Form 3160-3
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

(other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK: Drill [X] Deepen [ ]

b. TYPE OF WELL: Oil Well [X] Gas Well [ ] Other — Single Zone [ ] Multiple Zone [ ]

5. LEASE DESIGNATION AND SERIAL NO.: NM-0467934

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME: Grayburg Jackson PSU

2. NAME OF OPERATOR: ~~ABOC (Texas) Inc.~~ Shahara Oil Corp.

8. FARM OR LEASE NAME, WELL NO.: BB No. 2 26137

3. ADDRESS AND TELEPHONE NO.: 207 W. McKay, Carlsbad, NM 88220 — Phone: 505-885-5433, Fax: 505-885-4989

9. API WELL NO.: 30-015-31408

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 30' FNL & 2310' FEL, Unit B
At proposed prod. zone: Same

10. FIELD AND POOL, OR WILDCAT: Grayburg Jackson 7 Rivers-QN-GB-SA

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 33, T17S, R30E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE *: 1.5 miles southeast of Loco Hills, NM

12. COUNTY OR PARISH: Eddy — 13. STATE: NM

15. DISTANCE FROM PROPOSED * LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
1310'	960	40
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
660'	3650'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc): 3614' GR

22. APPROX. DATE WORK WILL START *: October 15, 2000

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	8 5/8"	24# K-55	500'	300 sx - circulate
7 7/8"	5 1/2"	15.5# J-55	3500'	600 sx -
				100' above 8 5/8" csg shoe

The operator proposes to drill to a depth sufficient to test the Queen and Grayburg for oil.
Specific programs are outlined in the following attachements:

SURFACE USE AND OPERATING PLAN
EXHIBIT A - ROAD MAP
EXHIBIT B - EXISTING WELL MAP
EXHIBIT C - LOCATION AND ACREAGE DEDICATION PLAT
EXHIBIT C-1 - TOPO MAP
EXHIBIT D - DRILLING AND RIG LAYOUT
EXHIBIT E - 3M BOP EQUIPMENT

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If propsal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Perry C Hughes — TITLE Project Manager — DATE 08/31/00

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that 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:

APPROVED BY /S/LARRY D. BRAY — TITLE Assistant Field Manager, Lands And Minerals — DATE OCT 27 2000

***See Instructions On Reverse Side**

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any fa se, ficticious ro fraudulent statements or representations as to any matter within its jurisdiction.

APPROVED FOR 1 YEAR

DRILLING PROGRAM

Alabama Oil Corp.
~~AROC (Texas) Inc.~~
Grayburg Jackson PSU BB No. 2
30' FNL & 2310' FEL, Unit B
Section 33, T17S, R30E
Eddy County, New Mexico
Lease No. NM-0467934

In connection with Form 3160-3, Application for Permit to Drill subject well, AROC (Texas) Inc. submit the following items of pertinent information in accordance with BLM requirements:

1. Geologic Name of Surface Formation: Permian

2. Estimated Tops of Important Geologic Markers and

Formation	Depth
Top of Salt	525'
Base of Salt	1265'
Queen	2470'
Grayburg	2880'
San Andres	3300'
Total Depth	3650'

3. Estimated Depths of Fresh Water, Oil and Gas:

There is little if any fresh water in this area. Oil is expected in the 7 Rivers, Queen, Grayburg and San Andres below 1900'. No other formations are expected to give up oil, gas or fresh water in measurable quantities. Any surface fresh water sands will be protected by setting 8 5/8" casing at approximately 500' into the anhydrite just above the top of salt, and circulating cement to surface. 5 1/2" production casing will be set at TD and cemented to 100' above the 8 5/8" casing shoe.

The pore pressure gradient is normal (±8.4 ppg) down through the San Andres. No abnormal pressures are anticipated.

4. Casing and Cement Program

	Casing			
Hole Size	From	To	Casing OD	Weight, Grade, Coupling, Cond.
12 1/4"	0'	500'	8 5/8"	24# K-55 STC New
7 7/8"	0'	TD	5 1/2"	15.5# J-55 LTC New

Minimum Design Factors: Collapse 1.125, Burst 1.1, Tension 1.7.

8 5/8" Surface Casing Set at 500'
Cement to surface with 300 sx of Class C with additives.
5 1/2" Production Casing Set at TD

Cement with 600 sx of Class C with additives. Will bring top of cement 100' above the 8 5/8" casing shoe.

5. Minimum Specifications for Pressure Control:

7 7/8" Hole - The following BOP equipment will be nippled up on the 8 5/8" casing and used continuously until TD is reached for the 7 7/8" hole.

The blowout preventer equipment (BOP) shown in Exhibit "E" will consist of a 3000 psi WP double ram type preventer and a 3M annular (bag type) preventer with rotating head. Both BOP's will be hydraulically operated. At the drilling contractor's option, 5M BOP's may be substituted. H_2S trim will not be required.

Before drilling out from under the 8 5/8" surface casing, all BOP's and accessory equipment will be tested to 1000 psi with the rig pump. 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.

BLM method to calculate minimum BOP requirements:
(.052)(8.4 ppg)(3650') - (0.22 psi/ft)(3650')=791 psi
Minimum BOP requirements: 2M BOP stack and manifold system

6. Proposed Mud System:

The well will be drilled to TD with a combination of fresh water and 10# brine. The applicable depths and properties of this system are as follows:

Depth	Type	Weight (ppg)	Viscosity (sec)	Water Loss cc
0-500'	Fresh water	8.4	28	NC
500-3650'	Brine	10.0	29	NC

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

7. Auxiliary Well Control and Monitoring Equipment:

a) A kelly cock will be kept in the string at all times.

b) A full opening drill pipe stabbing valve (TIW/inside BOP) with proper drill pipe connections will be on the rig floor at all times.

c) An electronic pit volume totalizer system will NOT be used. The drilling fluids system will be visually monitored at all time.

8. Logging, Testing and Coring Programs:

a) Drillstem tests will not be run.

b) The electric logging program will consist of:
GR-DLL-MSFL-Cal - TD-1800'
GR-CNL-CDL-Cal - TD-1800'
GR-CNL-Cal - TD-Surface

c) No cores are planned.

d) Further testing procedures will be determined after the 5 1/2" production casing has been cemented at TD.

