

New Mexico Oil Conservation Division, District I

1625 N. French Drive

Hobbs, NM 88240

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. nm108504
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		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	3b. Phone No. (include area code) (432) 686-3714	8. Lease Name and Well No. Vaca 24 Federal No.1 33817
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 1980FNL&990FEL (U/L H) At proposed prod. Zone same as Surface		9. API Well No. 30-025-36676
14. Distance in miles and direction from nearest town or post office* 22 Mi. west from Jal NM		10. Field and Pool, or Exploratory Red Hills Bone Spring 51020
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. Unit line, if any) 990	16. No. of Acres in lease 640	11. Sec., T., R., M., or Blk. And Survey or Area Sec 24 T-25-S;R-33-E
18. Distance from proposed location* to nearest well, drilling, completed applied for, on this lease, ft.	19. Proposed Depth 12500	12. County or Parish Lea Co.
21. Elevations (Show whether DF, KDB, RT, GL, etc) GL 3459'	22. Approximate date work will start* 5/1/2004	13. State NM
23. Estimated duration 145		17. Spacing Unit dedicated to this well 80 ac. E/2NE/4
24. Attachments Carlsbad Controlled Water Basin		

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 3/11/2004
Title Agent		

Approved by (Signature) /s/ Joe G. Lara	Name (Printed/Typed) /s/ Joe G. Lara	Date 12 APR 2004
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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)

DECLARED WATER BASIN

CEMENT BEHIND THE 8 3/4"

CASING MUST BE CIRCULATED

DECLARED WATER BASIN
CEMENT BEHIND THE 11 3/4"
CASING MUST BE CIRCULATED

**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, and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, New Mexico 87505

Form C-102

Revised August 15, 2000

Submit to Appropriate District Office

State Lease - 4 copies

Fee Lease - 3 copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-36676	² Pool Code 51020	³ Pool Name Red Hills Bone Spring
⁴ Property Code 33817	⁵ Property Name VACA "24" FEDERAL	⁶ Well Number 1
⁷ OGRID No. 7377	⁸ Operator Name EOG RESOURCES, INC.	⁹ Elevation 3334'

¹⁰ 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	24	25 SOUTH	33 EAST, N.M.P.M.		1980'	NORTH	990'	EAST	LEA

¹¹ 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
¹² Dedicated Acres 80	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ 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

<div><p>¹⁶</p><p>NAD 27 NM E ZONE X = 751733 Y = 407495 LAT.: N 32.11771 LONG.: W 103.52025</p></div>	<div><p>¹⁷ OPERATOR CERTIFICATION</p><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 3/11/04 Date</p><p>¹⁸ SURVEYOR CERTIFICATION</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>MARCH 3, 2004 Date of Survey Signature and Seal of Professional Surveyor</p><p><i>V. L. Bezner</i> Certificate Number V. L. BEZNER R.P.S. #7920 JOB #93559 / 22 SE / J.C.P.</p></div>
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DRILLING PROGRAM

EOG RESOURCES, INC.

Vaca 24 Federal No.1

Lea Co. NM

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1100'
Delaware Mt. Group	59270'
Bone Springs	9275'
3 rd Bone Spring Sand	12025'

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

Upper Permian Sands	Above 250'	Fresh Water
3 rd Bone Spring Sands	12,450'	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 11-3/4" casing at 650' and circulating cement back to surface, and 8-5/8" casing will be set at 5200' with cement circulated back to surface

4. CASING PROGRAM

<u>Hole Size</u>	<u>Interval</u>	<u>OD Casing</u>	<u>Weight Grade Jt. Cond. Type</u>
14-3/4"	0-650'	11-3/4"	42# H-40 ST&C
11"	0-5200'	8-5/8"	32# J-55 ST&C
7-7/8"	0-12,500'	5-1/2"	17#P-110 LT&C

Cementing Program:

11-3/4" Surface Casing:	Cement to surface with 250 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 1100 sx Interfill C, .25#/sx flocele, 250 sx Premium Plus, 2% Calcium Chloride
5-1/2" Production	Cement w/1200sx 50/50 POZ+ 2% gel + 4% CF-14 + .1% Diacel LWL. This cement slurry is designed to bring TOC to 4500'.

DRILLING PROGRAM

EOG RESOURCES, INC.

