Form 3160-3 (September 2001)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. DIV-Distance on 1004-0136

1301 W. Grand Avenue

Artesia, NM L88271174 6. If Indian, Allottee or Tribe Name

APPLICATION FOR PERMIT TO DI	RILL OR	REENTER			
la. Type of Work: DRILL REENTE	R			7. If Unit or CA Agreen	X
1b. Type of Well: Oil Well Gas Well Other		Single Zone	ple Zone	8. Lease Name and Well Dodd Federal Unit #5	• • • •
2. Name of Operator	·			9_API Well No.	
Marbob Energy Corporation /4 C	149			150-015	-34499
3a. Address	3b. Phone	No. (include area code)		10. Field and Pool, or Ex	ploratory
PO Box 227, Artesia, NM 88211-0227	505-748			Wodos. Em	Ding: Moso E
4. Location of Well (Report location clearly and in accordance with	any State re	quiremenDECENE)	11. Sec., T., R., M., or B	k. and Survey or Area
At surface 330FSL 430FWL		1 Hart but V to	•,*	0	16410
At proposed prod. zone		DEC 2 2 2005	j	 Sec. 14, T-17S, R-29E	,
14. Distance in miles and direction from nearest town or post office*		CODEARTE	214	12. County or Parish	13. State
				Eddy	NM
15. Distance from proposed* location to nearest property or lease line, ft.	16. No. (of Acres in lease		g Unit dedicated to this we	11
(Also to nearest drig. unit line, if any)	- I		40		
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 20. BLM		20. BLM/E	BIA Bond No. on file	
applied for, on this lease, it.	5000' 585176		585176		
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*			23. Estimated duration	
3590' GL	July 17, 2005		21 Days		
	24. A	ttachments			
The following, completed in accordance with the requirements of Onsho	ore Oil and	Gas Order No.1, shall be at	tached to thi	s form:	
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest System SUPO shall be filed with the appropriate Forest Service Office). 	Lands, the	Item 20 above). 5. Operator certific	ation. specific info	s unless covered by an ex ormation and/or plans as a	
25. Signature	Na	nme (Printed Typed)		D	ate
m and	Am	ny Reid		6.	/17/2005
Title			-		
Land Department					
Approved by (Signature) /s/ Joe G. Lara	N	ame (Printed Typed)	G. La	arà	*DEC 2 1 2005
FIELD MANAGER	Of	fice		TELD OFFIC	
Application approval does not warrant or certify that the applicant holds	legal or equ	itable title to those rights i	n the subject	lease which would entitle t	he applicant to conduct
operations thereon. Conditions of approval, if any, are attached.		APP	ROVA	L FOR 1 YE	AR

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.

*(Instructions on reverse)

Roswell Controlled Water Basin

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

Witness Surface Casing

State of New Mexico

DISTRICT I 1625 N. FRENCH DR., HOBBS, NM 88240

Energy, Minerals and Natural Resources Department

DISTRICT II 1301 W. GRAND AVENUE, ARTESIA, NM 88210

OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

Form C-102 Revised JUNE 10, 2003 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 67410

DISTRICT IV WELL LOCATION AND ACREAGE DEDICATION PLAT ☐ AMENDED REPORT 1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

API Number	-96610 Emp-100	Pool Name
Property Code	Property Name DODD FEDERAL UNIT	Well Number 508
OGRID No. 14049	Operator Name MARBOB ENERGY CORPORATI	ON Elevation 3590'

