Form 3160-3 (August 1999) EC

OCD-HOBBS

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

E-04-20

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM110834

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.: MOE FEDERAL 15

2. Name of Operator: MARBOB ENERGY CORPORATION
Contact: MELANIE PARKER
E-Mail: marbob@marbob.com

9. API Well No.: 30-025-36655

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: PEARSALL QUEEN

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

At surface: SWSW Lot M 330FSL 990FWL

At proposed prod. zone: SWSW Lot M 330FSL 990FWL

11. Sec., T., R., M., or Blk. and Survey or Area: Sec 34 T17S R32E Mer NMP SME: BLM

14. Distance in miles and direction from nearest town or post office*

12. County or Parish: LEA

13. State: NM

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)

16. No. of Acres in Lease: 160.00

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: 7000 MD

20. BLM/BIA Bond No. on file

21. Elevations (Show whether DF, KB, RT, GL, etc.): 3902 GL

22. Approximate date work will start: 04/01/2004

23. Estimated duration: 15 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): MELANIE PARKER — Date: 02/06/2004

Title: AUTHORIZED REPRESENTATIVE

Approved by (Signature): /s/ Joe G. Lara — Name (Printed/Typed): /s/ Joe G. Lara — Date: MAR 29 2004

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 #27655 verified by the BLM Well Information System
For MARBOB ENERGY CORPORATION, sent to the Hobbs
Committed to AFMSS for processing by ARMANDO LOPEZ on 02/06/2004 (04AL0056AE)

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

OPER. OGRID NO. 14049
PROPERTY NO. 33624
POOL CODE 49970
EFF. DATE 4-1-04

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

API NO. 30-025-36655

KZ

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
30-025-36655	49970	PEARSALL QUEEN

Property Code	Property Name	Well Number
33624	MOE FEDERAL	15

OGRID No.	Operator Name	Elevation
14049	MARBOB ENERGY CORPORATION	3902'

Surface Location

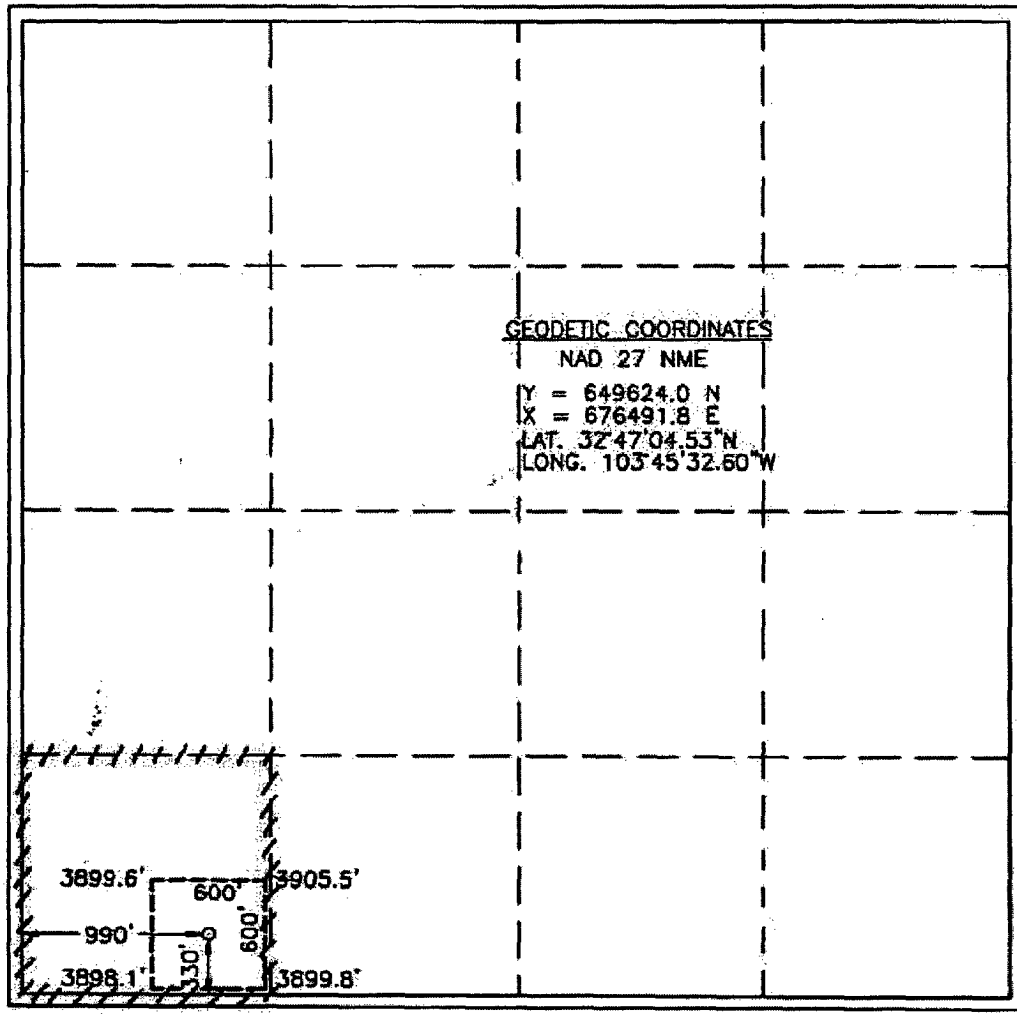
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	34	17-S	32-E		330	SOUTH	990	WEST	LEA

