

F-34

30227

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 MANGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM30400 Drill Site NMNM19859	
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.		7. If Unit or CA Agreement, Name and No. Red Hills North Unit	
3a. Address P.O. Box 2267 Midland, TX 79702		8. Lease Name and Well No. Red Hills North Unit 604	
3b. Phone No. (include area code) (915) 686-3714		9. API Well No. 30-025-35900	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 2200' FEL & 1980' FSL At proposed prod. Zone 200' FSL & 1775' FWL <b>1880 Carlsbad Controlled Water Basin</b> <b>SUBJECT TO LIKE APPROVAL BY STATE</b>		10. Field and Pool, or Exploratory Red Hills Bone Spring	
14. Distance in miles and direction from nearest town or post office* 20 Mi. west from Jal		11. Sec., T., R., M., or Blk. And Survey or Area Sec 6 T-25-S R-34 E Sec 1 T-25-S R33-E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. Unit line, if any) 1900' 660'		12. County or Parish Lea	
16. No. of Acres in lease See Exhibit 5		13. State NM	
17. Spacing Unit dedicated to this well 320ac		18. Distance from proposed location* to nearest well, drilling, completed applied for, on this lease, ft. 900	
19. Proposed Depth TVD 12,500 TMD 19300		20. BLM/BIA Bond No. on file nm2308	
21. Elevations (Show whether DF, KDB, RT, GL, etc) GL 3447.		22. Approximate date work will start* 5/1/2002	
23. Estimated duration 70 days		24. Attachments	

The following completed in accordance with the requirements of Onshore Oil an 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)
- 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 3/26/2002
Title Agent		

Approved by (Signature) <i>JS/ JOE G. LARA</i>	Name (Printed/Typed) JS/ JOE G. LARA	Date APR 30 2002
Title <i>JS/</i> FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

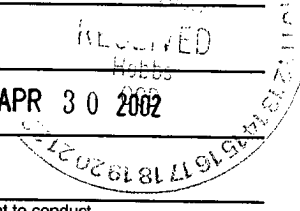
Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached  
**APPROVAL FOR 1 YEAR**

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)

OPER. OGRID NO. 7377  
 PROPERTY NO. 26406  
 POOL CODE 51020  
 EFF. DATE 5-2-02  
 API NO. 30-025-35900

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS  
ATTACHED



*KE*  
*MP*

J  
2  
A



151 JOE G. LARA

151 JOE G. LARA

BUREAU OF LAND MGMT  
ROSWELL OFFICE

2002 MAR 27 AM 10:26

RECEIVED

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 30-025-35900		'Pool Code 51020		'Pool Name Red Hills Bone Spring	
'Property Code 26406		'Property Name RED HILLS NORTH UNIT			'Well Number 604
'OGRID No. 7377		'Operator Name EOG RESOURCES INC.			'Elevation 3447

<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
J	6	25-S	34-E		1880	SOUTH	2200	EAST	LEA

<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

'Dedicated Acres 200	'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

16				<sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.	
				<p><i>Mike Francis</i> Signature</p> <p>Mike Francis Printed Name</p> <p>Agent Title</p> <p>3/26/02 Date</p>	
	<p><sup>11</sup> EOG RESOURCES INC. RED HILLS NORTH UNIT No. 604 ELEV.=3447' Y=421995.61 X=755688.26 LAT.=32°09'29.95" LONG.=103°30'25.62"</p>			<p><sup>18</sup> SURVEYOR CERTIFICATION 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>JANUARY 18, 2002 Date of Survey</p> <p>Signature and Seal of Professional Surveyor:    <i>James E. Tompkins</i>  Certificate Number 14729</p>	
	<p>HORIZONTAL DRILLING DIRECTION S 74°52'38" W (GRID) 6811.9'</p>				
	<p>1880'</p>				

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  
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*OGRID No. 7377	*Operator Name EOG RESOURCES INC.		*Elevation 3447

<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

<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
N	1	25-S	33-E		200	SOUTH	1775	WEST	LEA

*Dedicated Acres 120	*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

<p>16</p>	<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 3/26/02 Date</p>
<p>EOG RESOURCES INC. RED HILLS NORTH UNIT No. 604 BOTTOM HOLE LOCATION Y=420218.52 X=749112.33 LAT.=32°09'09.85" LONG.=103°31'42.26"</p> <p>HORIZONTAL DRILLING DIRECTION S 74°52'38" W (GRID) 6611.9</p> <p>1775'      200'</p>	

