Form 3160-3
(August 1999)

EC 0814

OCD-ARTESIA

E-13

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM0557371

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

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.
AAO FEDERAL 5

2. Name of Operator
MARBOB ENERGY CORPORATION
Contact: DIANA CANNON
E-Mail: production@marbob.com

9. API Well No.
30 - 015 - 32959

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
UNKNOWN
RED LAKE;GLORIETA-YESO

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface SWNW Lot E 1650FNL 875FWL

At proposed prod. zone SWNW Lot E 1650FNL 875FWL

11. Sec., T., R., M., or Blk. and Survey or Area
Sec 1 T18S R27E Mer NMP

14. Distance in miles and direction from nearest town or post office*
SEE SURFACE USE PLAN

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)
875'

16. No. of Acres in Lease

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
4000 MD

20. BLM/BIA Bond No. on file

21. Elevations (Show whether DF, KB, RT, GL, etc.
3615 GL

22. Approximate date work will start
03/28/2003

23. Estimated duration

RECEIVED
AUG 2003
OCD - ARTESIA

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	Name (Printed/Typed)	Date
(Electronic Submission)	DIANA CANNON	02/10/2003

Title
AUTHORIZED REPRESENTATIVE

Approved by (Signature)	Name (Printed/Typed)	Date
/s/ Mary J. Rugwell	/s/ Mary J. Rugwell	1 AUG 2003

Title	Office
FOR FIELD MANAGER	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 #18461 verified by the BLM Well Information System
For MARBOB ENERGY CORPORATION, sent to the Carlsbad
Committed to AFMSS for processing by Armando Lopez on 02/10/2003 (03AL0134AE)

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

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

Additional Operator Remarks:

12 1/4" HOLE, 8 5/8" 24# J55 CSG SET @ ~~320'~~ 350', CMT W/ 300 SX TO SURFACE WITNESS
7 7/8" HOLE, 5 1/2" 17# J55 CSG SET @ 4000', CMT W/ 750 SX

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

ATTACHMENT INCLUDES:

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

JAN 13 2003

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

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
30-015	96836	RED LAKE; GLORIETA YESO, NORTHEAST

Property Code	Property Name	Well Number
29793	AAO FED.	5

OGRID No.	Operator Name	Elevation
14049	MARBOB ENERGY CORPORATION	3615'

