Form 3160-3 (July 1992)

(This space for Federal or State office use)

PERMIT NO.

APPROVED BY

# UNITED STATES DEPARTMENT OF THE INTERIOR

SUBMIT IN TR (Other instructions on reverse side)

FORM APPROVED OMB NO. 1004-0136

Expires: February 28, 1995

5. LEASE DESIGNATION AND SERIAL NO. NMLC-029393B

# BUREAU OF LAND MANAGEMENT

	BUREAU OF LAND				6. IF INDIAN, ALLOTTEE OR TRIBE NAME
	TION FOR PERM			<u> </u>	1
		DEEPEN =			7. UNIT AGREEMENT NAME 2 80 2
TYPE OF WELL OIL S	AS OTHER		SINGLE ZONE	MULTIPLE	8. FARM OR LEASE NAME, WELL NO.
WELL WELL COMER			(2)28	29 30 31	Shugart "18" Federal # 4
IAME OF OPERATOR  Mewbourne Oil Con	npany 4	744	100 m		9. APLWELL NO.
ADDRESS AND TELEPHONE		<del>, ,</del>		#	FIELD AND POOL, OR WILDCATTS SP
P O Box 5270 Hol	obs, NM 88241 (505) 3	93-5905		<del></del>	North Shugart Month
OCATION OF WELL (Report	location clearly and in accordance v	with any State requirem	nents.*)	Chille	SEC T R M ORBLK
At surface			12 3	4750	to / Allo Golden
At proposed prod. zone 330' FSL &	990' FEI ( ) L	T P	\o_{i}	SIA	Sec.18,T18S,R31E
SOU FOL O	DIRECTION FROM NEAREST TOW	N OR POST OFFICE		919171ELZI	12. COUNTY OR PARISH 13. STATE
6 miles SE of Loco			32(1)	91917181	Eddy NM
DISTANCE FROM PROPOS			16. NO. OF ACRES IN LEASE	17, NO. OF	ACRES ASSIGNED
LOCATION TO NEAREST		30'	320		40
PROPERTY OR LEASE LINE (Also to nearest drig, unit line). DISTANCE FROM PROPOS	, if any)		19. PROPOSED DEPTH	20. ROTA	RY OR CABLE TOOLS
TO NEAREST WELL, DRILL	JNG, COMPLETED, 1'	320'	8300		Rotary
OR APPLIED FOR, ON THIS . ELEVATIONS (Show whether	er DF, RT, GR, etc.)				22. APPROX. DATE WORK WILL START*
3624'					02/26/01
		PROPOSED CAS	SING AND CEMENTING PRO	GRAM Capit	an Controlled Water Basin
	GRADE. SIZE OF CASING	WEIGHT PER F	OOT SETTING DEPT	н	QUANTITY OF CEMENT
SIZE OF HOLE	H40 13-3/8"	48#	600'		400 sacks circulate to Surface
17-1/2"	J55, 8-5/8"	36#	2000'		600 Sacks circulate to surface
12-1/4" 7-7/8"	N80, 5-1/2"	17#	8300'		600 sacks tie back into 8-5/8"
	npany proposes to drill a set to total depth. If the t lations. Specific plans an	ect nioves to be			ydrocarbon production. If successful, ed and abondoned in a manner
4)Schematic Diagra 5)Map of Existing at 6)Map of Planned F	ration Plat (NMOCD Forr Im of Blowout Preventer Ind Planned Access Road Pipe line and Electric Line	and Choke Mai d and Location	3B)	<b>APPROVA</b> I	L SUBJECT TO REQUIREMENTS AND
7)List of Offset Well 8)Proposed Drilling 9)Proposed Produc 10)Hydrogen Sulfid	Rig Layout (Exhibit 5) tion Facilities Layout (Ex e Contingency Plan (Ext	nidit /)		ATTACHE	TIPULATIONS D
7)List of Offset Well 8)Proposed Drilling 9)Proposed Produc 10)Hydrogen Sulfid	Rig Layout (Exhibit 5) tion Facilities Layout (Ex e Contingency Plan (Ext	NDT /)		SPECIAL S	TIPULATIONS  D  ew productive zone. If proposal is to drill or

FIELD MANAGER /s/ LESLIE A. THEISS MAY 3 U 2001 \*See Instructions On Reverse Side

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:

#### State of New Mexico

DISTRICT I P.O. Box 1980, Hobbs, NM 88241-1980 Energy, Minerals and Natural Resources Department

