

D-2
E-4h
New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

Form 3160-3

(August 1999)

OPEN. U.S. NO. 7377

PROPERTY NO. 26406

POOL CODE 51020

EFF. DATE 4-3-03

API NO. 30-025-36327

UNITED STATES

DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

362

FORM APPROVED

OMB No. 1004-0136

Expires November 30, 2000

5. Lease Serial No.

S/L NM94108: BHL NM24490

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

Red Hills North Unit NM NM 104037 X

8. Lease Name and Well No.

Red Hills North Unit 904

9. API Well No.

30-025-36237

10. Field and Pool, or Exploratory

Red Hills Bone Spring

11. Sec., T., R., M., or Blk. And Survey or Area

S/L Sec. 17 T-25-S; R-34-E

BHL Sec. 18 T-25-S; R-34-E

12. County or Parish

Lea

13. State

NM

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 1000' FNL & 1700' FWL (U/L C)

At proposed prod. Zone 1500' FNL & 1050' FWL (U/L E)

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.

940'

(Also to nearest drlg. Unit line, if any)

same

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.

1700

19. Proposed Depth

TVD 12,700

TMD 18,639

20. BLM/BIA Bond No. on file

NM2308

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

GL3337'

22. Approximate date work will start*

4/1/2003

23. Estimated duration

60 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:

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

Title

Agent

Date

2/10/2003

Approved by (Signature)

/s/ JOE G. LARA

Name (Printed/Typed)

/s/ JOE G. LARA

Title

ACTING FIELD MANAGER

Office

CARLSBAD FIELD OFFICE

Date

MAR 28, 2003

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)

SUBJECT TO LIKE APPROVAL BY STATE

**APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED**

KZ
MP

RECEIVED

2003 FEB 19 AM 10:40

BUREAU OF LAND MGMT.
ROSWELL OFFICE

121 JOE G. LARBY

121 JOE G. LARBY

COPIES
121 JOE G. LARBY

398

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

State of New Mexico

Form C-102

Energy, Minerals, and Natural Resources Department

Revised August 15, 2000

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

Submit to Appropriate District Office

OIL CONSERVATION DIVISION

State Lease - 4 copies

Fee Lease - 3 copies

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

1220 South St. Francis Dr.

Santa Fe, New Mexico 87505

DISTRICT IV
1230 S. St. Francis Dr., Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-36237	² Pool Code 51020	³ Pool Name Red Hills Bone Spring
⁴ Property Code 26406	⁵ Property Name RED HILLS NNORTH UNIT	⁶ Well Number 904
⁷ GRID No. 7377	⁸ Operator Name EOG RESOURCES, INC.	⁹ Elevation 3337'

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
C	17	25 SOUTH	34 EAST, N.M.P.M.		1000'	NORTH	1700'	WEST	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

¹⁶ SECTION 17	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. <i>Mike Francis</i> Signature Mike Francis Printed Name Agent Title 2/10/2003 Date ¹⁸ 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 the best of my belief. JANUARY 28, 2003 Date of Survey Signature and Seal of Professional Surveyor Certificate Number V. L. BEZNER R.P.S. #7920 JOB #85694-1 / 22 NE / J.C.P.
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1625 N. French Dr., Hobbs, NM 88240