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

Melanie J. Parker
Printed Name

Land Department
Title

February 6, 2004
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 supervision, and that the same is true and correct to the best of my belief.

January 02, 2004
Date Surveyed A.W.B

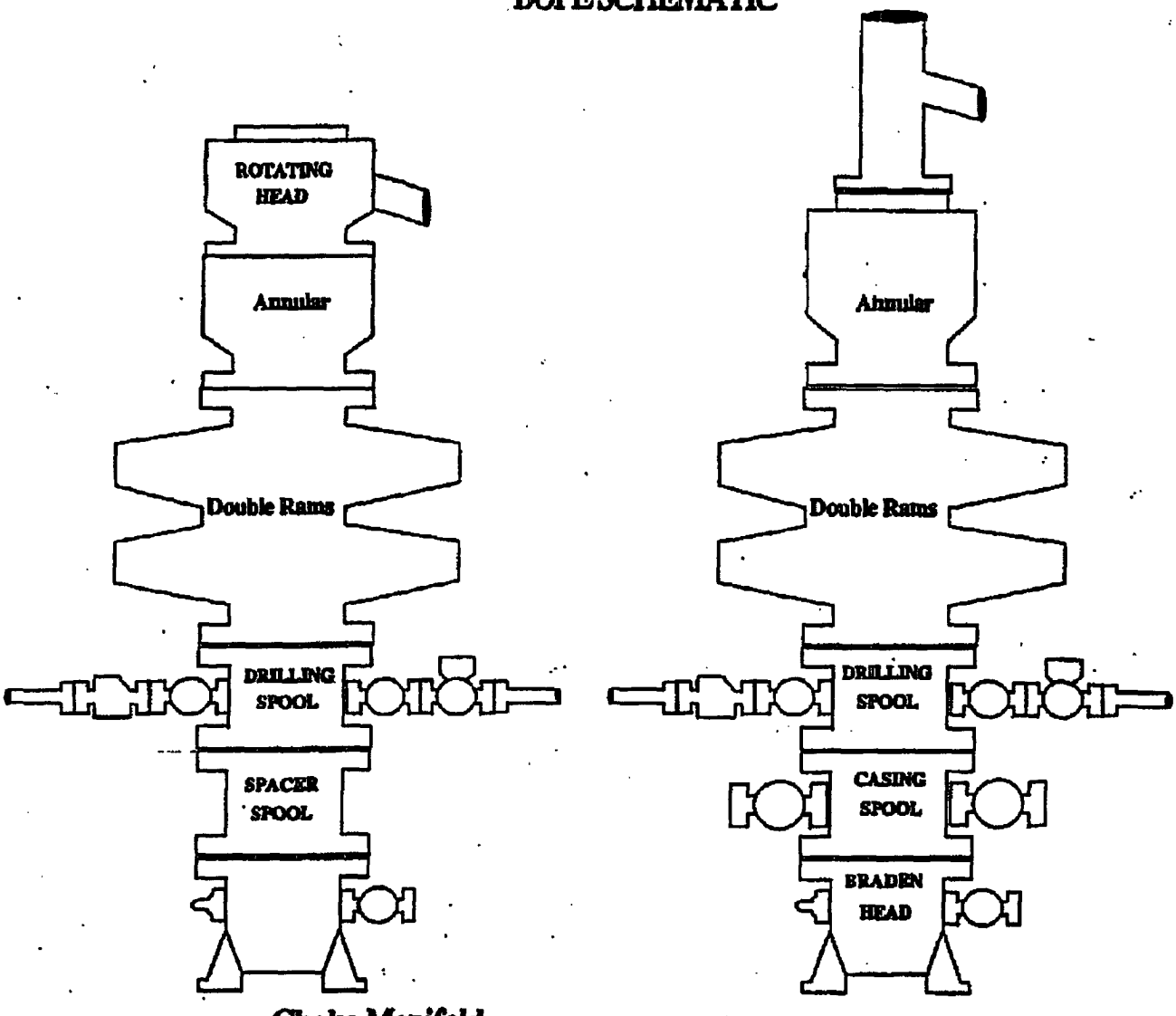
Signature & Seal of Professional Surveyor

