EC

OCD-ARTESIA

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OCD - ARTESIA

Form 3160-3
(August 1999)

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER	5. Lease Serial No. NMLC029395B
	6. If Indian, Allottee or Tribe Name
	7. If Unit or CA Agreement, Name and No.
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone	8. Lease Name and Well No. LEE FEDERAL 5
2. Name of Operator MARBOB ENERGY CORPORATION Contact: DIANA CANNON E-Mail: production@marbob.com	9. API Well No. 30-015-30508
3a. Address P O BOX 227 ARTESIA, NM 88211-0227	3b. Phone No. (include area code) Ph: 505.748.3303 Fx: 505.746.2523
	10. Field and Pool, or Exploratory LOCO HILLS-PADDOCK
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface SENE Lot H 1400FNL 330FEL Unorthodox location At proposed prod. zone SENE Lot H 1400FNL 330FEL	11. Sec., T., R., M., or Blk. and Survey or Area Sec 20 T17S R31E Mer NMP
14. Distance in miles and direction from nearest town or post office* EAST OF ARTESIA ON HWY 82 APPX 30.1 MILES Subject to Like Approval by NMOCD	12. County or Parish EDDY 13. State NM
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330'	16. No. of Acres in Lease 1786.15 / 17. Spacing Unit dedicated to this well 40.00
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 6000 MD / 20. BLM/BIA Bond No. on file
21. Elevations (Show whether DF, KB, RT, GL, etc. 3720 GL	22. Approximate date work will start 02/15/2003 / 23. Estimated duration 21 DAYS

24. Attachments Roswell Controlled Water Basin

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) DIANA CANNON	Date 01/17/2003
Title AUTHORIZED REPRESENTATIVE		
Approved by (Signature) /s/ LESLIE A. THEISS	Name (Printed/Typed) /s/ LESLIE A. THEISS	Date APR 0 8 2003
Title Field Manager	Office Carlsbad Field Office	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached. Approval for 1 year

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Additional Operator Remarks (see next page)

Electronic Submission #17727 verified by the BLM Well Information System
For MARBOB ENERGY CORPORATION, sent to the Carlsbad
Committed to AFMSS for processing by Linda Askwig on 01/21/2003 (03LA0245AE)

Approval Subject to General Requirements and Special Stipulations Attached

Witness Surface Casing

** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED **

Additional Operator Remarks:

17 1/2" HOLE, 13 3/8" 48# H40 CSG SET @ 350', CMT W/ 400 SX
12 1/4" HOLE, 8 5/8" 24# J55 CSG SET @ 1200' (BOS), CMT W/ 400 SX
7 7/8" HOLE, 5 1/2" 17# J55 CSG SET @ 6000', CMT SUFFICIENT TO COVER 200' ABOVE ALL KNOWN OIL & GAS HORIZONS.

PAY ZONE WILL BE SELECTIVELY PERFORATED AND STIMULATED AS NEEDED FOR OPTIMUM PRODUCTION.

ATTACHMENT INCLUDES:

1. WELL LOCATION AND ACREAGE DEDICATION PLAT
2. DRILLING PROGRAM
3. SURFACE USE AND OPERATING PLAN
4. HYDROGEN SULFIDE DRILLING OPERATIONS PLAN
5. ADDITIONAL REQUIRED INFORMATION (EXHIBITS #1 - #4)

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 Mexico
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
	96718	LOCO HILLS PADDOCK