Surface Location

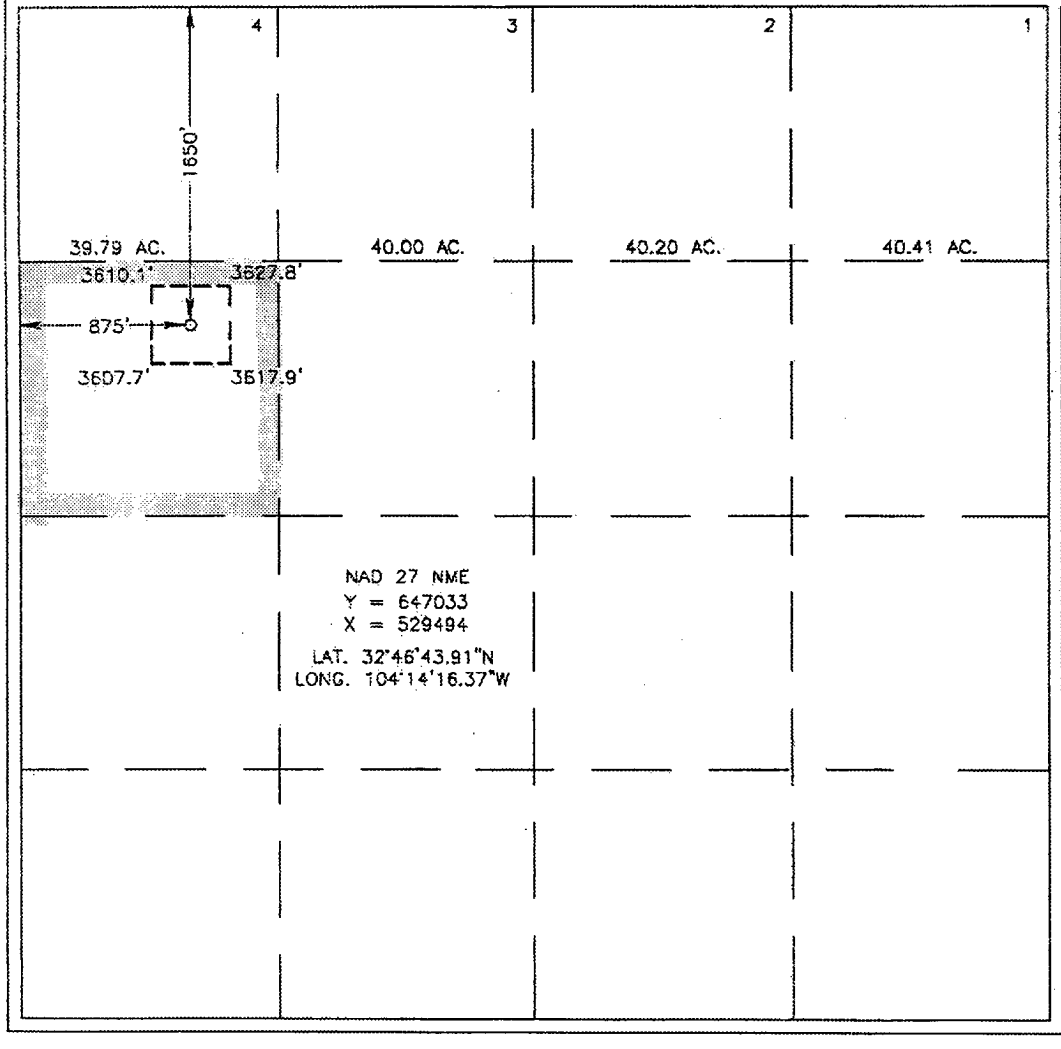
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	1	18-S	27-E		1650	NORTH	875	WEST	EDDY

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

FEBRUARY 10, 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.

JANUARY 9, 2003
Date Surveyed L.A.

Signature & Seal of Professional Surveyor

Ronald J. Eidson 1/10/03

03.11.0006

Certificate No. RONALD J. EIDSON 3239
GARY EIDSON 12641

MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

A A O Federal No. 5
1650' FNL and 875' FWL
Section 1-T18S-R27E
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Marbob Energy Corporation submits the following ten items of pertinent information in accordance with BLM requirements.

1. The geological surface formation is Alluvium:

2. The estimated tops of geologic markers are as follows:

Seven Rivers	450'
Queen	1050'
San Andres	1850'
Glorieta	3250'

3. The estimated depths at which anticipated water, oil or gas formations are expected to be encountered:

Water:	Approximately 180'
Oil or Gas:	Approximately 1050'

4. Proposed Casing Program: See Form 3160-3.

5. Pressure Control Equipment: See Form 3160-3 and Exhibit 1.

6. Mud Program: 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'-4000'	Brine	9.8 - 10.2	40 - 45	N.C.

7. Auxiliary Equipment: Kelly Cock; Sub with full opening valve on floor; and drill pipe connections.

8. Testing, Logging and Coring Program:

   No drillstem tests are anticipated.
   The electric logging program will consist of Dual Laterolog Micro SFL, Spectral Density Dual Spaced Neutron Csng Log, and Depth Control Log.
   No conventional coring is anticipated.

9. No abnormal pressures or temperatures are anticipated.

10. Anticipated stating date: As soon as possible after approval.

MARBOB ENERGY CORPORATION
MULTI-POINT SURFACE USE AND OPERATIONS PLAN

A A O Federal No. 5
1650' FNL and 875' FWL
Section 1-T18S-R27E
Eddy 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 the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

EXISTING ROADS:

Exhibit 3 is a portion of Topo map showing the well and roads in the vicinity of the proposed location. The proposed wellsite and the access route to the location is indicated in red on Exhibit 3. The proposed flowline route is indicated in blue on Exhibit 3.

