055' FEL

ELEVATION 3546'

OPERATOR EOG RESOURCES, INC.

LEASE ARCO "34" FEDERAL COM No. 1

USGS TOPO MAP RED LAKE SE, NEW MEXICO

CONTOUR INTERVAL 10'

**WEST TEXAS CONSULTANTS, INC.**

**ENGINEERS-PLANNERS-SURVEYORS**

**MIDLAND, TEXAS**

**915-685-3800**

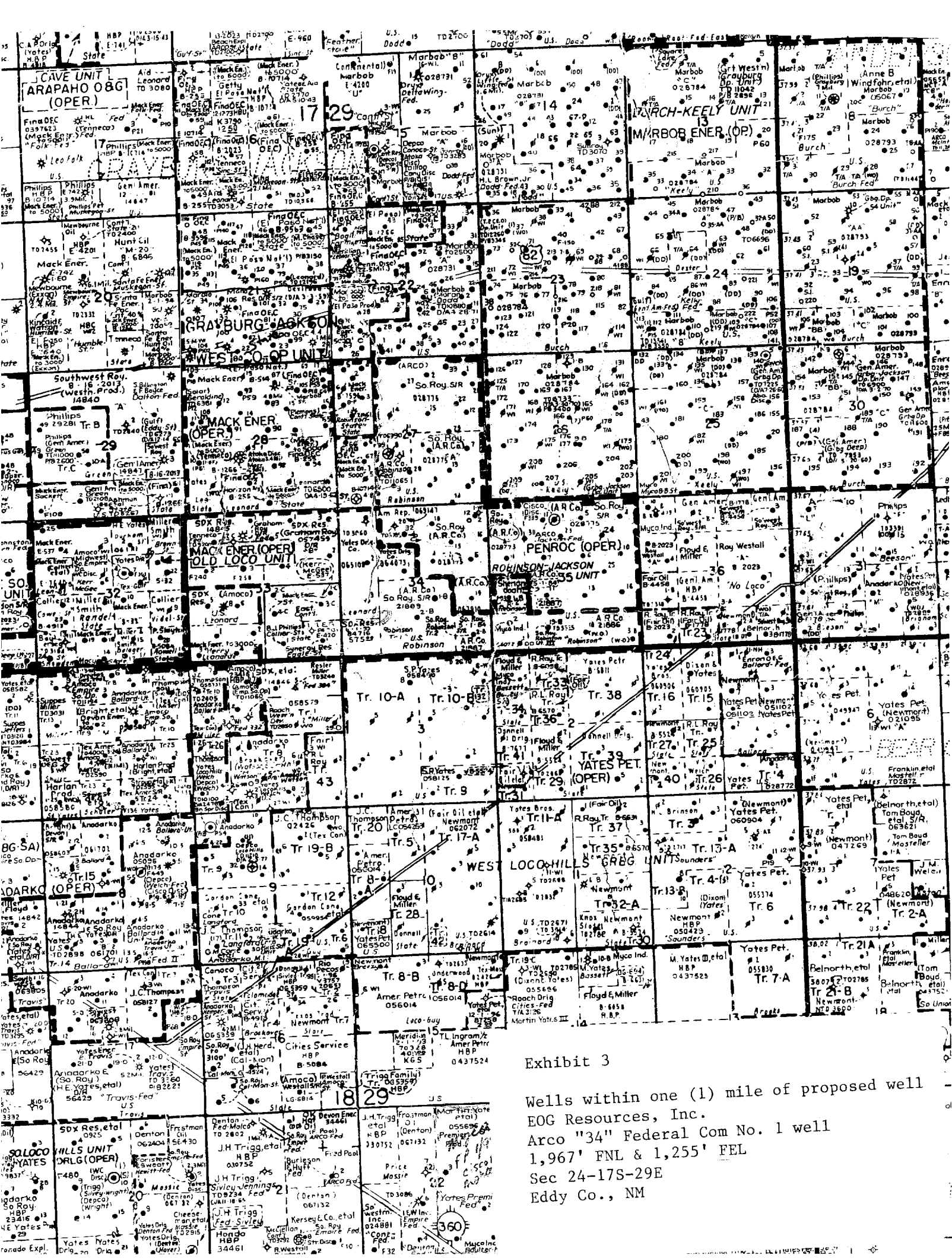


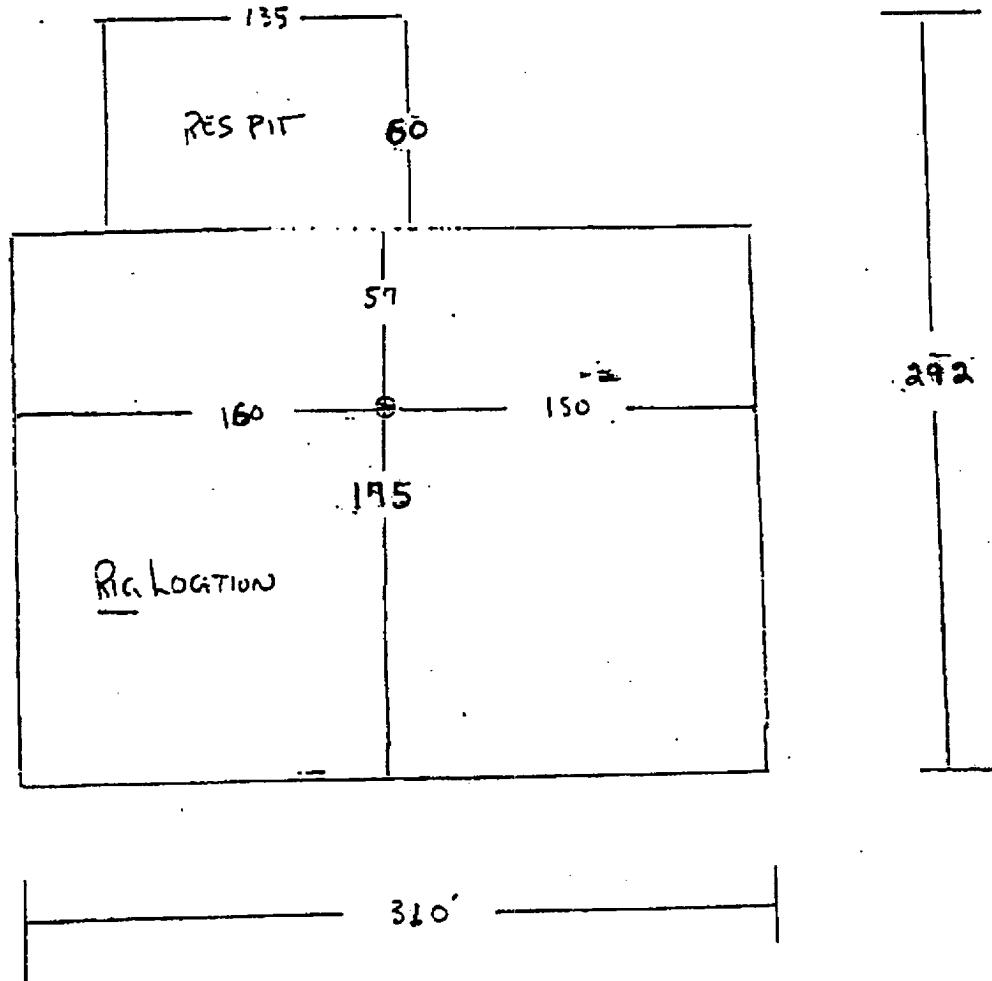
Exhibit 3

Wells within one (1) mile of proposed well  
EOG Resources, Inc.  
Arco "34" Federal Com No. 1 well  
1,967' FNL & 1,255' FEL  
Sec 24-17S-29E  
Eddy Co., NM

Exhibit 4

Arco "34" Federal Com No. 1 well

NORTH



### Statement Accepting Responsibility For Operations

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

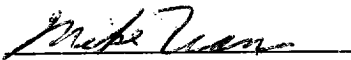
**Lease No.:** NM 028775

**Legal Description:** Section 34, T17S, R29E  
Eddy Co., NM

**Formation(s):**

**Bond Coverage:** Individually with Endorsement to State of New Mexico

**BLM Bond File No.:** NM-2308

**Authorized Signature:**   
Mike Francis

**Title:** Agent

**Date:** 6/22/2000