**DRILLING PROGRAM  
EOG RESOURCES, INC.  
Red Hills North Unit No. 604H  
Lea County, NM**

**1. GEOLOGIC NAME OF SURFACE FORMATION:**

Permian

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

Rustler	1100'
Delaware Mt. Group	5150'
Bone Spring Lime	9275'
3 <sup>rd</sup> Bone Spring Sand	12225'
TVD	12500'
TMD	19300'

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

Upper Permian Sands	100'	Fresh Water
3 <sup>rd</sup> Bone Spring Sand	12400'	Oil

**4. CASING PROGRAM**

<u>Hole Size</u>	<u>Interval</u>	<u>OD Casing</u>	<u>Weight Grade Jt. Cond. Type</u>
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"	0-12700'	7"	26#/P110 LTC
6 1/8"	11,500-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, 2% Calcium Chloride, 0.25#/sx Flocele, 150 sx Prem Plus, 2% Calcium Chloride

9 5/8" Intermediate:

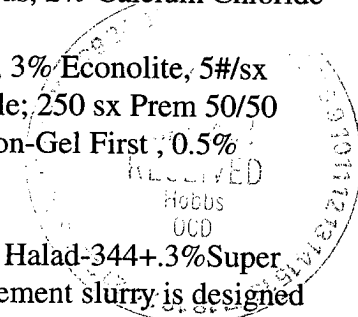
Cement to surface with 1100sx Interfill C, .25#/sx flocele, 250 sx Premium Plus, 2% Calcium Chloride

7" 2<sup>nd</sup> Intermediate

Cement w/800sx Premium, 3% Econolite, 5#/sx Salt (3%), +.25lb/sk Flocele, 250 sx Prem 50/50 Poz mix 'A', 2% Halliburton-Gel First, 0.5% Halad-322. +2%HR-5

4 1/2" Liner

520 sx Premium Plus +.3% Halad-344+.3%Super CBL+.3%SCR-100. This cement slurry is designed to bring TOC to 11500'.



**DRILLING PROGRAM  
EOG RESOURCES, INC.  
Red Hills North Unit No. 604H  
Lea 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 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 and prior to drilling out of first intermediate. 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 Mud)	8.5	40-45	N.C.
650'-5200'	Brine Water	10.0	30	N.C.
5200' - 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.

**DRILLING PROGRAM  
EOG RESOURCES, INC.  
Red Hills North Unit No. 604H  
Lea County, NM**

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

Electric logging will consist of GR-Compensated Neutron from 12,500' to surface. LWD GR from 12,500' to 13,800'

**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. 604H  
Lea 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:**

134.9' 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:**

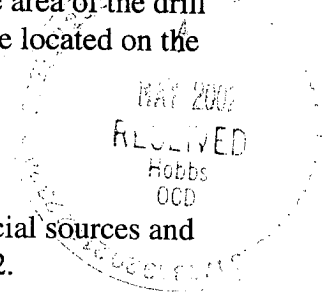
Exhibit #3 shows all existing wells within a one-mile radius of this well.

**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  
EOG RESOURCES, INC.  
Red Hills North Unit No. 604H  
Lea 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.

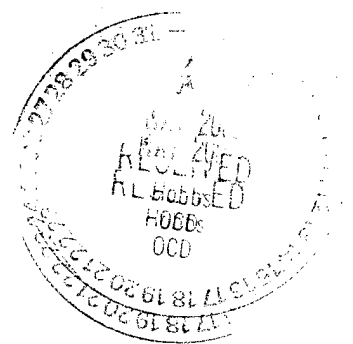
All trash and debris will be removed from the well site within 30 days after finishing drilling and/or completion operations.

**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.



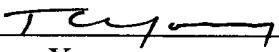
**DRILLING PROGRAM  
EOG RESOURCES, INC.  
Red Hills North Unit No. 604H  
Lea County, NM**

**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.

  
\_\_\_\_\_  
Tom Young  
Drilling Manager *mz*

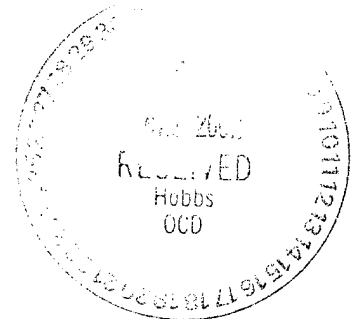
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Date: 3/26/02