9. Abnormal Conditions, Pressures, Temperatures and Potential Hazards:

No abnormal pressures, temperatures, or other potential hazards are anticipated.

No or very little 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 lost circulation zones have been reported in offsetting wells.

The maximum anticipated bottom hole pressure is approximately 1580 psi.
(3650' x .433 psi/ft = 1580 psi)
The maximum anticipated bottom hole temperature is 100 degrees F.

10. Anticipated Starting Date and Duration of Operations:

Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is October 15, 2000. Once commenced, the drilling operation should be complete in 10 days. If the well is productive, an additional 20 days may be required for completion, testing, and installation of permanent facilities.

SURFACE USE AND OPERATING PLAN

AROC (Texas) Inc.
Grayburg Jackson PSU BB No. 2
30' FNL & 2310' FEL, Unit B
Section 33, T17S, R30E
Eddy County, New Mexico
Lease No. NM-0467934

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities, and the operations plan to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal can be made of the environmental effects associated with the operations.

Located: 1.5 miles southeast of Loco Hills, New Mexico

Federal Lease Number: NM-060528

Lease Issued: N/A

Acres in Lease (Unit): 960 acres

Record lessee: Phillips Petroleum Company

Surface Ownership: Federal

Grazing Permittee: Charles Martin, Inc.

Pool: Grayburg Jackson 7R-QN-GB-SA

Pool Rules: This well is being drilled as a producing well in the Grayburg Jackson Premier Sand Unit Waterflood to be completed only in the unitized Premier Sand of the Grayburg Formations under Oil Conservation Division Order No. R-2749.

Exhibits:

"A" Road Map
"B" Existing Wells Map
"C" Well Location and Acreage Dedication Plat
"C-1" Topo Map (Location Verification Map)
"D" Drilling Rig Layout Diagram
"E" BOP Equipment

1. **Existing Roads:**

a) The well site and elevation plat for the proposed well is shown in Exhibit "C". It was staked by John West Engineering, Hobbs, NM.

b) All roads to the location are shown on Exhibit "A". The existing roads are illustrated in yellow and are adequate for travel during drilling and production operations. Upgrading of the road prior to drilling will be done where necessary as determined during the on-site inspection.

c) Directions to location: Go south from Loco Hills on Highway 217 (Hagerman cutoff road) ½ mile, go southeast 1 mile to location on right on access road 620'.

d) Routing 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:**

Exhibit "A" shows the new access road to be constructed and is illustrated in green. The proposed access road as shown in Exhibit "C-1" has been centerline flagged. The road will be constructed as follows:

a) Length and Width: 620' of new access road will be constructed. The maximum width of the running surface will be 15'. See Exhibit "B".

b) Surfacing Material: Caliche material will be used to surface the proposed road. It will be watered, compacted, and graded. Caliche will be obtained from either the reserve pit or a borrow pit on the proposed location as described in Item 6 of the Surface Use and Operating Plan.

c) Maximum Grade: An approximate grade of less than two percent will be encountered from the existing road to the proposed well pad.

d) Turnouts: No turnouts are planned.

e) Drainage Design: The new road will be crowned at the center to direct drainage to ditches on both sides of the roadway with turnout ditches to be constructed as required. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns. BLM may specify any additions or changes during the on-site inspections.

f) Culverts: None required.

g) Cuts and Fills: A slight amount of leveling will be required as the road crosses several small size sand dunes to the proposed well pad.

h.) Gates and Cattle Guards: Neither gates nor cattleguards will be necessary for this location.

3. **Location of Existing Wells:**

Exhibit "B" shows all existing wells within a one-mile radius of this well.

4. **Location of Existing and/or Proposed Facilities:**

a) AROC (Texas) Inc. operates a production facility on the Grayburg Jackson PSU.

b) If the oil well proves to be commercial, the necessary production facilities will be installed on the drilling pad and flow lines will be installed to the production facilities and storage tanks. Flowlines will follow all access roads to the central production facilities.

c) An existing electric powerline to the wellsite will be utilized.

5. **Location and Type of Water Supply:**

The well will be drilled with a combination of brine and fresh water mud system as outlined in the drilling program.

The water necessary for drilling operations will be purchased and trucked to the wellsite, or will be moved to the well site by way of a temporary pipeline laid on the ground along existing and proposed roads.

6. **Source of Construction Materials:**

Caliche needed for the road and well pad will be taken from the proposed reserve pit. An alternate plan will be to obtain caliche from a borrow pit located within the 400' x 400' archaeologically cleared tract at the proposed well site. If sufficient quality or quantity of caliche is not available, it will be transported to the proposed road and well site from an existing BLM approved caliche pit. The BLM will be notified and consulted if caliche must be obtained off location.

7. **Method of Handling Waste Disposal:**

a) Drill cuttings will be disposed into the reserve pit.

b) Drilling fluids will be contained in the reserve pit. The reserve pit will be an earthen pit, approximately 150' x 150' x 6' deep and fenced on three sides prior to drilling. The fourth side will be fenced immediately following rig removal. The reserve pit will be lined with plastic (5-7 mil thickness) to minimize loss of drilling fluids.

c) Water produced from the well during completion may be disposed into the reserve pit or a steel tank (depending upon rates).

d) Drilling fluids will be allowed to evaporate in the drilling pits until the pits are dry.

e) Oil produced during testing will be stored in steel test tanks until sold.

f) Trash, waste paper, garbage and junk will be placed in a trash bin located on the drill site pad. It will be transported to an approved landfill for disposal within 30 days after completion of drilling and/or completion of operations. All waste material will be contained to prevent scattering by the wind.

g) A portable chemical toilet will be provided on the location for human waste during the drilling and completion operations.

8. **Ancillary Facilities:**

No other facilities will be built as a result of the operations on this well.