Property Code	Property Name	Well Number
23300	LEE FEDERAL	5

OGRID No.	Operator Name	Elevation
14049	MARBOB ENERGY CORPORATION	3719

Surface Location

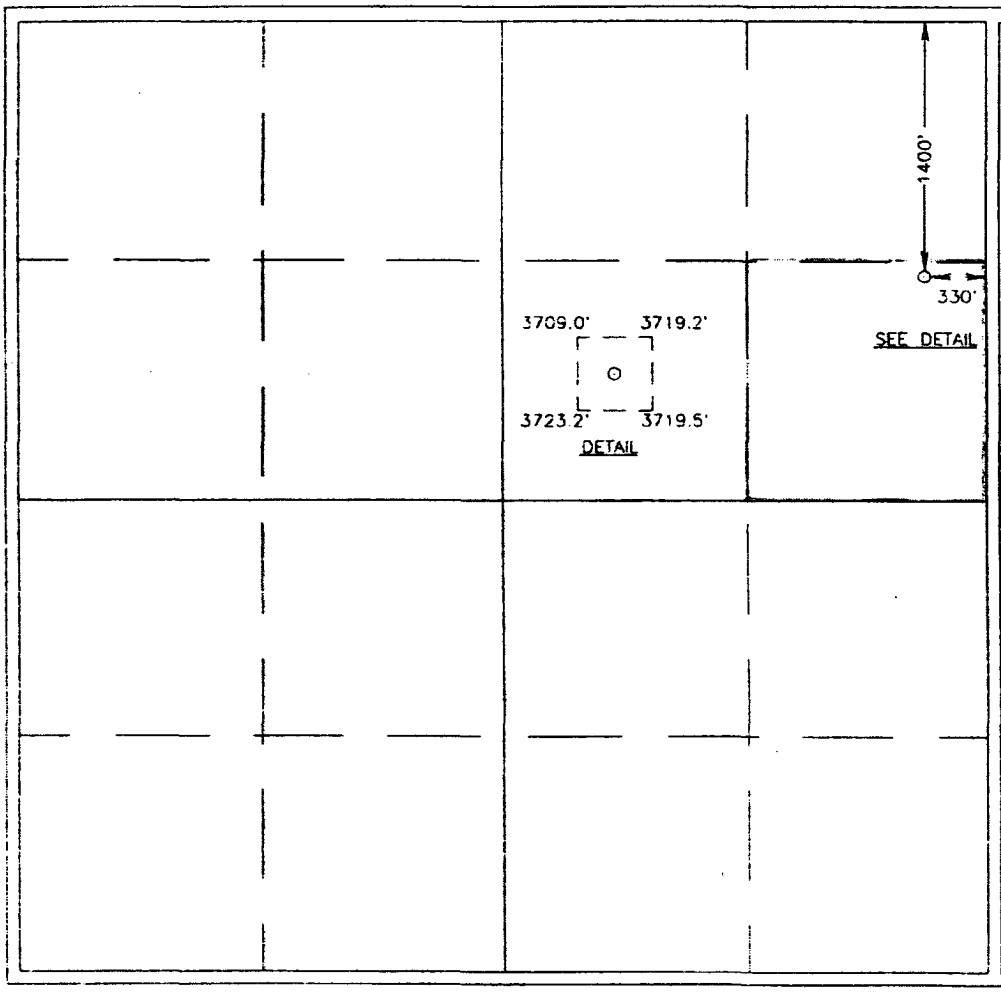
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	20	17 S	31 E		1400	NORTH	330	EAST	EDDY

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

DIANA J. CANNON
Printed Name

PRODUCTION ANALYST
Title

JANUARY 17, 2003
Date

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.

JULY 28, 1998
Date Surveyed DMCC

Signature & Seal of Professional Surveyor

7-30-98

98-11-1079

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

DRILLING PROGRAM

Attached to Form 3160-3
Marbob Energy Corporation
Lee Federal No. 5
1450' FNL – 330' FEL
Section 20-17S-31E
Eddy County, New Mexico

1. Geologic Name of Surface Formation:

   Permian

2. Estimated Tops of Important Geologic Markers:

Permian	Surface	Seven Rivers	1340'
Salt	450'	Queen	2430'
Base of Salt	1100'	Grayburg	2804'
Yates	1225'	San Andres	3134'

3. Estimated Depths of Anticipated Fresh Water, Oil or Gas:

Upper Permian Sands	180'	Fresh Water
Yates	1225'	Oil
Seven Rivers	1340'	Oil
Queen	2430'	Oil
Grayburg	2804'	Oil
San Andres	3134'	Oil

No other formations are expected to give up oil, gas, or fresh water in measurable quantities. The surface fresh water sands will be protected by setting 13 3/8 casing at 350' and circulating cement back to surface. Any shallower zones above TD which contain commercial quantities of oil and/or gas will have cement circulated across them by inserting a float shoe joint into the 5 1/2" production casing which will be run at TD.