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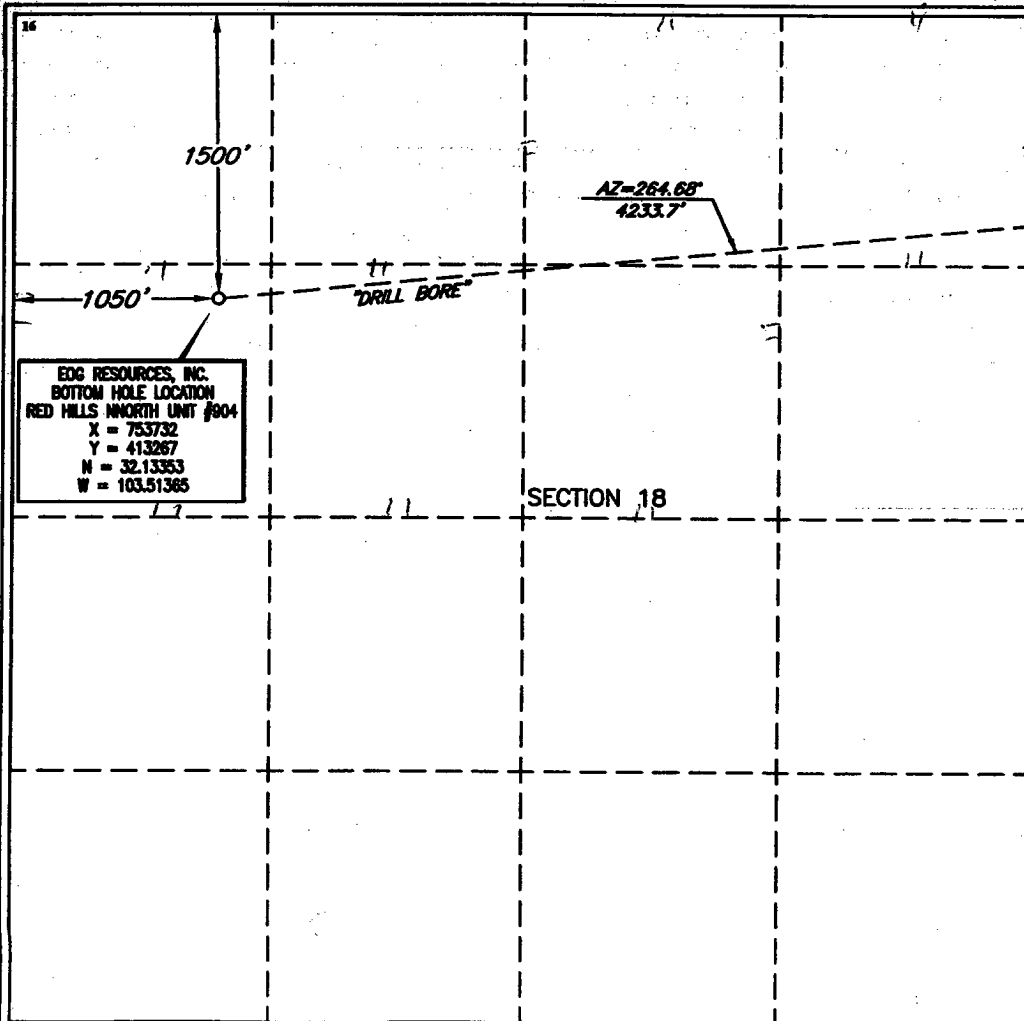
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	18	25 SOUTH	34 EAST, N.M.P.M.		1500'	NORTH	1050'	WEST	LEA

¹² Dedicated Acres 200	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Mike Francis
Signature
Mike Francis
Printed Name
Agent
Title
2/10/2003
Date

¹⁸ 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 the best of my belief.

JANUARY 28, 2003

Date of Survey
Signature and Seal of Professional Surveyor

V. L. Bezner
Certificate Number
V. L. BEZNER R.P.S. #7920
JOB #85694-2 / 22 NE / J.C.P.

DRILLING PROGRAM

EOG RESOURCES, INC.
Red Hills North Unit No. 904
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 rd Bone Spring Sand	12225'

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

Upper Permian Sands	Above 250'	Fresh Water
3 rd 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

<u>Hole Size</u>	<u>Interval</u>	<u>OD Casing</u>	<u>Weight Grade</u>	<u>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"	0-12,700'	7"	26#	P-110 LT&C
6 1/8"	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" 2nd 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. 904
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-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: 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. 904
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 of the vertical hole-GR in horizontal section 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.

EOG Resources, Inc.

