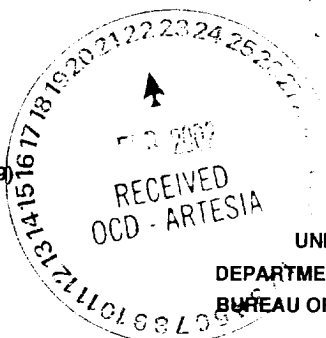


Form 3160-3  
(August 1999)



N.M. Oil Cons. DIV-Dist. 2  
1301 W. Grand Avenue  
Artesia, NM 88210

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

5. Lease Serial No.  
LC028936-D

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.  
19445

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

8. Lease Name and Well No.  
Sand Tank "31" Federal Com. No.3

2. Name of Operator

EOG Resources, Inc.

9. API Well No.

30-015-32221

3a. Address

P.O. Box 2267, Midland, TX 79702

3b. Phone No. (include area code)

(915)686-3714

10. Field and Pool, or Exploratory

Sand Tank Morrow

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

At surface 660' FNL & 1300' FWL

At proposed prod. Zone SAME

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

Sec 31 T-17-S R-30-E

12. County or Parish  
Eddy Co

13. State  
NM

15. Distance from proposed\*  
location to nearest  
property or lease line, ft. 660'  
(Also to nearest drlg. Unit line, if at same

16. No. of Acres in lease  
640

17. Spacing Unit dedicated to this well  
W/2 320

18. Distance from proposed location\*  
to nearest well, drilling, completed  
applied for, on this lease, ft. 660'

19. Proposed Depth  
12,100

20. BLM/BIA Bond No. on file  
NM2308

21. Elevations (Show whether DF, KDB, RT, GL, etc)  
GL 3573

22. Approximate date work will start\*  
3/15/02

23. Estimated duration  
45 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:

~~Renewal Controlled Water Basin~~

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  
1/10/02

Title  
Agent

Approved by (Signature) *TS/ JOE G. LARA*

Name (Printed/Typed)  
TS/ JOE G. LARA

Date  
FEB 21 2002

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)

APPROVAL FOR 1 YEAR

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 Sand Tank
*Property Code	*Property Name SAND TANK "31" FEDERAL COM		*Well Number 3
*OGRID No. 7377	*Operator Name EOG RESOURCES INC.		*Elevation 3573

<sup>10</sup> Surface Location

UL or lot no. D	Section 31	Township 17-S	Range 30-E	Lot Idn -	Feet from the 660	North/South line NORTH	Feet from the 1300	East/West line WEST	County EDDY
--------------------	---------------	------------------	---------------	--------------	----------------------	---------------------------	-----------------------	------------------------	----------------

<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 320 310.56	*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 1/10/02 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 best of my belief.</p> <p>JANUARY 4, 2002 Date of Survey</p> <p>Signature and Seal of Professional Surveyor: <i>James E. Tompkins</i> Certificate Number 14729</p>	

## DRILLING PROGRAM

EOG RESOURCES, INC.  
SAND TANK"31"FED. Com.No.3

### 1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

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

Rustler	500'
San Andres	3400'
Wolfcamp	8200'
Lower Strawn	10375'
Morrow Clastics	11,200'
TD	12,100'

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

Upper Permian Sands	Above 250'	Fresh Water
Grayburg/San Andres	3000'	Oil
Strawn	10375'	Oil
Morrow	11,100	Gas

## CASING PROGRAM

<u>Hole Size</u>	<u>Interval</u>	<u>OD Casing</u>	<u>Weight Grade Jt. Cond. Type</u>
14 3/4	0-500'	11 3/4"	42# H-40 ST&C
11"	0-4000'	8 5/8"	32# J-55 LT&C
7 7/8'	0-11,900'	5 1/2'	17# N80/S95 LT&C

### Cementing Program:

11 3/4" Surface Casing:	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'.