4. Casing Program:

Hole Size	Interval	OD csg	Weight, Grade, Jt. Cond. Type
17 ½"	0 – 350'	13 3/8"	48# H-40 LTC NEW
12 1/4"	350-1200'	8 5/8"	24# J-55 LTC NEW R-3
7 7/8"	1200'-TD	5 1/2"	17# J-55 LTC NEW R-3

Witness

Cement Program:

13 3/8" Surface Casing: Cemented to surface w/ 400sx of Class C.
8 5/8" Intermediate Casing: Cemented to surface with 400sx of Class C w/2% cc.
5 1/2" Production Casing: Cement string sufficient to cover 200' above all oil and gas horizons.

5. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram-type (2000 psi wp) preventer. This unit will by hydraulically operated and the ram-type preventer will be equipped with blind rams on top and 4-1/2" drill pipe rams on bottom. This BOP will be nippled up on the 8 5/8" surface csg and used continuously until TD is reached. All BOP's and accessory equipment will be tested to 1000 psi before drilling out of surface casing.

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. A 2" kill line and a 3" choke line will be included in the drilling spool located below the ram-type BOP. Other accessories to the BOP equipment will include a kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold with 2000 psi WP rating.

6. Types and Characteristics of the Proposed Mud System:

The well will be drilled to TD with cut brine. The applicable depths and properties of this system are as follows:

Depth	Type	Weight (ppg)	Viscosity (sec)	Waterloss (cc)
0 - 350'	Fresh Water	8.5	28	N.C.
350'-6000'	Brine	9.8 - 10.2	40 - 45	N.C.

7. Auxiliary Well Control and Monitoring Equipment:

(A) A kelly cock will be kept in the drill string at all times.
(B) A full opening drill pipe stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

8. Logging, Testing, and Coring Program:

(A) No Drillstem tests are anticipated.
(B) The electric logging program will consist of Dual Laterolog Micro SFL, Spectral Density Dual Spaced Neutron Csng Log, and Depth Control Log.
(C) No conventional coring is anticipated.
(D) Further testing procedures will be determined after the 5 1/2" production casing has been cemented at TD based on drill shows, and log evaluation, and drill stem test results.

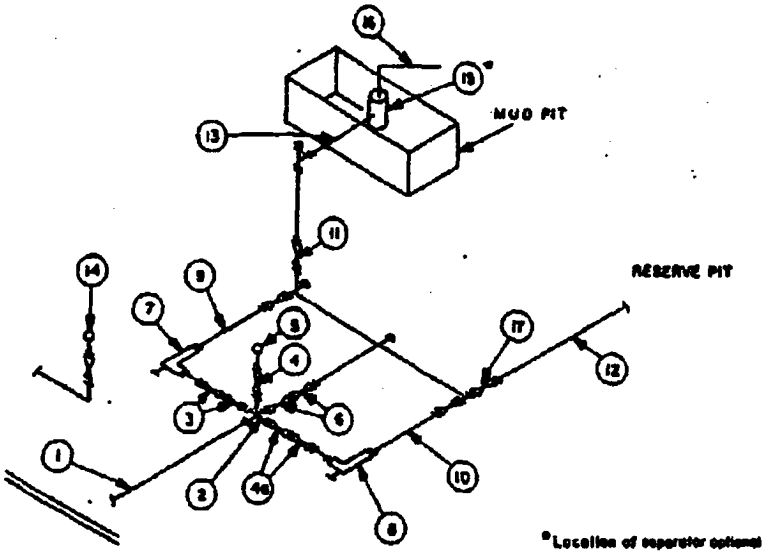
9. Abnormal Conditions, Pressures, Temperatures, & Potential Hazards:
No abnormal pressures or temperatures are anticipated. The estimated bottom hole temperature (BHT) at TD is 104' and estimated bottom hole pressure (BHP) is 2250 psig.

10. Anticipated Starting Date and Duration of Operations:

Location and road work will not begin until approval has been received from the BLM. The anticipated spud date is February 15, 2003. Once commenced, the drilling operation should be finished in approximately 21 days. If the well is productive, an additional 30 to 60 days will be required for completion and testing before a decision is made to install permanent facilities.

