

**COCD-ARTESIA**

**RECEIVED**

**MAY 08 2006**

FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**COCD-ARTESIA**

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

5. Lease Serial No.

**NM 96848**

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.

**Save D A 21 Federal #1**

9. API Well No.

**30-015-34840**

10. Field and Pool, or Exploratory

**Willow Lake; Bone Spring SE**

11. Sec., T., R., M., or Blk. and Survey or Area

**Sec. 21, T-25S R-29E**

12. County or Parish

**Eddy County**

13. State

**NM**

1a. Type of Work: ☒ DRILL

☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other

☒ Single Zone

☐ Multiple Zone

2. Name of Operator

**Marbob Energy Corporation**

3a. Address

**P.O. Box 227, Artesia, New Mexico 88211-227**

3b. Phone No. (include area code)

**505-748-3303**

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

At surface **660' FNL & 660' FWL**

At proposed prod. zone

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

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

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

**9500'**

20. BLM/BIA Bond No. on file

**NM 2056**

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

**2939'**

22. Approximate date work will start\*

**May 4, 2006**

23. Estimated duration

**21 Days**

24. Attachments

**CARLSBAD 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

**Nancy Bratcher**

Title

Name (Printed/Typed)

**Nancy T. Bratcher**

Date

**4/4/06**

Land Department

Approved by (Signature)

**/s/ Russell E. Sorensen**  
**ACTING FIELD MANAGER**

Name (Printed/Typed)

**/s/ Russell E. Sorensen**

Date

**MAY 5 2006**

Office

**CARLSBAD FIELD OFFICE**

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, 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.

\*(Instructions on reverse)

**APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED**

**WITNESS Surface Cementing**

## DISTRICT I

1625 N. FRENCH DR., BOBBS, NM 88240

## DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## DISTRICT IV

1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

## State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.

Santa Fe, New Mexico 87505

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 96217	Pool Name WILLOW LAKE; BONE SPRING SE
Property Code	Property Name SAVE D A 21 FEDERAL	Well Number 1
OGRID No. 14049	Operator Name MARBOB ENERGY CORPORATION	Elevation 2939'

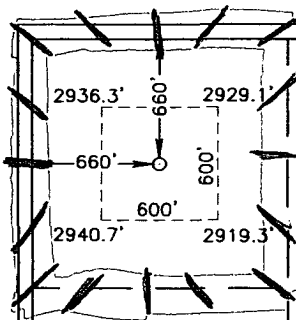
## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	21	25-S	29-E		660	NORTH	660	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 40	Joint or Infill	Consolidation Code	Order No.						

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



GEODETIC COORDINATES  
NAD 27 NME

Y=407828.4 N  
X=604618.6 E

LAT.=32°07'14.83" N  
LONG.=103°59'43.46" W

## OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

*Nancy T. Bratcher* 4/4/06  
Signature Date  
Nancy T. Bratcher  
Printed Name

## 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.

MARCH 10, 2006

Date Surveyed JR  
Signature & Seal of Professional Surveyor

*Gary E. Eidsen* 3/17/06  
06.11.0495

Certificate No. GARY EIDSON 12641

**MARBOB ENERGY CORPORATION**  
**DRILLING AND OPERATIONS PROGRAM**

**Save D A 21 Federal #1**  
**660' FNL & 660' FWL, Unit D**  
**Section 21, T25S, 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:

Rustler	576'	Delaware	2956'
TOS	681'	Bone Springs	6728'
BOS	2716'	TD	9500'

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

Rustler	576'	Oil
Bone Springs	6728'	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 17 1/2" 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 7 7/8" production casing which will be run at TD to sufficiently cover all known oil and gas horizons 200' above.

4. Proposed Casing Program:

Hole Size	Interval	OD Casing	Wt	Grade
17 1/2"	0-350'	13 3/8"	48#	H-40
12 1/4"	350-2750'	8 5/8"	24#	J-55
7 7/8"	2750-9500'	5 1/2"	17#	J-55

Proposed Cement Program:

13 3/8" Surface Casing: Cement w/ 350 sx Class C. Circulate to surface.

8 5/8" Intermediate Casing: Cement w/ 700 sx Class C. Circulate to surface.

5 1/2" Production Casing: Cement w/ 500 sx Class C. 200' above all oil & gas zones.

5. Pressure Control Equipment:

See Exhibit #1. Marbob proposes to nipple up on the 17 1/2" casing with a 2M system, testing it to 1000# with rig pumps, then nipple up on the 7 7/8" casing with a 5M system, tested to 5000# before drilling out.