Vaca 24 Federal No.1

Lea 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. EOG request authorization to use a 2M system, providing for an annular preventer to be used prior to drilling the surface casing shoe 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-psig 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>
0-1100	Fresh Water (Spud Mud)	8.5	40-45	N.C.
1100'-5200'	Brine Water	10.0	30	N.C.
5200''- TD	Cut Brine + Polymer/KCL	8.8 – 9.2	28	N.C

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.

DRILLING PROGRAM

EOG RESOURCES, INC.

Vaca 24 Federal No.1

Lea Co. NM

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 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.

DRILLING PROGRAM

EOG RESOURCES, INC.

Vaca 24 Federal No.1

Lea 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:

3648' of new road is required. Exhibit #2a,2b

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.

6. PLANS FOR RESTORATION OF THE SURFACE:

DRILLING PROGRAM

EOG RESOURCES, INC.

Vaca 24 Federal No.1

Lea 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.

DRILLING PROGRAM

EOG RESOURCES, INC.

Vaca 24 Federal No.1

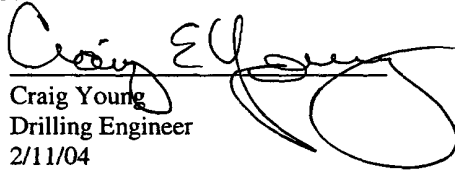
Lea Co. NM

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.


Craig Young
Drilling Engineer
2/11/04

DRILLING PROGRAM

**EOG RESOURCES, INC.
Vaca 24 Federal No.1
Lea 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, 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.

EOG Resources, Inc.

