

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT

OPER. OGRID NO. 20595
PROPERTY NO. 23087
POOL CODE 96797
EFF. DATE 10/15/99
API NO. 30-025-34728

DATE
18 OR

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

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

b. TYPE OF WELL

OIL WELL ☒

GAS WELL ☐

OTHER ☐

SINGLE ZONE ☐

MULTIPLE ZONE ☐

2. NAME OF OPERATOR

Shackelford Oil Company

3. ADDRESS AND TELEPHONE NO.

P.O. Box 10665 Midland, TX 79702 (915)682-9784

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

330' FSL 330' FEL

At proposed prod. zone

330' FSL 330' FEL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

18.5 miles SE of Malijamar, NM

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. 330'
(Also to nearest drlg. unit line, if any)

16. NO. OF ACRES IN LEASE
959.96

17. NO. OF ACRES ASSIGNED TO THIS WELL
40

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.

2250'

19. PROPOSED DEPTH
8300'

20. ROTARY OR CABLE TOOLS
Rotary

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

GR 3581.8

22. APPROX. DATE WORK WILL START*

February 20, 1999

23. SECRETARY'S POTASH R-111-P POTASH CRISTIAN CONTROLLED WATER BASIN

SIZE OF HOLE	GRADE SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2	13 3/8 J-55	48#	500'	REGULAS Class C
12 1/4	8 5/8 J-55	36 28 & 32#	5100'	REGULAS 775SX, 2nd s
7 7/8	5 1/2 J-55	17#	TD	630 SX Class H

* Class C, DV tool at 3400'

The operator proposes to drill to a depth sufficient to test the Delaware formation for oil. If non-productive, the well will be plugged and abandoned in a manner consistent with federal regulations. Specific programs as per on shore oil and gas order #1 are outlined in the following attachments:

Drilling Program

Surface use and operating plant
Exhibit #1/#1-A Blowout Prevention Equipment
Exhibit #2 location & elevation plant

Exhibit #3 Planned Access Road
Exhibit #4 Wells within one mile radius
Exhibit #5 on back of page

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS

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

24. SIGNED [Signature] TITLE Owner DATE Feb. 21, 1999

(This space for Federal or State office use)

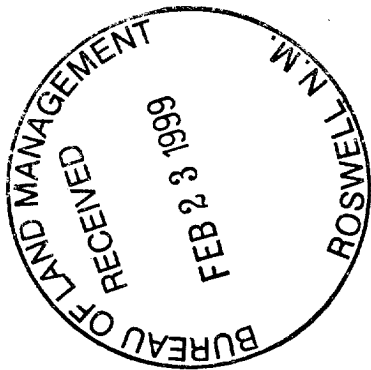
PERMIT NO. [Signature]

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 [Signature] TITLE Acting DATE 5-27-99

*See Instructions On Reverse Side



District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised October 18, 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

1 API Number 30-025-34728		2 Pool Code 96797		3 Pool Name Teas Delaware		
4 Property Code 23087		5 Property Name Tonto Federal			6 Well Number 3	
7 OGRID No. 20595		8 Operator Name Shackelford Oil Co			9 Elevation	

10 Surface Location

UL or lot no. P	Section 3	Township 20s	Range 33e	Lot Idn	Feet from the 330	North/South line S	Feet from the 330	East/West line E	County Lea
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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
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12 Dedicated Acres 40	13 Joint or Infill	14 Consolidation Code	15 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				17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief Signature: <u>Don Shackelford</u> Printed Name: <u>Don Shackelford</u> Title: <u>Owner</u> Date: <u>10/18/99</u>			
				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. Date of Survey: _____ Signature and Seal of Professional Surveyor: _____ Certificate Number: _____			

New Mexico Oil Conservation Division
C-102 Instructions

IF THIS IS AN AMENDED REPORT, CHECK THE BOX LABELED "AMENDED REPORT" AT THE TOP OF THIS DOCUMENT.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed contact the appropriate OCD district office. Independent subdivision surveys will not be acceptable.

1. The OCD assigned API number for this well
2. The pool code for this (proposed) completion
3. The pool name for this (proposed) completion
4. The property code for this (proposed) completion
5. The property name (well name) for this (proposed) completion
6. The well number for this (proposed) completion
7. Operator's OGRID number
8. The operator's name
9. The ground level elevation of this well
10. The surveyed surface location of this well measured from the section lines **NOTE: If the United States government survey designates a Lot Number for this location use that number in the 'UL or lot no.' box. Otherwise use the OCD unit letter.**
11. Proposed bottom hole location. If this is a horizontal hole indicate the location of the end of the hole.
12. The calculated acreage dedicated to this completion to the nearest hundredth of an acre
13. Put a Y if more than one completion will be sharing this same acreage or N if this is the only completion on this acreage
14. If more than one lease of different ownership has been dedicated to the well show the consolidation code from the following table:

C	Communitization
U	Unitization
F	Forced pooling
O	Other
P	Consolidation pending

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!