Form C-102 Revised February 10, 1994 Submit to Appropriate District Office

State Lease - 4 Copies

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

# OIL CONSERVATION DIVISION

P.O. Box 2088

Fee Lease - 3 Copies

DISTRICT III 1000 Rio Braxos Rd., Axtec, NM 87410 Santa Fe, New Mexico 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT DISTRICT IV

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
Property Code	Property Nam	
com N	SHUGART 18 F	Elevat.
OGRID No.	MEWBOURNE C	

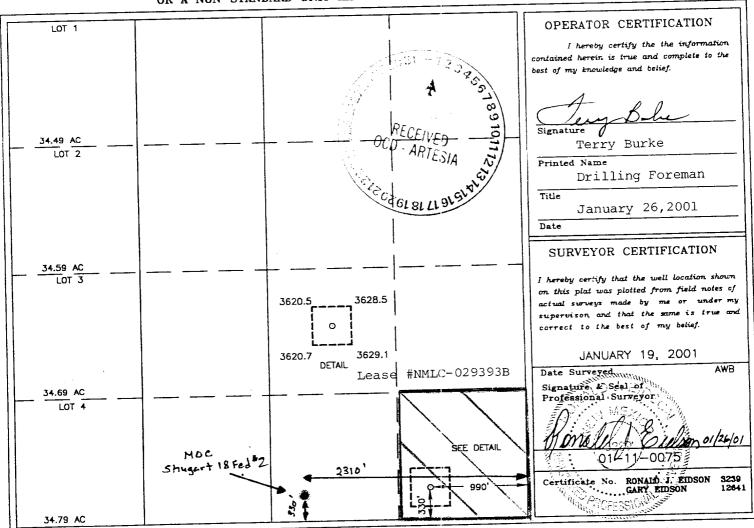
Surface Location

						C 6224600					
							North/South line	Feet from the	East/West line	County	
- 1	UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North, South line		•		
ļ	OL OI 100 1101		1	74 -		770	HTILOS	990	EAST	EUUY	i
1	Р	18	l 18-S	131 E		330	South	1 333			l
- 1		, , ,	1	1	i	·	<u> </u>				

Bottom Hole Location If Different From Surface

Bottom Hole Location is Different From Burraes									
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North,/South line	Feet from the	East/West line	County
									l
Dedicated Acre	s Joint o	r Infill Co	nsolidation	Code Or	der No.				
40							andre HAVE D	EEN CONSOLID	ATED

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



# Drilling Program Mewbourne Oil Company

Shugart "18" Federal # 4 330' FSL & 990' FE:L Section 18- T18S-R31E Eddy County, New Mexico Lease Number NMLC-029393B

# 1. The estimated top of geological markers are as follows:

Yates	1909'
Queen	3067'
Penrose	3320'
San Andres	3870'
Delaware	4496'
Bone Spring	5714'
1 <sup>st</sup> Bone Spring	7360'
2 <sup>nd</sup> Bone Spring	7942'

# 2. Estimated depths of anticipated fresh water, oil, or gas:

Water

Approximately 200'

Hydrocarbons

All zones below San Andres

### 3. Pressure control equipment:

Two thousand psi working pressure annular BOP's will be installed on the 13-3/8" surface casing. Pressure tests will be conducted prior to drilling out under all casing strings. BOP controls will be installed prior to drilling under surface casing and will remain in use until completion of drilling operations. BOP's will be inspected and operated daily to insure mechanical integrity and the inspection will be recorded on the daily drilling report.

Kelly cock and a sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position when the kelly is not in use.

#### **Drilling Program**

#### Mewbourne Oil Company

Shugart "18" Federal # 4

Page 2

#### 4. Proposed casing and cementing program:

#### A. Casing Program:

Hole Size	Casing	Wt/Ft.	<u>Grade</u>	<u>Depth</u>
17-1/2"	13-3/8"	48#	H40	0-600'
12-1/4"	8-5/8"	32#	J55	0-2000'
7-7/8"	5-1/2"	17#	N80	0-8300'

Minimum casing design factors: Collapse 1.2, Burst 1.10, Tensile strength 2.0.

#### B. Cementing Program

- i. Surface Casing: 200 sacks Class "C" light cement containing ½ #/sk cellophane flakes, 3% CaCl, 5 lbs/sack gilsonite. 200 sacks Class "C" penmen containing 3% CaCl.
- ii. <u>Intermediate Casing:</u> 400 sacks 35:65 pozmix cement containing 6% gel, 5 lbs/sack gilsonite. 200 sacks Class "C" cement containing 2% CaCl.
- iii. Production Casing: 600 sacks Class "H" cement containing fluid loss additive, friction reducer additive, compressive strength enhancer, and NaCl. Shallower productive zones may be protected by utilizing and multiple stage cementing tool in the production casing below potentially productive zones and cementing with a light cement slurry.