### 5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

## DRILLING PROGRAM

### EOG RESOURCES, INC. SAND TANK"31" FED. Com.No.3

(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 Viscosity</u> <u>(PPG)</u>	<u>Waterloss</u> <u>(sec)</u>	<u>(cc)</u>
0-500'	Fresh Water	8.5	40-45	N.C.
500'-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 H2S detector will be continuously monitoring drilling penetration rate and hydrocarbon shows from 5000' to TD.

## **DRILLING PROGRAM**

**EOG RESOURCES, INC.**  
**SAND TANK"31" FED. Com.No.3**

### **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.

**DRILLING PROGRAM**  
**EOG RESOURCES, INC.**  
**SAND TANK”31”FED. Com.No.3**

**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:**

365.6' 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.

**6. PLANS FOR RESTORATION OF THE SURFACE:**

## **DRILLING PROGRAM**

### **EOG RESOURCES, INC. SAND TANK"31"FED. Com.No.3**

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**

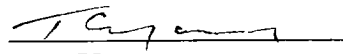
**EOG RESOURCES, INC.**  
**SAND TANK"31" FED. Com.No.3**

### **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  
Division Drilling Manager *my*

Date 1/10/02



EOG RESOURCES, INC.  
SAND TANK "31" FED. COM.

WELL NO. 3

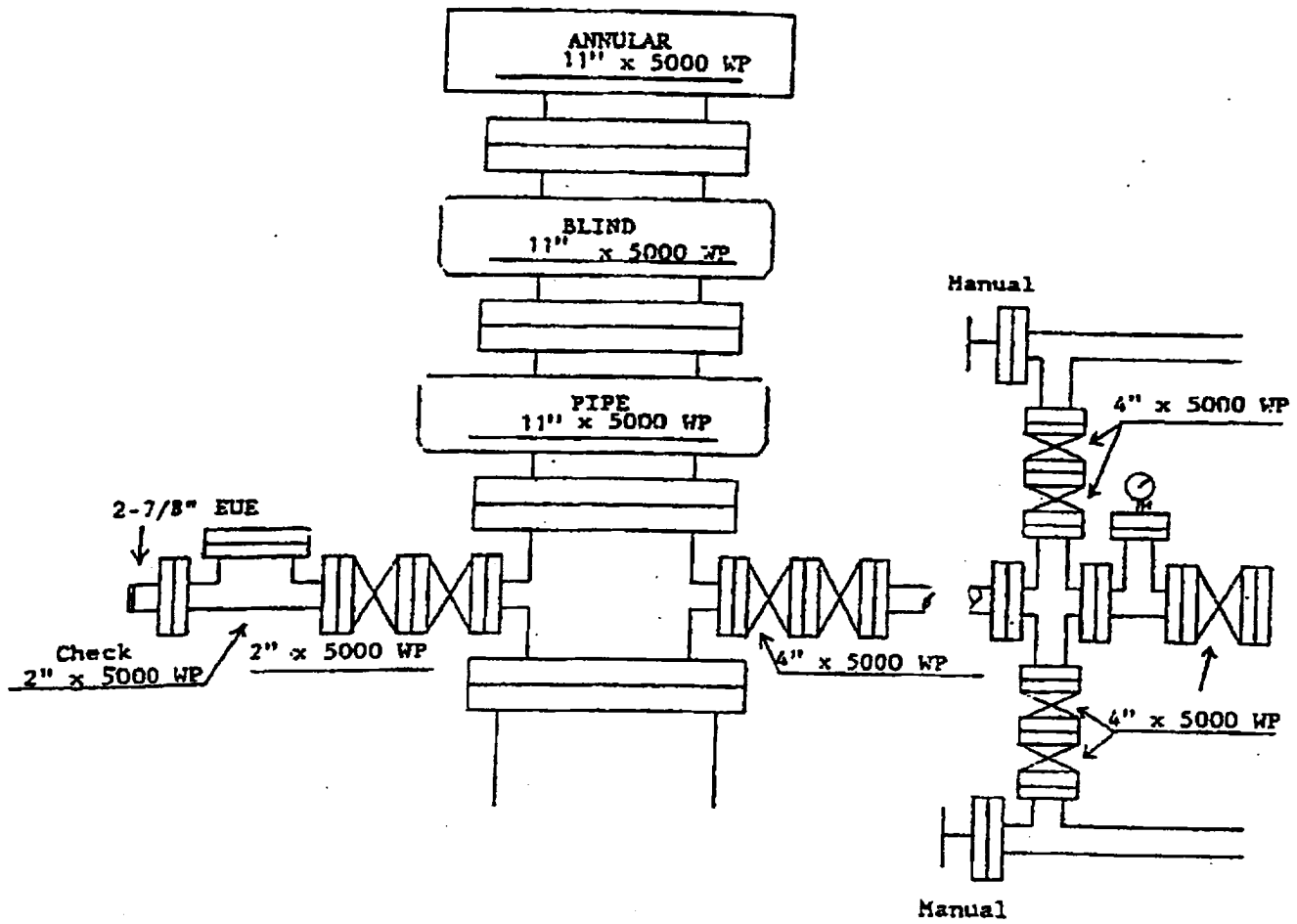


Exhibit 1

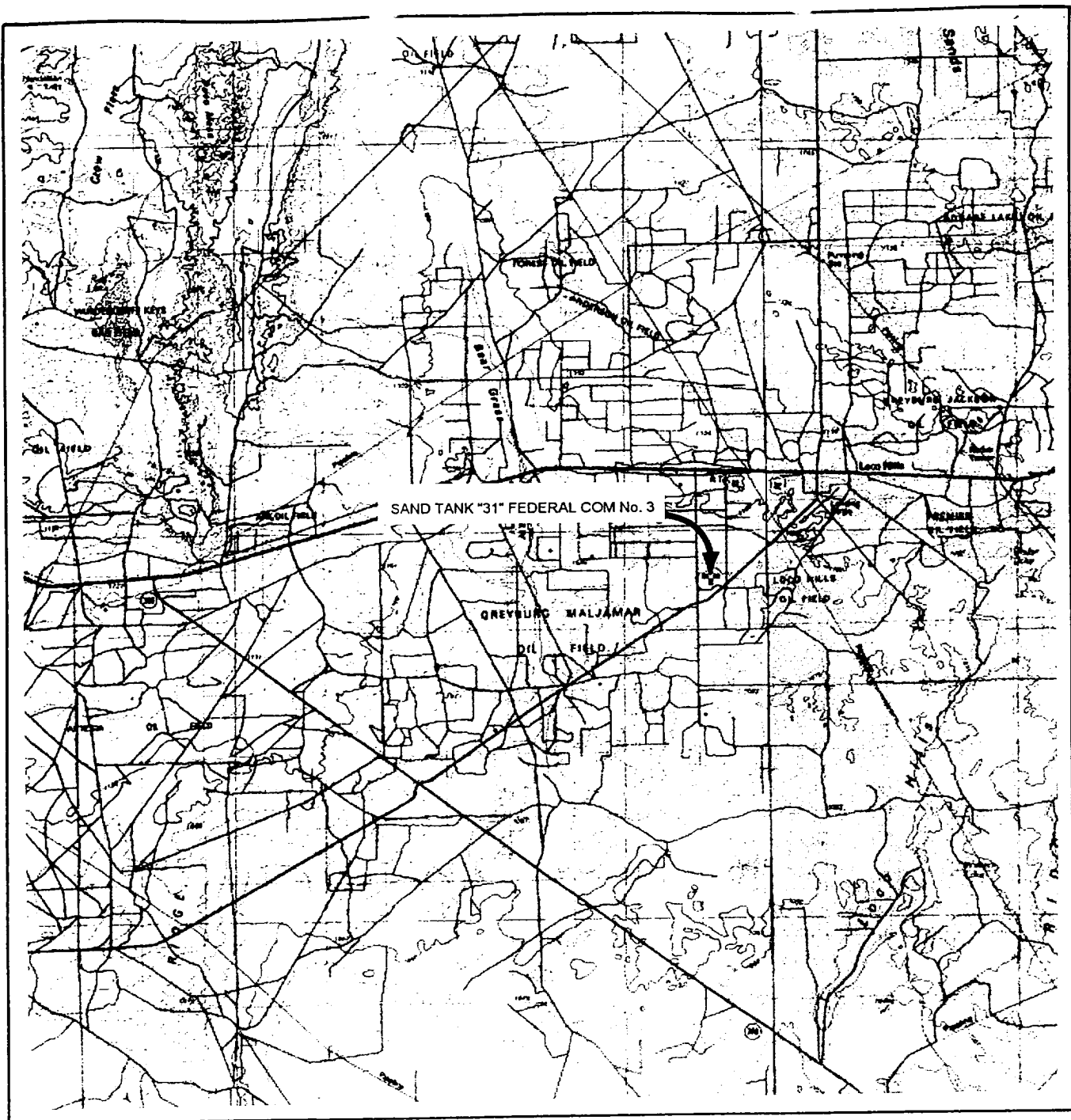
## **DRILLING PROGRAM**

**EOG RESOURCES, INC.  
SAND TANK"31" FED. Com.No.3**

### **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.

# VICINITY MAP



SCALE: 1" = 3 MILES

Exhibit 2

WTC 46459

SEC. 31 TWP. 17-S RGE. 30-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NM

DESCRIPTION 660' FNL & 1300' FWL

ELEVATION 3573'

OPERATOR EOG RESOURCES, INC.