15. Write in the OCD order(s) approving a non-standard location, non-standard spacing, or directional or horizontal drilling
16. This grid represents a standard section. You may superimpose a non-standard section over this grid. Outline the dedicated acreage and the separate leases within that dedicated acreage. Show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. (Note: A legal location is determined from the perpendicular distance to the edge of the tract.) If this is a high angle or

horizontal hole show that portion of the well bore that is open within this pool.

Show all lots, lot numbers, and their respective acreage.

If more than one lease has been dedicated to this completion, outline each one and identify the ownership as to both working interest and royalty.

17. The signature, printed name, and title of the person authorized to make this report, and the date this document was signed.
18. The registered surveyors certification. This section does not have to be completed if this form has been previously accepted by the OCD and is being filed for a change of pool or dedicated acreage.

APPLICATION TO DRILL

In conjunction with Form 3160-3, Application for Permit to Drill, Shackelford Oil Co. submits the subject well in accordance with Bureau of Land Management requirements.

1. The geologic surface information is Quaternary.
2. The estimated tops of geologic markers are:
 1. Anhydrite 1350'
 2. Transill 3135'
 3. Yates 3350'
 4. Seven Rivers 3650'
 5. Delaware 5400'
3. The estimated depths at which water, oil, or gas-bearing formation are expected:

Water: 350' ft
Oil & Gas: 3350' - 3700' Yates- Seven Rivers
5400' - 8300' Delaware
4. Casing

13 3/8"	48#	J-55	0-500'
8 5/8"	28 & 32#	J-55	0-5100'
5 1/2"	17#	J-55	0-TD
5. Cement
 - A. Cement from 500' to surface with 530 sacks Class C.
 - B. Cement from 5100' with 1st stage 775 sacks, 2nd stage 1905 sacks Class C, DV tool at 3400'.
 - C. Cement from 8300' with 630 sacks Class H.
6. Pressure control equipment: Blowout preventer.
7. Mud Program: See Exhibit #7
8. No abnormal pressures are expected
9. Testing, Logging, and Coring Programs

Wireline logging program: See Exhibit #7
10. Anticipated starting date: February 1999

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Tonto Federal #3
330' FSL and 330' FFL
Sec. 3, T-20-S, R-33-E
Lea County, New Mexico

This plan is submitted with Form 3160-3, application for permit to drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbance involved, and the procedures to be followed in rehabilitating the surface after completion of operations so that a complete appraisal can be made of the environmental effects associated with the operations.

1. EXISTING ROADS

- A. The wellsite and elevation plat for the proposed Tonto Federal #3 are reflected on Exhibit #2.
- B. All roads to the location are indicated on Exhibit #3.
- C. **DIRECTIONS:**
 - 1. Proceed west from Hobbs on US 62 - 180 for 31 miles.
 - 2. Turn right on Caliche Road and continue 1.2 miles to the location on the left.

2. PLANNED ACCESS ROAD

- A. See Item 1.

3. LOCATION OF EXISTING WELLS

- A. The locations of existing active wells located in and immediately adjacent to Section 21 are highlighted on Exhibit #4.

4. LOCATION OF EXISTING AND PROPOSED FACILITIES

- A. There are two producing wells on this lease. These two wells are listed below:

SAMSON RESOURCES

Section 11, T- 20 - S: R- 33 -E

Smith Ranch Federal #1 1980'FNL & 660' FWL

Smith Ranch Federal #2 660'FNL & 1980' FWL

5. **LOCATION AND TYPE OF WATER SUPPLY**

- A. It is planned to drill the proposed well with a cut- brine water system or with produced water. The water will be obtained from commercial source and will be hauled to location by truck over existing and proposed lease roads marked on Exhibit #3.

6. **SOURCES OF CONSTRUCTION MATERIALS**

- A. Caliche required for construction of the location pad and access road will be obtained from caliche on the location or from the nearest BLM approved pit.