DIRECTIONS:

From Artesia, NM proceed east on US 82 for 9.5 miles. Turn south on Hilltop Road (CR-204) and proceed to Empire Road (CR-225). Turn south on lease road and proceed 1.5 miles to Evans Road (CR-226). Turn east and proceed .3 miles. Turn southeast on lease road and proceed .5 miles. Turn south and proceed .2 miles. Turn west and proceed .1 miles to location.

PLANNED ACCESS ROAD:

None

LOCATION OF EXISTING WELL:

Exhibit 2 shows existing wells within a one-mile radius of the proposed wellsite.

LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. There are production facilities on this lease at the present time, located at the A A O Federal No. 2 wellpad.

LOCATION AND TYPE OF WATER SUPPLY:

B. It is planned to drill with a water system. The water will be obtained from commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in Exhibit 3 or transported via poly lines along the same roads of existing right-of-ways.

SOURCE OF CONSTRUCTION MATERIALS:

Caliche will be obtained from a BLM approved pit, if needed.

METHODS OF HANDLING WASTE DISPOSAL:

C. Drill cuttings will be disposed of in the lined pit.
D. Drilling fluids will be allowed to evaporate in the lined pit until the pit is dry.
E. Water produced during completion may be disposed into the lined reserve pit.
F. All trash and debris will be removed from the wellsite within 30 days after finishing drilling and/or completion operations. All waste material will be contained to prevent scattering by the wind.

ANCILLARY FACILITES:

None required.

WELLSITE LAYOUT:

G. Exhibit 4 shows the relative location and dimensions of the well pad, the pit, and access road approach.
H. The reserve pit will be lined with a high quality plastic sheeting.

PLANS FOR RESTORATION:

I. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the wellsite in as aesthetically pleasing a condition as possible.
J. Reserve pit will be fenced until they have dried and been leveled.
K. All rehabitation and/or vegetation requirements of the BLM will be complied with and will be accomplished as expeditiously as possible. All pits will be filled level within 90 days after abandonment.

SURFACE OWNERSHIP:

Federal

OTHER INFORMATION:

L. Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.
M. The primary surface use is for grazing.

OPERATOR'S REPRESENTATIVE:

A. Through A.P.D. Approval:

Dean Chumbley, Landman
Marbob Energy Corporation
P. O. Box 227
Artesia, NM 88211-0227
Phone (505)748-3303
Cell (505)748-5988

B. Through Drilling Operations

Sheryl Baker, Drilling Supervisor
Marbob Energy Corporation
P. O. Box 227
Artesia, NM 88211-0227
Phone (505)748-3303
Cell (505)748-5489

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 Marbob Energy Corporation and its contractors and subcontractors 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 a false statement.

2-7-2003
Date

Dean Chumbley
Landman

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:

A. The hazards and characteristics of hydrogen sulfide (H_2S).

B. The proper use and maintenance of personal protective equipment and life support systems.

C. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.

D. The proper techniques for first aid and rescue procedures.

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

A. 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.

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

C. 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.

A. Well Control Equipment:

Flare line.

Choke manifold.

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

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

B. Protective equipment for essential personnel:

Mark II Surviveair 30-minute units located in the dog house and at briefing areas.

C. H_2S detection and monitoring equipment:

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.

D. Visual warning systems:

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.

E. Mud Program:

The mud program has been designed to minimize the volume of H_2S circulated to the surface.

A mud-gas separator will be utilized.

F. Metallurgy:

All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H_2S service.

G. Communication:

Company vehicles equipped with cellular telephone and 2-way radio.