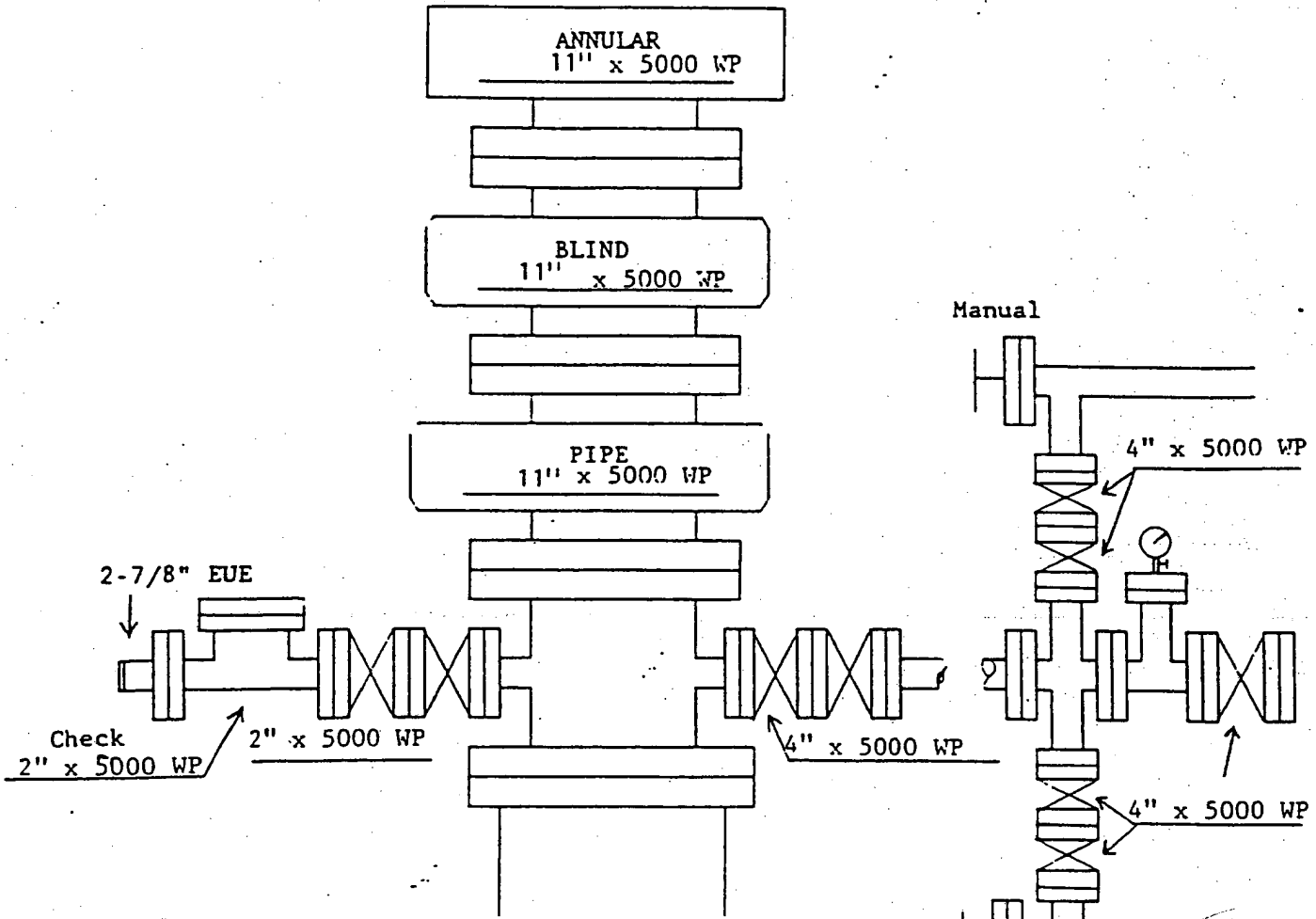
**DRILLING PROGRAM  
EOG RESOURCES, INC.  
Red Hills North Unit No. 604H  
Lea County, NM**