LEASE SAND TANK "31" FEDERAL COM No. 3

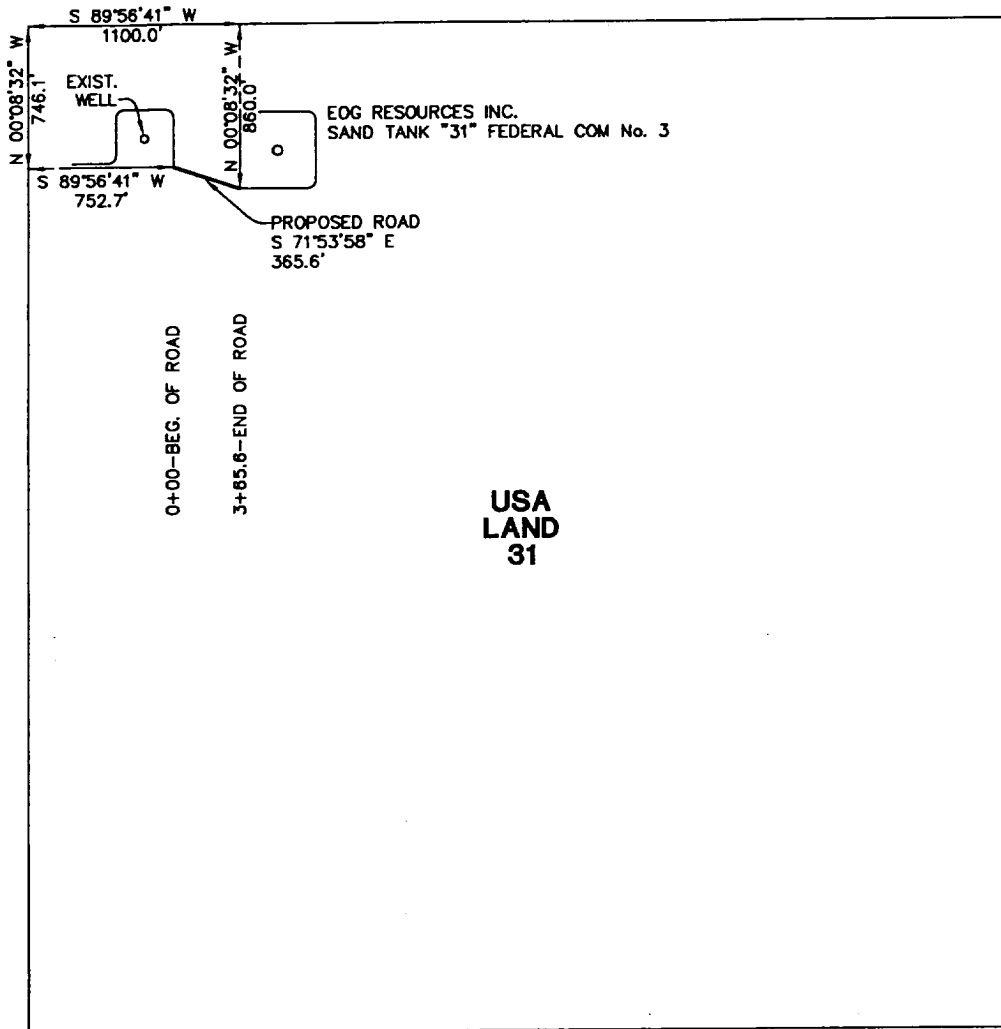
**WEST TEXAS CONSULTANTS, INC.**

ENGINEERS-PLANNERS-SURVEYORS

MIDLAND, TEXAS

915-685-3800

**SECTION 31, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.  
EDDY COUNTY,  
NEW MEXICO**



**CENTERLINE DESCRIPTION OF A PROPOSED ROAD:**

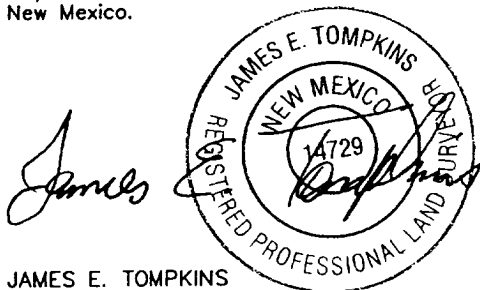
**BEGINNING** at a point in the southeast corner of an existing well, from which point the northwest corner of Section 31, T-17-S, R-30-E, N.M.P.M., Eddy County, New Mexico, bears S 89° 56' 41" W, 752.7 feet and N 00° 08' 32" W, 746.1 feet;

**THENCE** S 71° 53' 58" E, with the centerline of proposed road, 365.6 feet to a point in the southwest corner of a well pad for EOG Resources, Inc. SAND TANK "31" FEDERAL COM No. 3, for the end of this road, from which point the northwest corner of said Section 31 bears N 00° 08' 32" W, 860.0 feet and S 89° 56' 41" W, 1100.0 feet.