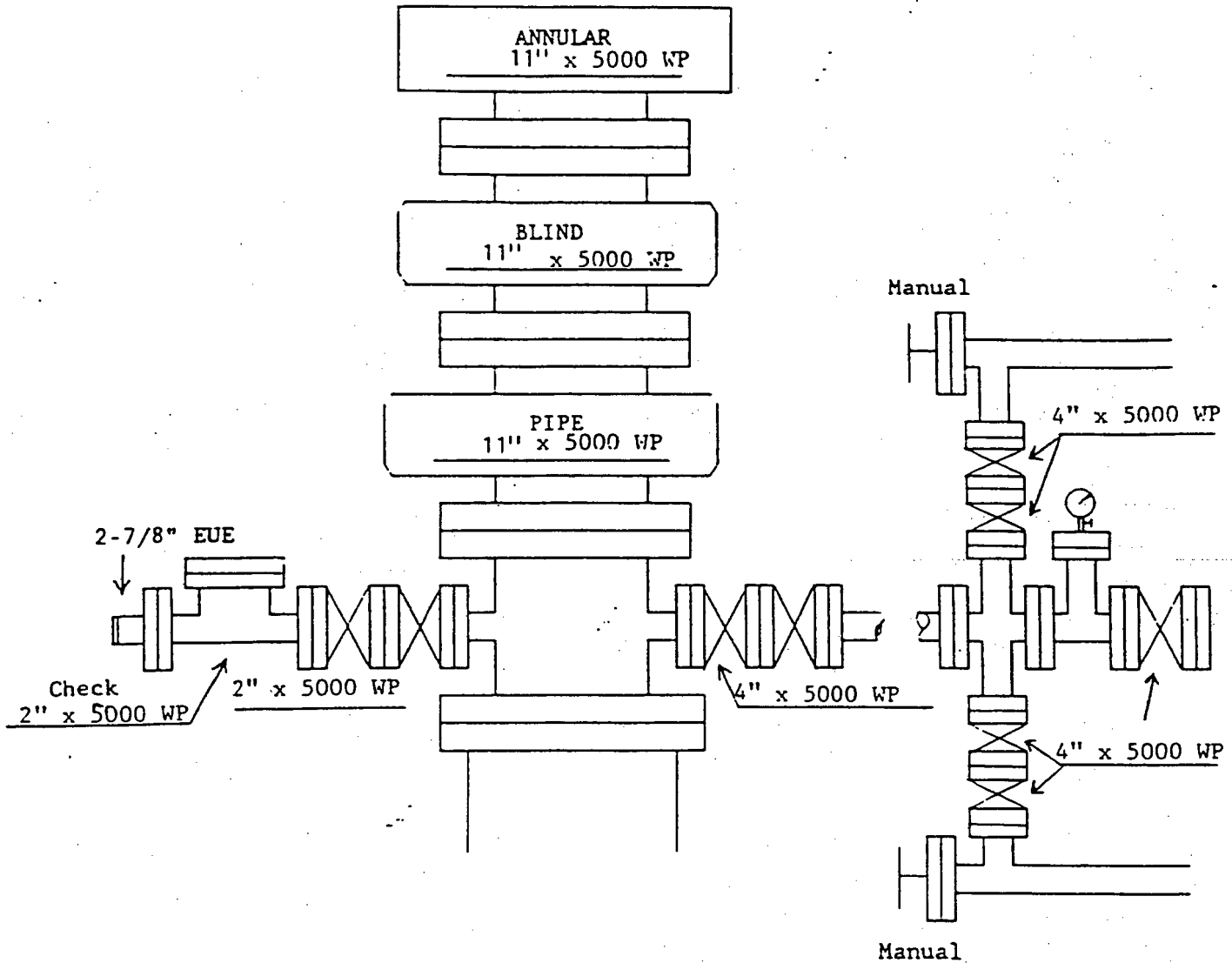