9. **Well Site Layout:**

a) Exhibit "D" shows the relative location and dimensions of the well pad, mud pits, reserve pit, location of the major rig components, and location of parking area.

b) Cut and fill requirements will be minor, but clearing and leveling of the well site will be necessary. Top soil, if available, will be stockpiled per BLM specifications as determined at the on-site inspection.

c) The reserve pit will be lined with a high quality plastic sheeting (5-7 mil thickness).

d) The pad and pit area are staked and flagged.

10. **Plans for Reclamation of the Surface:**

a) After completion of drilling and/or completion of operations, all equipment and other material not needed for operations will be removed. The pit area will be allowed to dry before reclamation. If the borrow pit is constructed, the cuttings in the reserve pit will be deep buried in the borrow pit, and the reserve pit and borrow pit will be broken out, filled, and leveled. The location will be cleaned of all trash and junk to leave the well site in an as aesthetically pleasing condition as possible.

b) Three sides of the reserve pit will be fenced prior to and during drilling operations. The borrow pit will be fenced on all four sides after the location is built. At the time the rig is removed, the reserve pit will be fenced on the fourth side to prevent livestock or wildlife from being entrapped in the pit. The fencing will remain in place until the pits are cleaned up and leveled.

c) After abandonment, all equipment, trash and junk will be removed and the well site will be cleaned.

d) Topsoil removed from the drill site will be used to recontour the pit area to the original natural level. The disturbed area will be revegetated by reseeding during the proper growing season with a seed mixture of native grasses as recommended by the BLM.

11. **Other Information:**

a) Topography: The land surface in the area is undulating with small sand dunes. In the immediate area of the well site, the land slope is to the southwest.

b) Soil: Top soil at the well site is loamy sand.

c) Flora and Fauna: The vegetation cover is moderate. It includes range grasses, weeds, scrub oak bushes, and mesquite bushes. Wildlife in the area is that typical of a semi-arid desert land and includes coyotes, rabbits, rodents, reptiles, hawks, dove, quail and other small birds.

d) Ponds and Streams: There are no rivers or streams within a mile of this proposed location.

e) Residences and Other Structures: There are no occupied dwellings within a mile of this location.

f) Archaeological, Historical, or Other Cultural Sites: None are know of in the area. An archaeological survey has been conducted by Desert West Archaeological Services.

g) Land Use: Grazing, oil and gas production and wildlife habitat.

h) Surface Ownership: Federal

12. **Operator's Representative:**

Perry L. Hughes, Project Manager
AROC (Texas) Inc.
207 W. McKay
Carlsbad, NM 88220

Phone: 505-885-5433
Fax: 505-885-4989

13. **Certification:**

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; 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 AROC (Texas) Inc. and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of false statement.

8/31/00
Date

Perry L. Hughes
Perry L. Hughes, Project Manager

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

APPLICABILITY:

The provisions of this plan are effective when drilling operations are conducted in areas where zones may be penetrated that are known to contain, or may be reasonably expected to contain, hydrogen sulfide gas in concentrations of 100 parts per million or more.

TRAINING REQUIREMENTS:

A. When conducting drilling operations in an area where hydrogen sulfide gas might be encountered, all personnel at the well site will have had proper training in the following areas:

1. The hazards and characteristics of hydrogen sulfide gas (H_2S).

2. Toxicity of hydrogen sulfide and sulfur dioxide.

3. Hydrogen sulfide gas detectors, warning systems, evacuation procedures, and proper use and maintenance of personal protective equipment.

4. Proper rescue procedures, first aid, and artificial respiration.

B. In addition, supervisory personnel will be trained in the following areas:

1. The effects of hydrogen sulfide on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.

2. Corrective action and shut-in procedures when drilling or reworking a well, and blowout prevention and well control procedures.

3. The contents and requirements of the Hydrogen Sulfide Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable hydrogen sulfide zone (within 3 days or 500 feet) and weekly hydogen sulfide and well control drills for all personnel in each crew. The initial training session will include a review of the site specific Hydrogen Sulfide Drilling Operations Plan and the Public Protection Plan. This plan will be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

WELL SITE DIAGRAM:

A. Attached is a detailed well site diagram showing:

1. Drilling rig orientation
2. Prevailing wind direction (Southwest)
3. Location of briefing areas
4. Location of Caution/Danger signs
5. Location of hydrogen sulfide monitors
6. Location of wind direction indicators

HYDROGEN SULFIDE SAFETY EQUIPMENT:

A. All safety equipment and systems will be installed, tested, and deemed operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone reasonably expected to contain hydrogen sulfide.

B. During drilling operations, a flare line will be routed from the BOP manifold to the reserve pit. Should suspected sour gas be vented through the flare line, a flare pistol will be used to ignite the flare.

C. Protective equipment for essential personnel will be installed and maintained as follows:

1. 30-minute air packs will be maintained on the rig floor and near the briefing area.
2. 30-minute work units will be maintained at the H_2S trailer and/or on the rig floor.
3. 30-minute escape units will be maintained on the rig floor.
4. 300 cubit ft. air cylinders will be maintained in the H_2S trailer.
5. Associated breathing air equipment will also be installed and maintained.
6. Hydrogen sulfide monitor will be located in the dog house on the rig floor with sensors placed on the rig floor, at the bell nipple, the shale shaker, and in the pit areas.
7. An audible/visual alarm will be located near the dog house on the rig floor.

VISUAL WARNING SYSTEMS:

A. High visibility Caution/Danger signs will be posted on roads providing direct access to the well location.

B. Green, yellow and red conditions flags to be displayed to denote Normal Conditions, Potential

Danger and Danger, H_2S present.

C. Wind socks to be located at the protection center and in the pit area to continuously indicate wind direction.

CIRCULATING MEDIUM:

A. Drilling fluid to be conditioned to minimize the volume of H_2S circulated to the surface.

SPECIAL WELL CONTROL EQUIPMENT:

A. In addition to the normal BOP stack and choke manifold, a drilling head will be used to help control and H_2S contaminated drilling fluid.