Exhibit 2a

**PROPOSED ROAD TO SERVE  
SAND TANK "31" FEDERAL COM No. 3**

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

**EOG RESOURCES INC.**

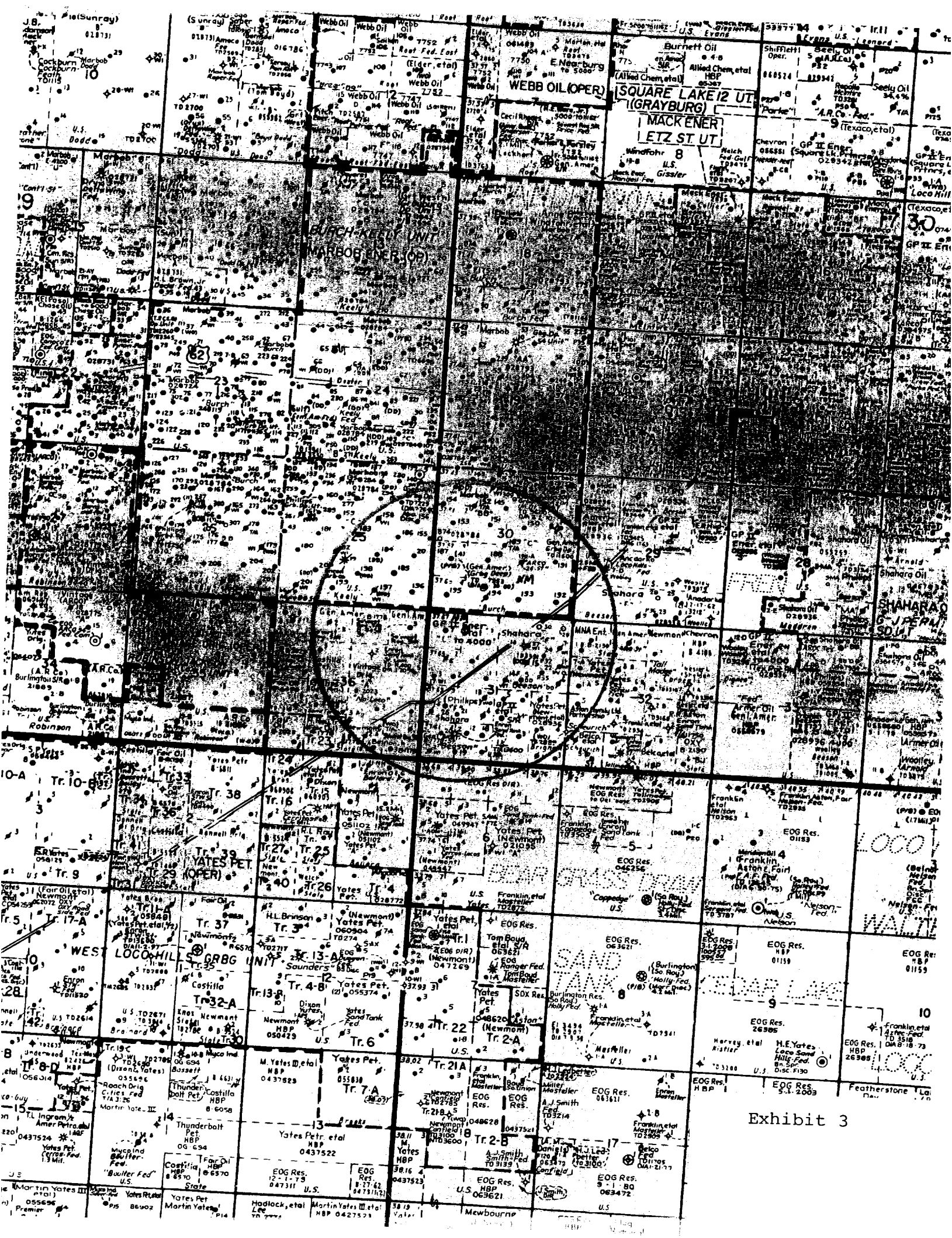
365.6 feet of proposed road in  
Section 31, T-17-S, R-30-E, N.M.P.M.,  
Eddy County, New Mexico