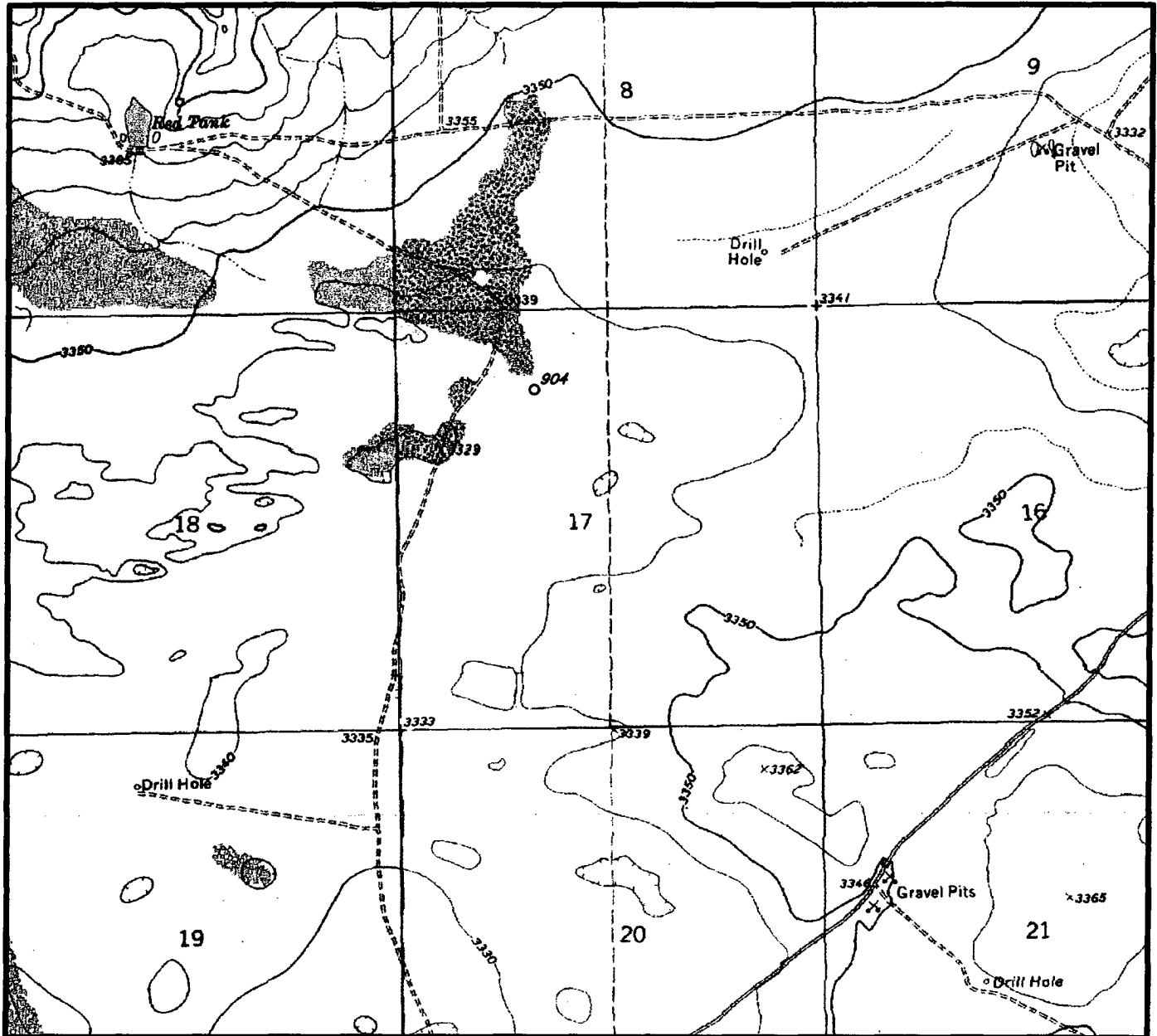