WELL TESTING:

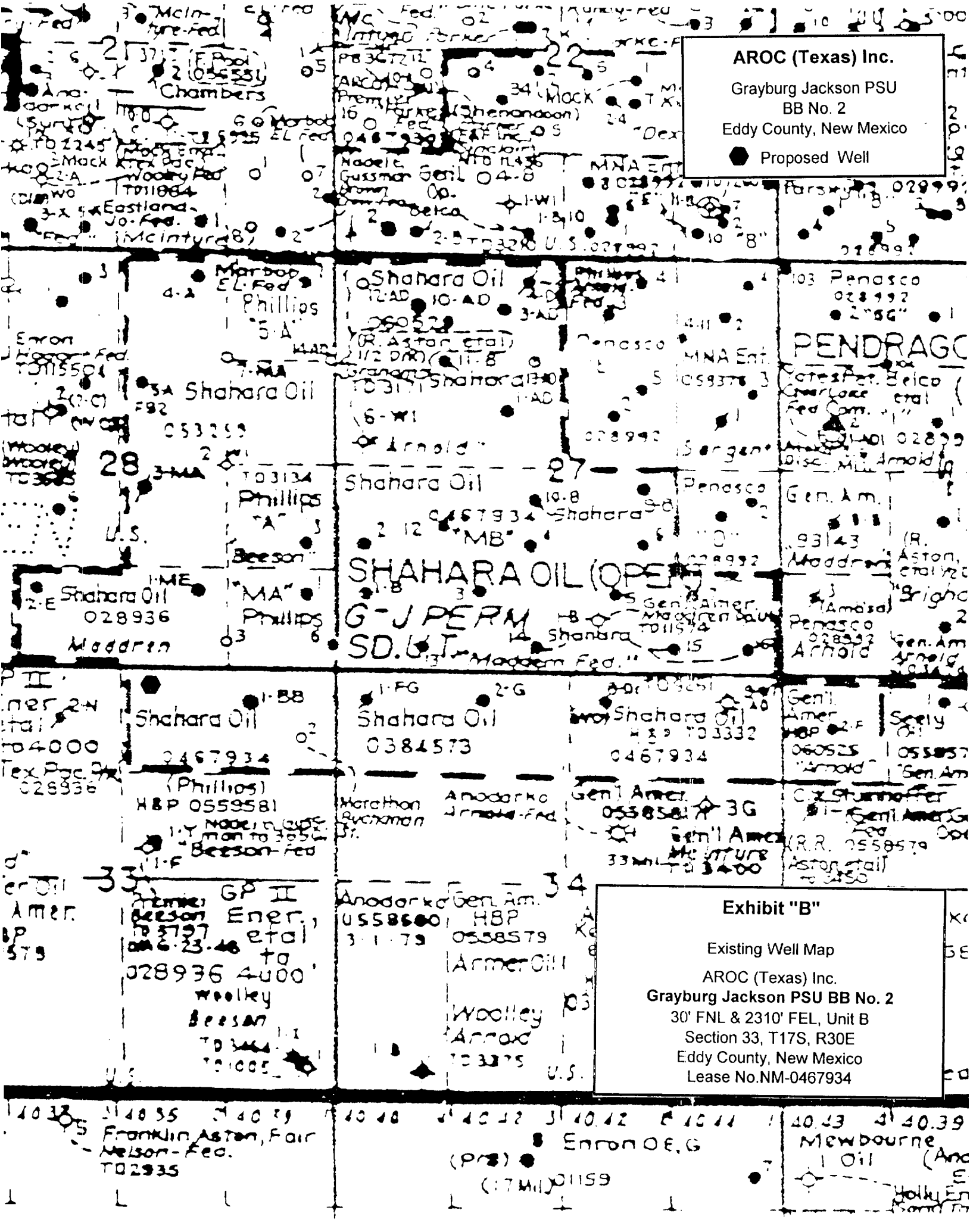
A. Drill stem testing of zones known, or reasonably expected, to contain H_2S in concentrations of 100 ppm or more will use the closed chamber method of testing.

COMMUNICATION:

A. Radio communication will be available at the drilling rig and also in company vehicles.

ADDITIONAL INFORMATION:

A. Additional information concerning Emergency Reaction Steps, Ignition Procedures, Training Requirements and Emergency Equipment Requirements will be available on location at the well site.


AROC (Texas) Inc.
Grayburg Jackson PSU
BB No. 2
Eddy County, New Mexico
Proposed Well
SHAHARA OIL (OPER)
G-J PERM
SD. U
Exhibit "B"
Existing Well Map
AROC (Texas) Inc.
Grayburg Jackson PSU BB No. 2
30' FNL & 2310' FEL, Unit B
Section 33, T17S, R30E
Eddy County, New Mexico
Lease No.NM-0467934

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

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

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexic
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	28509	Grayburg Jackson 7Rivers-QN-GB-SA