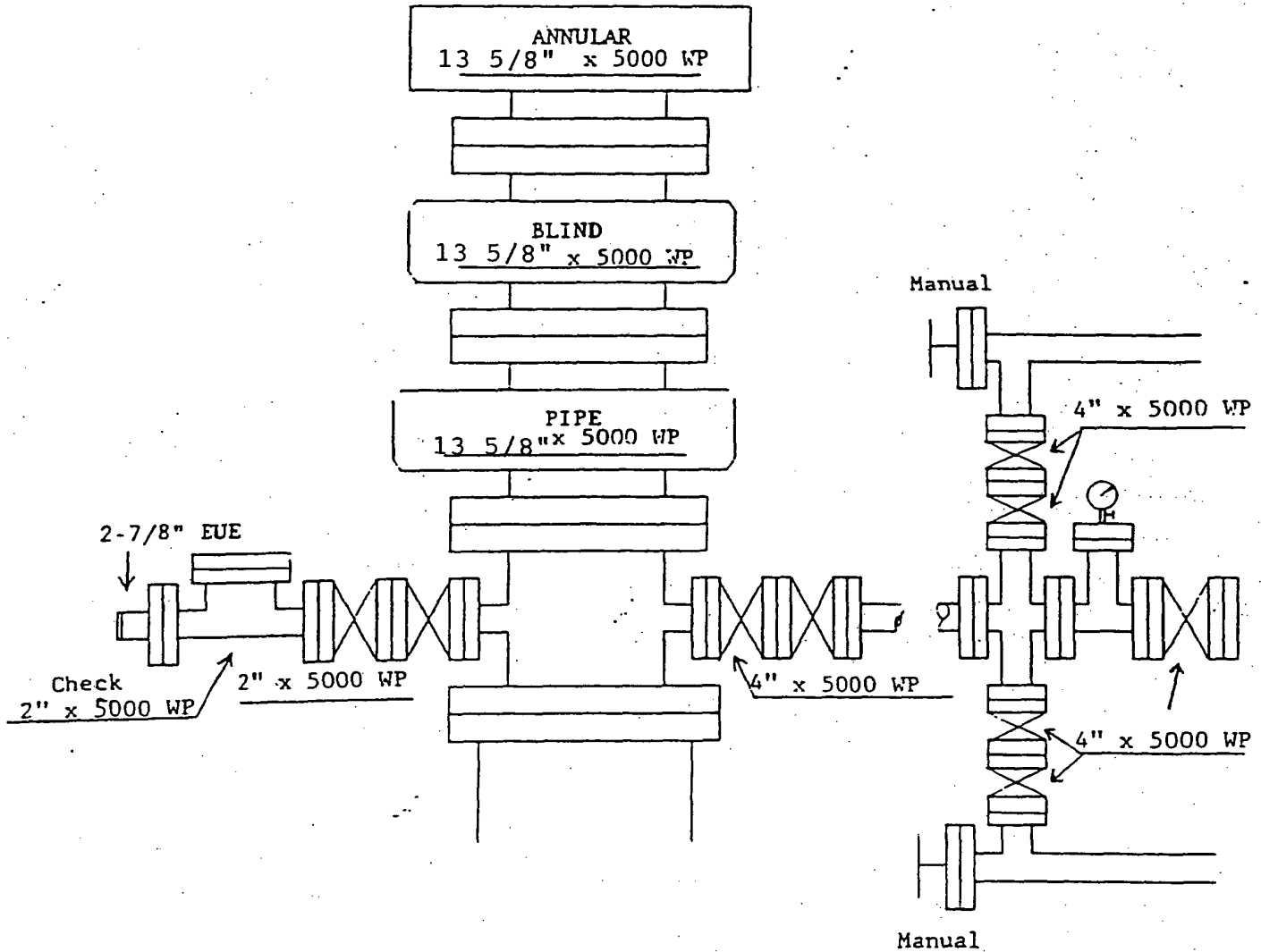
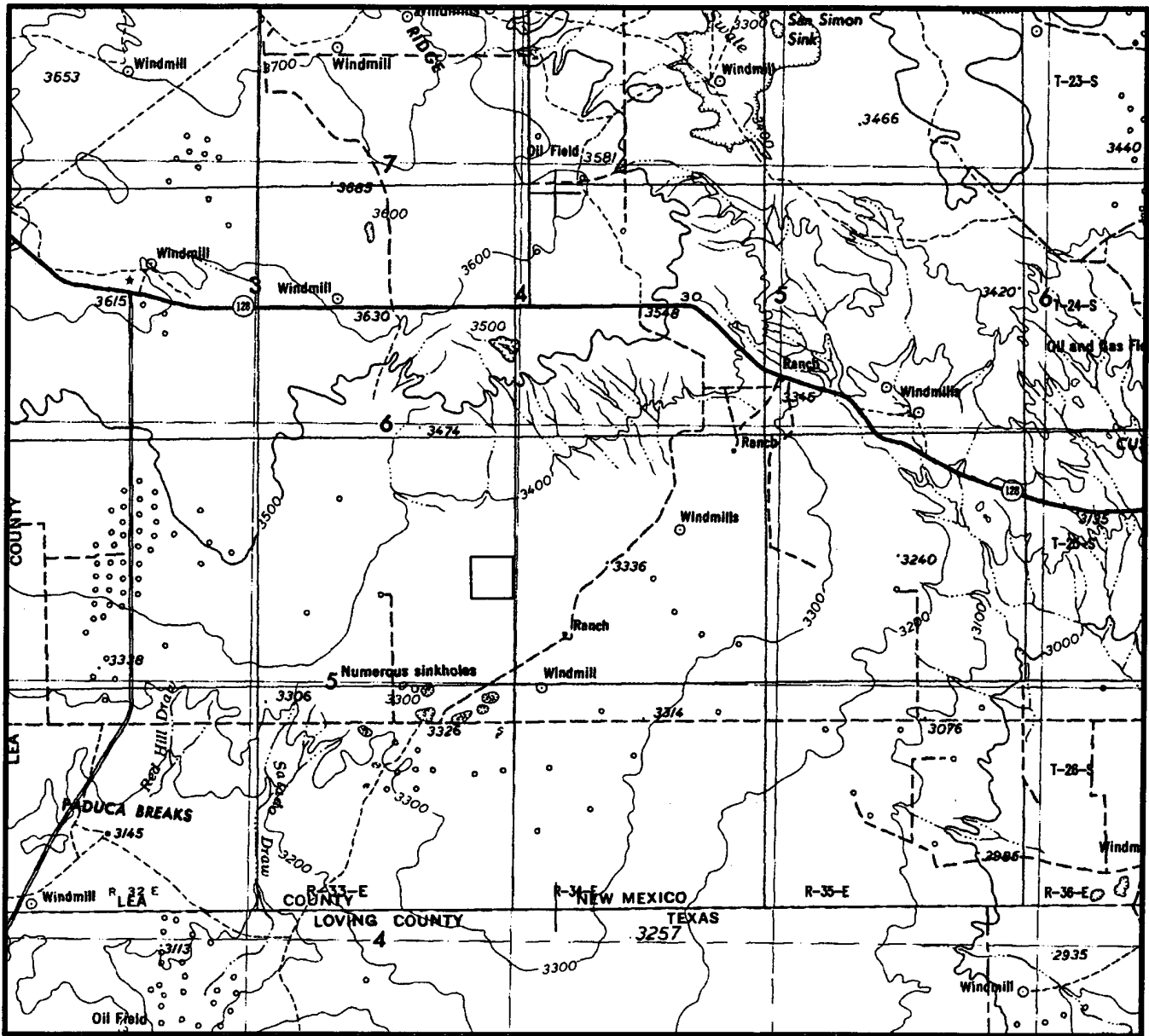