Exhibit 1

LOCATION & ELEVATION VERIFICATION MAP



SCALE : 1" = 2000'

CONTOUR INTERVAL 10'

SECTION 17 TWP 25-S RGE 34-E

SURVEY NEW MEXICO PRINCIPAL MERIDIAN

COUNTY LEA STATE NM

DESCRIPTION 1000' FNL & 1700' FWL

ELEVATION 3337'

OPERATOR EOG RESOURCES, INC.

LEASE RED HILLS NNORTH UNIT #904

U.S.G.S. TOPOGRAPHIC MAP

WOODLEY FLAT, NEW MEXICO

SCALED LAT. N = 32.13492

LONG. W = 103.49453

Exhibit 2



TOPOGRAPHIC LAND SURVEYORS

Surveying & Mapping for the Oil & Gas Industry

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

SECTION 17, TOWNSHIP 25 SOUTH, RANGE 34 EAST, N.M.P.M.,
LEA COUNTY NEW MEXICO

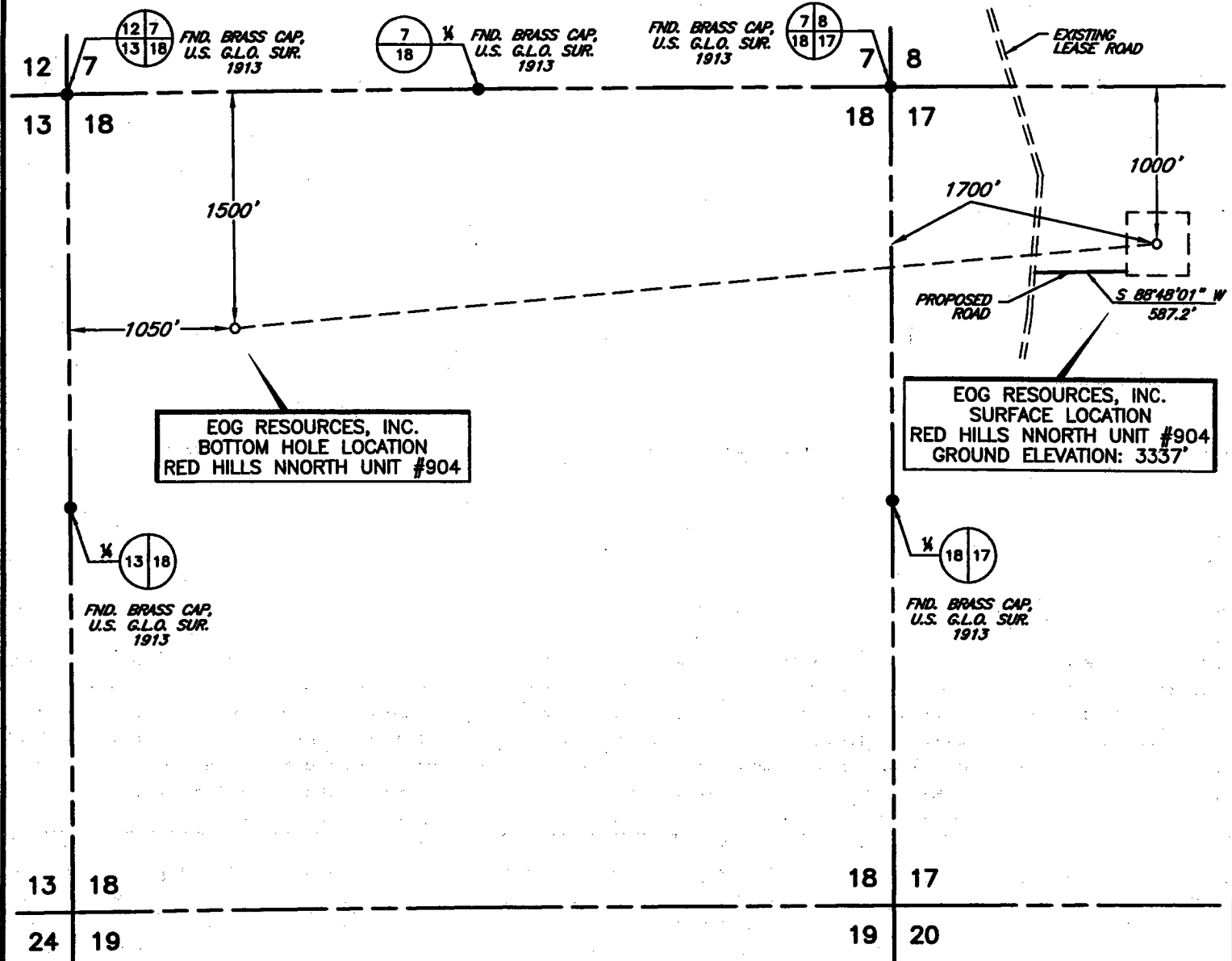
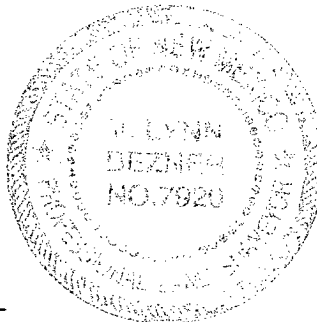


Exhibit 2A

PLAN VIEW.
1" = 1000'

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)



0 1000
1" = 1000'

V. L. BEZNER, P.S. NO. 7920

DATE OF FIELD WORK: JANUARY 28, 2003

				EOG RESOURCES, INC.		SCALE: 1" = 1000'	
						DATE: JANUARY 28, 2003	
NO.	REVISION	DATE	BY	SURVEYING AND MAPPING BY TOPOGRAPHIC LAND SURVEYORS MIDLAND, TEXAS		JOB NO.: 85694-F	
SURVEYED BY: R.J.O.						QUAD NO.: 22 NE	
DRAWN BY: J.C.P.						SHEET : 1 OF 1	
APPROVED BY: V.L.B.							