## 5. Mud Program:

<u>Interval</u>	Type System	Weight	<u>Viscosity</u>	Fluid Loss
0'-600'	FW spud mud	8.6-9.4	32-34	NA
600'-2000'	Brine water	10.0-10.2	28-30	NA
2000'-7000'	Cut brine water	8.8-9.2	28.30	NA
7000'-8300'	Cut brine water	9.2-9.4	32-42	8-12

#### 6. Evaluation Program:

Samples:

10'samples from intermediate casing to TD

Logging:

Compensated density and dual laterlog from intermediate casing

to TD

Coring:

As needed for evaluation

Drill Stem Tests: As

As needed for evaluation

<sup>\*</sup>Mewbourne Oil Company reserves the right to change cement designs as hole conditions may warrant.

#### **Drilling Program**

Mewbourne Oil Company

Shugart "18" Federal # 4

Page 3

#### **Downhole Conditions** 7.

Zones of abnormal pressure:

None anticipated

Zones of lost circulation:

Anticipated in surface and intermediate holes

Maximum bottom hole temperature: 180 degree F

Maximum bottom hole pressure:

8.3 lbs/gal gradient or less

#### **Anticipated Starting Date:** 8.

Mewbourne Oil Company intends to drill this well as soon as possible after receiving approval with approximately 25 days involved in drilling operations and an additional 10 days involved in completion operations on the project.

# MULTI-POINT SURFACE USE AND OPERATIONS PLAN MEWBOURNE OIL COMPANY

Shugart "18" Federal # 4
330' FSL & 990' FEL
Section 18-T18S-R31E
Eddy County, New Mexico
Lease Number NMLC-029393B

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 the surface disturbance involved, and the procedures to be followed in restoring the surface so that a complete appraisal can be made of the environmental impact associated with the proposed operations.

#### 1. Existing Roads:

- A. Exhibit #3 is a road map showing the location of the proposed well. Exhibit #3A is a topographic map showing the location of the proposed well and access road. Existing roads are highlighted in yellow and proposed roads are highlighted in green.
- B. Directions to location: East from Loco Hil's on Highway 82 approximately 5 miles turn south on Eddy County Road #222 (Shugart Road). Go south approximately 5 miles and turn (west) right on caliche road. Go West 1.5 miles to a Y in road stay to the left and continue 1/10 mile. Turn South and follow main road as it bends East 1.2 miles. Turn South into our location Shugart "18" Federal #2 and continue East for another 1/4 mile into new location.

#### 2. Proposed Access Road:

- A The access road will be built from an existing lease road approximately 1320' feet West of the location pad and will enter the location pad from the Southwest corner.
- B. The access to the location will be limited to 16' in width and will adequately drain runoff and control erosion as presently constructed.
- C. Access to location has an existing grade to facilitate adequate drainage.

#### 3. Location of Existing Wells:

There are producing wells within the immediate vicinity of the well site. Exhibit #4 shows the proposed well and existing wells within a one mile radius.

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

- A. There are no production facilities on this lease at the present time.
- B. In the event that the well is productive, production facilities will be located on the well pad.
- C. If the well is productive, restoration plans are as follows:

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

MEWBOURNE OIL COMPANY

Shugart "18" Federal # 4

Page 2

- i. The reserve pit will be back-filled after the contents of the pit are allowed to dry (within 180 days after the well is completed).
- ii. Within 90 days of cessation of drilling and completion operations, all equipment not necessary for production operations will be removed. The location will be cleaned of all trash and junk to assure the well site is left as aesthetically pleasing as reasonably possible
- iii. All production vessels left on location will be painted to conform with BLM painting stipulations within 180 days of installation.

## 5. Location and Type of Water Supply

The well will be drilled with a combination of fresh water and brine water based mud systems. The water will be obtained from commercial suppliers in the area and hauled to the location by transport trucks over existing and proposed roads as indicated in Exhibit #3.

### 6. Source of Construction Materials

All material required for construction of the drill pad and access roads will be obtained from private, state, or federal pits. The construction contractor will be solely responsible for securing construction materials required for this operation and paying any royalties that may be required on those materials.