7. **METHODS OF HANDLING WASTE DISPOSAL**

- A. Drill cuttings will be disposed of in the reserve pits.
- B. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry. The reserve pit will be fenced on three sides and will be totally isolated upon removal of the rig.
- C. Water produced during operations will be collected in steel tanks or a reserve pit, if volumes prove excessive. After placing the well on production, all water will be collected in tanks.
- D. Oil produced during operations will be stored at the existing battery and sold through transport trucks.
- E. Current regulations pertaining to disposal of human waste will be complied with.
- F. Trash, waste paper, garbage and junk will be kept in a trailer and disposed of at an approved landfill. All waste material will be contained to prevent scattering by the wind.
- G. All trash and debris will be removed from the well site within 30 days after drilling and/or completion operations are terminated. At the point the reserve pit is dry it will be backfilled and reclaimed as outlined by BLM specifications. Only the portion of the drilling pad used by production equipment will remain in use. If deemed dry only a dry hole marker will remain.

8. **ANCILLARY FACILITIES**

- A. No ancillary facilities will be required for this well.

9. **WELLSITE LAYOUT**

- A. Exhibit #6 shows the dimensions of the well pad and reserve pits and the location of major rig components.
- B. The ground surface at the drilling location is essentially flat.
- C. The reserve pits will be plastic lined.
- D. The pad and pit area has been staked and flagged.

10. **PLANS FOR RESTORATION OF THE SURFACE**

- A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleared of all trash and junk, to leave the wellsite in as aesthetically pleasing a condition as possible.
- B. Unguarded pits, if any, containing fluids will be fenced until they have been filled.
- C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management and the United States Geological Survey will be compiled with and will be accomplished as expeditiously as possible. All pits will be filled and leveled within 90 days after abandonment.

11. **SURFACE OWNERSHIP**

- A. The wellsite is owned by the Bureau of Land Management.
- B. The surface location will be restored in compliance with BLM rules.

12. **TOPOGRAPHY**

- A. The well site and access route are located in a flat area with little relief.
- B. The top soil at the wellsite is caliche.
- C. The vegetation cover at the wellsite is moderately sparse, with mesquite, grasses, yucca, scrubs oak, and weeds.
- D. No wildlife was observed but it is likely that rabbits, lizards, insects, and rodents traverse the area. The area is used for cattle grazing.
- E. There are no ponds, lakes, streams, or rivers within several miles of the wellsite.

- F. The wellsite is located on federal surface.
- G. There is no evidence of any archaeological, historical, or cultural sites in the vicinity of the location.

13. **OPERATOR'S REPRESENTATIVES**

- A. The field representatives responsible for assuring compliance with the approved surface use plan are:

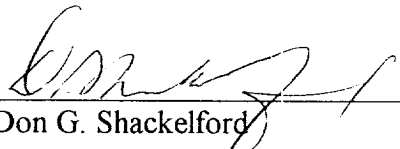
Don G. Shackelford
Shackelford Oil Co.
203 W. Wall Suite 401
Midland, Texas 79701
Phone: (915) 682-9784 (office)
(915) 758-9195 (home)

W.L. Shackelford
512 New Mexico Dr.
Roswell, New Mexico 88201
Phone: (505) 622-5902

14. **CERTIFICATION**

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite 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 Shackelford Oil Co. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Feb. 21, 1999
Date