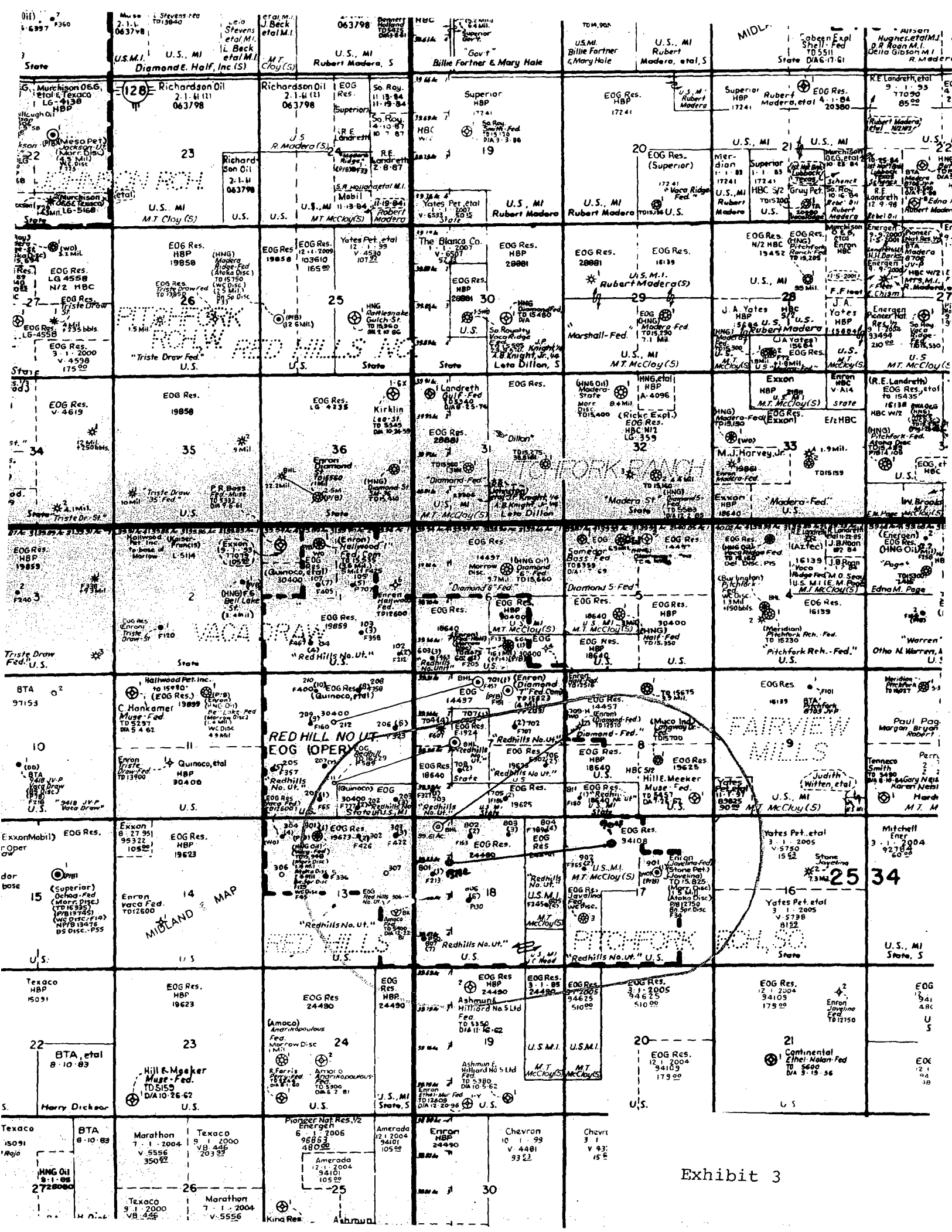
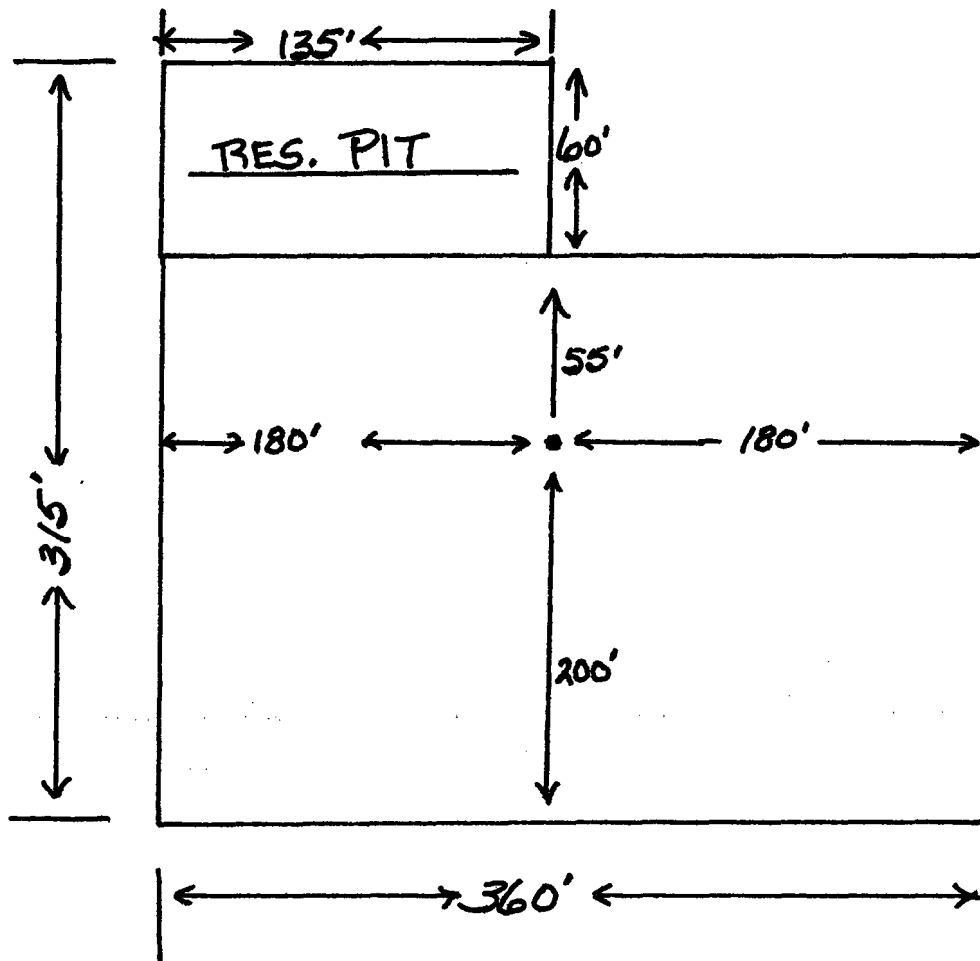