WARNING

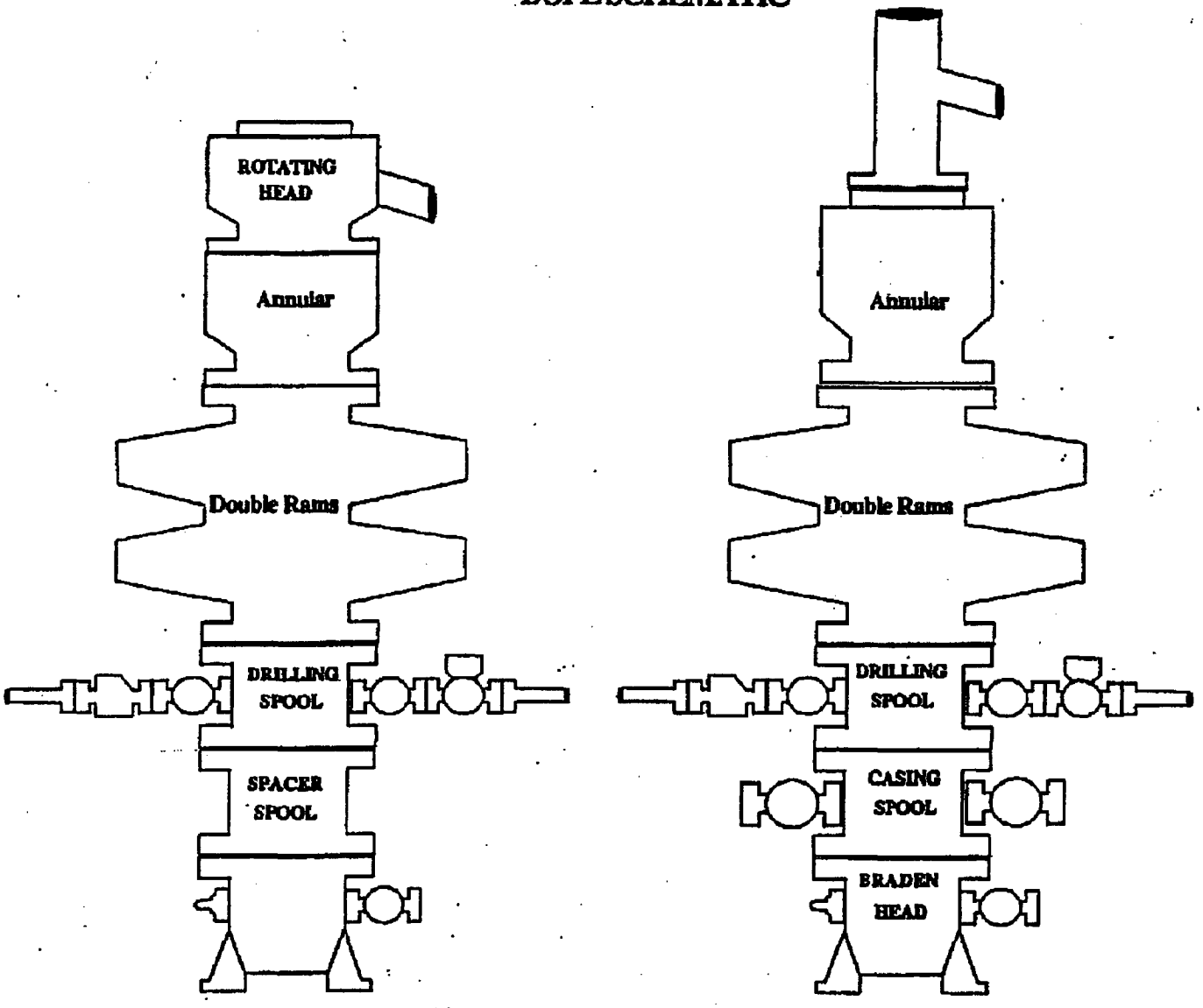
YOU ARE ENTERING AN H_2S AREA
AUTHORIZED PERSONNEL ONLY