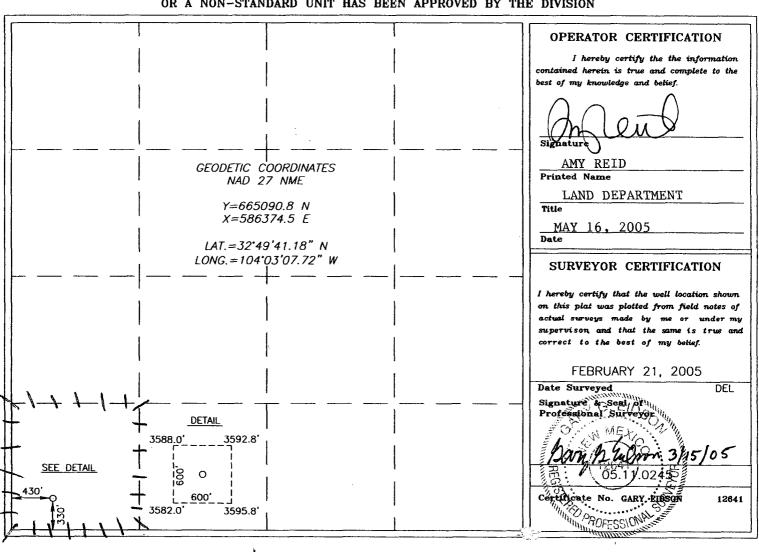
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	Rast/West line	County
M	14	17-S	29-E		330	SOUTH	430	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 o	r Infill Co	nsolidation (Code Or	der No.			<u> </u>	L
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



MARBOB ENERGY CORPORATION DRILLING AND OPERATIONS PROGRAM

Dodd Federal Unit #508 330' FSL & 430' FWL, Unit M Section 14, T17S, R29E 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 Permian.
- 2. The estimated tops of geologic markers are as follows:

Yates	830′	Queen	1765'
Grayburg	2078′	San Andres	2418′
Glorieta	3888'	Yeso	3954'

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

Water	200′	
Oil or Gas	2078′	

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 8 5/8" casing at 375 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	
	12¼"	0 – 375′	8 5/8"	24#	J-55	WINERS
i	7 7/8"	0-5000'	5 1/2"	17#	J-55	

Proposed Cement Program:

8 5/8" Surface Casing: Cement w/ 300 sx of Class C w/2% cc.

5 1/2" Production Casing: Cement w/ 1100 sx Class C. TOC to be 500' above all oil and as bearing zones.

- 5. Pressure Control Equipment: See Exhibit 1
- 6. Mud Program: The applicable depths and properties of this system are as follows:

Depth	Туре	Weight (ppg)	Viscosity (sec)	Waterloss (cc)
0 – 350′	Fresh Wtr	8.5	48	N.C.
350- 4800	Brine	9.8-10.2	40-45	N.C.

- 5000
- 5. Auxiliary Equipment: Kelly Cock; Sub with full opening valve on floor; and drill pipe connections.
- 6. 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.

- 7. No abnormal pressures or temperatures are anticipated.
- 8. Anticipated starting date: As soon as possible after approval.

MARBOB ENERGY CORPORATION MULTI-POINT SURFACE USE AND OPERATIONS PLAN

Dodd Federal Unit #508 330' FSL & 430' FWL, Unit M Section 14, T17S, R29E 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.

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 well site and the access route to the location are indicated in red on Exhibit 2.

DIRECTIONS:

From the intersection of US HWY. #82 and Standard Road(west of Loco Hills). Go East U.S. Hwy #82 approx. 0.4 miles. Turn left and go North approx. 0.5 miles. Turn right and go East approx. 0.2 miles to an existing well (Dodd A #35). This location is approx. 100' East of the existing well.

2. PLANNED ACCESS ROAD:

None

3. 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 well site within 30 days after finishing drilling and/or completion operations. All waste material will be contained to prevent scattering by the wind.

4. 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.

ئىد ئايى

5. 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 well site 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.

6. 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.

7. 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.

8. 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

9. 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 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.

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 H₂S 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 H₂S 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 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 each crew. The initial training session shall include a review of the site specific H₂S 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.

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. H₂S detection and monitoring equipment:

2 - portable H₂S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H₂S 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 H₂S 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 H₂S service.

