

New Mexico Oil Conservation Division, District I  
1625 N. French Drive  
Hobbs, NM 88240

Form 3160-3  
(August 1999)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☐ Multiple Zone

2. Name of Operator  
EOG Resources, Inc.

3a. Address  
P.O. Box 2267, Midland, TX 79702

3b. Phone No. (include area code)  
(915)686-3714

4. Location of Well (Report location clearly and in accordance with any State requirements.)

At surface 1603' FNL & 1832' FEL (U/L G)

At proposed prod. Zone 2380' FSL & 1100' FWL (U/L L)

14. Distance in miles and direction from nearest town or post office\*  
19 Miles west from Jal, NM

15. Distance from proposed\*  
location to nearest  
property or lease line, ft. S/L 1603 BHL 1100  
(Also to nearest drlg. Unit line, if any)

16. No. of Acres in lease  
See Exhibit 5  
Red Hills North Unit 4,198 Ac.

17. Spacing Unit dedicated to this well

80

18. Distance from proposed location\*  
to nearest well, drilling, completed  
applied for, on this lease, ft. 300'

19. Proposed Depth  
TVD 12,700  
TMD 19500'

20. BLM/BIA Bond No. on file  
NM2308

21. Elevations (Show whether DF, KDB, RT, GL, etc)  
GL 3403

22. Approximate date work will start\*  
3/1/2003

23. Estimated duration  
60 days

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.
2. A Drilling Plan.
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)

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 authorized officer.

25. Signature *Mike Francis*

Name (Printed/Typed)  
Mike Francis

Date  
1/14/2003

Title  
Agent

Approved by (Signature) */s/ LESLIE A. THEISS*

Name (Printed/Typed)  
/s/ LESLIE A. THEISS

Date  
FEB 20 2003

Title  
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

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)

OPER. OGRID NO. 7377  
PROPERTY NO. 26406  
POOL CODE 51020  
EFF. DATE 3-6-03  
API NO. 30-025-36217

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED

BUREAU OF LAND MGMT  
ROSWELL OFFICE

2003 JAN 15 AM 8:26

RECEIVED

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

<sup>1</sup> API Number 30-025-36217	<sup>2</sup> Pool Code 51020	<sup>3</sup> Pool Name Red Hills Bone Spring
<sup>4</sup> Property Code 26406	<sup>5</sup> Property Name RED HILLS NORTH UNIT	<sup>6</sup> Well Number 710
<sup>7</sup> OGRID No. 7377	<sup>8</sup> Operator Name EOG RESOURCES, INC.	<sup>9</sup> Elevation 3403'

<sup>10</sup> Surface Location

UL or lot no. G	Section 7	Township 25 SOUTH	Range 34 EAST, N.M.P.M.	Lot Idn	Feet from the 1603'	North/South line NORTH	Feet from the 1832'	East/West line EAST	County LEA
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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
<sup>12</sup> Dedicated Acres 120	<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

<p><sup>16</sup></p> <p>SECTION 7</p>	<p><sup>17</sup> 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>Signature <i>Mike Francis</i> Printed Name Mike Francis Title Agent</p> <p>Date 1/14/2003</p> <p><sup>18</sup> 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>DECEMBER 10, 2002</p> <p>Date of Survey Signature and Seal of Professional Surveyor <i>V. L. Bezner</i> 12-31-02</p> <p>Certificate Number V. L. BEZNER R.P.S. #7920 JOB #85014-1 / 22NE / D.C.G.</p>
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1625 N. French Dr., Hobbs, NM 88240

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UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

<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
L	12	25 SOUTH	33 EAST, N.M.P.M.		2380'	SOUTH	1100'	WEST	LEA
<sup>12</sup> Dedicated Acres 240	<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

<p><sup>16</sup></p> <p>EOG RESOURCES, INC. BOTTOM HOLE LOCATION RED HILLS NORTH UNIT #710 X = 748460 Y = 417114 N = 32.14422 W = 103.53059</p> <p>SECTION 12</p> <p>1100'</p> <p>2380'</p> <p>"DRILL BORE" AZ = 259.95°, 4255.63</p> <p>FEB 2003 Hobbs 1000</p>	<p><sup>17</sup> 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 1/14/2003 Date</p> <p><sup>18</sup> 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>DECEMBER 10, 2002</p> <p>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 #85014-2 / 22NE / D.C.G.</p>
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## DRILLING PROGRAM

EOG RESOURCES, INC.  
RED Hills North Unit No. 710  
Lea Co. NM

### 1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

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

Rustler	1100'
Delaware Mt. Group	5150'
Bone Springs	9275'
3 <sup>rd</sup> Bone Spring Sand	12225'