Property Code	Property Name	Well Number
17364	GRAYBURG JACKSON PSU BB	2

OGRID No.	Operator Name	Elevation
187940	ARCO (Texas) Inc	3614

Surface Location

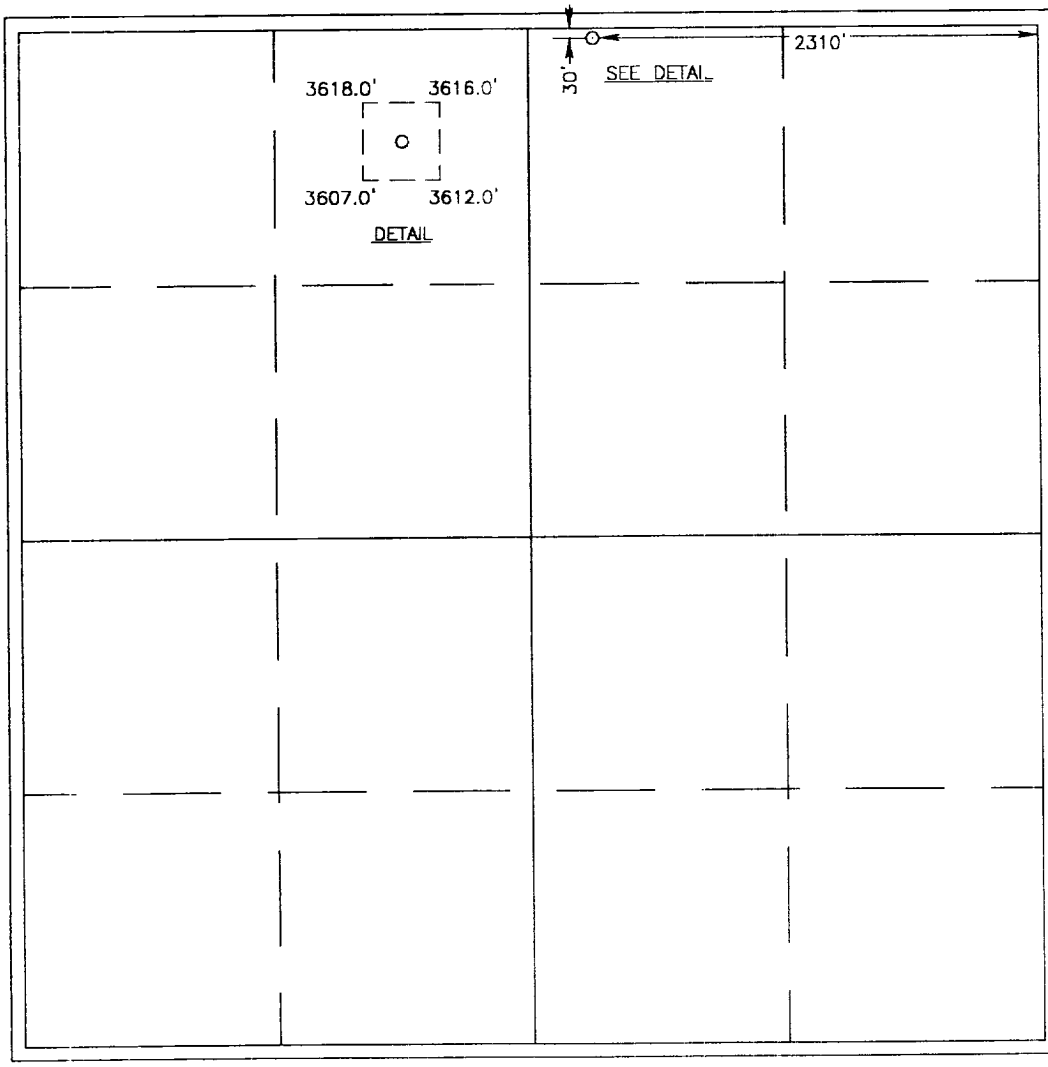
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	33	17 S	30E		30	NORTH	2310	EAST	EDDY

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	Joint or Infill	Consolidation Code	Order No.
40			

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



OPERATOR CERTIFICATION

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

Signature: Perry L. Hughes

Printed Name: PERRY L. HUGHES

Title: E.O.

Date: 6/9/00

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 supervison, and that the same is true and correct to the best of my belief.