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

BOPE SCHEMATIC



Choke Manifold

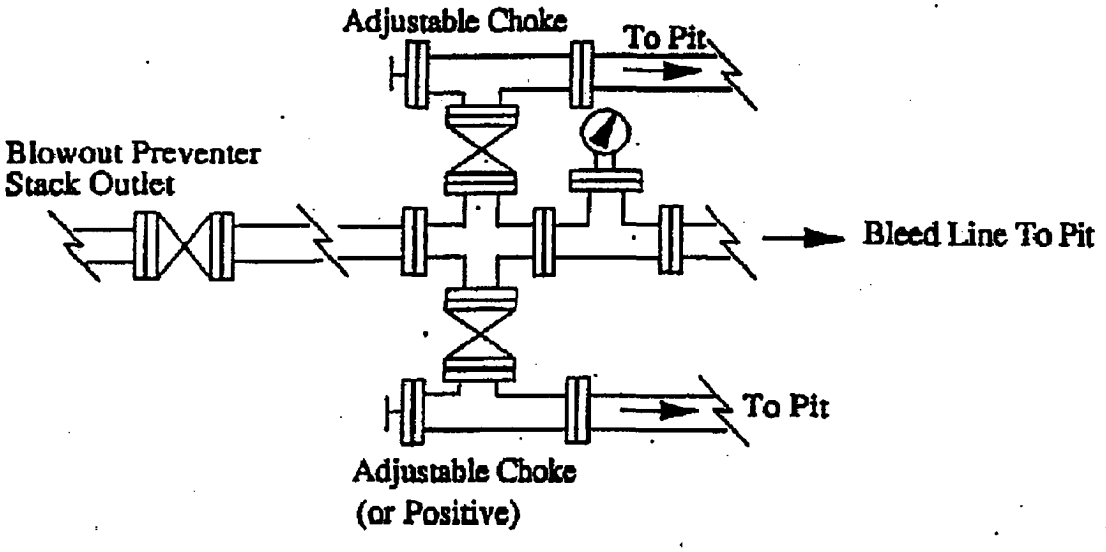
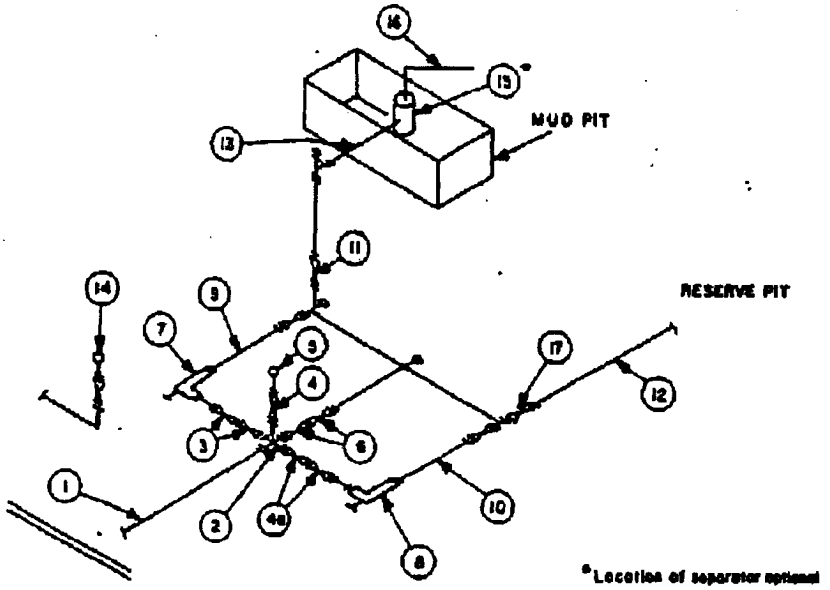