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

Upper Permian Sands	Above 250'	Fresh Water
3 <sup>rd</sup> Bone Spring Sands	12,225'	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 13-3/8" casing at 650' and circulating cement back to surface, and 9-5/8" casing will be set at 5200' with cement circulated back to surface

### 4. CASING PROGRAM

Hole Size	Interval	OD Casing	Weight Grade Jt. Cond. Type
17-1/2"	0-650'	13-3/8"	48# H-40 ST&C
12-1/4"	0-5200'	9-5/8"	40# N-80 LT&C
8-3/4"	0-12,700'	7"	26#P-110 LT&C
61/8	12500-TD	4 1/2"	11.6# P-110 Hydrill

#### Cementing Program:

17-1/2" Surface Casing: Cement to surface with 325 sx Prem Plus, 3% Econolite, 25 Calcium Chloride, 0.25#/sx Flocele, 150 sx Prem Plus, 2% Calcium Chloride

9-5/8" Intermediate: Cement to surface with 1100 sx Interfill C, .25#/sx flocele, 250 sx Premium Plus, 2% Calcium Chloride

7" 2<sup>nd</sup> Intermediate Cement with 800sx Premium Plus, 3% Econolite, 5#/sx Salt +.25lb/sk Flocele; 250sx Prem50/50 POZ mix 'A', 2% Halliburton-Gel First, .5% Halad-322+2%HR5.

4 1/2" Liner 150sx Premium +.3%Halad-322+.3%Super CBL+.3%SCR-100 ;350sx Acid Soluble H+FDP-C358+6% H344+.7%Econolite

## DRILLING PROGRAM

EOG RESOURCES, INC.  
RED Hills North Unit No. 710  
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: Lateral section will be drilled with oil based mud.

<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''- 12700	Cut Brine + Polymer/KCL	8.8 - 9.2	28	N.C
Lateral Section 12700-TD	Oil Based Mud	8.5-8.8	40	15

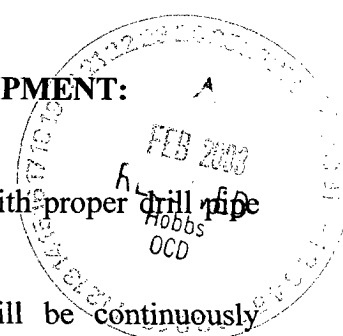
Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

### 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.**  
**RED Hills North Unit No. 710**  
**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..

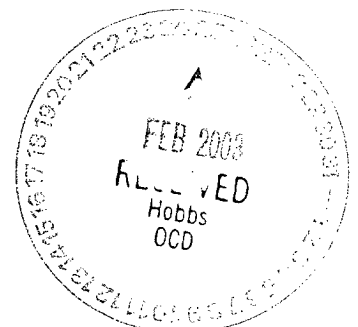
Possible sidewall cores based on shows.

### **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.  
RED Hills North Unit No. 710  
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:**

0' new road is required. Exhibit #2

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:**

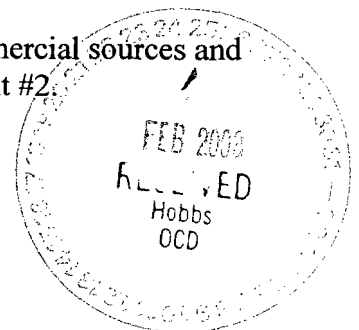
Exhibit #3 shows all existing wells within a one-mile radius of this well.

#### **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**

**EOG RESOURCES, INC.  
RED Hills North Unit No. 710  
Lea Co. 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 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.

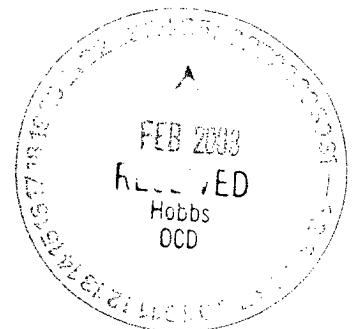
All trash and debris will be removed from the well site within 30 days after finishing drilling and/or completion operations.

### **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.  
RED Hills North Unit No. 710  
Lea Co. NM

### OTHER INFORMATION:

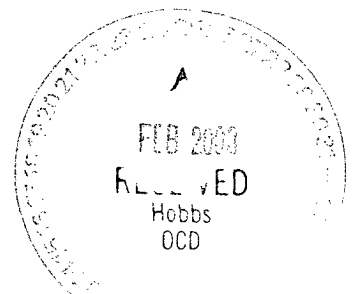
The area around the well site is grassland and the topsoil is duned and sandy. The vegetation is native scrub grasses with abundant oakbrush, sagebrush, yucca, and prickly pear.