**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.



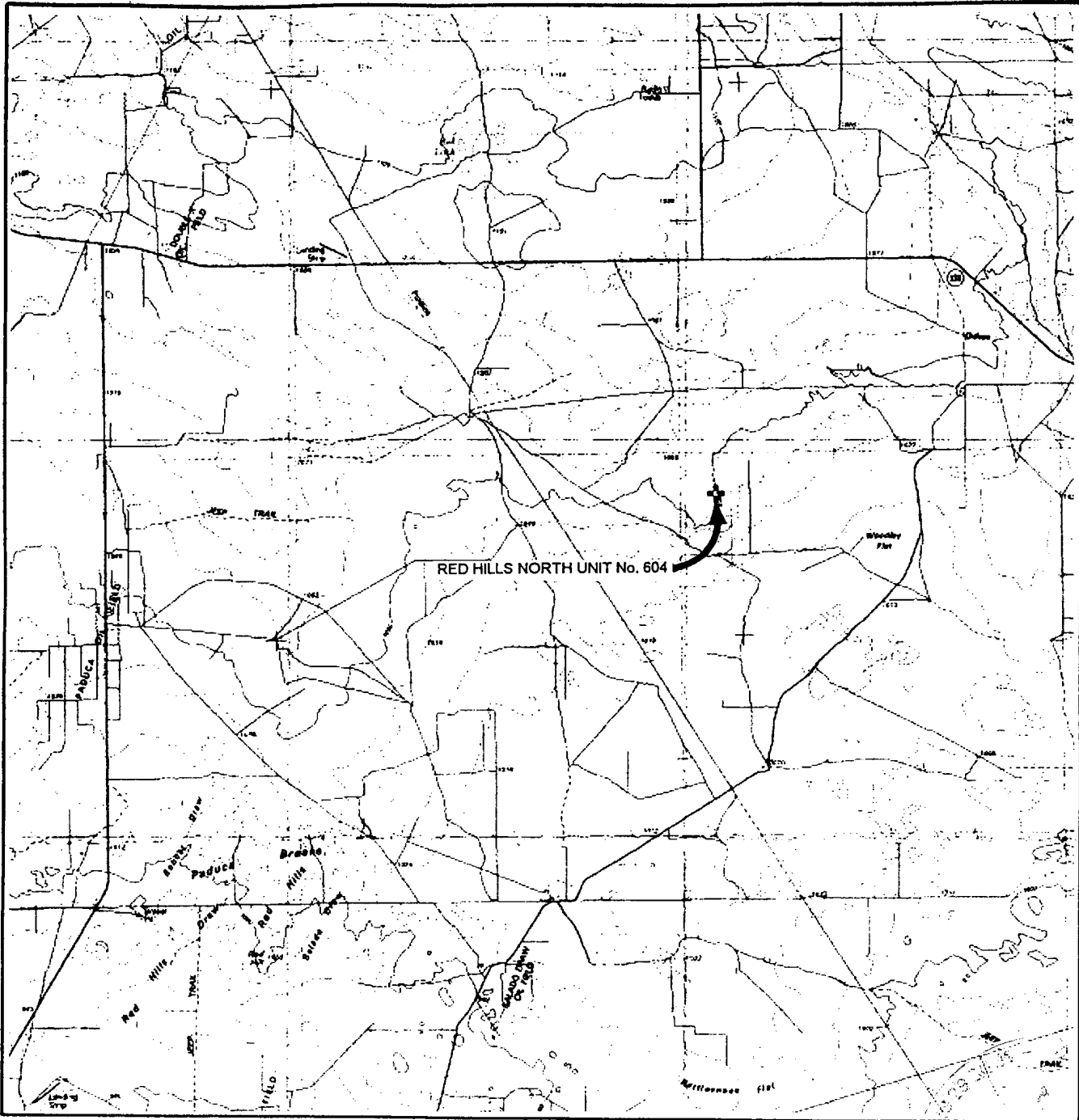
EOG Resources, Inc.



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Hobbs  
OCD-  
MAY 2000  
7532128 59202

Exhibit 1

# VICINITY MAP



SCALE: 1" = 3 MILES

Exhibit 2

RECEIVED  
Hobbs  
OCD

WTC 46463  
 SEC. 6 TWP. 25-S RGE. 34-E  
 SURVEY N.M.P.M.  
 COUNTY LEA STATE NM  
 DESCRIPTION 1880' FSL & 2200' FEL  
 ELEVATION 3447'  
 OPERATOR EOG RESOURCES, INC.  
 LEASE RED HILLS NORTH UNIT No. 604