Exhibit 1

VICINITY MAP



SECTION 24 TWP 25-S RGE 33-E

SURVEY NEW MEXICO PRINCIPAL MERIDIAN

COUNTY _____ LEA _____ STATE _____ NM _____

DESCRIPTION 1980' FNL & 990' FEL

OPERATOR EOG RESOURCES, INC.

LEASE VACA "24" FEDERAL #1

DISTANCE & DIRECTION FROM JAL GO WEST 25.0 MILES

ON STATE HWY. 128, THENCE SOUTH ± 2.0 MILES, THENCE

SOUTHEAST ON PIPELINE RIGHT OF WAY 5.2 MILES TO A

POINT $\pm 1500'$ WEST OF THE LOCATION.

Exhibit 2

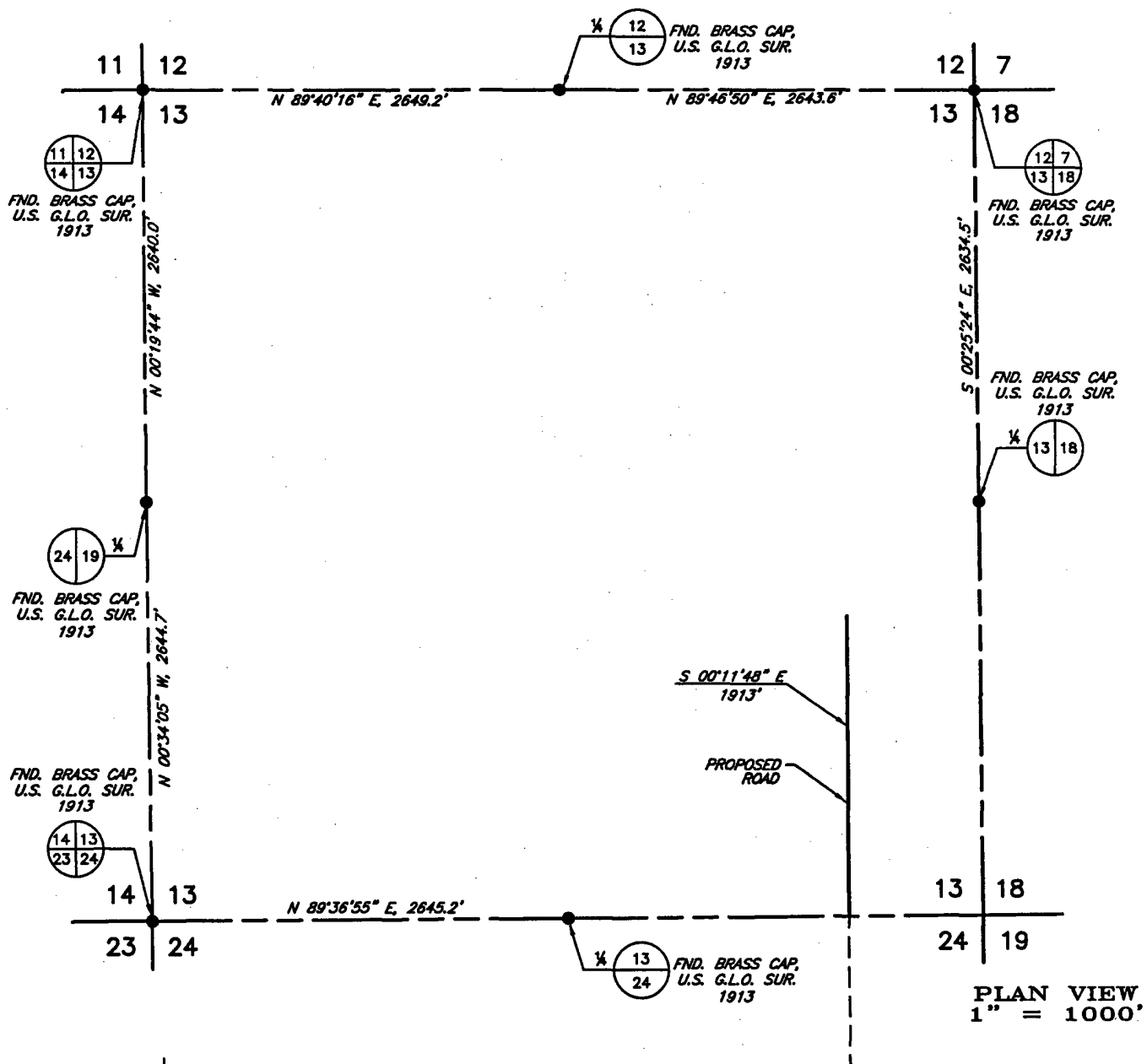


TOPOGRAPHIC LAND SURVEYORS

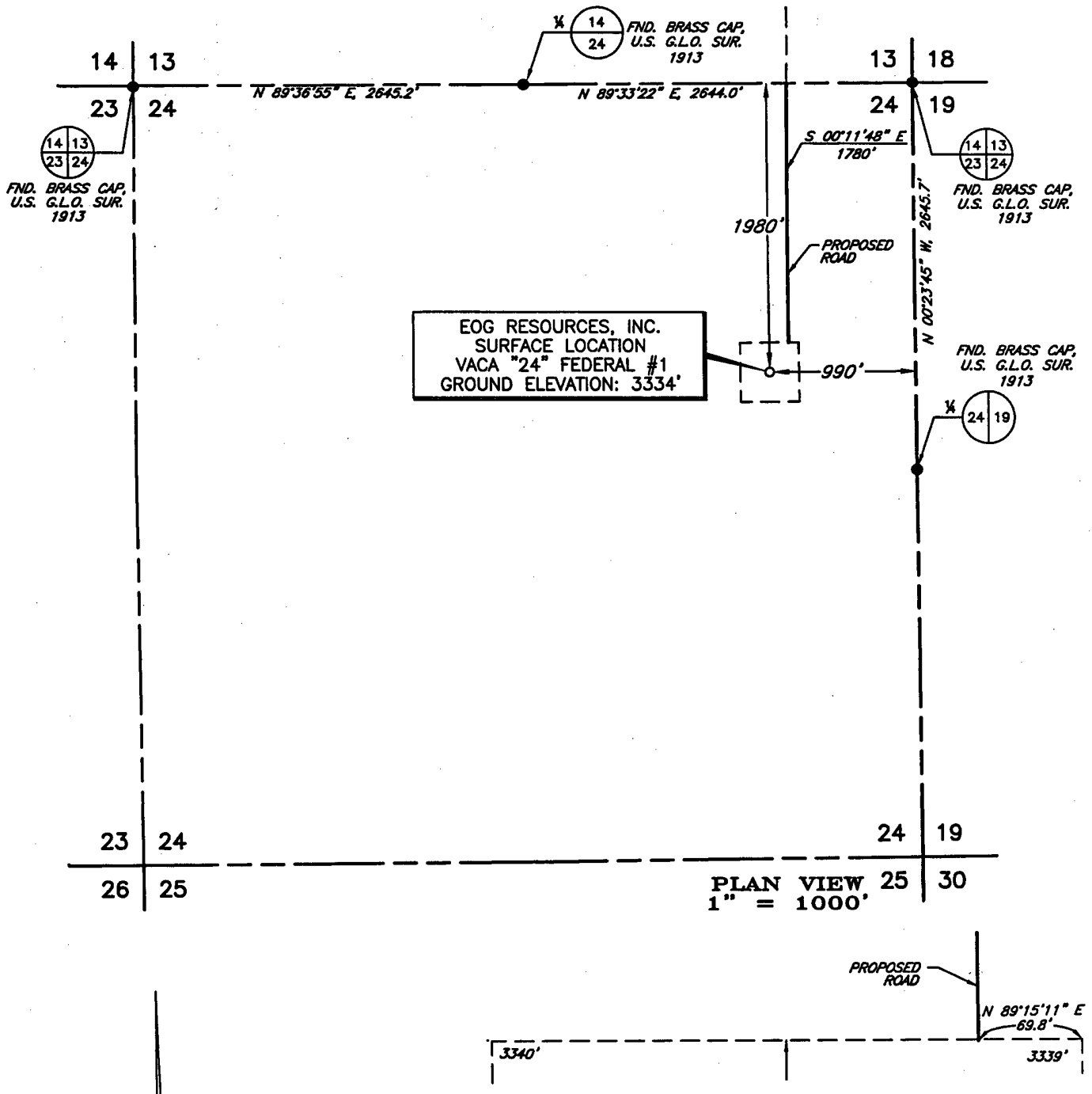
Surveying & Mapping for the Oil & Gas Industry