### 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.

  
Rene St Pierre  
Division Drilling Mgr. *mf*

1/14/2002

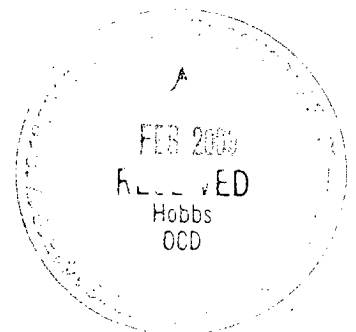


**DRILLING PROGRAM**

**EOG RESOURCES, INC.  
RED Hills North Unit No. 710  
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.

Red Hills North Unit 710

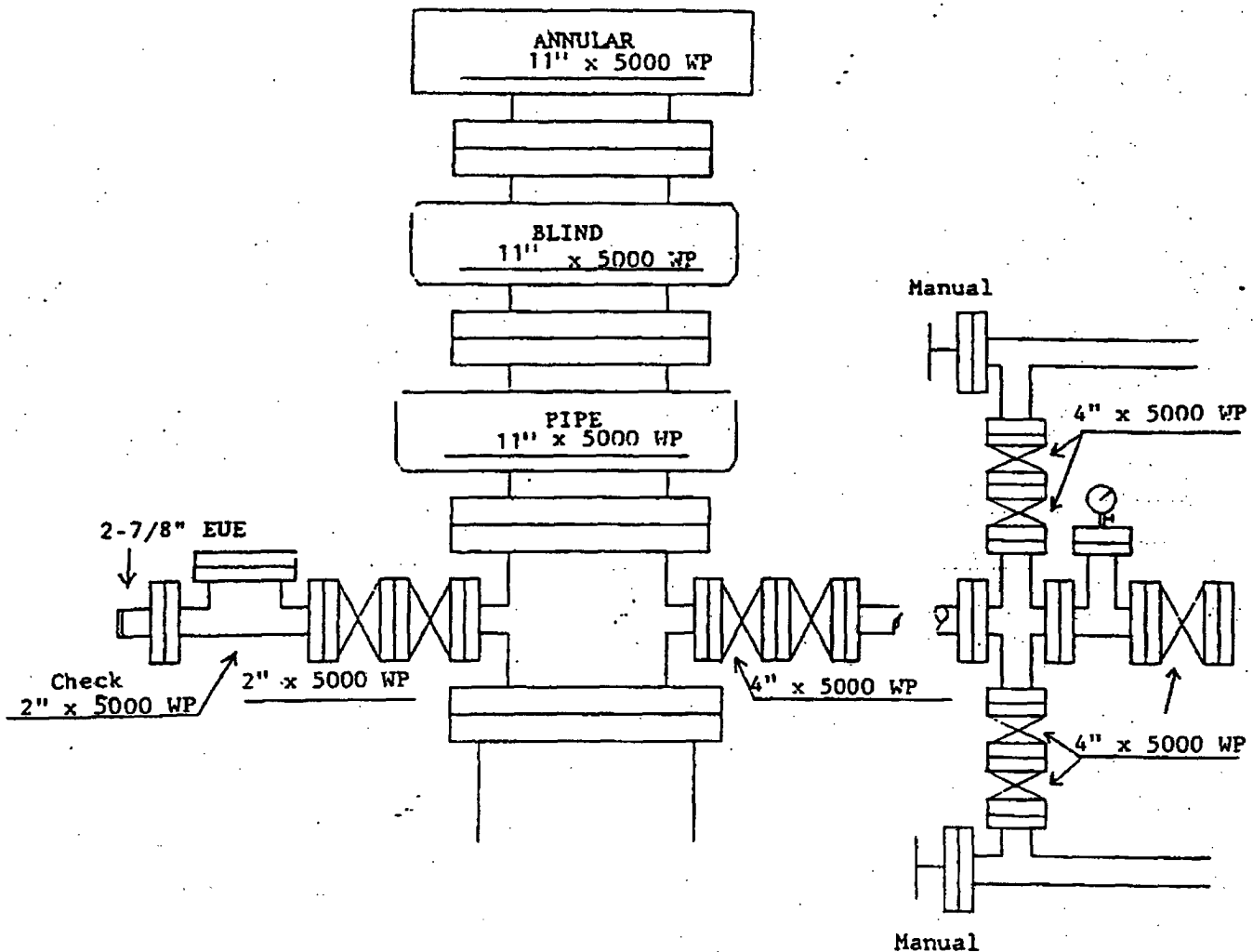
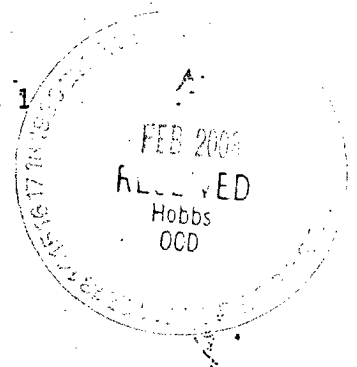
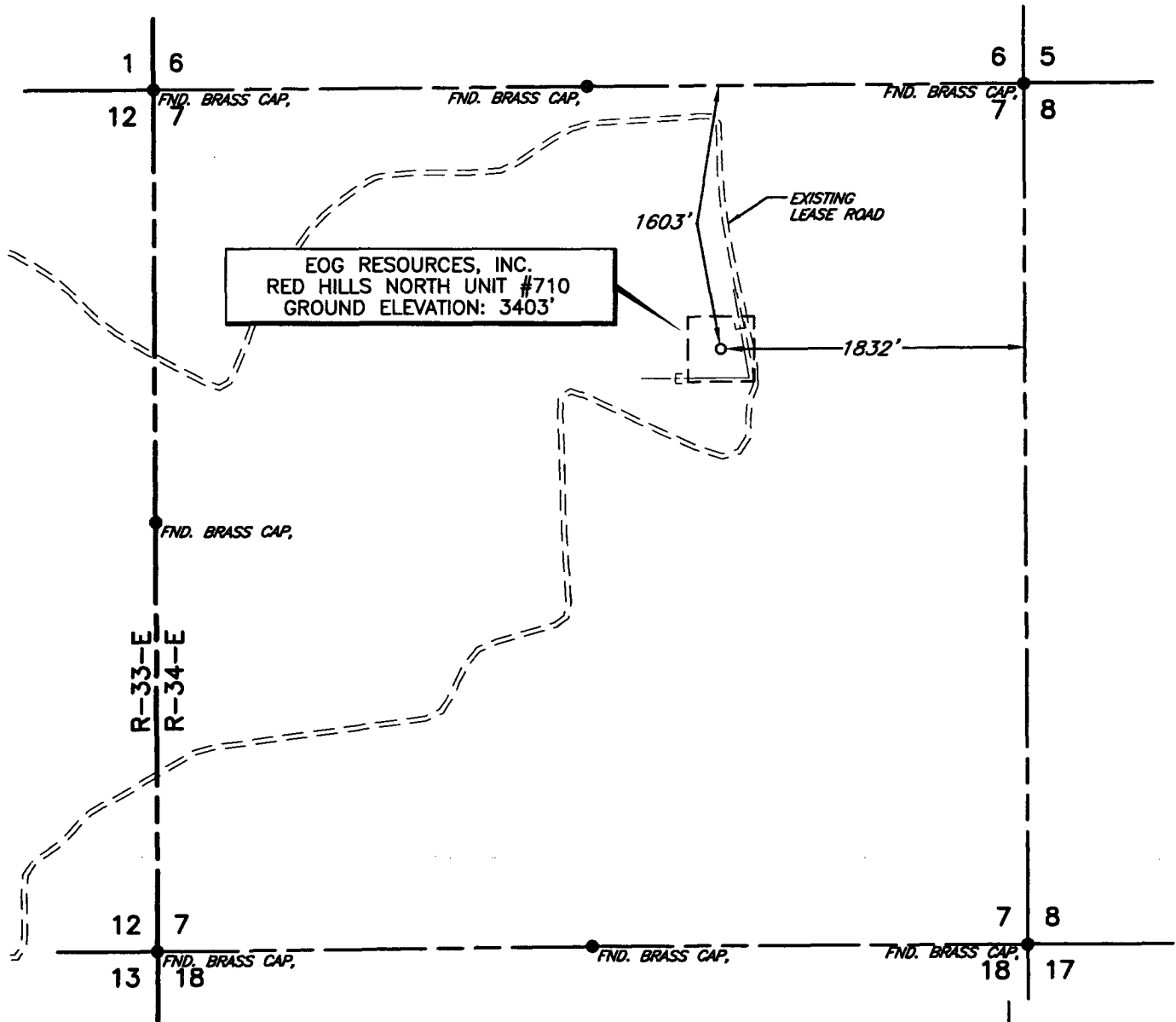