# 7. Methods of Handling Waste Disposal:

- A. Drill cuttings not retained for evaluation purposed will be disposed of in the reserve pit.
- B. Drilling fluids will be allowed to evaporate in the reserve pit prior to closure.
- C. Water produced during operations will be disposed of in the reserve pit.
- D. If any liquid hydrocarbons are produced during operations, those liquids will be stored in suitable tanks until sold.
- E. Current regulations regarding the proper disposal of human waste will be followed.
- F. All trash, junk, and other waste materials will be stored in proper containers to prevent dispersal and will be removed to an appropriate facility within one week of cessation of drilling and completion activities.

# 8. Ancillary Facilities

There are no ancillary facilities within the immediate vicinity of the proposed well site.

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

#### **MEWBOURNE OIL COMPANY**

Shugart "18" Federal # 4

Page 3

#### 9. Well Site Layout

- A diagram of the drill pad is shown in Exhibit #5. Dimensions of the pad, pits, and location of major rig components are shown.
- B. The reserve pit will be lined with a high quality plastic sheeting to prevent migration of fluids.
- C. The pad dimension of 400' X 400' has been staked and flagged.
- D. An archaeological survey has been conducted on the proposed access road and location pad.

#### 10. Plans for Restoration of Surface

- A. Upon cessation of the proposed operations, if the well is abandoned, the location and road will be ripped and re-seeded per ELM guidelines. The reserve pit area, after allowing to dry will be leveled. The entire location will be restored to the original contour as much as reasonable possible. All trash, garbage, and pit lining will be hauled to appropriate disposal to assure the location is aesthetically pleasing as reasonable possible. All restoration work will be completed within 180 days of cessation of activities.
- B. The disturbed area will be restored by re-seeding during the proper growing season with a mixture of native grasses as stipulated by the BLM.
- C. Three sides of the reserve pit will be fenced prior to and during drilling operations. The reserve pit will be fenced on the fourth side after the drilling rig is removed to prevent the endangerment of livestock. The fence will remain in place until the pit area has been leveled and restored.
- D. Upon cessation of the proposed operations, if the well is not abandoned, the reserve pit area will be treated as outlined above within the prescribed amount of time. Any additional caliche required for production facilities will be obtained from a source as described in Section 6.

#### 11. Surface Ownership:

The surface is owned by: Bureau of Land Maragement

#### 12. Other Information

- A. Topography: Refer to the archaeological report for a detailed description of flora, fauna, soil characteristics, dwellings, and historical or cultural sites.
- B. The primary use of the surface at the location is for grazing of livestock.

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

MEWBOURNE OIL COMPANY

Shugart "18" Federal # 4 Page 4

#### 13. Operator's Representative:

A. Through APD approval and drilling operations:

Mickey Young, District Manager Mewbourne Oil Company PO Box 5270 Hobbs, NM 88241 505-393-5905

B. Through completion and production operations:

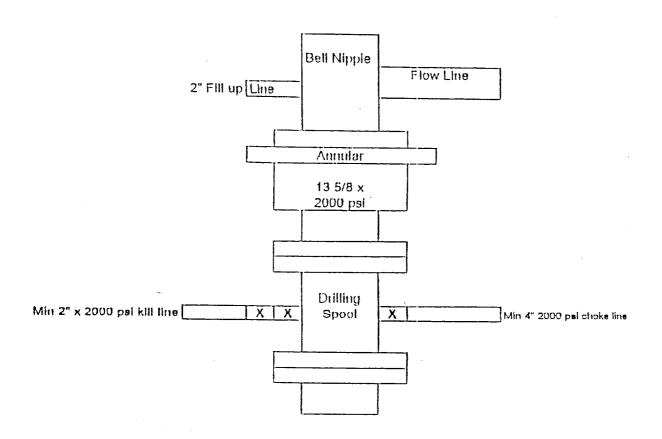
Mickey Young, District Manager Mewbourne Oil Company PO Box 5270 Hobbs, NM 88241 505-393-5905

#### 14. 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 currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by Mewbourne Oil Company, its contractors and subcontractors, in accordance 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 a false statement.