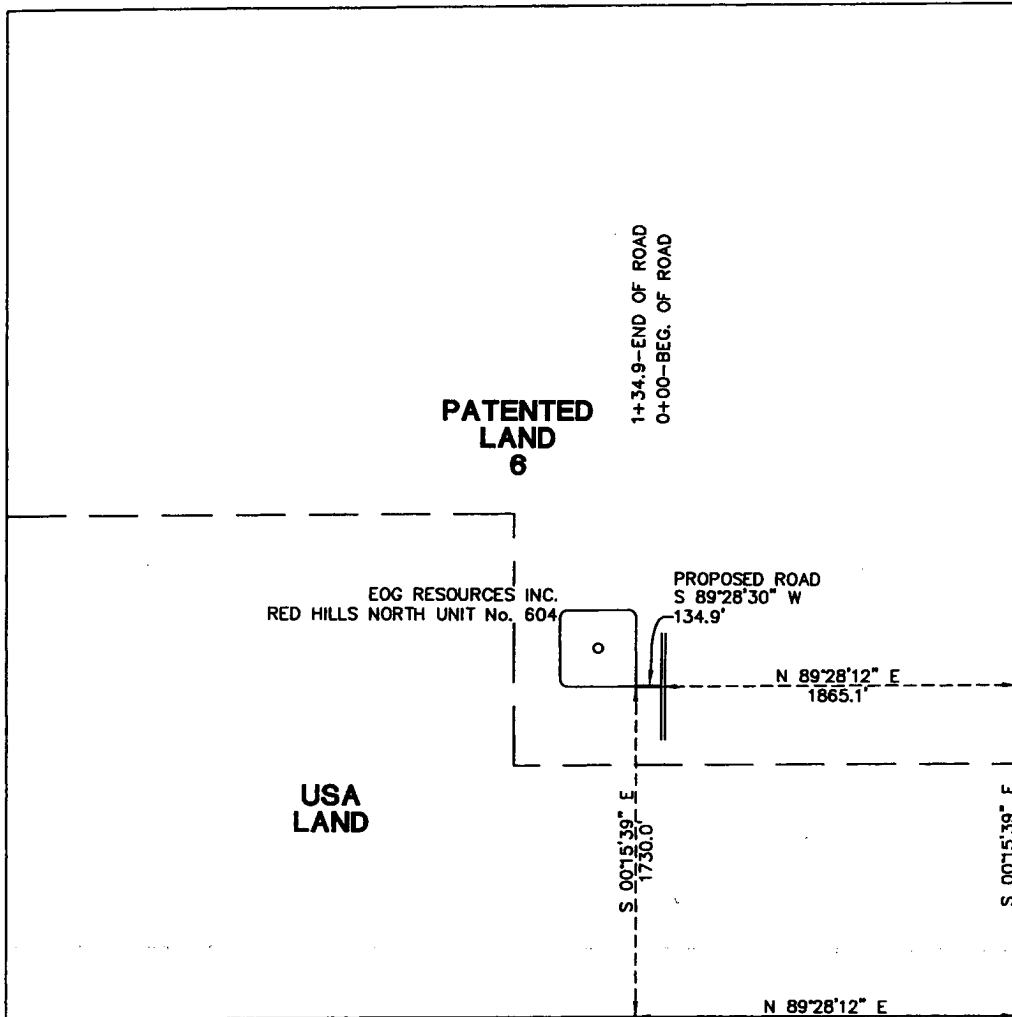
**WEST TEXAS CONSULTANTS, INC.**

ENGINEERS-PLANNERS-SURVEYORS

MIDLAND, TEXAS

915-685-3800

SECTION 6, TOWNSHIP 25 SOUTH, RANGE 34 EAST, N.M.P.M.  
LEA COUNTY, NEW MEXICO



CENTERLINE DESCRIPTION OF A PROPOSED ROAD:

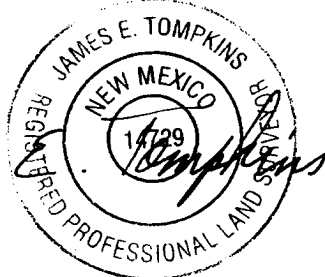
BEGINNING at a point in an existing road, from which point the southwest corner of Section 6, T-25-S, R-34-E, N.M.P.M., Lea County, New Mexico, bears N 89° 28' 12" E, 1865.1 feet and S 00° 15' 39" E, 1730.0 feet;  
THENCE S 89° 28' 30" W, with the centerline of proposed road, 134.9 feet to a point in the southeast corner of a well pad for EOG Resources, Inc. RED HILLS NORTH UNIT No. 604, for the end of this line; from which point the southeast corner of said Section 6 bears S 00° 15' 39" E, 1730.0 feet and N 89° 28' 12" E, 2000.0 feet.