Exhibit 1



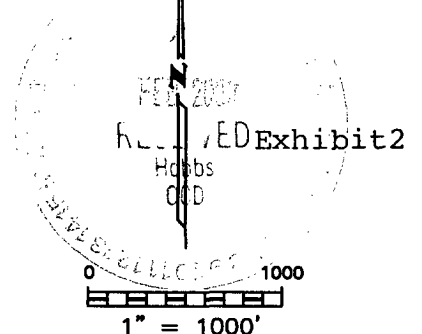
SECTION 7, TOWNSHIP 25 SOUTH, RANGE 34 EAST, N.M.P.M.,  
LEA COUNTY NEW MEXICO



I, V. L. BEZNER, A PROFESSIONAL SURVEYOR IN THE STATE OF NEW MEXICO AND AUTHORIZED AGENT OF TOPOGRAPHIC LAND SURVEYORS, HEREBY CERTIFY THIS PLAT TO BE A TRUE REPRESENTATION OF A SURVEY PERFORMED IN THE FIELD UNDER MY SUPERVISION, THAT I AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT THIS PLAT AND FIELD SURVEY UPON WHICH IT IS BASED MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO. (RULE 500.6 EASEMENT SURVEYING)

*V. Lynn Bezner*  
V. L. BEZNER, P.S. NO. 7920

PLAN VIEW  
1" = 1000'



DATE OF FIELD WORK: DECEMBER 10, 2002

**EOG RESOURCES, INC.**

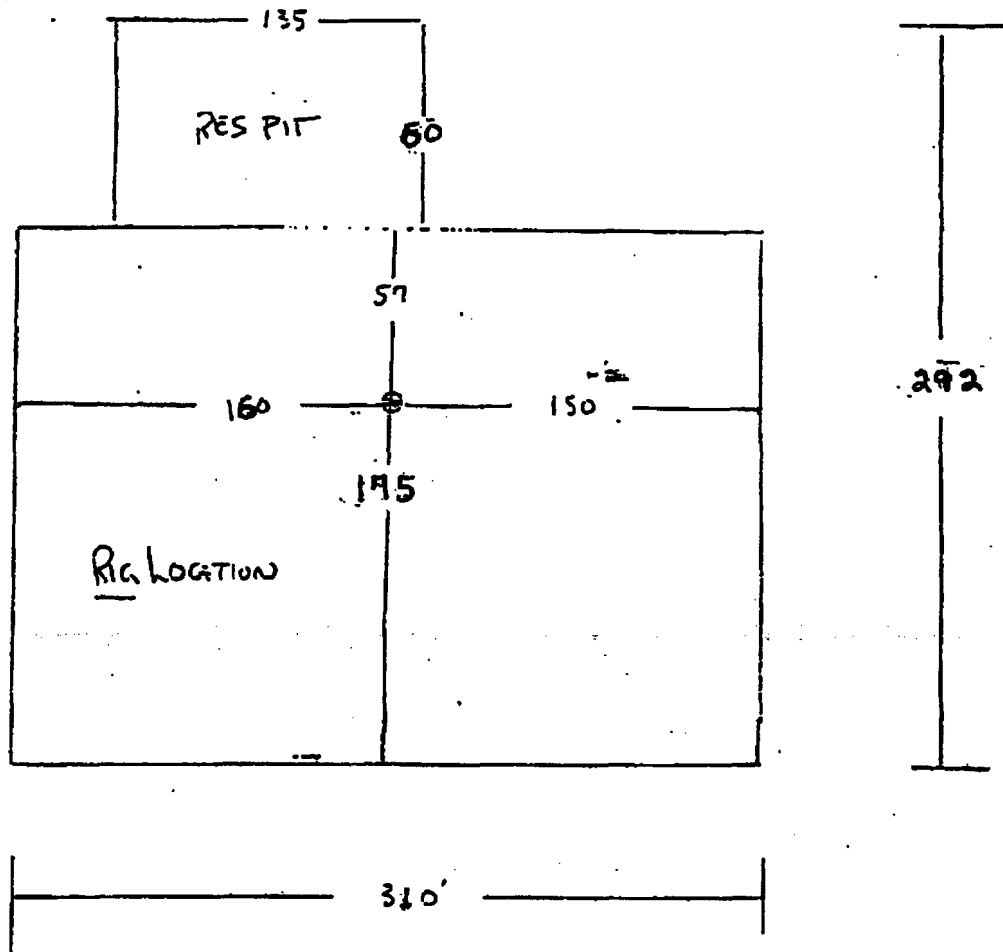
SURVEYING AND MAPPING BY  
TOPOGRAPHIC LAND SURVEYORS  
MIDLAND, TEXAS