GARY L. EDSON
NEW MEXICO
RECISTERED PROFESSIONAL SURVEYOR

Gary L. Edson 1/12/04
03.11.1390

Certificate No. GARY EDSON 12641

BOPE SCHEMATIC



Choke Manifold

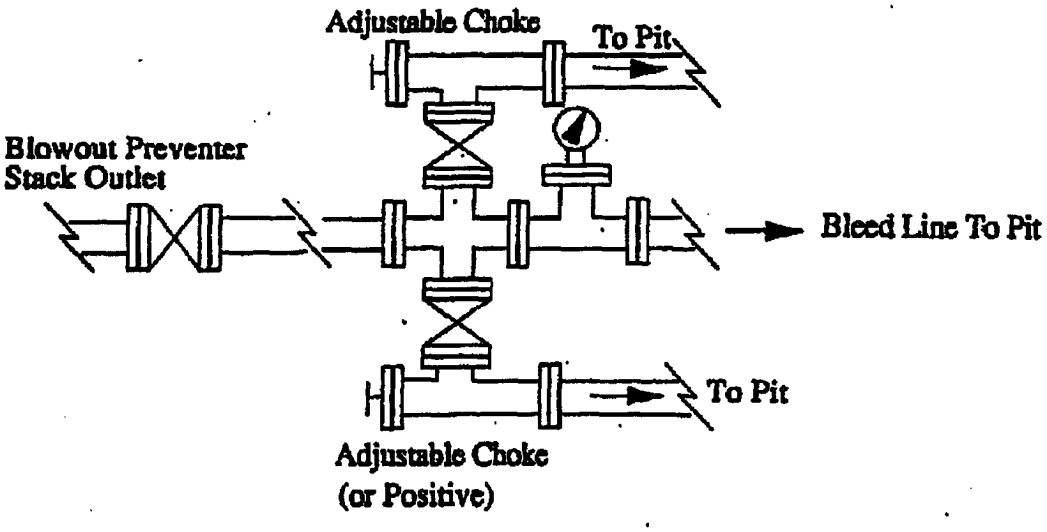
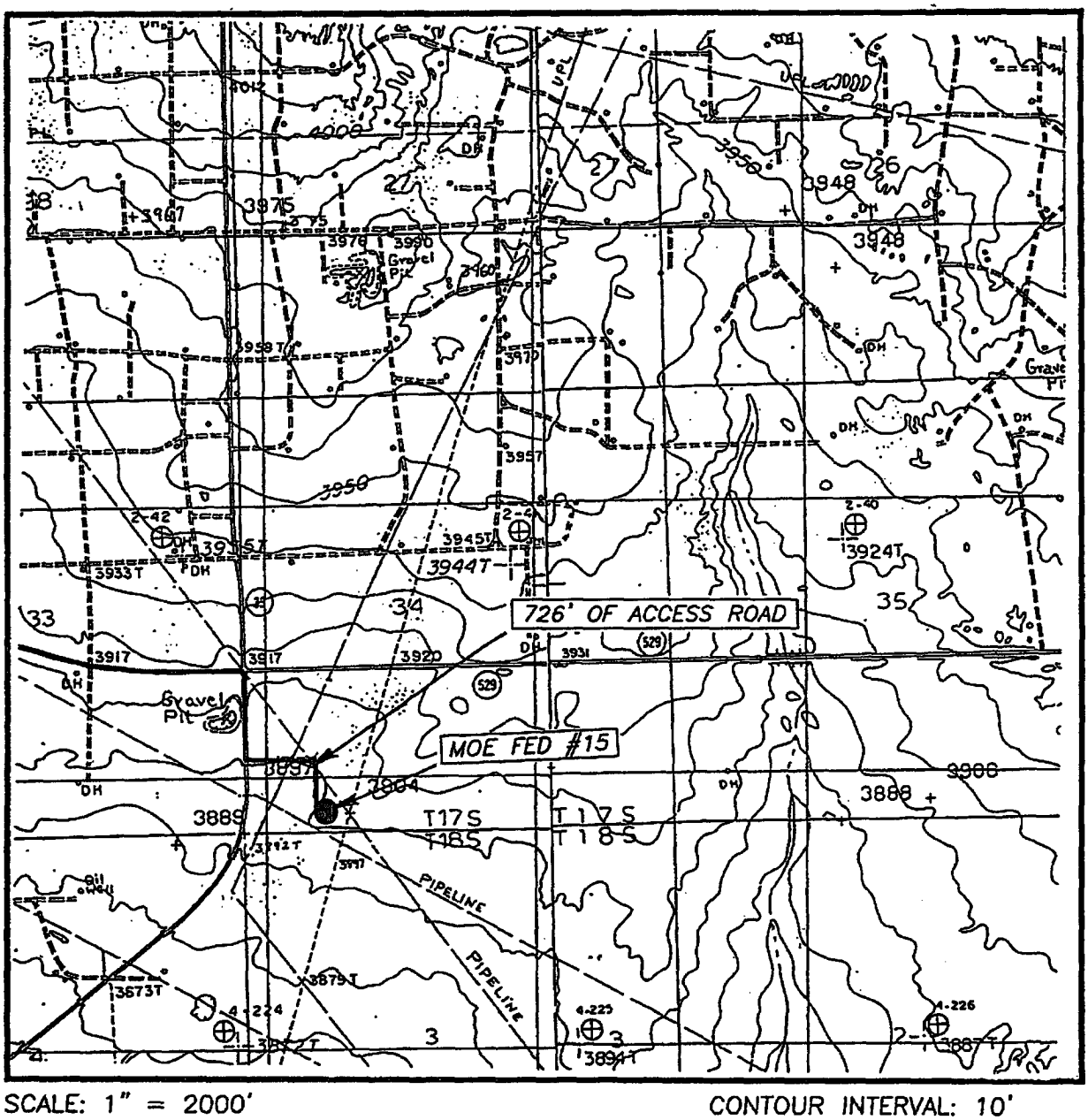


Exhibit One

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'
MALJAMAR, & DOG LAKE, N.M.
SUP, 5'