Exhibit One

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

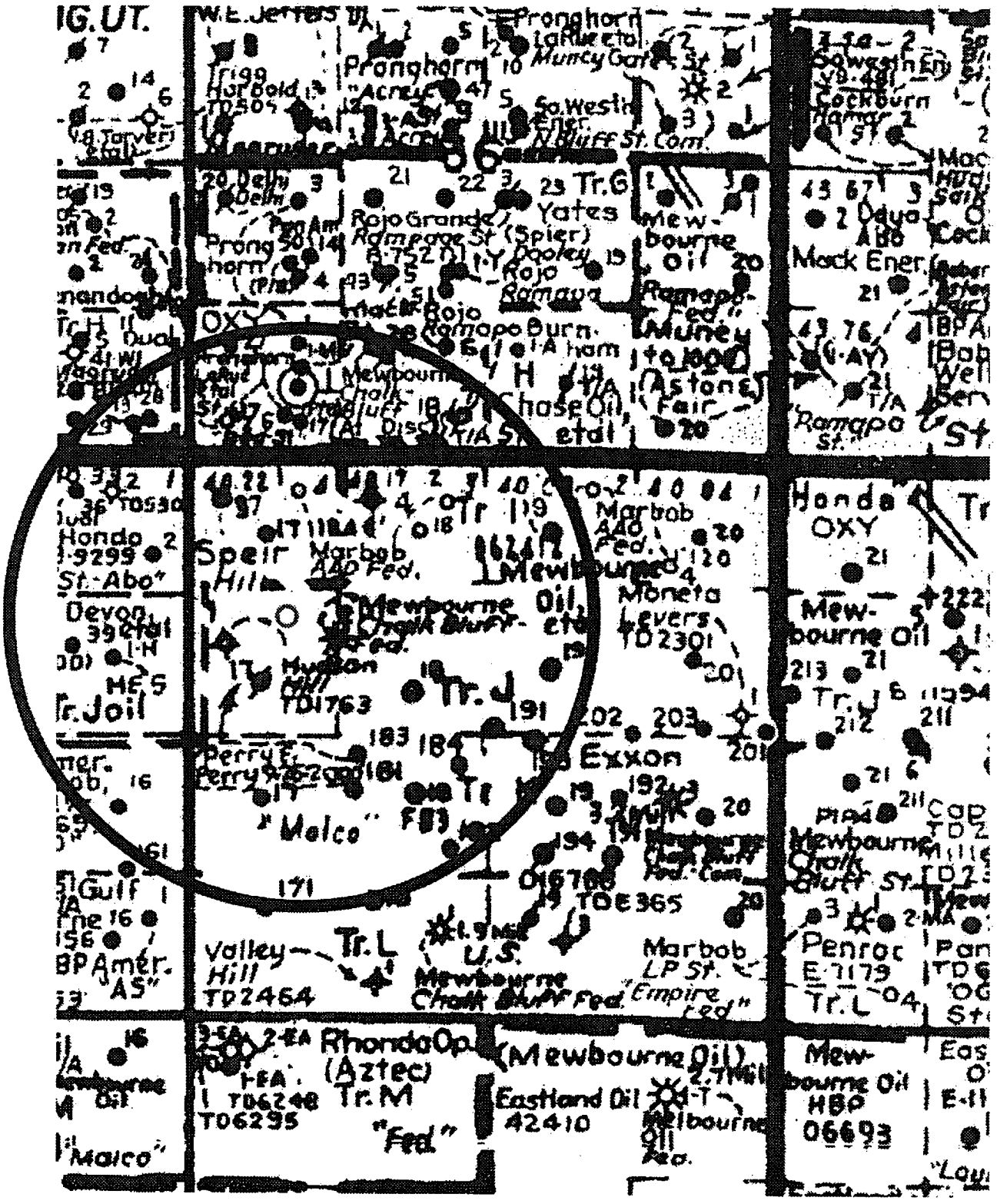
(1) Only one required in Class 3M.

(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.