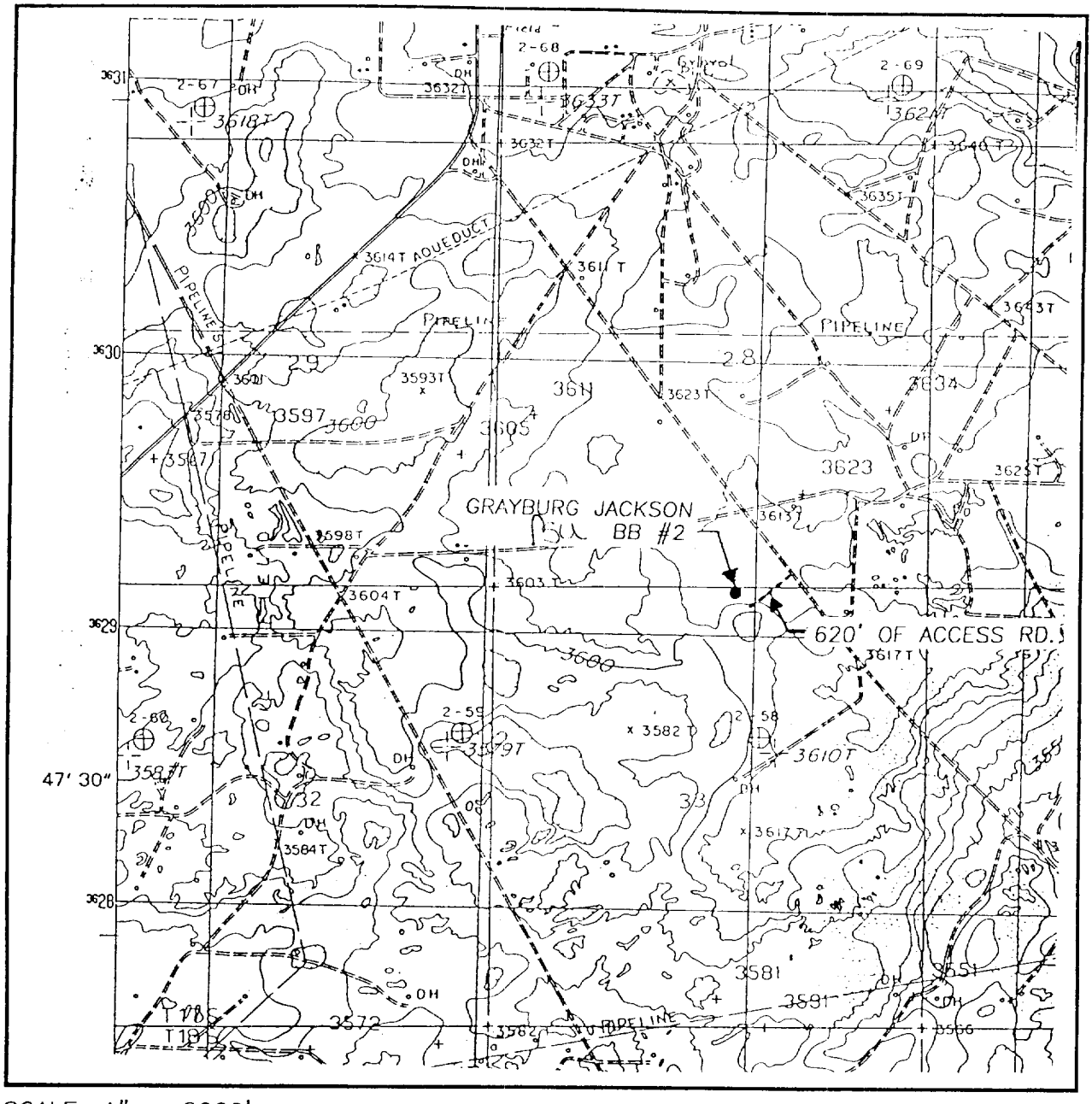
Date Surveyed: MAY 30, 2000 LMP

Signature & Seal of Professional Surveyor: Ronald J. Eidson 6.01.00

00-11-0680

Certificate No. RONALD J. EIDSON 3239
GARY EIDSON 12641
MACON McDONALD 12185

LOCATION VERFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
LOCAL HILLS, N.M.- 10'

SEC. 33 TWP. 17-S RGE. 30-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 30' FNL & 2310' FEL

ELEVATION 3614

OPERATOR AROC (Texas) Inc

LEASE GRAYBURG JACKSON PSU BB

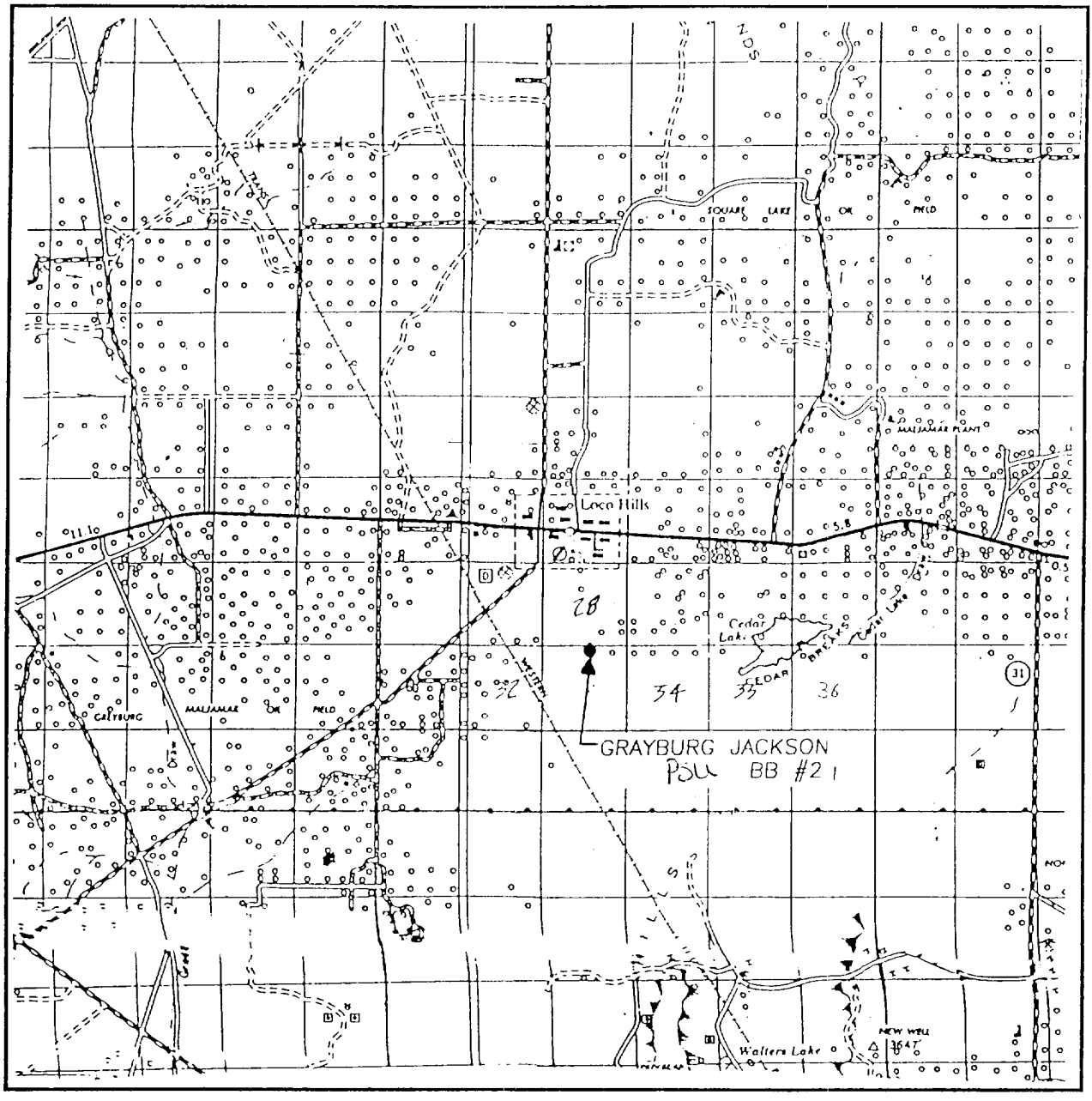
U.S.G.S. TOPOGRAPHIC MAP
LOCAL HILLS, N.M.