Don G. Shackelford

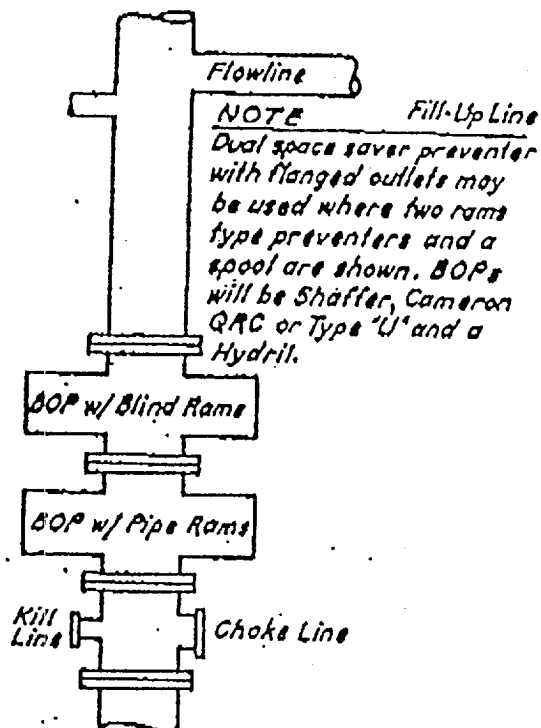


301 BOYD, E
ALLEN, TEXAS 75002

P. O. BOX 589
ALLEN, TEXAS 75002

(214) 727-8367

In Texas (800) 442-5224



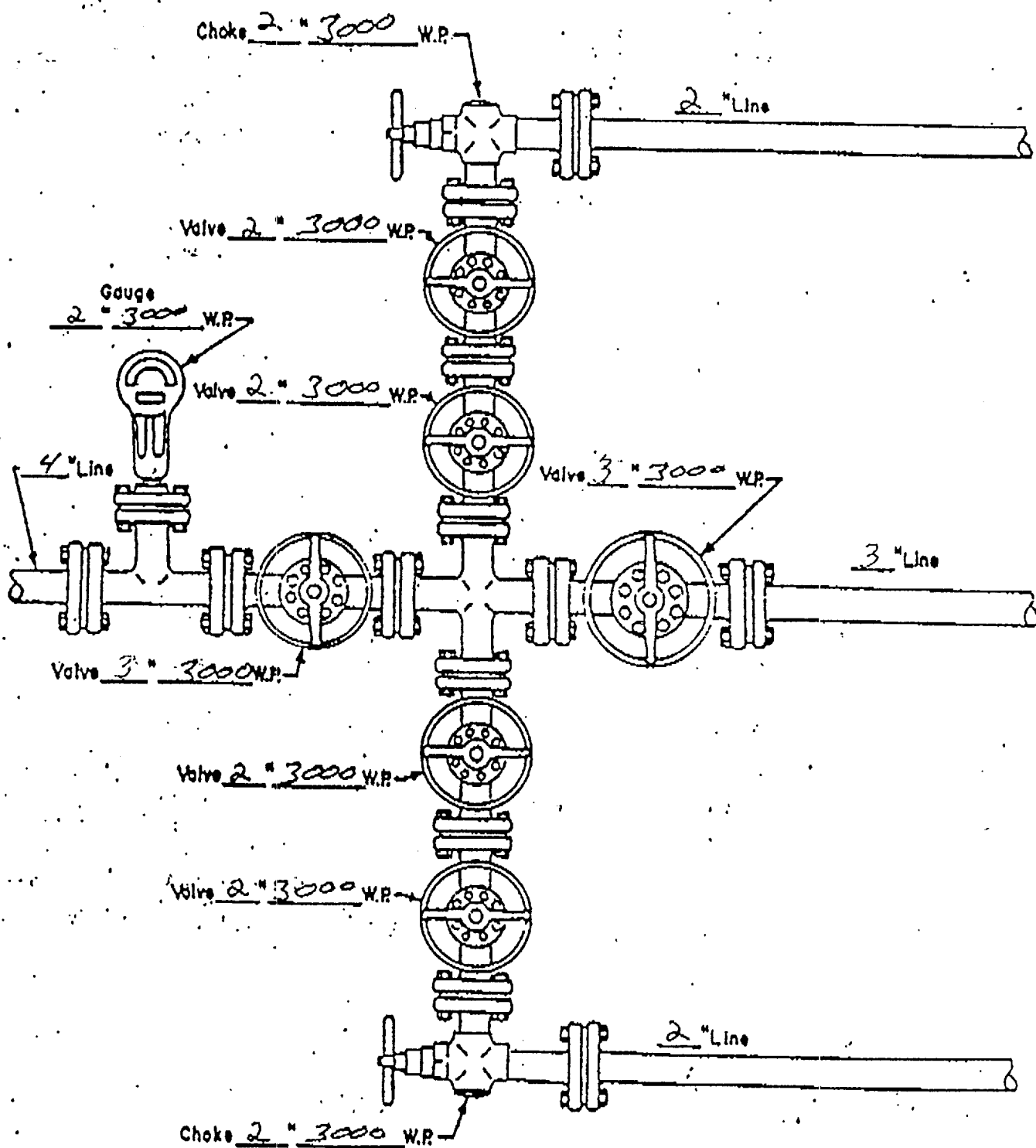
CASE I

BLOWOUT PREVENTER HOOKUP

3000# Working Pressure

Choke Manifold

Exhibit 1-A



MANIFOLD
3000 #W.P.

- ☒ Manual
- ☐ Hydraulic

SHACKELFORD OIL COMPANY

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

I. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H₂S).
2. The proper use and maintenance of personal protective equipment and life support system.
3. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

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

1. The effects of H₂S 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 H₂S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H₂S zone (within 3 days or 500 feet) and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

II. H₂S SAFETY EQUIPMENT AND SYSTEMS

Note: All H₂S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H₂S.