MINIMUM CHOKE MANIFOLD
3,000, 5,000 and 10,000 PSI Working Pressure

3 MWP - 5 MWP - 10 MWP



MINIMUM REQUIREMENTS										
		3,000 MWP			5,000 MWP			10,000 MWP		
No.		I.D.	NOMINAL	RATING	I.D.	NOMINAL	RATING	I.D.	NOMINAL	RATING
1	Line from drilling spool		3"	3,000		3"	5,000		3"	10,000
2	Cross 3"x3"x3"x2"			3,000			5,000			
	Cross 3"x3"x3"x3"									10,000
3	Valves(1) Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
4	Valve Gate ☐ Plug ☐(2)	1-13/16"		3,000	1-13/16"		5,000	1-13/16"		10,000
4a	Valves(1)	2-1/16"		3,000	2-1/16"		5,000	3-1/8"		10,000
5	Pressure Gauge			3,000			5,000			10,000
6	Valves Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
7	Adjustable Choke(3)	2"		3,000	2"		5,000	2"		10,000
8	Adjustable Choke	1"		3,000	1"		5,000	2"		10,000
9	Line		3"	3,000		3"	5,000		3"	10,000
10	Line		2"	3,000		2"	5,000		3"	10,000
11	Valves Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
12	Lines		3"	1,000		3"	1,000		3"	2,000
13	Lines		3"	1,000		3"	1,000		3"	2,000
14	Remote reading compound standpipe pressure gauge			3,000			5,000			10,000
15	Gas Separator		2'x5'			2'x5'			2'x5'	
16	Line		4"	1,000		4"	1,000		4"	2,000
17	Valves Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000

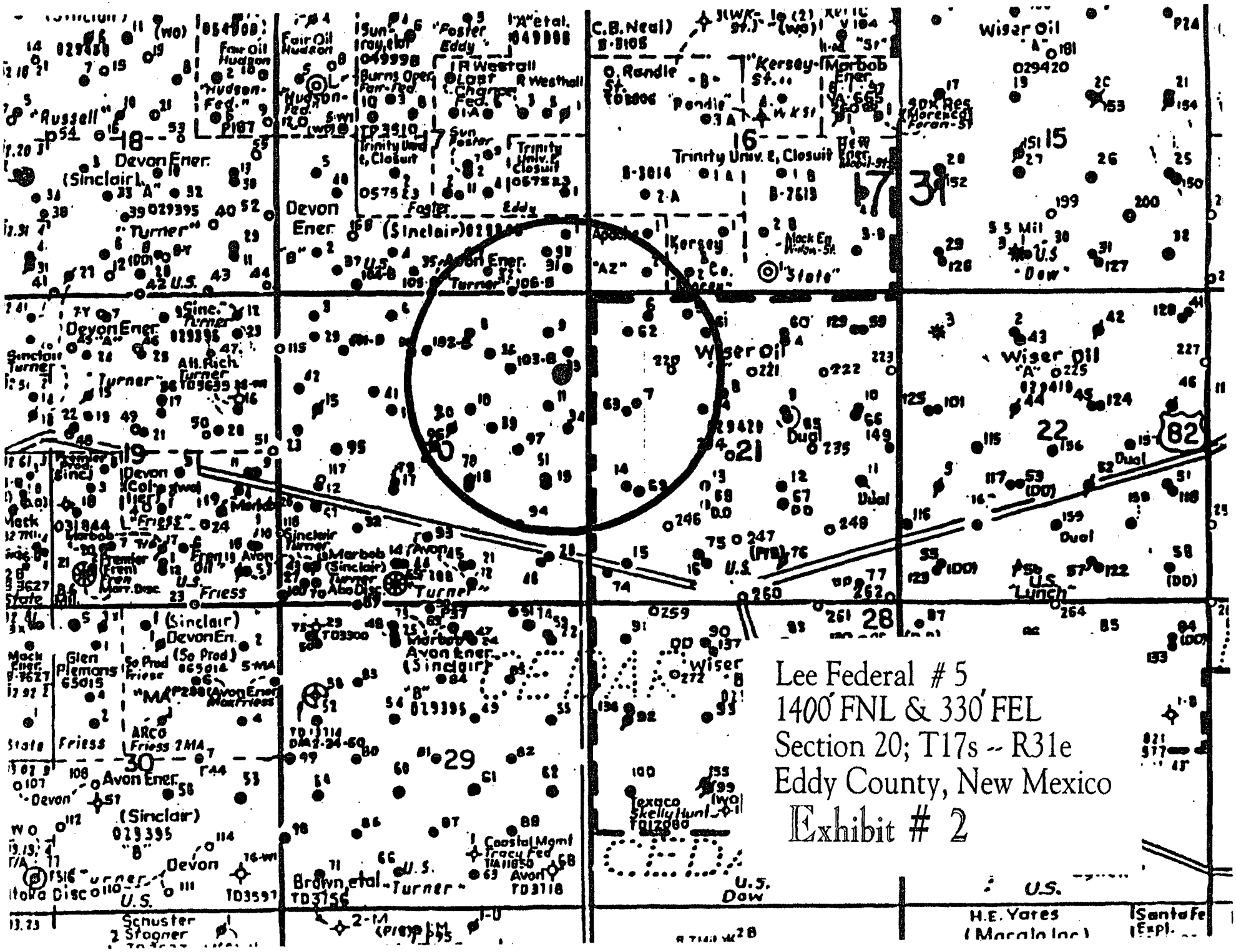
(1) Only one required in Class 3M.