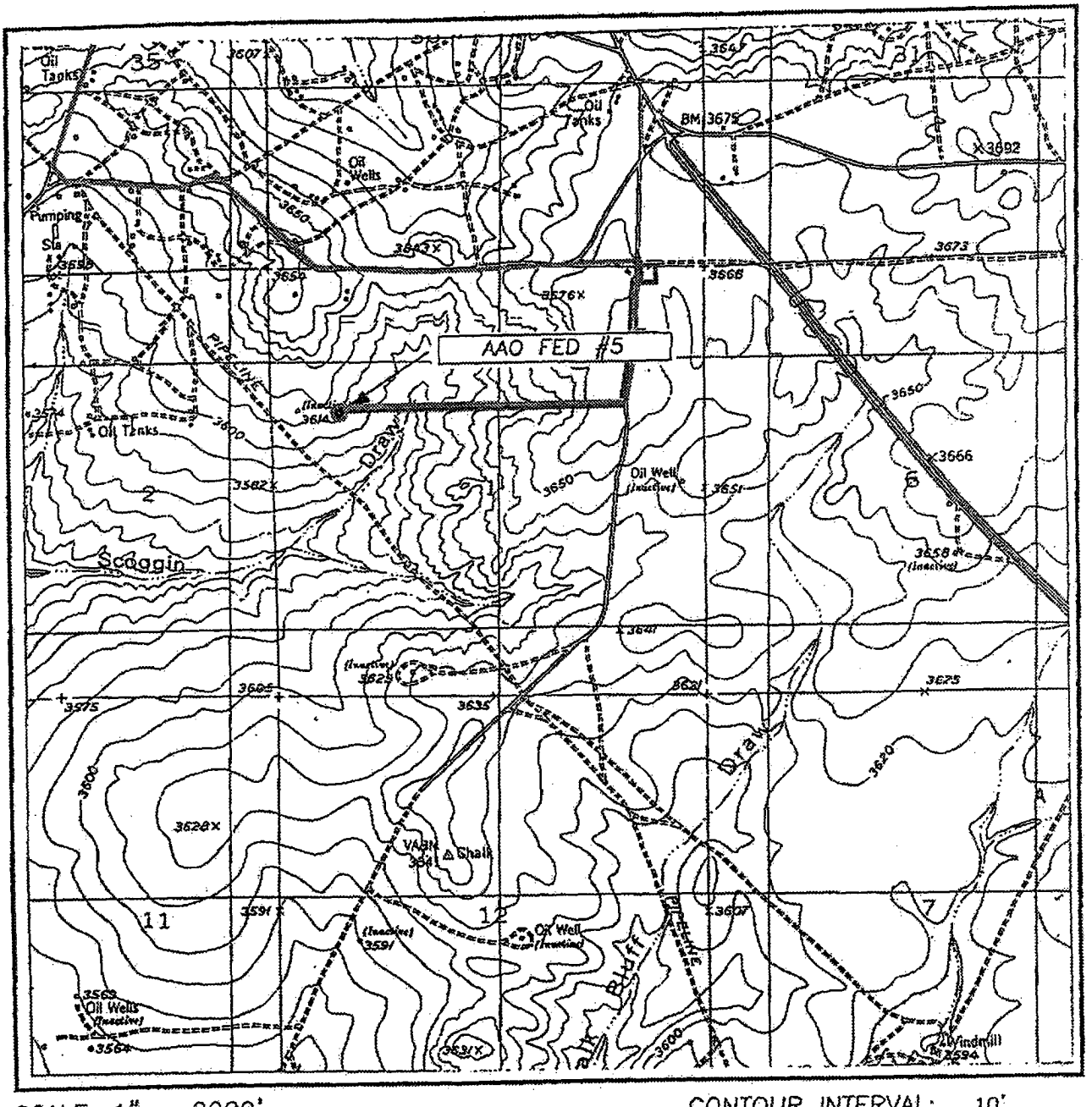
EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS

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



A A O Federal No.5
1650 FNL & 875 FWL
Sec. 1: T18s - R27e
Eddy County, New Mexico

EXHIBIT TWO



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'
RED LAKE, N.M.

A A O Federal No.5
1650 FNL & 875 FWL
Sec. 1: T18s - R27e
Eddy County, New Mexico