1. Well Control Equipment:
 - A. Flare line with electronic igniter or continuous pilot.
 - B. Choke manifold with a minimum of one remote choke.
 - C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
2. Protective equipment for essential personnel:
 - A. Mark II Survivor 30-minute units located in the dog house and at briefing areas, as indicated on well site diagram.
3. H2S detection and monitoring equipment:
 - A. 2 - portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.
 - B. 1 - portable SO2 monitor positioned near flare line.
4. Visual warning systems:
 - A. Wind direction indicators as shown on well site diagram.
 - B. Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.
5. Mud program:
 - A. The mud program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H2S scavengers will minimize hazards when penetrating H2S bearing zones.
6. Metallurgy:
 - A. All drill strings, casing, tubing wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

7. Communication:

- A. Radio communications in company vehicles including cellular telephone and 2-way radio.
- B. Land line (telephone) communications at field office.

8. Well testing:

- A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill stem testing operations conducted in an H₂S environment will use the closed chamber method of testing.

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

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

EXHIBIT #2

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

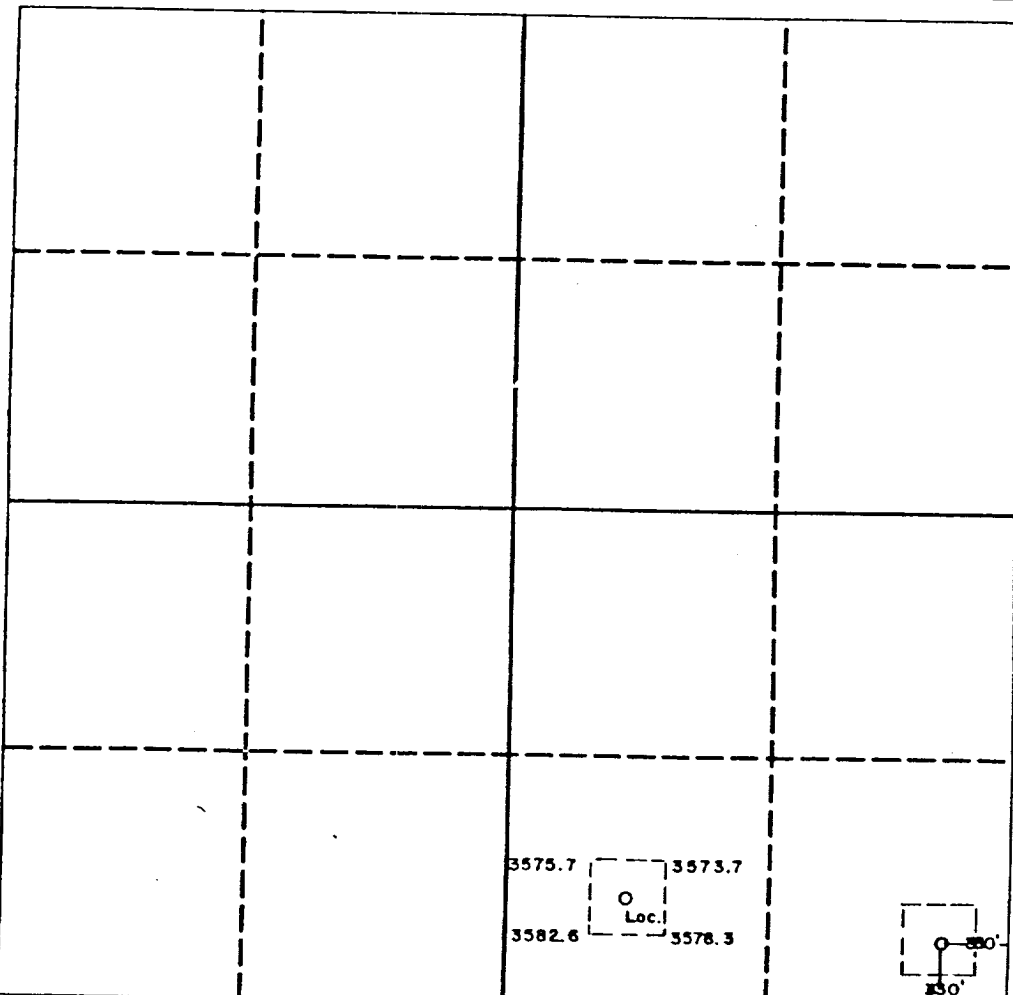
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator GRACE PETROLEUM CORP.			Lease SMITH RANCH 3 FED.		Well No. 1
Unit Letter P	Section 3	Township 20 SOUTH	Range 33 EAST	County LEA	
Actual Footage Location of Well: 330 feet from the SOUTH line and 330 feet from the EAST line					
Ground level Elev. 3581.8	Producing Formation Bone Springs	Pool Teas	Dedicated Acreage: 40 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?
☐ Yes ☐ No If answer is "yes" type of consolidation _____
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary). _____
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