SEC. *34* TWP. *17-S* RGE. *32-E*

SURVEY *N.M.P.M.*

COUNTY *LEA*

DESCRIPTION *330' FSL & 990' FWL*

ELEVATION *3902'*

OPERATOR *MARBOB ENERGY CORPORATION*

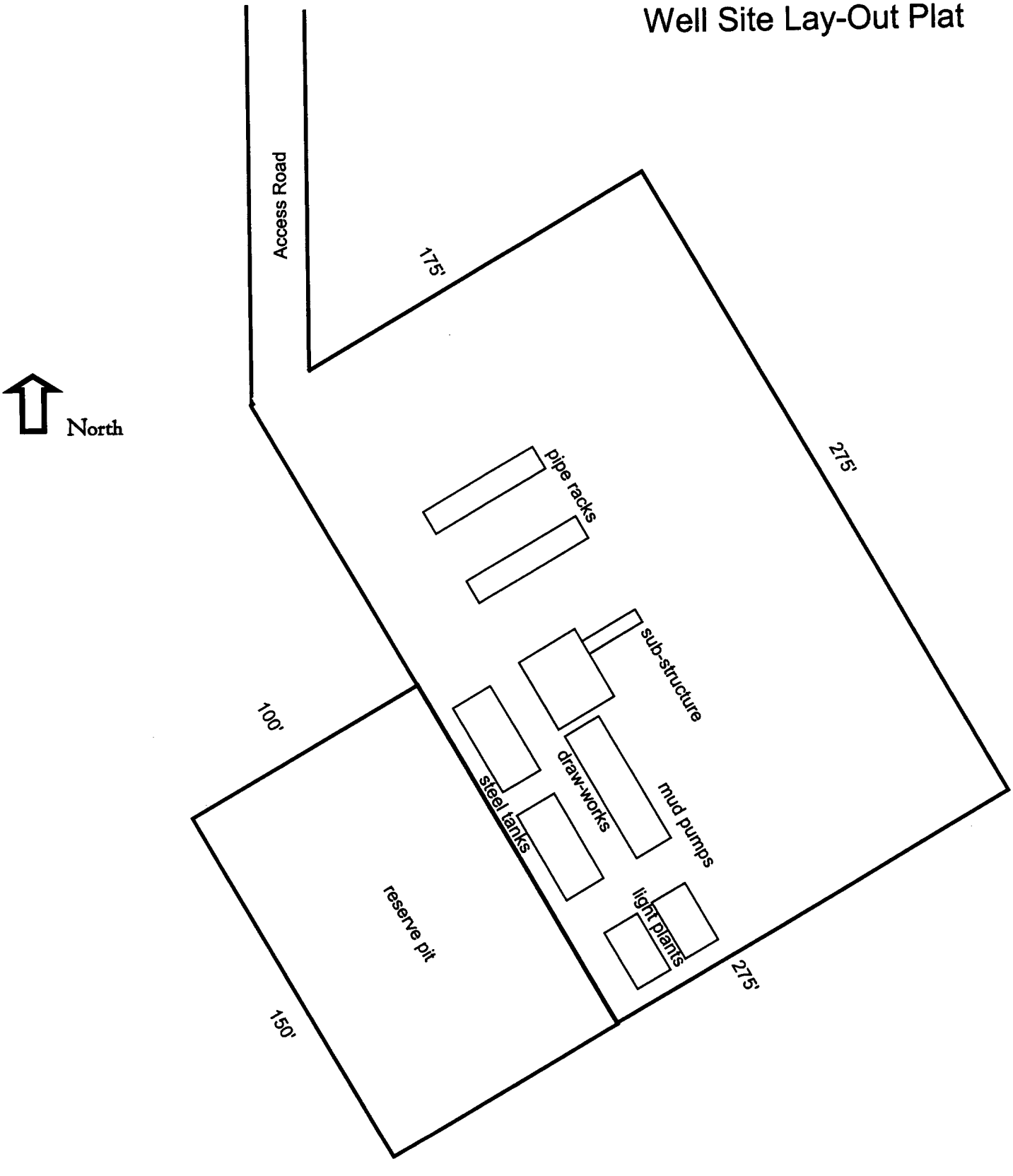
LEASE *MOE FEDERAL*

U.S.G.S. TOPOGRAPHIC MAP
MALJAMAR, & DOG LAKE, N.M.

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

EXHIBIT TWO

Well Site Lay-Out Plat



Moe Federal No. 15
330' FSL & 990' FWL
Section 34, T17S, R32E
Lea County, New Mexico

EXHIBIT THREE

MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

Moe Federal #15
330' FSL & 990' FWL, Unit M
Section 34, T17S, R32E
Lea 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 Permian.

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

Rustler	1120'	Queen	3590'
Top of Salt	1270'	San Andres	4090'
Base of Salt	2200'	Bone Spring	6000'

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

Queen	3590'	Oil
San Andres	4090'	Oil
Bone Spring	6000'	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 400' 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 to sufficiently cover all known oil and gas horizons above 200'.

4. Proposed Casing Program:

Hole Size	Interval	OD Casing	Wt	Grade
17 1/2"	0 – 400'	13 3/8"	48#	H-40
12 1/4"	0 – 2300'	8 5/8"	24#	J-55
7 7/8"	0 – 7000'	5 1/2"	17#	J-55

Proposed Cement Program:

13 3/8" Surface Casing: Cement w/ 400 sx Premium Plus. Circulate to surface.