EXHIBIT THREE

Well Site Lay-Out Plat

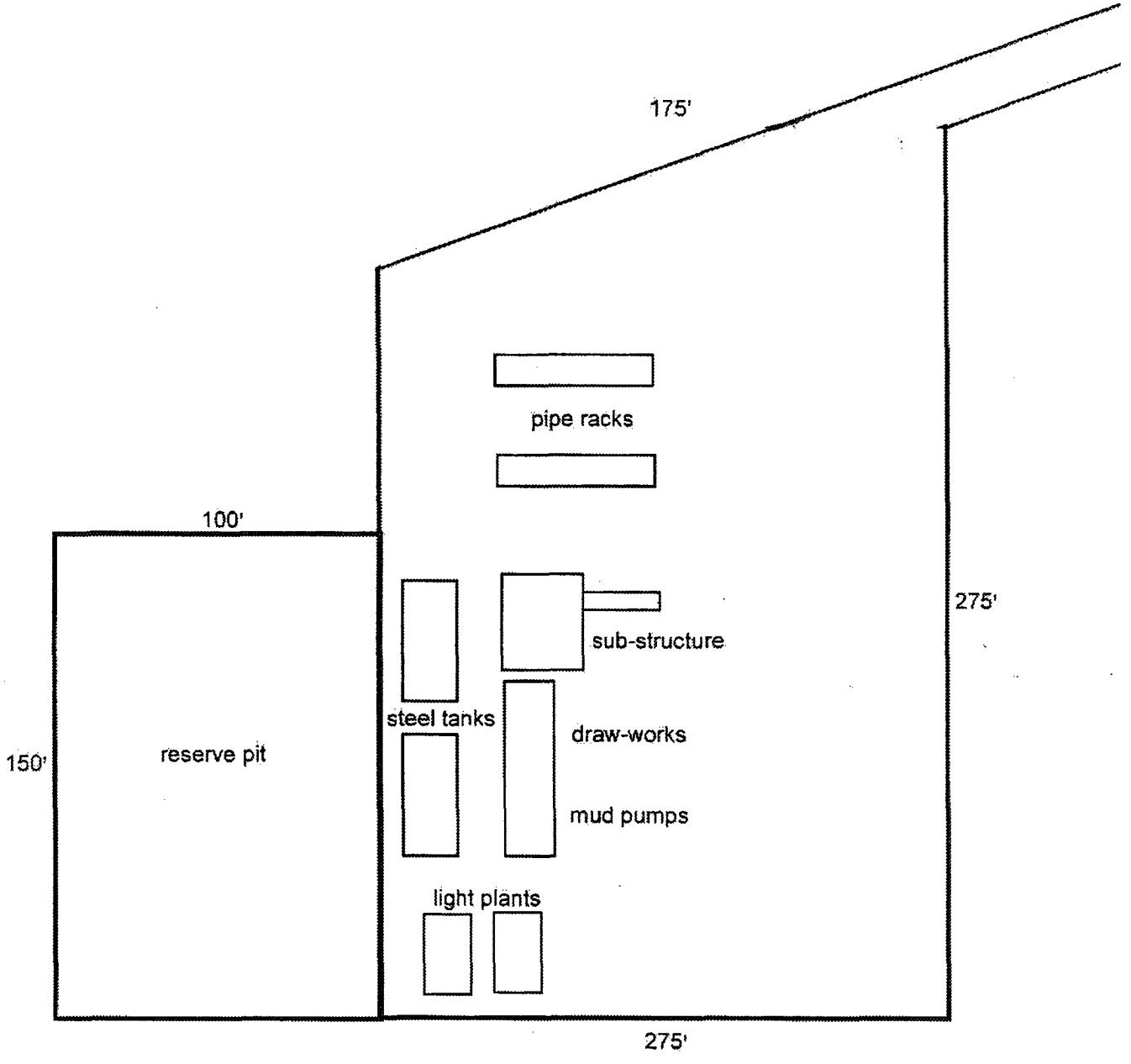


EXHIBIT FOUR

marbob
ENERGY CORPORATION
ARTESIA, NEW MEXICO

August 25, 2003

Oil Conservation Division
1301 W. Grand Ave.
Artesia, NM 88210

Attention: Bryan Arrant

Re: AAO Federal #5
1650' FNL & 875' FWL, Unit E
Section 1, T18S, R27E
Eddy County, New Mexico

Dear Bryan:

We don't anticipate cutting any formations that contain H2S gas during the drilling of the above referenced well. Therefore, we do not believe that an H2S contingency plan is necessary.

If you have questions or need further information, please call.

Sincerely,

Melanie J. Parker
Land Department

/mp

marbob
ENERGY CORPORATION
ARTESIA, NEW MEXICO

August 25, 2003

Oil Conservation Division
1301 W. Grand Ave.
Artesia, NM 88210

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