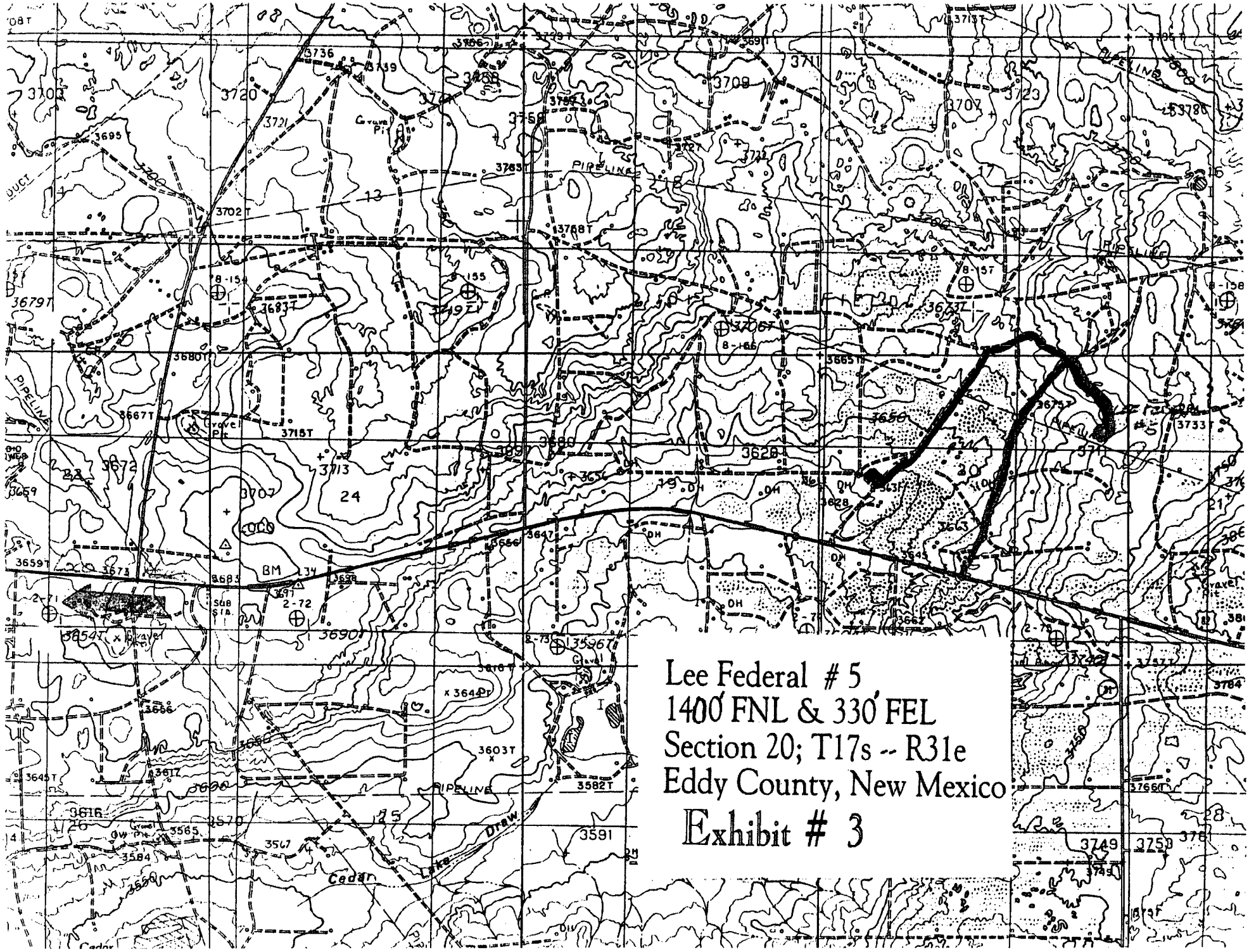
(2) Gate valves only shall be used for Class 10M.