Exhibit 2a

PROPOSED ROAD TO SERVE  
RED HILLS NORTH UNIT No. 604

I hereby certify that this plat was prepared from an actual survey made on the ground and meets or exceeds all requirements for land surveys as specified by the state of New Mexico.

*James*



JAMES E. TOMPKINS  
Registered Professional Surveyor  
New Mexico Certificate No. 14729

**EOG RESOURCES INC.**

134.9 feet of proposed road in  
Section 6, T-25-S, R-34-E, N.M.P.M.,  
Lea County, New Mexico

**WEST TEXAS CONSULTANTS, INC.**

ENGINEERS-PLANNERS-SURVEYORS

MIDLAND, TEXAS

Survey Date: 1-18-02

Date: 1-23-02

Scale: 1" = 1000'

WTC No.: 46463

Drawn By: JWD

Sheet 1 of 1

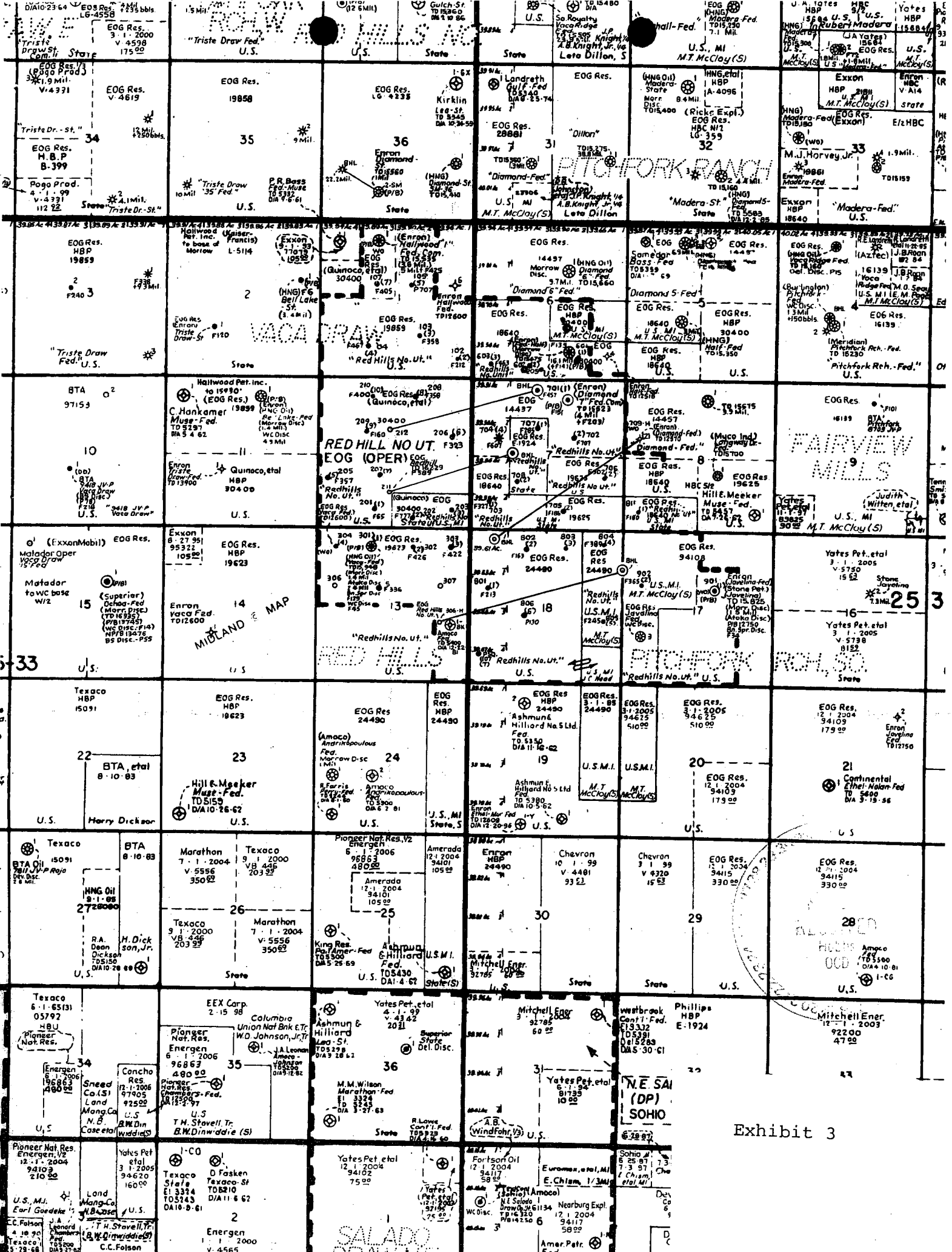
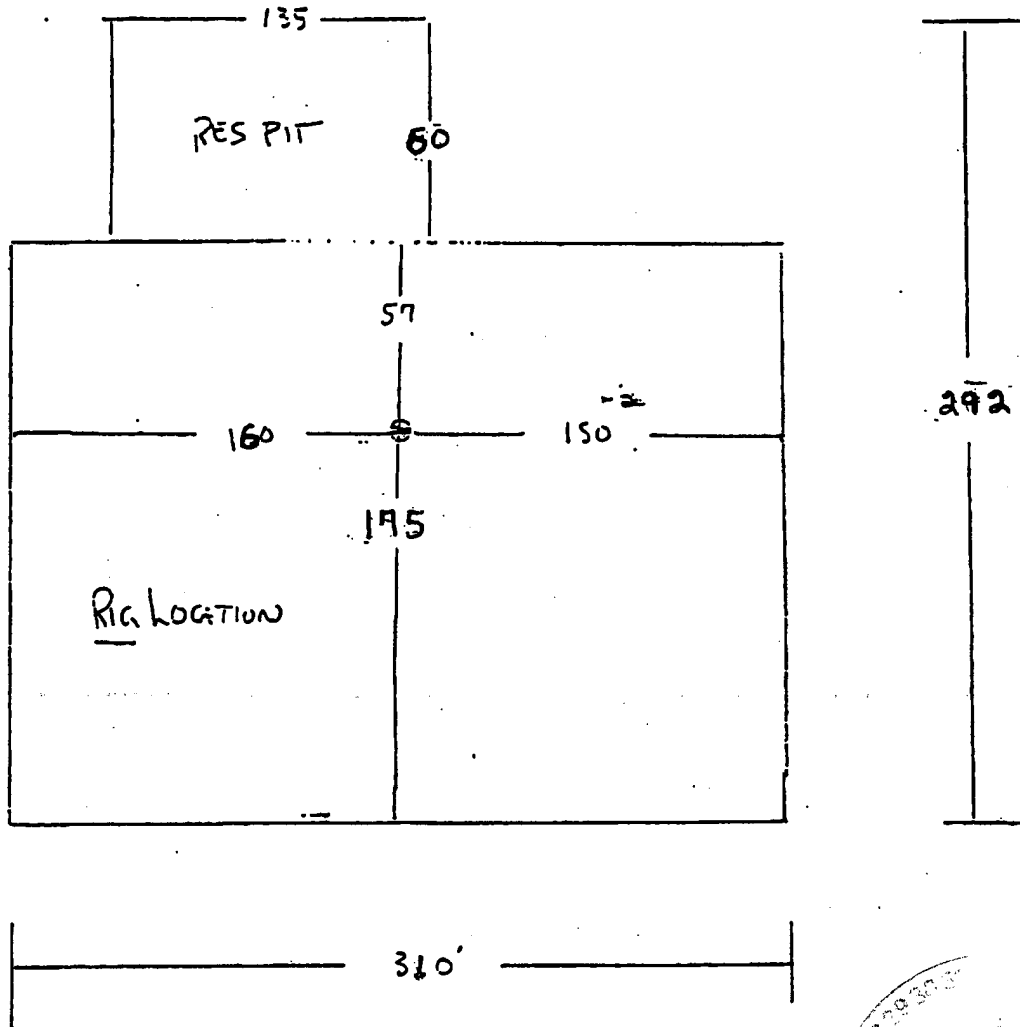
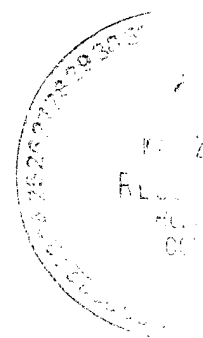