8 5/8" Intermediate Casing: Cement w/ 900 sx Class C. Circulate to surface.

5 1/2" Production Casing: Cement w/ 750 sx Class H. Attempt to tie in to 8 5/8" csg.

5. Pressure Control Equipment: See Exhibit 1. Marbob proposes to nipple up on the 13 3/8" with a 2M system testing to 1000# with rig pumps, then nipple up on the 8 5/8" casing with a 2M system, testing it to 2000# with independent tester.

6. Mud Program: The applicable depths and properties of this system are as follows:

Depth	Type	Weight (ppg)	Viscosity (sec)	Waterloss (cc)
0' – 1270'	Fresh Wtr	8.4 – 9.2	32 – 36	N.C.
1270' – 2300'	Brine	9.9 – 10.2	28 – 32	N.C.
2300' – TD	Cut Brine	9.2 – 9.4	30 – 34	10 cc

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 starting date: As soon as possible after approval.

MARBOB ENERGY CORPORATION
MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Moe Federal #15
330' FSL & 990' FWL, Unit M
Section 34, T17S, R32E
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 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.

1. EXISTING ROADS:

Exhibit 2 is a portion of a topo map showing the well and roads in the vicinity of the proposed location. The proposed wellsite and the access route to the location are indicated in red on Exhibit 2.

DIRECTIONS:

Proceed east of Loco Hills approximately 5.6 miles on Hwy 62-180 to State Hwy 529. Take State Hwy 529 to CR 126. Turn south on CR 126 and proceed approximately 3/10 mile. Access road is on the east side of lease road.

2. PLANNED ACCESS ROAD:

A new access road of 726' will be necessary. The new road will be constructed as follows:

A. The maximum width of the running surface will be 10'. The road will be crowned and ditched and constructed of 6" of rolled and compacted caliche. Ditches will be at 3:1 slope and 4 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns. BLM may specify any additions or changes during the onsite inspection.

B. The average grade will be less than 1%.

C. No turnouts are planned.

D. No culverts, cattleguard, gates, low-water crossings, or fence cuts are necessary.

E. Surfacing material will consist of native caliche. Caliche will be obtained from the nearest BLM-approved caliche pit. Any additional materials that are required will be purchased from the dirt contractor.

The proposed access road as shown in Exhibit 2 has been centerline flagged by John West Engineering.

3. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. Marbob Energy Corporation proposes a collection facility, if well is productive, to be located on Moe Federal #1 well pad.

4. METHODS OF HANDLING WASTE DISPOSAL:

A. Drill cuttings will be disposed of in the lined pit.

B. Drilling fluids will be allowed to evaporate in the lined pit until the pit is dry.

C. Water produced during completion may be disposed into the lined reserve pit.

D. 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.

5. WELLSITE LAYOUT:

A. Exhibit 3 shows the relative location and dimensions of the well pad, the pit.

B. The reserve pit will be lined with high quality plastic sheeting.

6. PLANS FOR RESTORATION:

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 cleaned of all trash and junk to leave the wellsite in as aesthetically pleasing a condition as possible.

B. Reserve pit will be fenced until they have dried and been leveled.

C. 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.

7. SURFACE OWNERSHIP:

The well site and lease are located on Federal surface

A. The area around the well site is grassland and the top soil is sandy. The vegetation is native scrub grasses with abundant oakbrush, sagebrush, yucca, and prickly pear.

B. A Cultural Resources Examination has been requested and will be forwarded to your office in the near future.

8. OTHER INFORMATION:

A. Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.

9. 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

10. 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.

2/6/04
Date

Melanie Parker
Land Department

Moe Federal #15
330' FSL & 990' FWL, Unit M
Section 34, T17S, R32E
Lea County, New Mexico

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

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

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

Date: February 4, 2004

Lease #: NM-110834
Moe Federal

Legal Description: SW/4 Sec. 34-T17S-R32E
Lea County, New Mexico

Formation(s): Pearsall Queen

Bond Coverage: Statewide

BLM Bond File #: 585716

Melanie J. Parker
Land Department