SCALE: 1" = 1000'  
DATE: DECEMBER 10, 2002  
JOB NO.: 85014-1BF  
QUAD NO.: 99 SE  
SHEET : 1 OF 1

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



Exhibit 4  
Red Hills North Unit 710



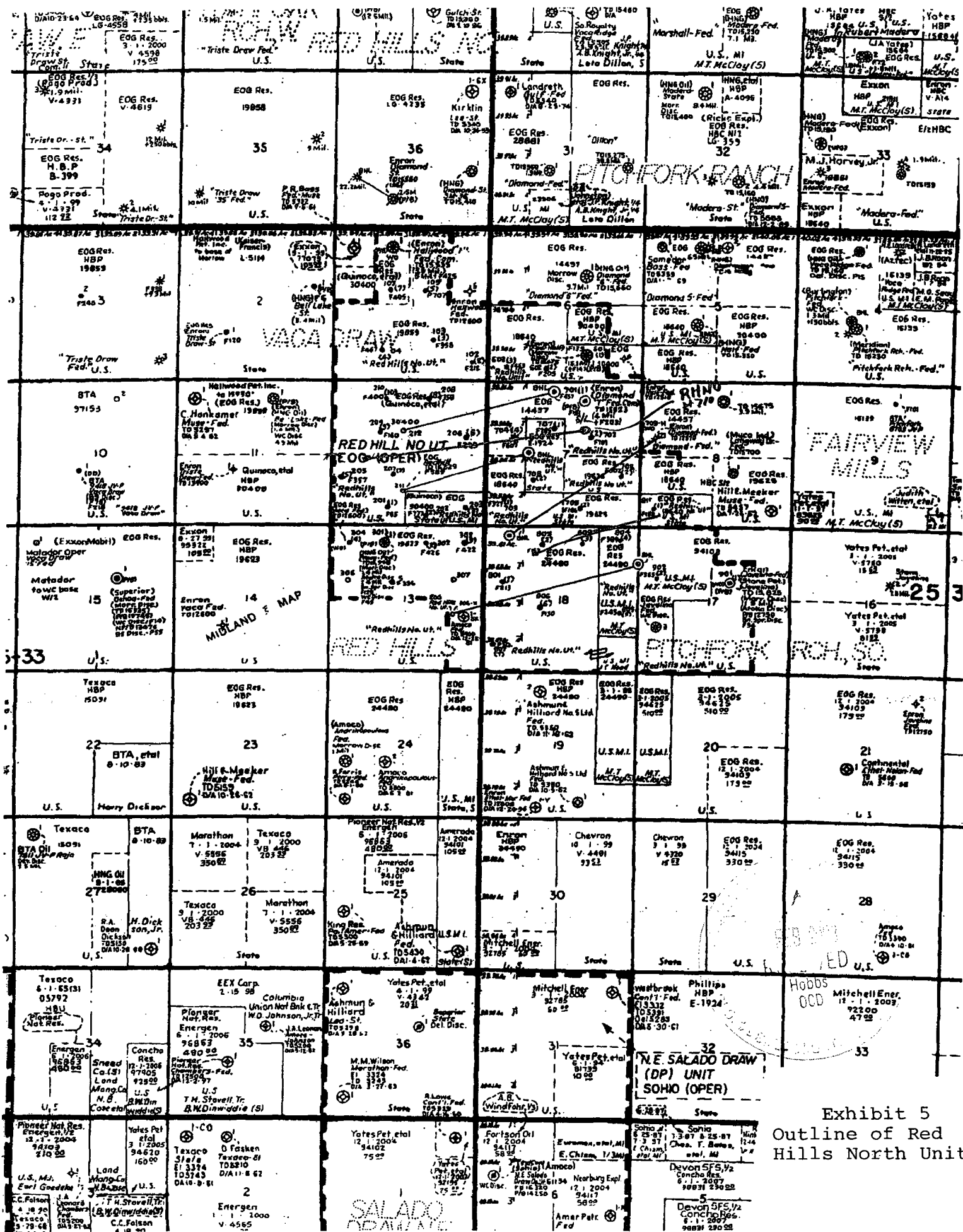
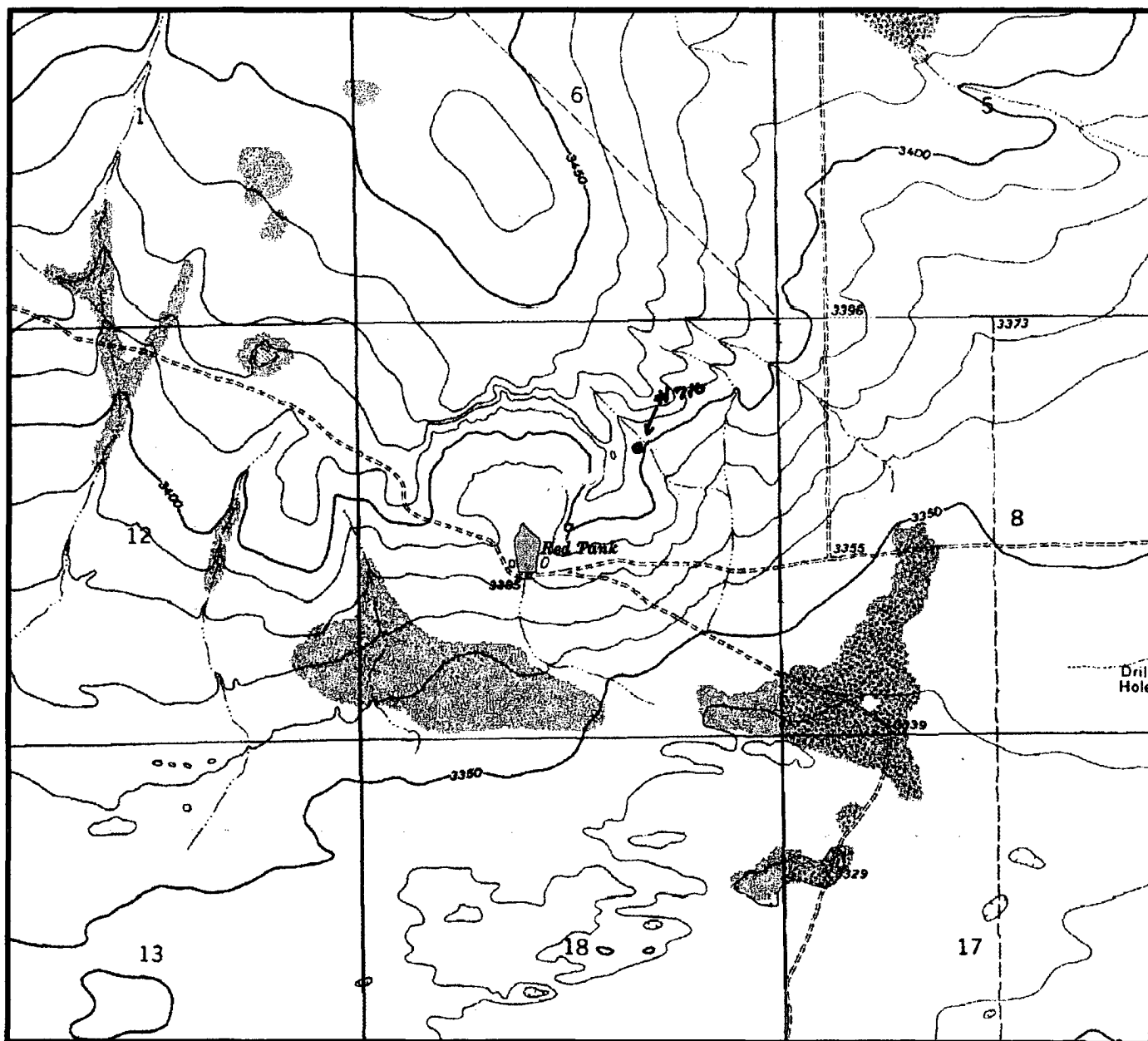