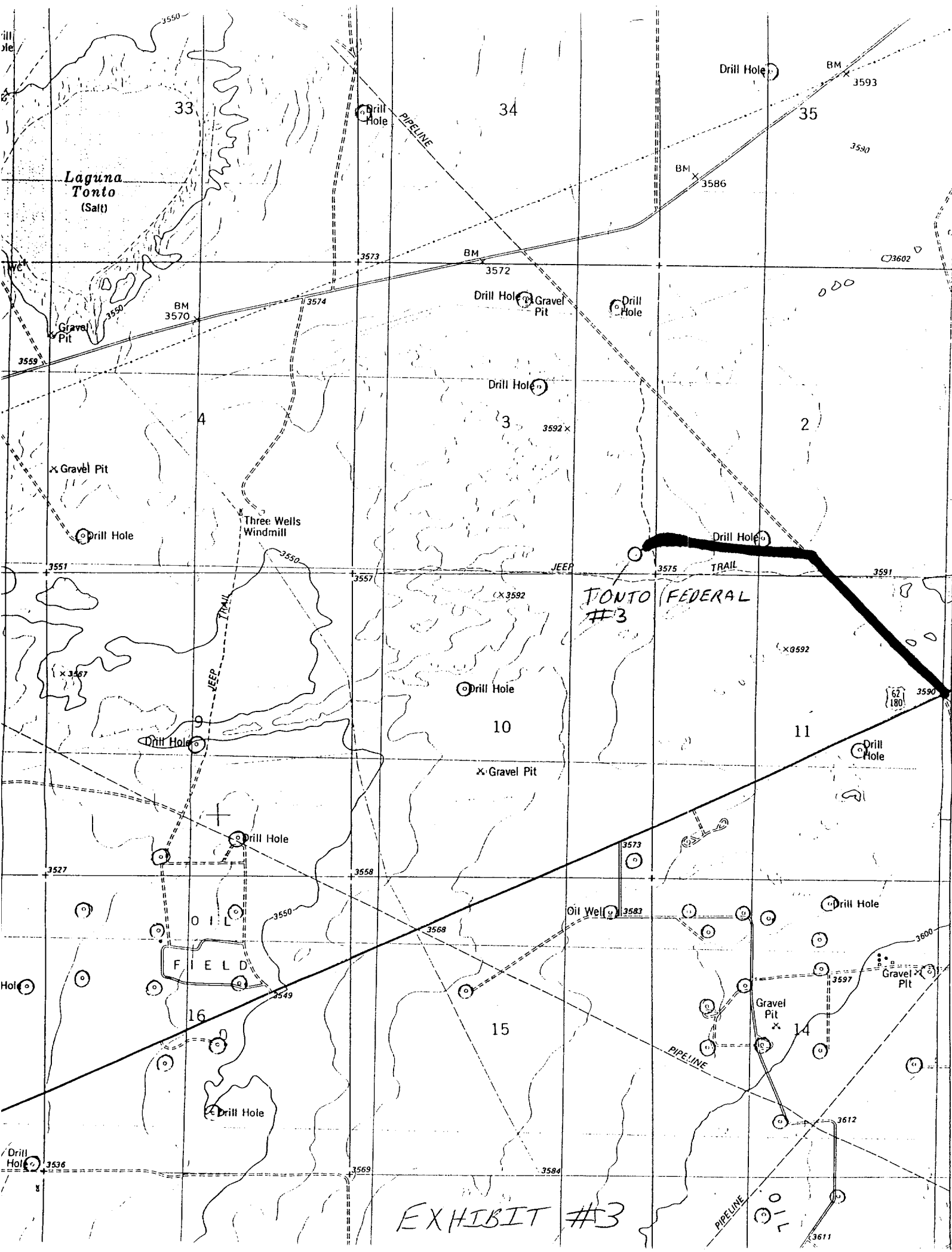
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature
William P. Baswell
Printed Name
William P. Baswell
Position
Operations Engineer
Company
Grace Petroleum Corporation
Date
4/30/91

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 knowledge and belief.

Date Surveyed
4-18-91
Signature & Seal of Professional Surveyor
John W. West
Certificate No. JOHN W. WEST, 676
RONALD J. EIDSON, 3239