Exhibit 3

Exhib 4



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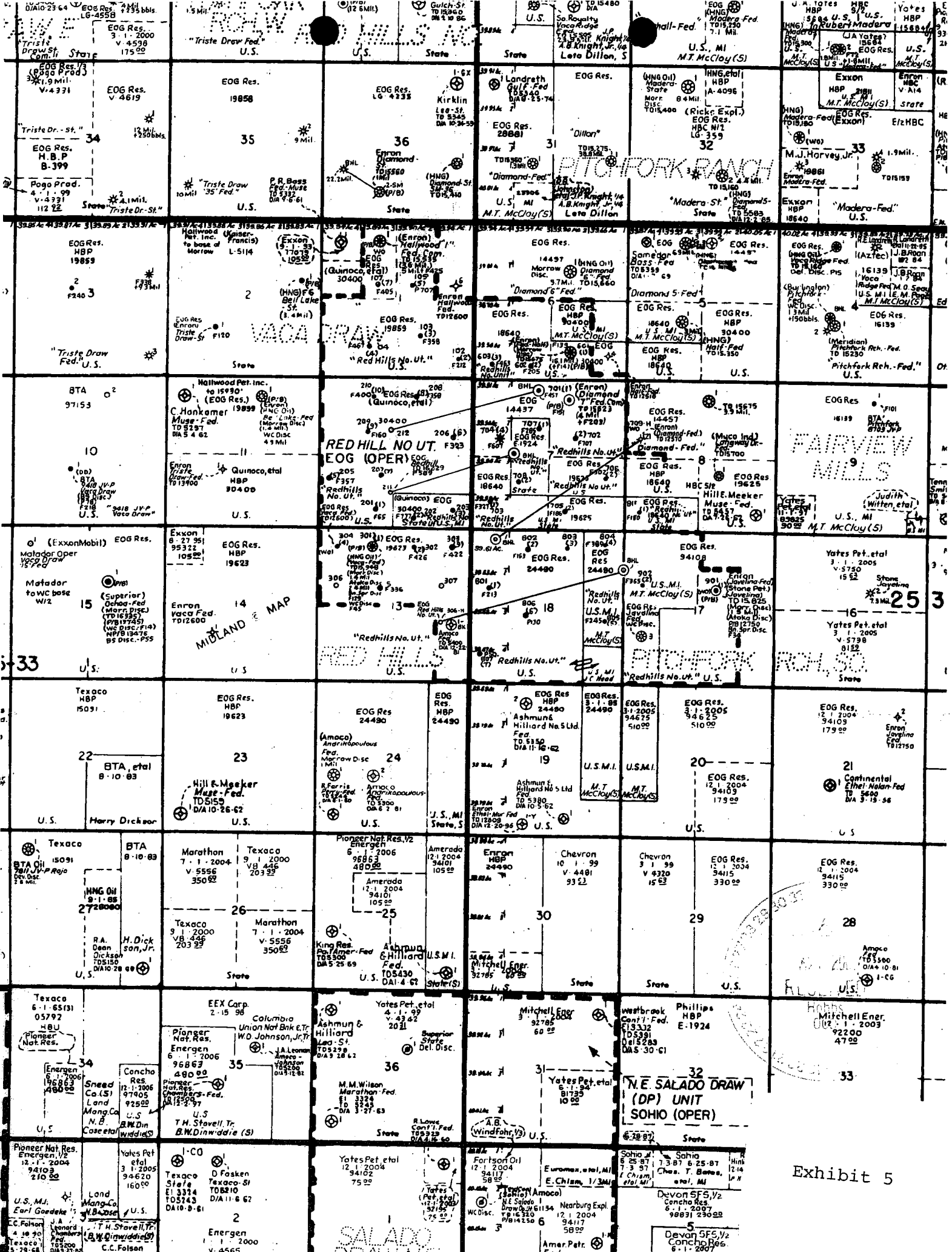


Exhibit 5

**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.:** NMNM 30400

**Legal Description of Land:** Section 6, T25S, R34E, NMPM  
Lea Co., NM (S/2 SE/4)

**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

Mike Francis

**Title:** Agent

**Date** 2/26/02\_



**EOG Resources, Inc.**  
P.O. Box 2267  
Midland, TX 79702  
(915) 686-3600

April 2, 2002

Bureau of Land Management  
2909 West Second St.  
Roswell, NM 88202

RE: APD

Red Hills North Unit No. 604 Well  
NM-30400

Gentlemen,

Please be advised EOG Resources, Inc. and Mark McCloy (Surface Owner) have reached an agreement concerning surface use for the referenced well.

Thanking you for your attention to this matter I am very truly yours,

  
Mike Francis