Exhibit 5  
Outline of Red  
Hills North Unit



SCANNED

# LOCATION & ELEVATION VERIFICATION MAP



SCALE : 1" = 2000'

CONTOUR INTERVAL 10'

SECTION 7 TWP 25-S RGE 33-E

SURVEY NEW MEXICO PRINCIPAL MERIDIAN

COUNTY LEA STATE NM

DESCRIPTION 1602' FNL & 1832' FEL

ELEVATION \_\_\_\_\_

OPERATOR EOG RESOURCES, INC.

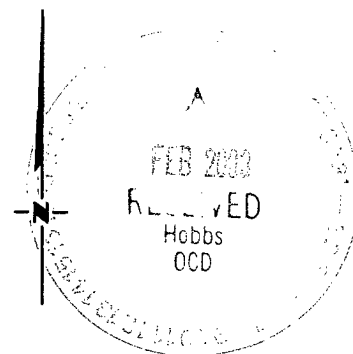
LEASE RED HILLS NORTH UNIT #710

U.S.G.S. TOPOGRAPHIC MAP

BELL LAKE, NEW MEXICO

SCALED LAT. \_\_\_\_\_ N = \_\_\_\_\_

LONG. \_\_\_\_\_ W = \_\_\_\_\_



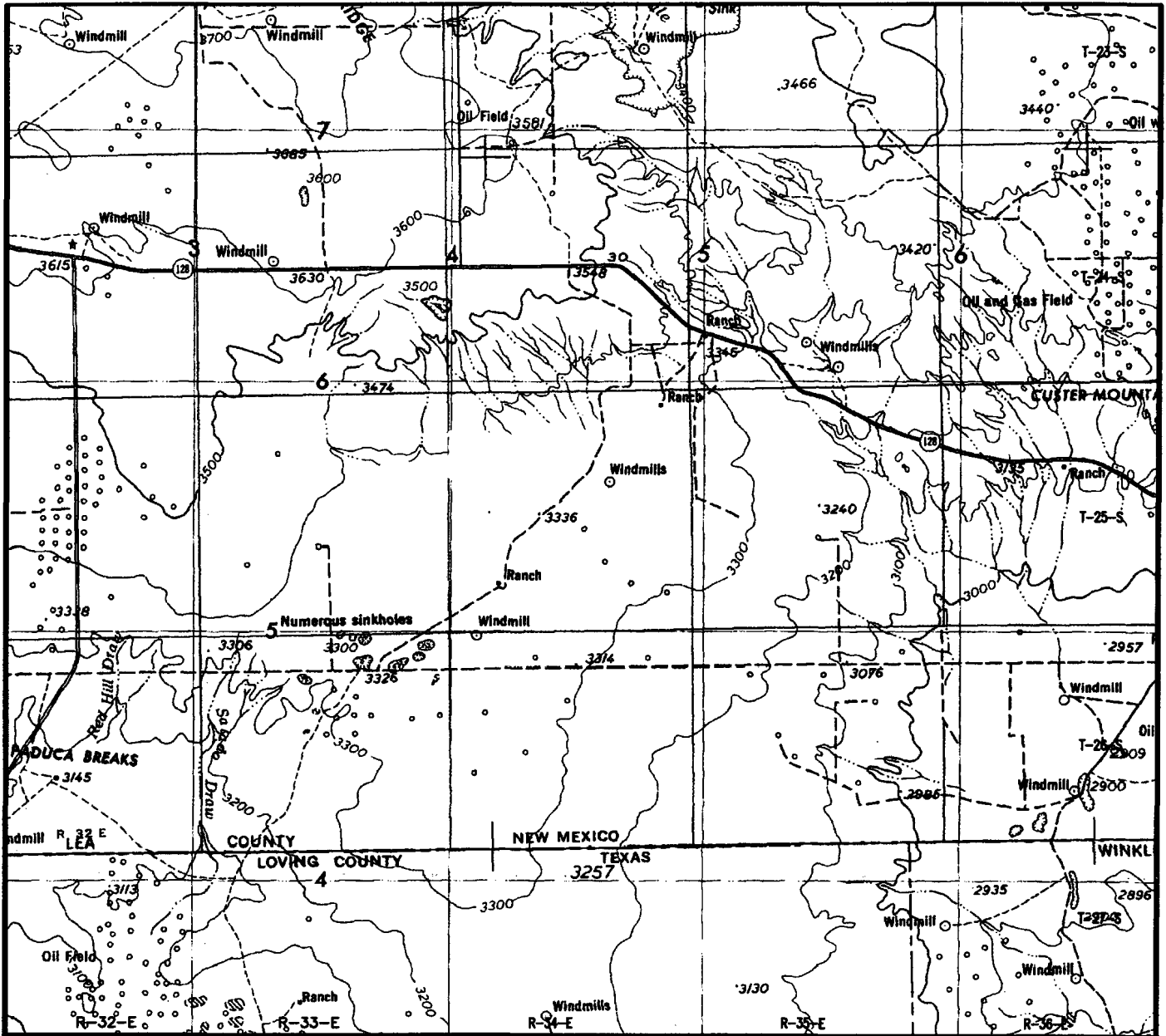
## TOPOGRAPHIC LAND SURVEYORS

*Surveying & Mapping for the Oil & Gas Industry*

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

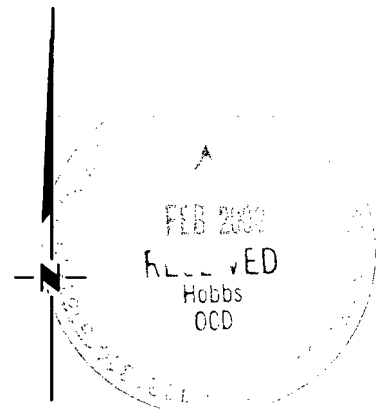
SCANNED

# VICINITY MAP



SECTION 7 TWP 25-S RGE 33-E  
 SURVEY NEW MEXICO PRINCIPAL MERIDIAN  
 COUNTY LEA STATE NM  
 DESCRIPTION 1603' FNL & 1832' FEL

OPERATOR EOG RESOURCES, INC.  
 LEASE RED HILLS NORTH UNIT #710  
 DISTANCE & DIRECTION FROM JAL GO WEST 23.0 MILES  
ON STATE HWY. 128, THENCE SOUTHEAST 2.0 MILES ON  
LEASE RD., THENCE EAST 0.7 MILES, THENCE SOUTH 2.6  
MILES ON LEASE RD., THENCE WEST 1.2 MILES ON LEASE  
RD., THENCE SOUTHWEST 0.2 MILES ON LEASE RD. TO A  
POINT ±900' SOUTH OF THE LOCATION.



## TOPOGRAPHIC LAND SURVEYORS

*Surveying & Mapping for the Oil & Gas Industry*

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

**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.:** NM14437

**Legal Description of Land:** Section 7, T25S, R34E, NMPM  
Lea Co., 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:** 1/14/2003