agnolia
3259

26982
JFG
(Internorth)
1-Tonto
TD 13.630
11-9-90

10 12-79
2-3-79

NEW
WELL

27152
Un Cal
3-Laguna Deep
TD 13.600
12-23-81

5

4

3

2

3ig Eddy
1.600
32563
Bass
9-Anasazi

32564
Bass
10-Anasazi
LS&R
1-Bass
TD 3410

32047
32032
32012
TD 3373
31857
TD 3410

32013
Bass
2-Anasazi
McGrath, et al
1-Tri9g Fed
TD 3435

Hank
1-US Govt
TD 3460
8-16-66

Tri9g
2-Fed
TD 3440
5-1-59

30468
BTA
2-Gem
TD 13.630
11-4-89

29916
BTA
1-Gem
TD 13.700

Penrose
1-Crozier
TD 3684

8

9

10

11

S W, 59
S. SEVEN RIVERS

29971
Grover
2 Barber
TD 3400
29972
Grover
2-Fed
TD 3400
31896
31718
TD 3340
32217
TD 3390
29900
Grover
1-Barber
TD 3404
31558
32517
33004
29861
TD 3400
30239
TD 3425
33004
7
TD 3435
30238
TD 3400
TD 6015
Sinclair
1-Fed
TD 3300
08

Stoltz
1-Union Tex
TD 3554
7-25-63

29285
Yates
(Siete)
1-Tonto
TD 10.706
10-11-85

Grace
1-Smith Rich
TD 13.650
31255
TD 9700
31683
Devon
2-Smith Rich
TD 9520
11-8-93

31138
TD 9746

Grace
1-Smith
TD 13.700

17

16

15

14

Byrom
1 Fed
TD 3286
7-30-62

33286
1
31856
TD 13.858
30543
Olsen
1-Snyder
TD 3429

33144
Stevens & Tull
4-BF State
TD 3470
Knox
1-Tenneco Fed
TD 3418
1-15-64

33144
Stevens & Tull
4-BF State
TD 3470
Knox
1-Tenneco Fed
TD 3418
1-15-64

1-A
5
1-B
TD 3455

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31274
TD 13
021

EXHIBIT #4

TONTON FEDERAL #3

Jeff
1-Jir
TD :

EXHIBIT #4

T - 20S, R-33E, Lea County

Section 2

Well Name

Location

#1 State "YS"

660' FSL and 1980' FWL

#1 GEM 8705 JV- P

660' FNL and 1980' FEL

#2 GEM 8705 JV- P

660' FNL and 2310' FWL

#3 GEM 8705 JV- P

660' FSL and 1980' FEL

#4 GEM 8705 JV- P

510' FSL and 1980' FWL

#5 GEM 8705 JV- P

660' FSL and 810' FWL

#6 GEM 8705 JV- P

1980' FSL and 1980' FWL

Section 3

#1 US Government

1980' FNL and 1980' FEL

#1 Trigg Federal

660' FSL and 660' FWL

#2-3 Federal- Lea

657.73' FNL and 660' FEL

#1 Viper "3" Federal

2200' FSL and 1600' FEL

Section 10

#1 Anderson - Prichard

330' FSL and 330' FEL

#1 Tonto Federal

1980' FNL and 660' FEL

#1 Union Texas

1980' FNL and 1980' FWL

Section 11

#1 Federal "11"