**WEST TEXAS CONSULTANTS, INC.**

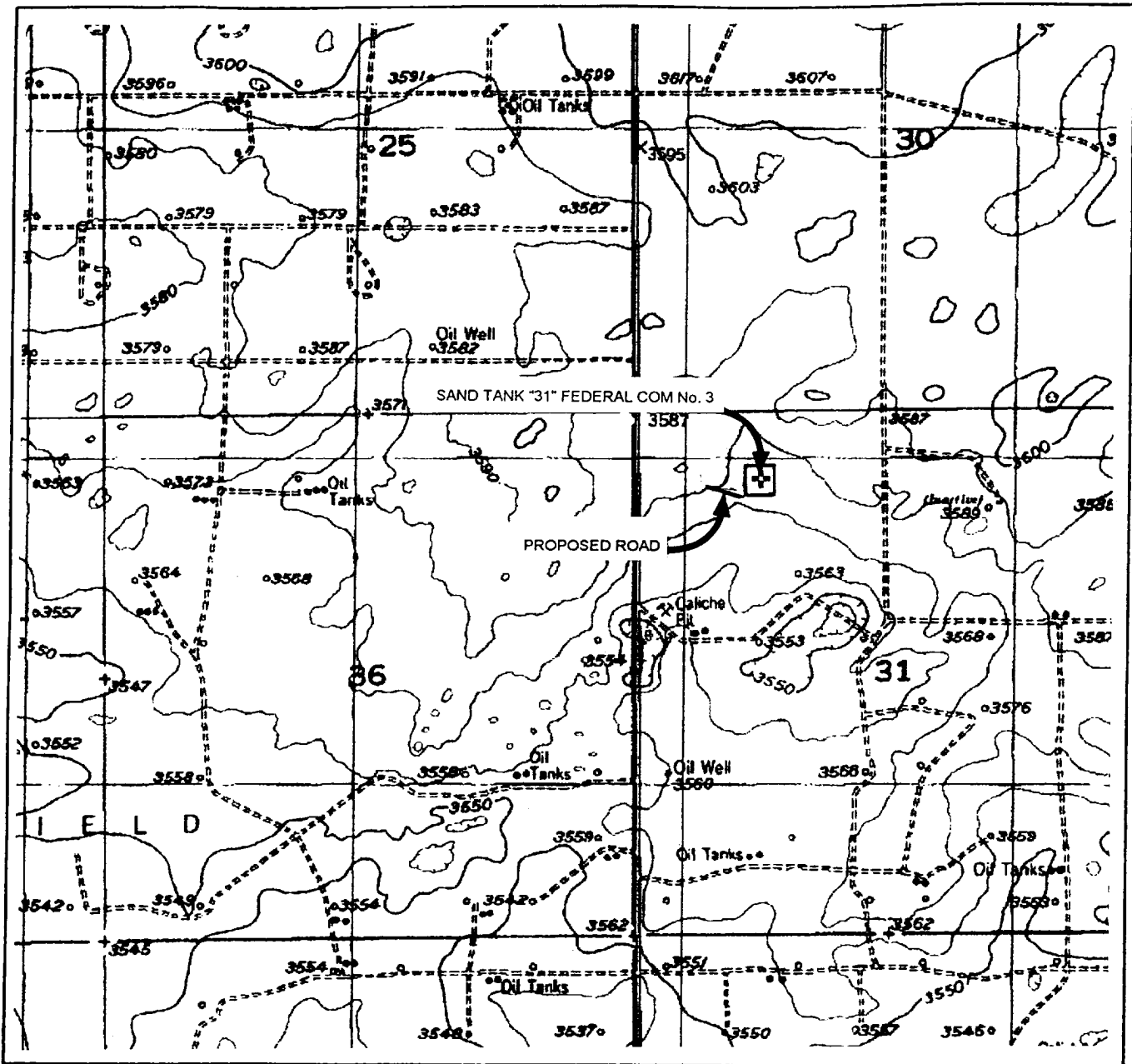
ENGINEERS-PLANNERS-SURVEYORS

MIDLAND, TEXAS

Survey Date: 1-4-02	Date: 1-4-02	Scale: 1" = 1000'
WTC No.: 46459	Drawn By: JWD	Sheet 1 of 1



# LOCAL ON VERIFICATION MAP



SCALE: 1" = 2000'  
WTC 46459

SEC. 31 TWP. 17-S RGE. 30-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NM

DESCRIPTION 660' FNL & 1300' FWL

ELEVATION 3573'

OPERATOR EOG RESOURCES, INC.

LEASE SAND TANK "31" FEDERAL COM No. 3

USGS TOPO MAP RED LAKE SE, NEW MEXICO

CONTOUR INTERVAL 10'

**WEST TEXAS CONSULTANTS, INC.**

ENGINEERS-PLANNERS-SURVEYORS

MIDLAND, TEXAS

915-685-3800

**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 LC028936-D

**Legal Description of Land:** W/2 of Section 31, T17S, R30E, NMPM  
Eddy 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:** 

**Title:** Agent

**Date:** 1/10/02