Exhibit "C-1"

Location Verification Map

AROC (Texas) Inc.
Grayburg Jackson PSU BB No. 2
30' FNL & 2310' FEL, Unit B
Section 33, T17S, R30E
Eddy County, New Mexico
Lease No.NM-0467934

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 33 TWP. 17-S RGE. 30-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 30' FNL & 2310' FEL

ELEVATION 3614

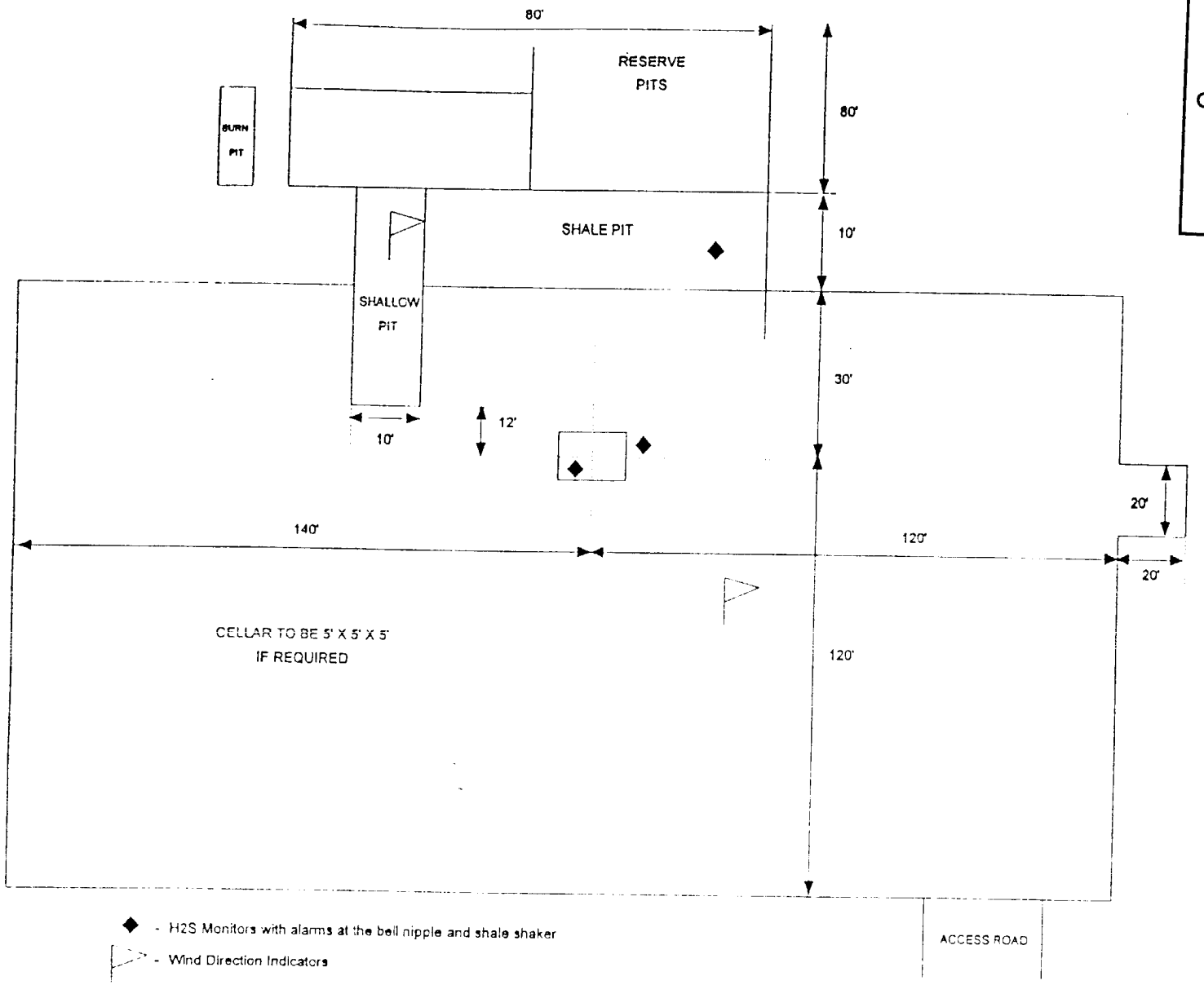
OPERATOR ARCO (Texas) Inc.

LEASE GRAYBURG JACKSON PSU BB

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505) 393-3117

Exhibit "D"
RIG LAYOUT

AROC (Texas) Inc.
Grayburg Jackson PSU BB No. 2
30' FNL & 2310' FEL, Unit B
Section 33, T17S, R30E
Eddy County, New Mexico
Lease No.NM-0467934



Prevailing Wind Direction
Southwest

N

Exhibit "E"

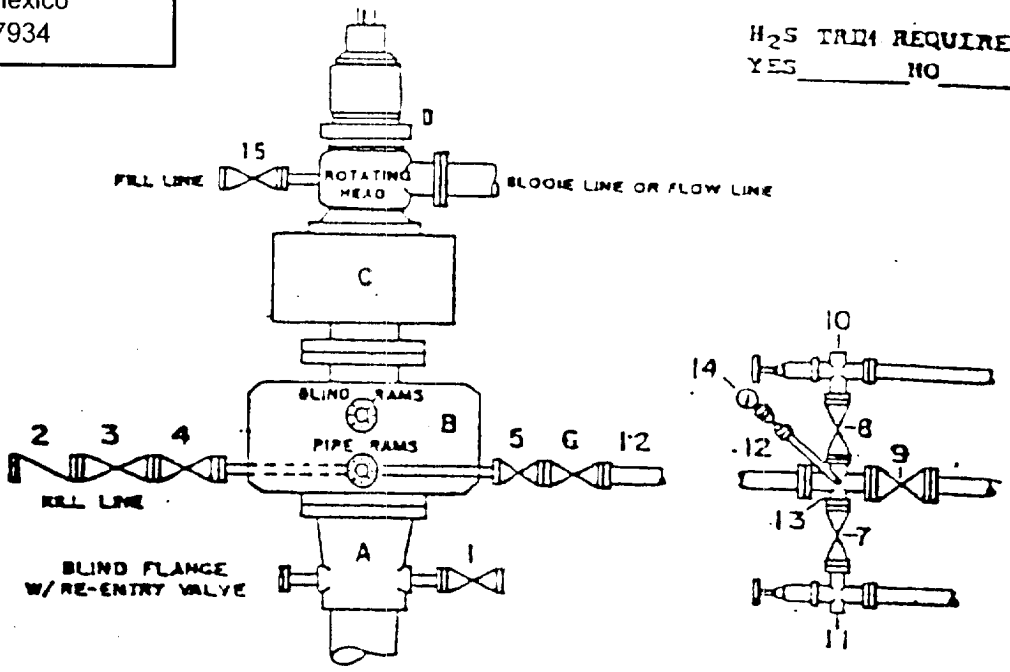
BOP Equipment

AROC (Texas) Inc.
Grayburg Jackson PSU BB No. 2
30' FNL & 2310' FEL, Unit B
Section 33, T17S, R30E
Eddy County, New Mexico
Lease No.NM-0467934