G. Communication:

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

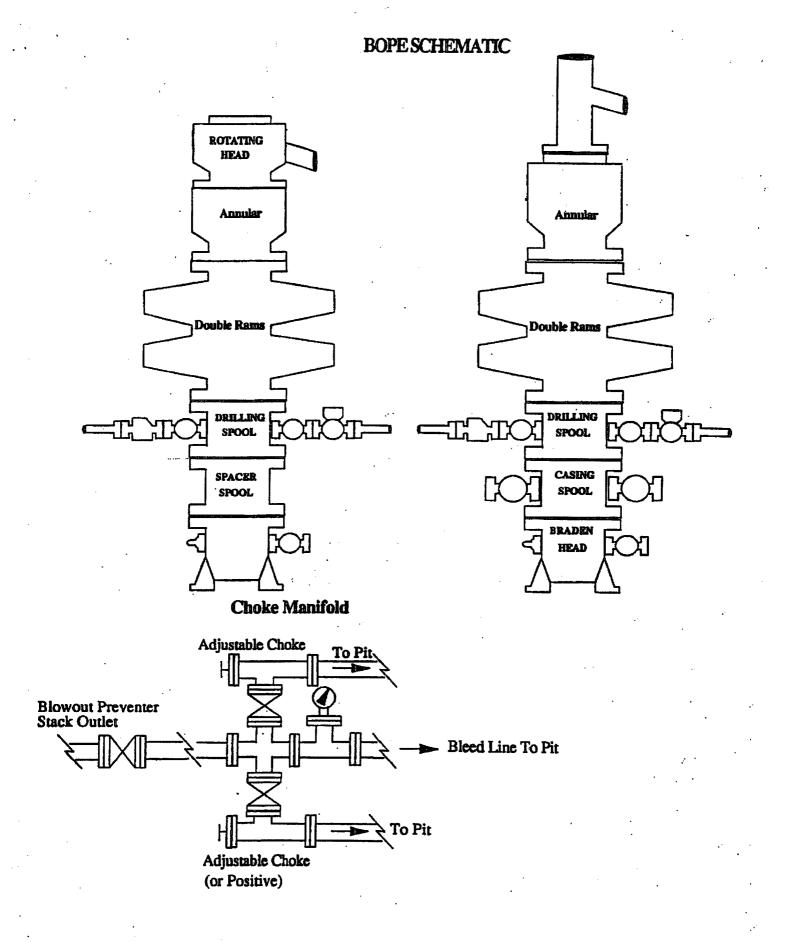
WARNING

YOU ARE ENTERING AN H₂S 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

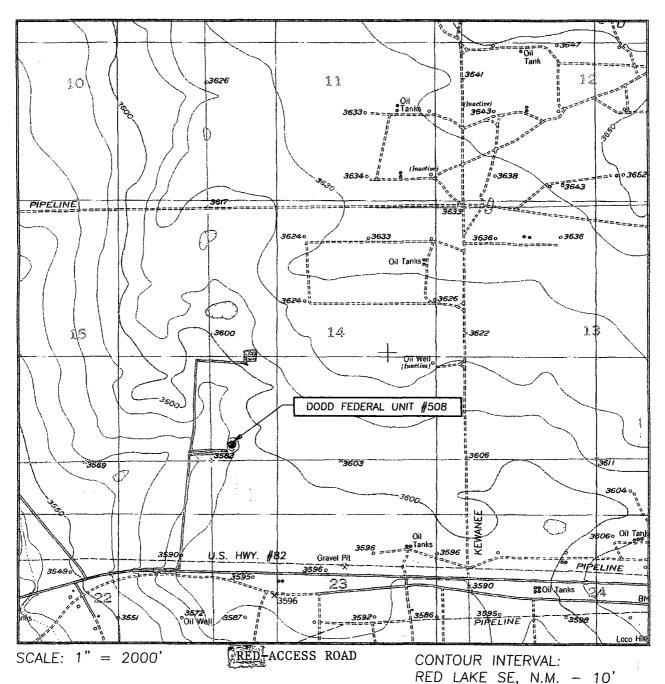
MARBOB ENERGY CORPORATION

1-505-748-3303



٠. ﴿ مُ

LOCATION VERIFICATION MAP



SEC. <u>14</u> TWP. <u>17-S</u> RGE. <u>29-E</u>

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 330' FSL & 430' FWL

ELEVATION 3590'

