Form 3160-3 (July 1992) UNI	MEXRO SALES SERVICES	SUBMIT IN TRI	ons on	FORM APPR OMB NO. 100 Expires: Februar	04-0136
DEPARTMEN	T OF THE INTERIOF	7 272	ĺ	5. LEASE DEBIGNATION A	ND BEBIAL NO.
BUREAU O	F LAND MANAGEMENT	52-		NMNM - 17238	
APPLICATION FOR F	ERMIT TO DRILL O	R DEEPEN		6. IF INDIAN, ALLOTTER	OR TRIBE NAME
1a. TYPE OF WORK		•		N/A 7. UNIT AGREEMENT NA	MD
	DEEPEN			N/A	
b. TYPE OF WELL OIL GAS WELL XX WELL OTHER	SINGLE Zone	MULTIPLI ZONE		8. FARM OR LEASE NAME, WELL	LNO.
2. NAME OF OPERATOR	Q L .			Tonto Federa	1#4
Shackelford Oil Company	potros	<u> </u>		9. API WELL NO.	4- 5
3. ADDRESS AND TELEPHONE NO.		01 070/		10. FIELD AND POOL, OF	34935
P. (). Box 10665 Midland, 4. LOCATION OF WELL (Report location clearly at		32–9784 regulrements.*)		Teas Delaware	
At surgree				11. SPC., T., R., M., OR B AND SURVET OR ARI	LR.
1980' FSL & 660' FEL At proposed prod. zone	#T				
1980' FSL & 660' FEL 14. DISTANCE IN MILES AND DIRECTION FROM NE	ar-			Sec. 3 T-20-S	
				12. COUNTY OR PARISH Lea.	13. BTATE NM
18.5 miles SE of Maljamar,		ACRES IN LEASE		F ACRES ASSIGNED	
LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.	2201 0	59.96	TO T	40 40	
(Also to nearest drig, unit line, if any) 18. DISTANCE FROM PROPOSED LOCATION*	330 <sup>*</sup> 9. 19. PROPOSI		20. ROTA	RY OR CABLE TOOLS	
TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	990' 9	700'		Rotary	
21. ELEVATIONS (Show whether DF, RT, GR, etc.)				22. APPROX. DATE WO	
<u>GR 3581.8</u>				February 10,	2000
23.	PROPOSED CASING AND CEN	MENTING PROGRAM	I		
SIZE OF HOLE GRADE SIZE OF CASING	WEIGHT FER FOOT	SETTING DEPTH		QUANTITY OF CEMEN	T
17 1/2 13 3/8 J-55		1300' 5100'		SX Class C X, 2nd stage 19	05 SX Class
12 1/4 8 5/8 J-55 7 7/8 5 1/2 J-55	307	TD		X Class H	, ozace
7 7/8   5 1/2 J-55	17 "		*C DV	tool at 3400'.	
			^C, DV	LUUI at 5400 a	•
The operator proposes to o for oil. If non-productive consistent with federal re- order #1 are outlined in a <u>Drilling Program</u> Surface use and operating Exhibit #1/#1-A Blowout P- Exhibit #2 location & ele	ve, the well will be egulations. Specifi the following attach plant revention Equipment	e plugged and c programs a ments: Exhibit Exhibit radius.	abond s per #3 Pla #4 Wel	oned in a manne on shore oil an inned Access Ro is within one to back of page	ad
IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM deepen directionally fove pertinent data on subsurface locs 24. SIGNED	If proposal is to deepen, give data on p tions and measured and true vertical dep	present productive zone : pths. Give blowout preve	and propose nter program	APINO. 30-	96797 2-17-00 -025-349
(This space for Federal or State office use	)			0 0	
PERMIT NO.		ROVAL DATE			
Application approval does not warrant or certify that the CONDITIONS OF APPROVAL, IF ANY:	e applicant holds legal or equitable title to	those rights in the subject		would entitle the applicant to c	onduct operations thereon.

5	APPROVED BY S CARSTEN F Gotf TITLE ASTING STATE DIRECTOR	2-10.00
5	*See Instructions On Reverse Side	APPROVED FOR IN EAR

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 false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



JAN 2. A 2000 BLM ROSWELL, NM

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Bureau of Lond Management Received DOD .

JAN 2 & 2000 Carledad Field Cffice Carledad, N.N.

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#### **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
	8305' - 9700' Bone Springs

4. Casing

13 3/8"	48#	J-55	0- 1300'
8 5/8"	28 & 32#	J-55	0-5100'
5 1/2"	1 <b>7</b> #	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 9700' 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 2000

#### MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Tonto Federal #4 1980' FSL & 660' FEL 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 #4 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 four producing wells on this lease. These four 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

#### SHACEKLFORD OIL COMPANY

Section 3, T-20-S: R-33E Tonto Federal #3 330'FSL & 330'FEL

#### **NEARBURG PRODUCING**

Section 3, T-20-S: R-33-E Viper 3 Federal #1 2200'FSL & 1600'FEL

#### 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 in 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:

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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.

many 13, 2000 Date

Don G. Shackelford

cc:\appdrill.soc



5th Working Pressure



## 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.

#### 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:
  - $\Lambda$ . 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:
  - Λ. 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 zoucs.
- 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.