DRILLING CONTROL

CONDITION III-B 3000 PSI WP

H_2S TRIM REQUIRED
YES _____ NO _____



DRILLING CONTROL

MATERIAL LIST - CONDITION III - B

A	Wellhead
B	3000# W.P. Dual ram type preventer, hydraulic operated with 1" steel, 3000# W.P. control lines (where sub-structure height is adequate, 2 - 3000# W.P. single ram preventers may be utilized with 3000# W.P. drilling spool with 2" minimum flanged outlet for kill line and 3" minimum flanged outlet for choke line. The drilling spool is to be installed below the single ram type preventers).
C	3000# W.P. Annular Preventer with 1" steel, 3000# W.P. control lines.
D	Rotating Head with fill up outlet and extended Blooie line.
1,3,4, 7,8,	2" minimum 3000# W.P. flanged full opening steel gate valve, or Halliburton Lo Torc Plug valve.
2	2" minimum 3000# W.P. back pressure valve.
5,6,9	3" minimum 3000# W.P. flanged full opening steel gate valve, or Halliburton Lo Torc Plug valve.
12	3" minimum Schedule 80, Grade B, seamless line pipe.
13	2" minimum x 3" minimum 3000# W.P. flanged cross.
10,11	2" minimum 3000# W.P. adjustable choke bodies.
14	Cameron Mud Gauge or equivalent (location optional in Choke line).
15	2" minimum 3000# W.P. flanged or threaded full opening steel gate valve, or Halliburton Lo Torc Plug valve.

SCALE:	DATE	EST. NO	SPR NO
DRAWN BY			
CHECKED BY			
APPROVED BY			

EXHIBIT E

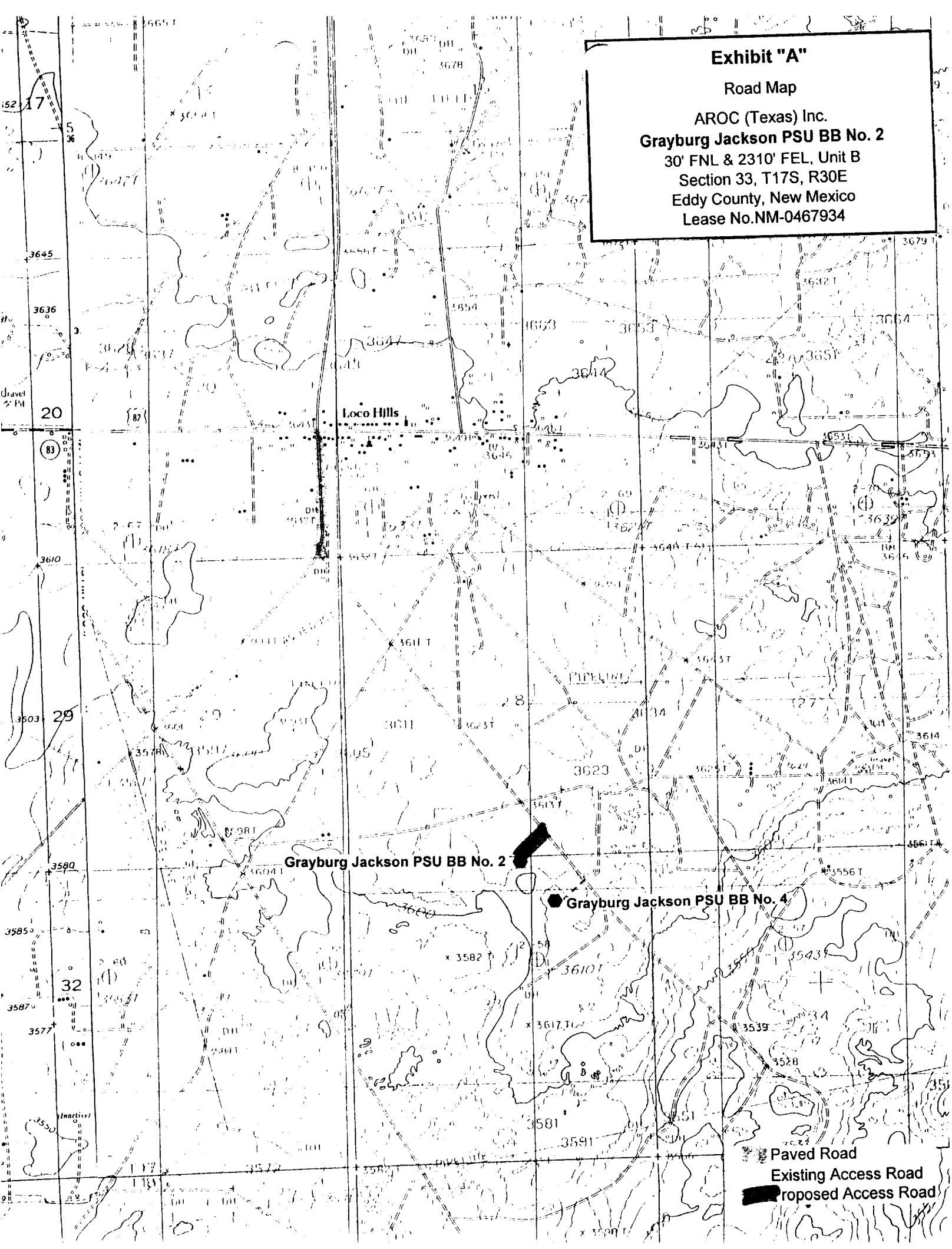


Exhibit "A"
Road Map
AROC (Texas) Inc.
Grayburg Jackson PSU BB No. 2
30' FNL & 2310' FEL, Unit B
Section 33, T17S, R30E
Eddy County, New Mexico
Lease No.NM-0467934
Loco Hills
Grayburg Jackson PSU BB No. 2
Grayburg Jackson PSU BB No. 4
Paved Road
Existing Access Road
Proposed Access Road