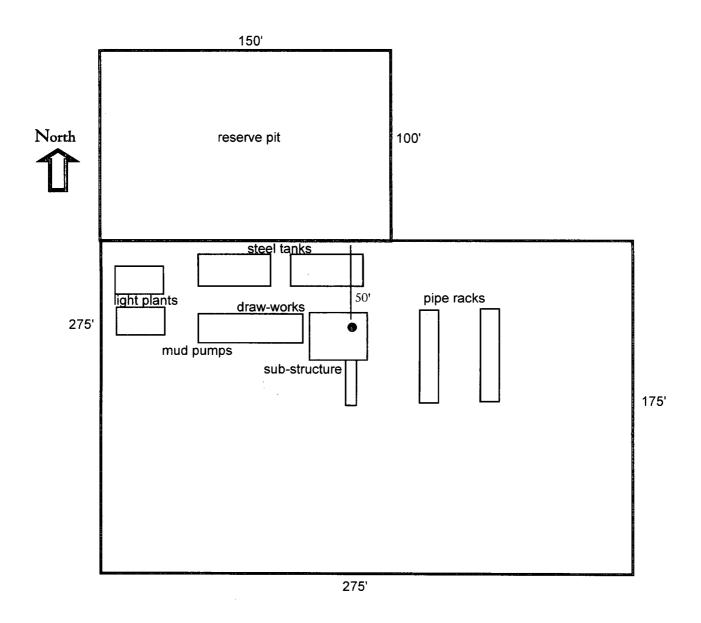
MARBOB ENERGY
OPERATOR CORPORATION

LEASE DODD FEDERAL UNIT

U.S.G.S. TOPOGRAPHIC MAP RED LAKE SE, N.M.

PROVIDING SURVEYING SERVICES SINCE 1946 JOHN WEST SURVEYING COMPANY 412 N. DAL PASO HOBBS, N.M. 88240 (505) 393-3117

EXHIBIT TWO



Dodd Federal Unit #508 330' FSL & 430' FWL Section 14, T17S, R29E Eddy County, New Mexico

EXHIBIT THREE

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Well Name & No.

Marbob Energy Corporation
Dodd Federal Unit #508

Location:

330' FSL, 430' FWL, Section 14, T. 17 S., R. 29 E., Eddy County, New Mexico

Lease:

LC-028731-A

I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Resource Area Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County in sufficient time for a representative to witness:

......

- A. Well spud
- B. Cementing casing: 8-5/8 inch 5-1/2 inch.
- C. BOP testing
- 2. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.
- 3. A Hydrogen Sulfide (H2S) Drilling Operation Contingency Plan shall be activated prior to drilling into the **Queen** formation. A copy of the plan shall be posted at the drilling site.
- 4. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

II. CASING:

- 1. The 8-5/8 inch surface casing shall be set at approximately 375 feet or 25 feet into the Rustler Anhydrite or in the case the salt occurs at a shallower depth, above the top of the salt. The surface casing shoe shall be set in the anhydrite to ensure adequate sealing. The operator is required to use an excess of 100% cement volume to fill the annulus. If cement does not circulate to the surface the operator may then use ready-mix cement to fill the remaining annulus.
- 2. The minimum required fill of cement behind the <u>5-1/2</u> inch production casing is to be sufficient to place the top of the cement 500 feet above the top of the uppermost hydrocarbon bearing interval or to the base of the salt.

III. PRESSURE CONTROL:

- 1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the <u>8-5/8</u> inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.
- 2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2000** psi.
- 3. The requested variance to test the BOPE to the reduced pressure of **1000 psi** using the rig mud pumps is approved. (Sundry Notice dated 5/25/99 and approved 6/16/99.)
- 4. Testing fluid must be water or an appropriate clear liquid suitable for sup-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- 5. Testing must be done in a safe workman-like manner. Hard line connections shall be required.

The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.