### 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 (1125).
- 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 zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in 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.

Note:

Proposed Well - Shackelford Oil Company #4 Tonto Federal 1980' FSL and 660' FEL Sec. 3 T-20-S R-33-E.

DISTRICT I P.O. Men. 1980, Hobbs, WM 68341-1980

DISTRICT II P.O. Drewer DO, Artonia, NM 85811-0719

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

DISTRICT IV P.O. BOX 2068, BANTA FE, N.M. 87504-2065 State of New Mexico

Energy, Minmuls and Natural Resources Department.

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

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#### OIL CONSERVATION DIVISION P.O. Box 2088 Santa Fe, New Mexico 87504-2088

AMENDED REPORT

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### WELL LOCATION AND ACREAGE DEDICATION PLAT

API I	iumber			Pool Code	AITD ACADA		Pool Name		
30-025	- 349	735	96087 Teas Delaware						
Property C	ode			· · ·	Property Nem			Well Number 4	
2300					Operator Nam			Elevatio	n
dosti No	$\sim$			SHACK	ELFORD OIL	COMPANY		3581	
		L			Surface Loca	ation			
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
	3	20 S	33E		1980	SOUTH	660	EAST	LEA
		L	Bottom	Hole Lo	cation If Diffe	rent From Sur	face		
UL or lot Na.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint o	r Infill (	onsolidation	Code Or	der No.	1	<u> </u>		
40									
NO ALLO	WABLE V	VILL BE	SSIGNED	TO THIS	COMPLETION U	JNTIL ALL INTE	RESTS HAVE B	EEN CONSOLID	ATED
		OR A	NON-STAN	IDARD UI	NIT HAS BEEN	APPROVED BY	THE DIVISION		
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# LOCATION VERFICATION MAP



VICINITY MAP



SEC. <u>3</u> TWP. <u>20-S</u> RGE. <u>33-E</u> SURVEY <u>N.M.P.M.</u> COUNTY <u>LEA</u> DESCRIPTION <u>1980' FSL & 660' FEL</u> ELEVATION <u>3581</u> SHACKELFORD OPERATOR <u>OIL COMPANY</u> LEASE <u>TONTO FEDERAL 3</u>

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



215634-026

NM060-3160-1 (4/88)

NOTICE OF STAKING (Not to be used in place of	6. Lease Number
Application for Permit to Drill Form 3160-3)	NMNM-17238
1. 011 Well X Gas Well Other (Specify)	7. If Indian, Allottee Tribe Name
2. Name of Operator	N/A
	8. Unit Agreent Name
SHACKELFORD OIL MPANY	N/A
3. Name of Spacific Untact Persons	9. Farm Least Name
DON G. SHACKELFORD	TO FEDERAL
4. Address & Phone No. o Operator or Agent	19 e11 No.
P. O. BOX 10665 MIDLAND, TEXAS 79702 (915) 682-9784	#4
5. Surface Lucation of Well	11. Field or Wildcat Name
1980' FSL 990' FEL	WILDCAT
Attach: a) Sketch showing rout entry and pad, pad dimensions, an reservoit.	
D) Topographical or other stable	12. Sec., T., R., M., or Blk and Survey or Area
map showing location, cleas road, and lease boundaries	the sources of Area 4
	SEC. 3 T205 R33E
15. Formation Objectives(s) 15 stime of Well	
Depth	13. County, Parish 14. State
BONE SPRINGS 9600'	or Borough
	LEA NM
17. Additional Information (as appropriate; shall in address and, if know (telephone number)	aclude surface owner a name.
BUREAU OF L B MANAGEMENT	
18. Signed Boy Blacker Title AGEN	1T Date 12/17/1999
Note: Upon receipt of this Notice, the Bureau of Le schedul, the date of the onsite predrill insp accordingly. The location must be staked and Prove to the onsite.	and Management (BLH) will
Operators must consider the following prior t a) H23 Potential b) Cultural Resources (Archaeology) c) Tederal Right of Way or Special Upe Permi	
IMPORTANT: SEE REVERSE SIDE FOR I	NSTRUCTIONS

AND SECTOR DE

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#### EXHIBIT #7 DRILLING PROGNOSIS TONTO FEDERAL #4

Location:	Section 3, T- 20-S, R- 33- E				
Proposed Depth and Objective:	Bone Springs - 9700'				
Casing Program:	8 5/8" J- 5	5 54.50# 5 28 & 32# 0 17#	1300' 5100' TD		
Logging Program:	<b>Logging Program:</b> A compensated neutron/ formation density with gamma ray, caliper will be run for porosity and lithology. A dual induction be run for water saturation analysis. The gamma ray will be fromTD to the surface. If shows are indicated in Yates or S Rivers logs will be run over these prior to casing, other wise will be run from TD to intermediate casing.				
Mud Logging:	Mud Logging: Samples will be caught every 10' from 3000' to TD.		om 3000' to TD.		
Mud Program:					
0 - 500'	Spud 17 $\frac{1}{2}$ " 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.				

exhib#7.sec

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CECEIVED

HORAT TO BARANCE BUREAU OF EARINGE