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

SECTION 13, TOWNSHIP 25 SOUTH, RANGE 33 EAST, N.M.P.M.,
LEA COUNTY NEW MEXICO



SECTION 24, TOWNSHIP 25 SOUTH, RANGE 33 EAST, N.M.P.M.,
LEA COUNTY NEW MEXICO



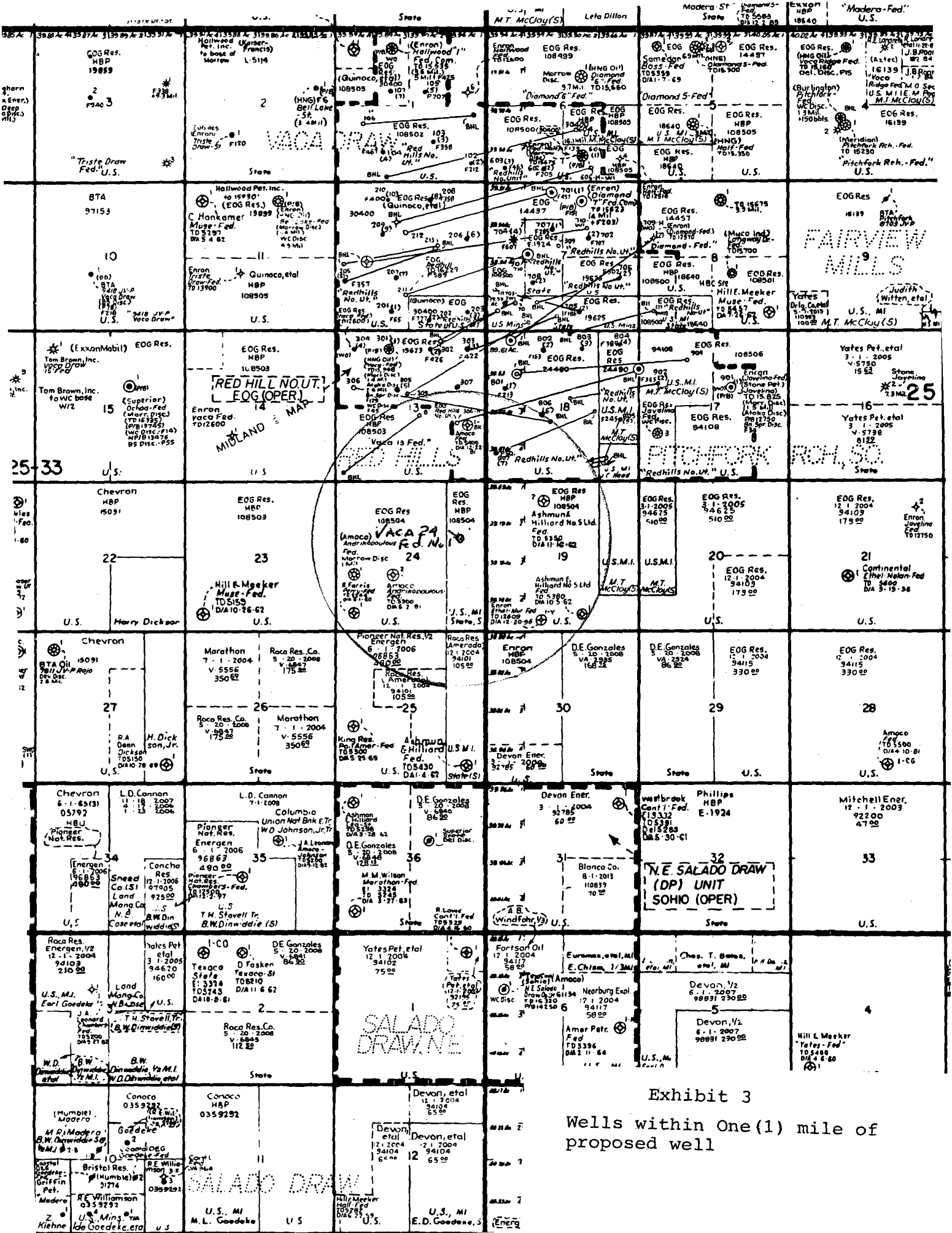
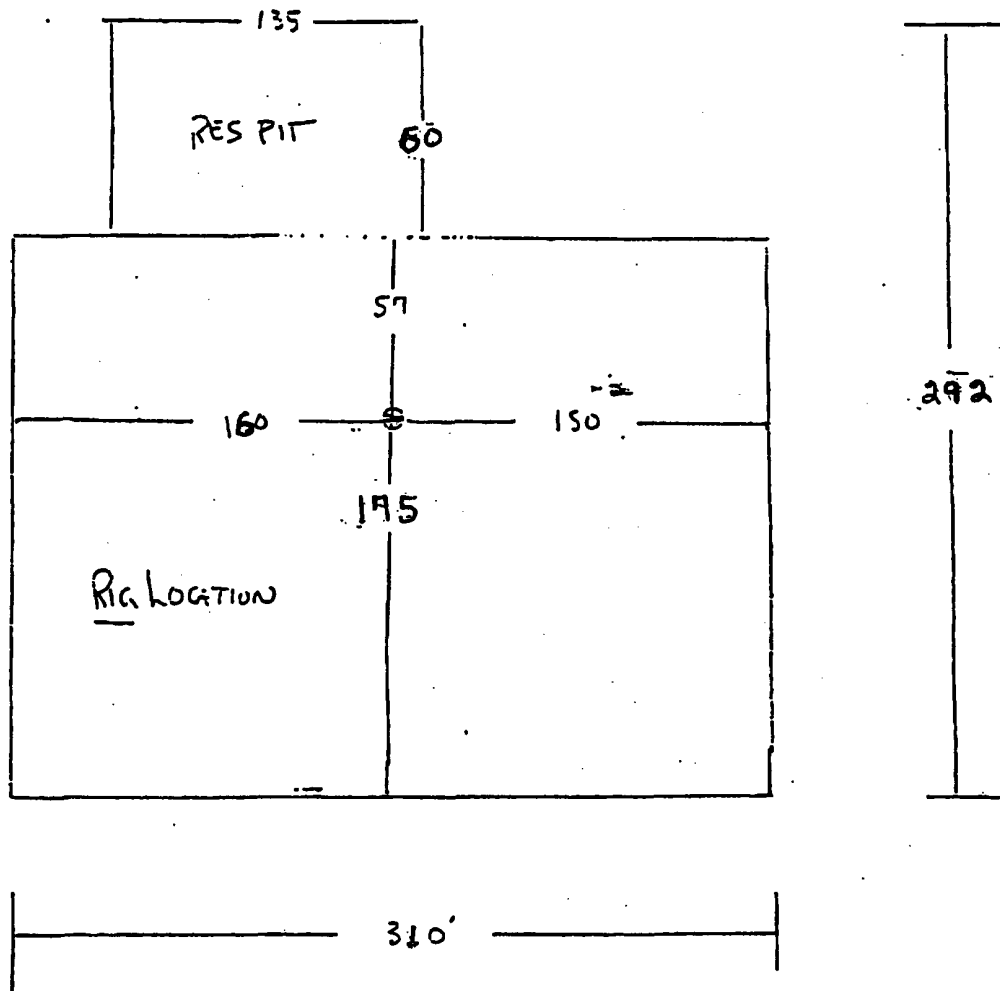


Exhibit 3

Wells within One (1) mile of proposed well

Exhibit 4



Statement Accepting Responsibility For Operations

Operator Name: EOG Resources, Inc.
Street or Box: P.O. Box 2267
City, State: Midland, TX
Zip Code: 79702

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

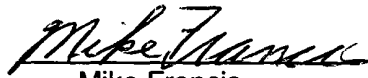
Lease No.: NM 108504

Legal Description of Land: E/2 NE/4 Sec.24, T-25-S, R-33-E, NMPM
Lea., NM

Formation(s) (if applicable):

Bond Coverage: *(State if individually bonded or another's bond)* Individually

BLM Bond File No.: NM2308 with endorsement to State of NM

Authorized Signature: 
Mike Francis

Title: Agent

Date: 3/11/2004