660' FSL and 660' FWL

#2 Smith Ranch "11" Federal

2250' FSL and 2014' FWL

#1 Smith Ranch Federal

1980' FNL and 660' FWL

#2 Smith Ranch Federal

660' FNL and 1980' FWL

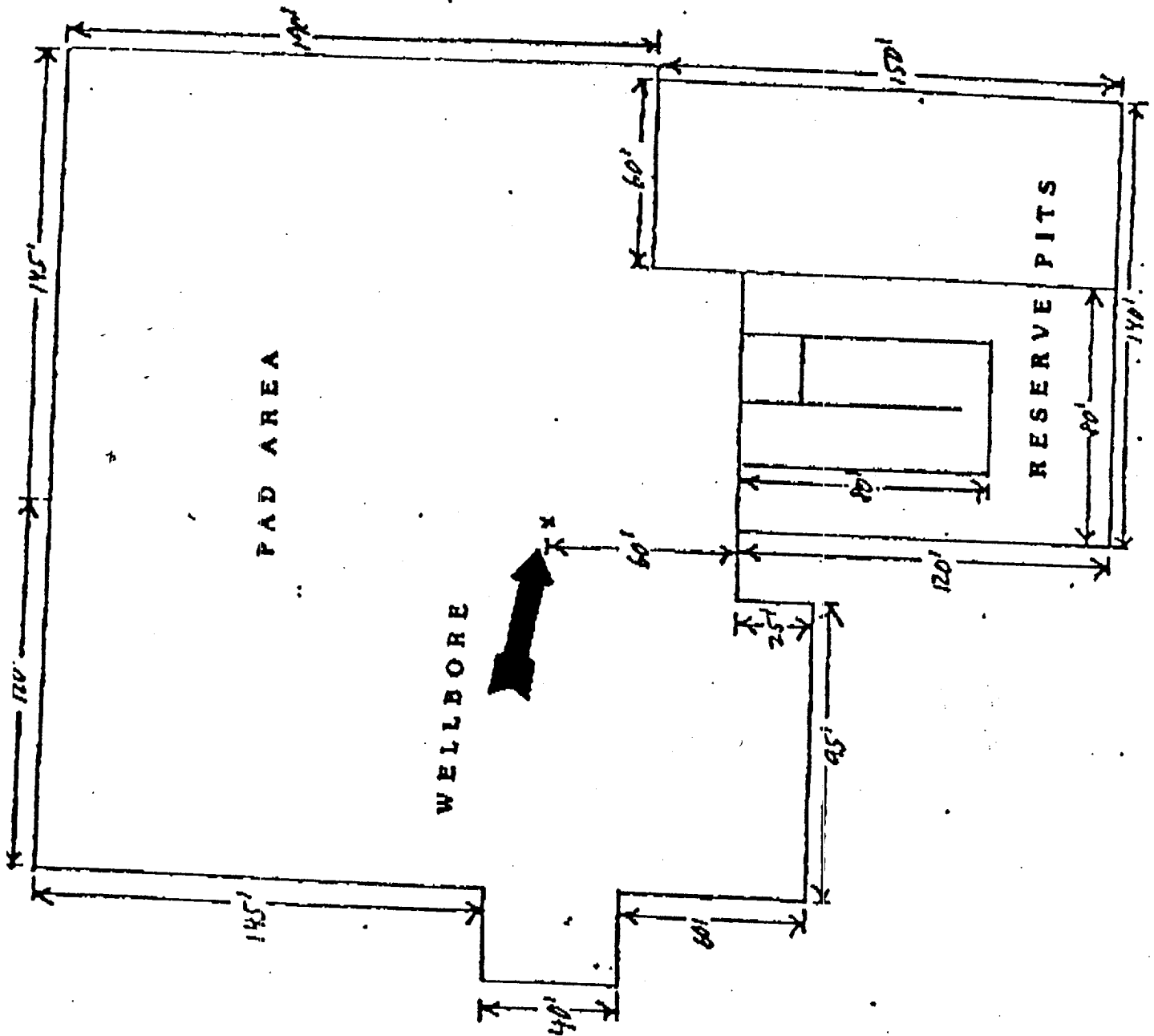
#1 Smith Ranch "11" Federal

2310' FSL and 900' FWL

Note:

Proposed Well - Shackelford Oil Company #3 Tonto Federal 330' FSL and
330'FEL Sec. 3 - T. 205., R. 33E.

EXHIBIT #6



**EXHIBIT #7
DRILLING PROGNOSIS
TONTA FEDERAL #3**

Location: Section 2, T- 20-S, R- 33- E

Proposed Depth and Objective: Delaware - 8300'

Casing Program:	13 3/8"	J- 55	48#	500'
	8 5/8"	J- 55	28 & 32#	5100'
	5 1/2"	J- 55	17#	TD

Logging Program: A compensated neutron/ formation density with gamma ray, and caliper will be ran for porosity and lithology. A dual laterlog will be ran for water saturation analysis. The grama ray will be ran from TD to the surface. If shows are indicated in Yates or Seven Rivers logs will be ran over these prior to casing, other wise logs will be ran over the Delaware.

Mud Logging: Samples will be caught every 10' from 3000' to TD.

Mud Program:

0 - 500'	Spud 17 1/2" hole with fresh water containing gel and lime, if necessary for hole cleaning. Mud weight should be 8.5 - 8.7 LB/GAL with a velocity of 33 - 35 sec/ 1000cc.
500'-5100'	Drill out below surface pipe using 12 1/4" bit with 10 LB/GAL brine for drilling the native salt section. Lime will be added to maintain a ph of 9.5 - 10.00.
5100' - TD	Drill out of intermediate casing with 7 7/8" bit with fresh water to TD.

STATEMENT ACCEPTING RESPONSIBILITY OF OPERATIONS

Shackelford Oil Company
203 W. Wall, Suite 401
Midland, TX 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 - 17238

Legal Description of Land: SE/4 of SE/4 Section 3 T-20-S, R-33-E

Formation(s) (if applicable): 0 - 8300

Bond Coverage: (State if individual bonded or another's bond)
25,000 Statewide Bond

BLM Bond file No. Statewide Bond
3104 (943C-3TF)

Authorized Signature:



Title: Owner

Date: Feb 21, 1999

ABOVE DATE DOES NOT
INDICATE WHEN
CONFIDENTIAL LOGS
WILL BE RELEASED

ELF

2/23/61