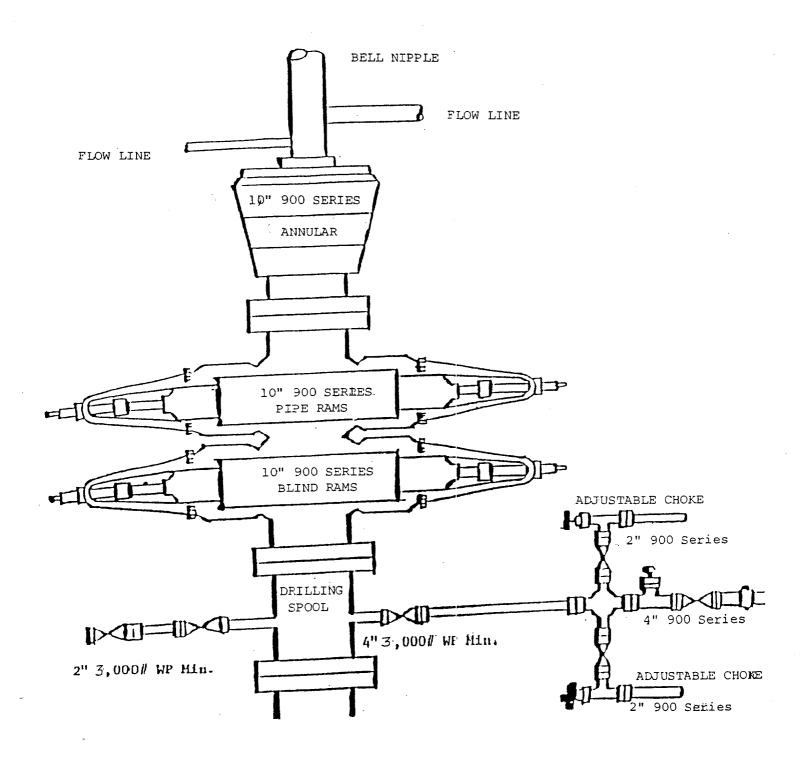
Date: 1-22-01 Signature: Levy Bake

Terry Burke, Drilling Foreman Mewbourne Oil Company PO Box 5270 Hobbs, NM 88241 (505) 393-5905



Mewbourne Oil Company

Exhibit #2
Schematic of BOP for Intermediate Hole



Shugart "18" Federal # 4 330' FSL & 990' FEL Sec.18;T18S;31E Eddy County, NM

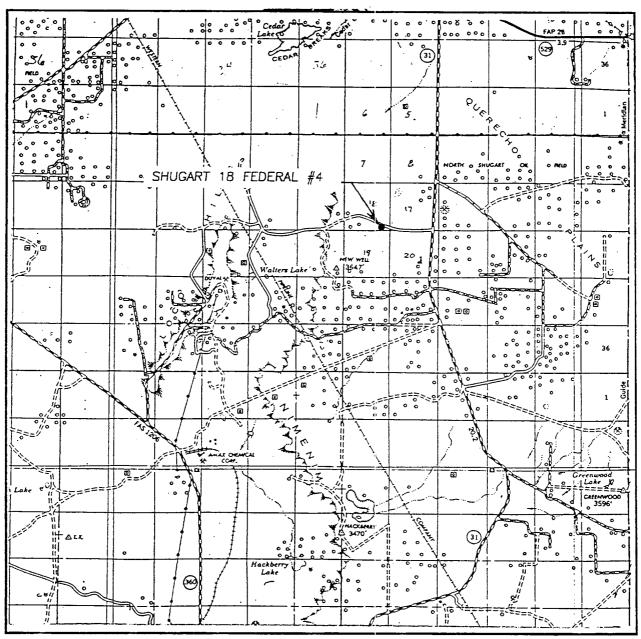
# Notes Regarding Blowout Preventer

Mewbourne Oil Company

Shugart "18" Federal # 4 330' FSL & 990' FEL Section 18- T18S-R31E Eddy County, New Mexico Lease Number NMLC-029393B

- 1. Drilling nipple (bell nipple) to be constructed so that it can be removed without the use of a welder through the opening of the rotary table, with minimum internal diameter equal to blowout preventer bore.
- 2. Blowout preventer and all fittings must be in good condition with a minimum 2000 psi working pressure.
- 3. Safety valve must be available on the rig floor at all times with proper connections to install in the drill string. Valve must be full bore with minimum 2000 psi working pressure.
- 4. Equipment through which bit must pass shall be at least as large as internal diameter of the casing.
- 5. A kelly cock shall be installed on the kelly at all times.
- 6. Blowout preventer closing equipment to include and accumulator of at least 40 gallon capacity, two independent sources of pressure on closing unit, and meet all other API specifications.

# VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 18	TWP. 18-S RGE. 31-E
SURVEY	N.M.P.M.
COUNTY	EDDY
DESCRIPTIO	ON 330' FSL & 990'FEL
	3624'
	MEWBOURNE OIL CO.
	SHUGART 18 FEDERAL

# Mewbourne Oil Company <u>Exhibit #3</u> <u>Proposed LocationConstruction</u>



# LOCATION VERFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10' LOCO HILLS, HACKBERRY LAKE, N.M.

SEC. 18 TWP. 18—S RGE. 31—E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 330' FSL & 990'FEL

ELEVATION 3624'

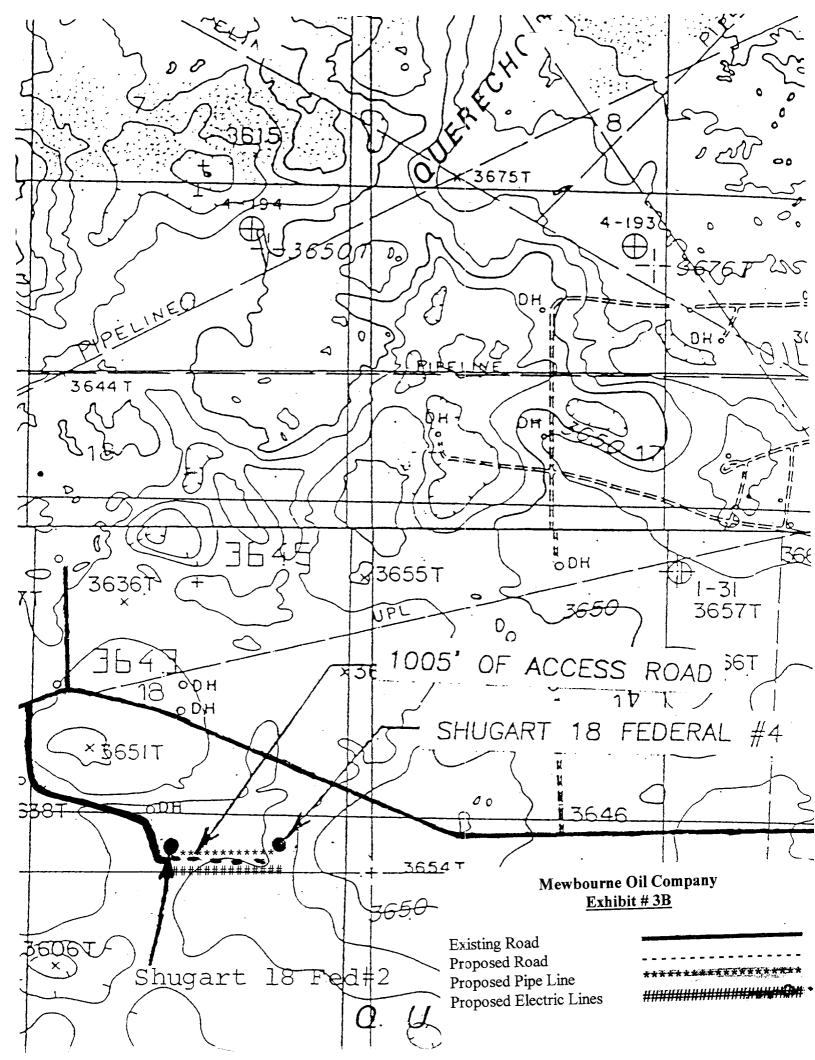
OPERATOR MEWBOURNE OIL CO.

LEASE SHUGART 18 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP

LOCO HILLS, HACKBERRY LAKE N.M.

# Mewbourne Oil Company <u>Exhibit #3A</u> Existing and Planned Road Access



# Exhibit #4

### Status of Wells in Immediate Vicinity

#### Mewbourne Oil Company

Shugart "18" Federal # 4 330' FSL & 990' FEL Section 18 T-18S R-31E Eddy County, New Mexico Lease # NMLC-029393B

#### **Section 18 T-18S R-31E**

Operator: Mewbourne Oil Company Well Name: Shugart "18" Federal #1

Unit letter: A

Status: Producing

Field: North Shugart Morrow

Operator: Mewbourne Oil Company Well Name: Shugart "18" Federal #2

Unit letter: O

Status: Producing

Field: North Shugart Bone Springs

# Section 8 T-18S R-31E

Operator: Mewbourne Oil Company Well Name: Fren 8 Federal Comm #1

Unit letter: [

Status: Producing

Field: North Shugart Morrow

Operator: Harvey E. Yates Company

Well Name: Arco 8 Federal #1

Unit letter: K

Status: Producing

Field: North Shugart Bone Springs

Operator: Harvey E. Yates Company

Well Name: Arco 8 Federal #4

Unit letter: N

Status: Producing

Field: North Shugart Bone Springs

Harvey E. Yates Company Operator:

Well Name: Arco 8 Federal #5

Unit letter:

Status:

Producing North Shugart Bone Springs Field:

Harvey E. Yates Company Operator:

Well Name: PMS 8 Federal #1

Unit letter:

Status: Producing

North Shugart Bone Springs Field:

Harvey E. Yates Company Operator:

Well Name: PMS 8 Federal #2

Unit letter: C

Producing Status:

North Shugart Bone Springs Field:

Harvey E. Yates Company Operator:

Well Name: PMS 8 Federal #3

Unit letter:

Ε

Status: Producing

North Shugart Bone Springs Field:

Harvey E. Yates Company Operator:

Well Name: PMS 8 Federal #4

Unit letter: G

Producing Status:

North Shugart Bone Springs Field:

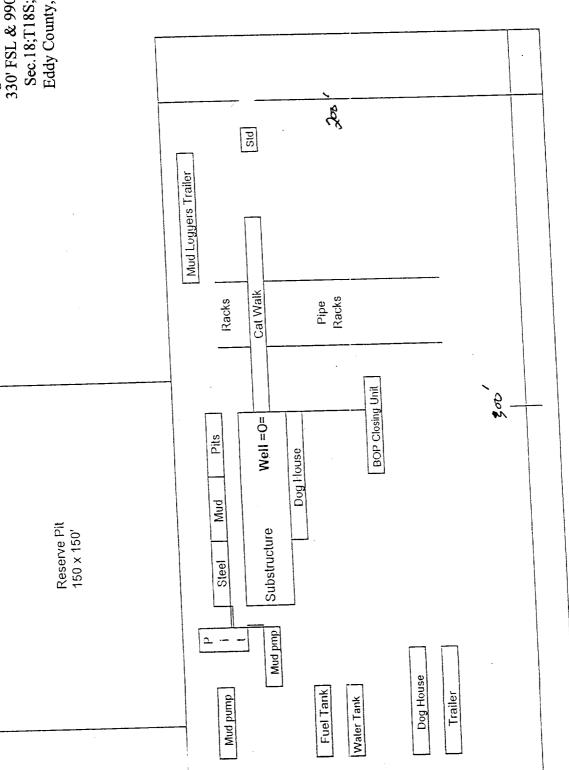
Harvey E. Yates Company Operator:

Well Name: Arco 8 Federal #2

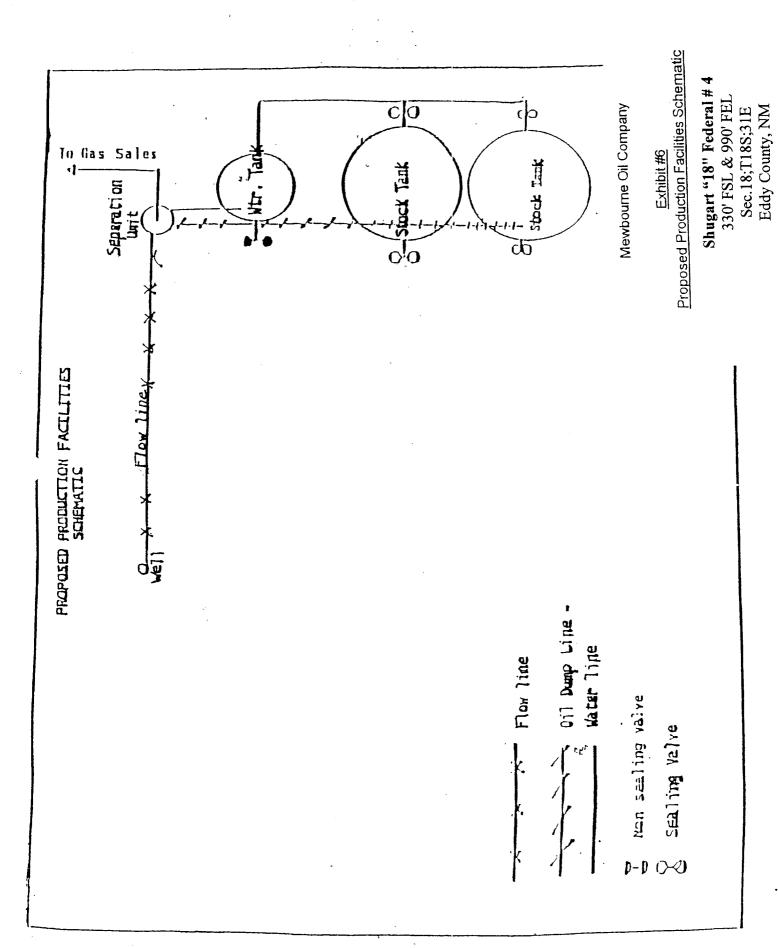
Unit letter:

Producing Status:

North Shugart Bone Springs Field:



Rig Location Schernatic



# Hydrogen Sulfide Drilling Operations Plan

Mewbourne Oil Company
Shugart "18" Federal # 4
330 'FSL & 990' FEL
Section 18- T18S-R31E
Eddy County, New Mexico
Lease Number NMLC-029393B

## 1. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will have received training from a qualified instructor in the following areas prior to entering the drilling pad area of the well:

- 1 The hazards and characteristics of hydrogen sulfide gas.
- The proper use of personal protective equipment and life support systems.
- The proper use of hydrogen sulfide detectors, alarms, warning systems, briefing areas, evacuation procedures.
- The proper techniques for first aid and rescue operations.

Additionally, supervisory personnel will be trained in the following areas:

- The effects of hydrogen sulfide on metal components. If high tensile tubular systems are utilized, supervisory personnel will be trained in their special maintenance requirements.
- 2 Corrective action and shut in procedures, blowout prevention, and well control procedures while drilling a well.
- The contents of the Hydrogen Sulfide Drilling Operations Plan.

There will be an initial training session prior to encountering a know hydrogen sulfide source. The initial training session shall include a review of the site specific Hydrogen Sulfide Drilling Operations Plan.

# 2. Hydrogen Sulfide Safety Equipment and Systems

All hydrogen sulfide safety equipment and systems will be installed, tested, and operational prior to drilling below the intermediate casing.

# 1. Well Control Equipment

- A. Flare line with automatic igniter or continuous ignition source.
- B. Choke manifold with minimum of one adjustable choke.
- C. Blowout preventers equipped with blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit
- D. Auxiliary equipment including rotating head and annular type blowout preventer..

#### 2. Protective Equipment for Essential Personnel

Thirty minute self contained work unit located at briefing area as indicated on wellsite diagram.

#### 3. Hydrogen Sulfide Protection and Monitoring Equipment

Two portable hydrogen sulfide monitors positioned on location for optimum coverage and detection. The units shall have audible sirens to notify personnel when hydrogen sulfide levels exceed 20 ppm.

#### 4. Visual Warning Systems

- A. Wind direction indicators as indicated on the wellsite diagram.
- B. Caution signs shall be posted on roads providing access to location. Signs shall be painted a high visibility color with lettering of sufficient size to be readable at reasonable distances from potentially contaminated areas.

#### 3. Mud Program

The mud program has been designed to minimize the amount of hydrogen sulfide entrained in the mud system. Proper mud weight, safe drilling practices, and the use of hydrogen sulfide scavengers will minimize hazards while drilling the well.

#### 4. Metallurgy

All tubular systems, wellheads, blowout preventers, drilling spools, kill lines, choke manifolds, and valves shall be suitable for service in a hydrogen sulfide environment when chemically treated.

#### 5. Communications

Communications in company vehicles and toolpushers are either two way radios or cellular phones.

#### 6. Well Testing

Drill stem testing is not an anticipated requirement for evaluation of this well. A drill stem test is required, it will be conducted with a minimum number of personnel in the immediate vicinity. The test will be conducted during daylight hours only.

# United States Department of the Interior Bureau of Land Management Roswell Field Office 2909 West Second Street Roswell, New Mexico 88201-1287

# Statement Accepting Responsibility for Operations

Operator Name:

Mewbourne Oil Company

Street or Box:

P.O. Box 5570

City, State:

Hobbs, New Mexico

Zip Code:

88241

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted of the leased land or portion thereof, as described below.

Lease Number:

Lease Number NMLC-029393B

Legal Description of Land:

Section 18, T18S, R31E, Eddy County, New Mexico. Location

330' FSL & 990' FEL of Section 18.

Formation (if applicable):

Bond Coverage:

\$150,000

BLM Bond File:

NM1693, Nationwide

Authorized Signature: Leng Bul

Name: Terry Burke Title: Drilling Foreman Date: January 26, 2001