(3) Remote operated hydraulic choke required on 5,000 psi and 10,000 psi for drilling.

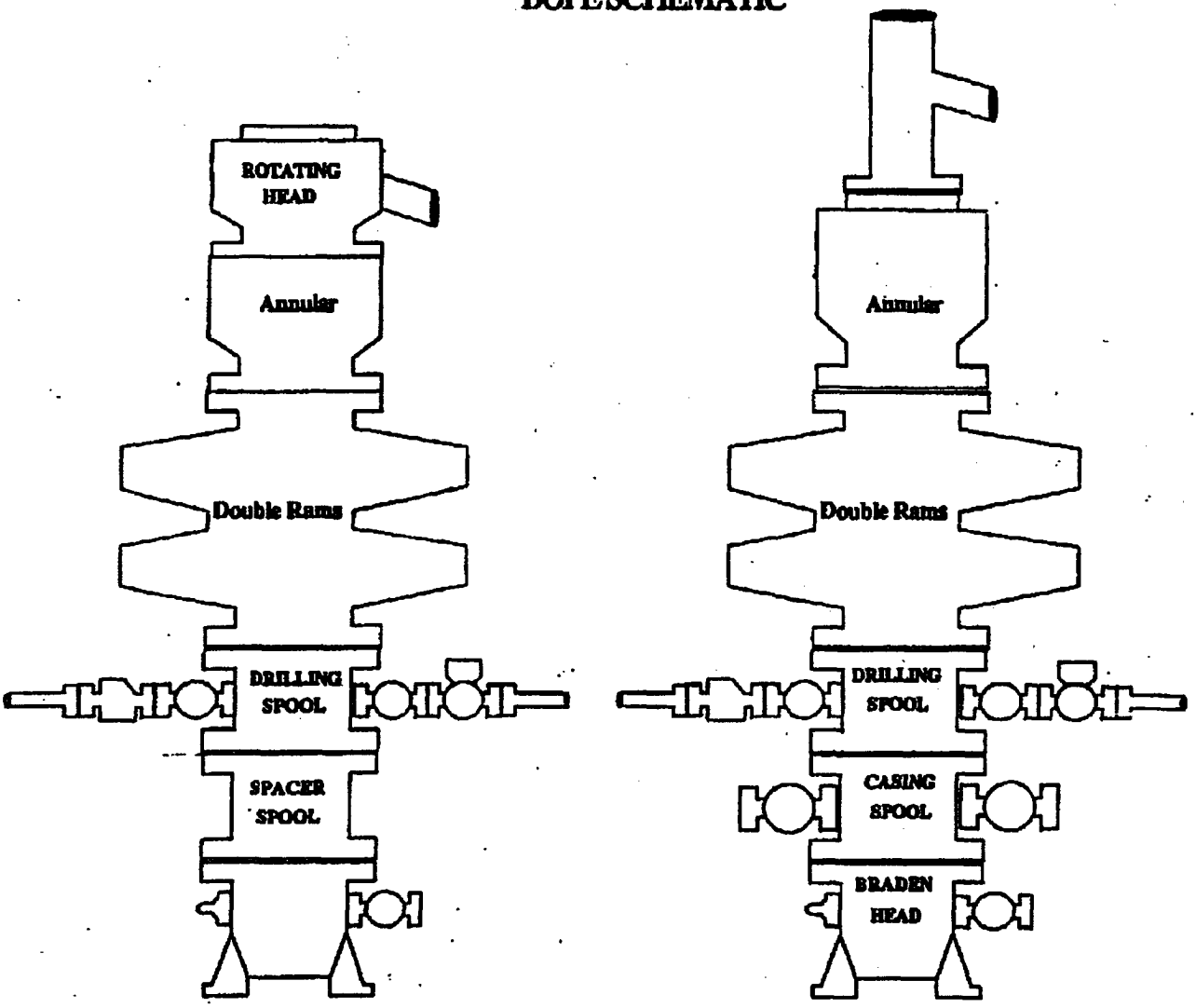
EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS

1. All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
2. All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
3. All lines shall be securely anchored.
4. Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.
5. Choke manifold pressure and standpipe pressure gauges shall be available at the choke manifold to assist in regulating chokes. As an alternate with automatic chokes, a choke manifold pressure gauge shall be located on the rig floor in conjunction with the standpipe pressure gauge.
6. Line from drilling spool to choke manifold should be as straight as possible. Lines downstream from chokes shall make turns by large bends or 90° bends using bull plugged tees.


Lee Federal # 5
1400' FNL & 330' FEL
Section 20; T17s -- R31e
Eddy County, New Mexico
Exhibit # 2


Lee Federal # 5
1400' FNL & 330' FEL
Section 20; T17s -- R31e
Eddy County, New Mexico
Exhibit # 3

BOPE SCHEMATIC



Choke Manifold

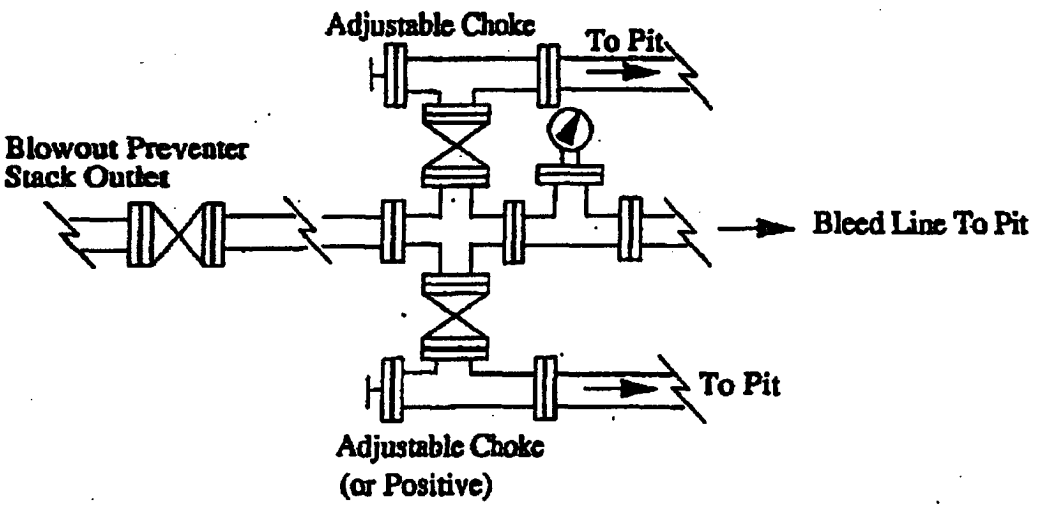


Exhibit One

WARNING

YOU ARE ENTERING AN H_2S AREA
AUTHORIZED PERSONNEL ONLY

1. *BEARDS OR CONTACT LENSES NOT ALLOWED*
2. *HARD HATS REQUIRED*
3. *SMOKING IN DESIGNATED AREAS ONLY*
4. *BE WIND CONSCIOUS AT ALL TIMES*
5. *CK WITH MARBOB FOREMAN AT MAIN OFFICE*

MARBOB ENERGY CORPORATION

1-505-748-3303

MARBOB ENERGY CORPORATION

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 (H_2S).
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H_2S 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 H_2S 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 H_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S 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. H_2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H_2S 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 H_2S.

1. Well Control Equipment:

   A. Choke manifold.

   B. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

   C. Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head.

2. Protective equipment for essential personnel:

   A. Mark II Surviveair 30-minute units located in the dog house and at briefing areas, as indicated on well site diagram.

3. H_2S detection and monitoring equipment:

   A. 2 - portable H_2S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H_2S levels of 20 ppm are reached.

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 H_2S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H_2S scavengers will minimize hazards when penetrating H_2S bearing zones.

B. A mud-gas separator will be utilized.

6. Communication:

A. Radio communications in company vehicles including cellular telephone and 2-way radio.

B. Land line (telephone) communications at field office.

7. Well testing:

A. No drill stem testing is planned.