Exhibit 4



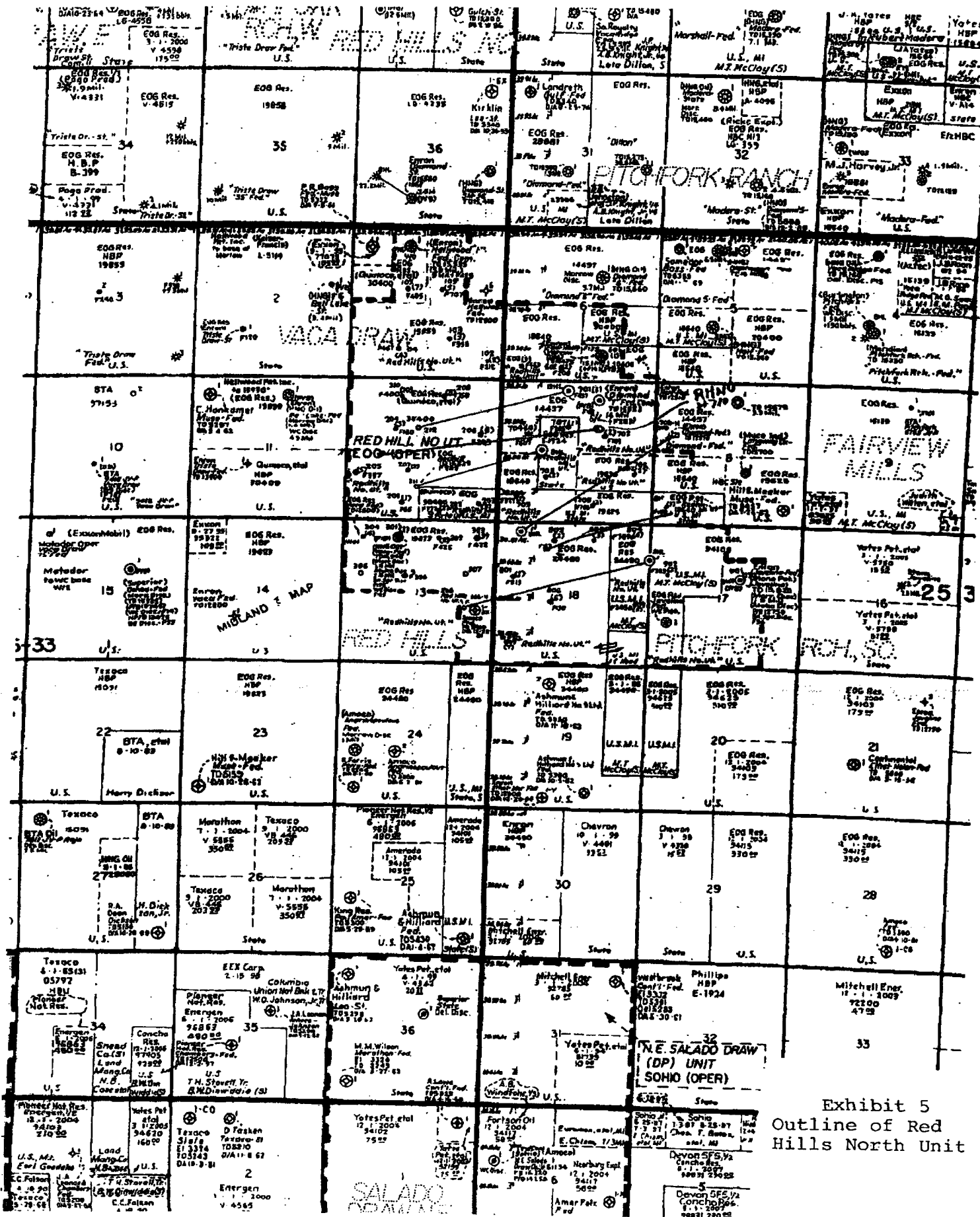
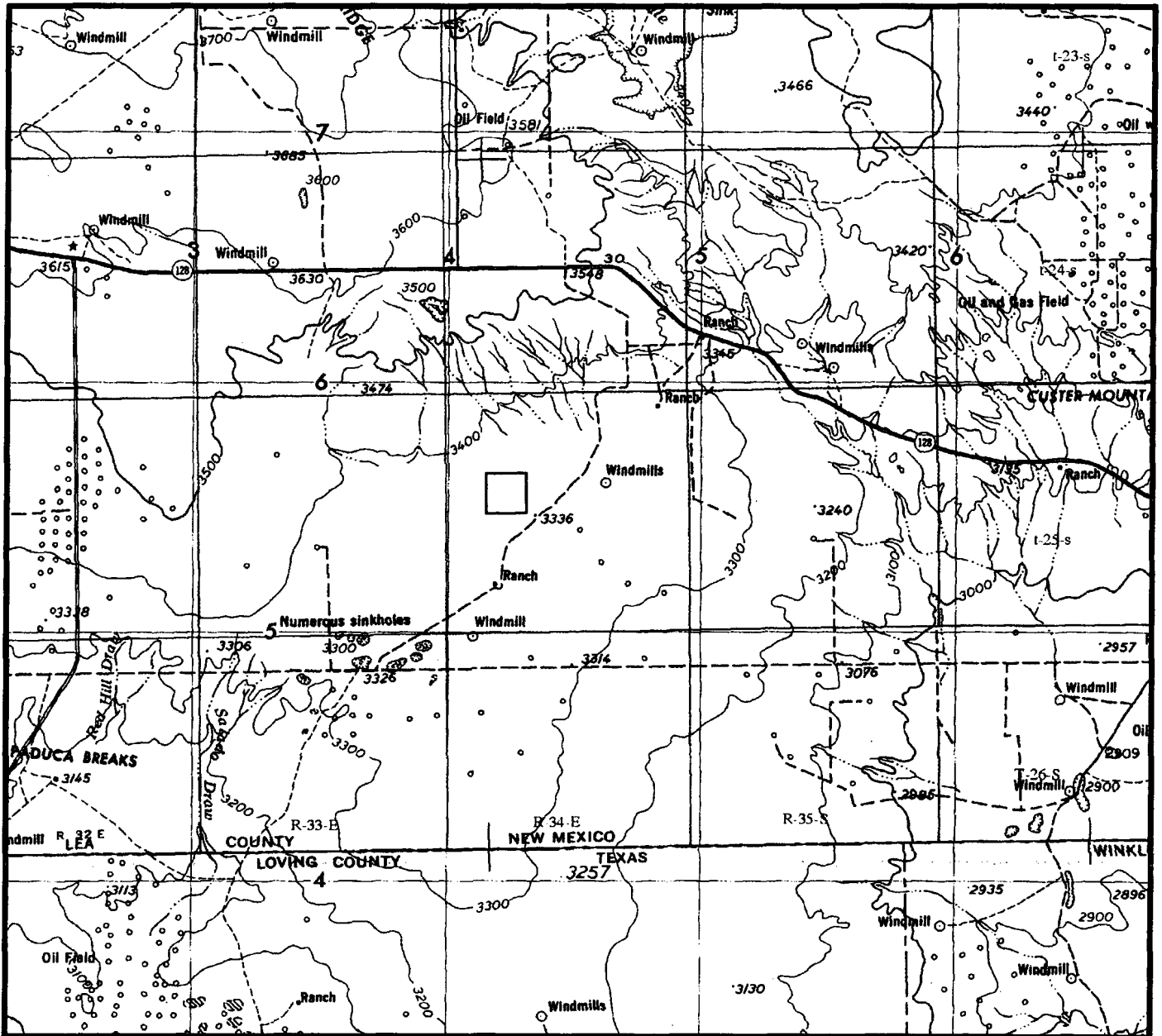


Exhibit 5
Outline of Red
Hills North Unit

VICINITY MAP



SECTION 17 TWP 25-S RGE 34-E
 SURVEY NEW MEXICO PRINCIPAL MERIDIAN
 COUNTY LEA STATE NM
 DESCRIPTION 1000' FNL & 1700' FWL

OPERATOR EOG RESOURCES, INC.

LEASE RED HILLS NNORTH UNIT #904

DISTANCE & DIRECTION FROM JAL GO WEST 23.0 MILES
ON STATE HWY. 128, THENCE SOUTH 2.2 MILES ON LEASE
ROAD, THENCE EAST 0.7 MILES, THENCE SOUTH 2.4 MILES
ON LEASE ROAD, THENCE SOUTHEAST 1.3 MILES ON LEASE
ROAD TO A POINT ±600' WEST OF THE LOCATION.



TOPOGRAPHIC LAND SURVEYORS

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 MIDLAND, TX. 79705
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