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 – 2750'	Brine	9.8-10.2	40-45	N.C.
2750 - 9500'	Cut Brine	8.6-9.4	28-36	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 Casing 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**

**Save D A 21 Federal #1**  
**660' FNL & 660' FWL, Unit D**  
**Section 21, T25S, 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 wellsite and the access route to the location are indicated in green on Exhibit 2.

**DIRECTIONS:**

From the intersection of U.S. Highway #285 & Co. Rd. #725 (Whitehorn Rd.) go east on Co. Rd. #725 approx. 4.0 miles. Turn left (NE) and go approx. 1.8 miles, turn left (North) and go approx. 2.2 miles to a "Y" intersection. Stay left (North) and go approx. 0.8 miles. Turn left (West) on Trail Road and go approx. 0.9 miles. This location is approx. 350' south.

**2. PLANNED ACCESS ROAD:**

A new access road of 236' 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.

- F. 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 Save D A 21 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 rehabilitation 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.

4/4/06  
Date

Nancy T. Bratcher  
Nancy T. Bratcher  
Land Department

## **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<sub>2</sub>S).
- B. The proper use and maintenance of personal protective equipment and life support systems.
- C. The proper use of H<sub>2</sub>S 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<sub>2</sub>S 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<sub>2</sub>S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days or 500 feet) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S 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<sub>2</sub>S SAFETY EQUIPMENT AND SYSTEMS**

Note: All H<sub>2</sub>S 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<sub>2</sub>S.

### **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<sub>2</sub>S detection and monitoring equipment:**

2 - portable H<sub>2</sub>S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H<sub>2</sub>S 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<sub>2</sub>S circulated to the surface.

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<sub>2</sub>S service.

G. Communication:

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

# **W A R N I N G**

**YOU ARE ENTERING AN H<sub>2</sub>S 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: April 4, 2006

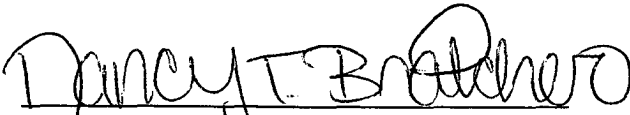
Lease #: Nm 96848  
**Save D A 21 Federal #1**

Legal Description: NWNW Sec. 21-T25S-R29E  
Eddy County, New Mexico

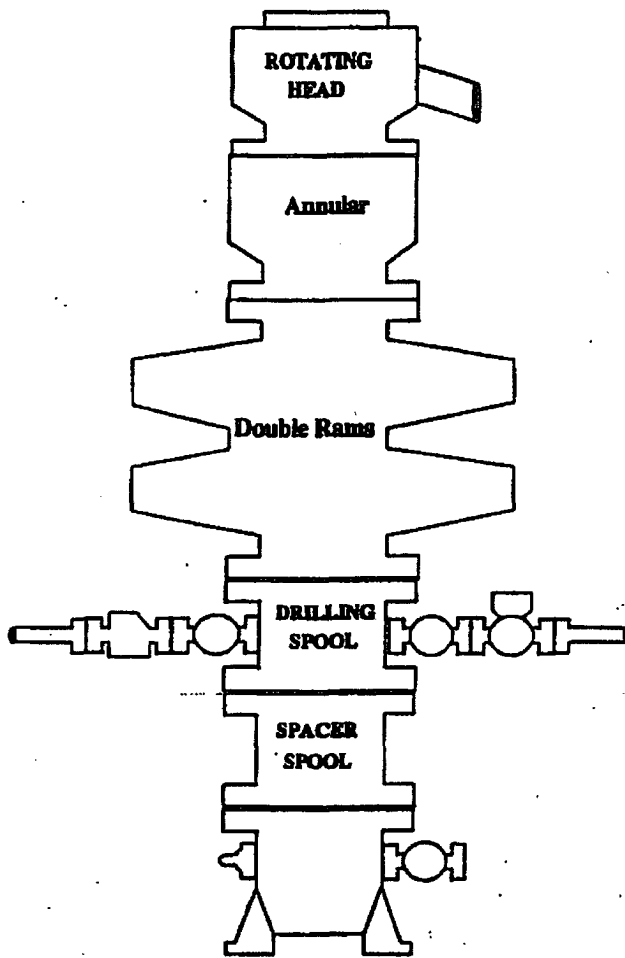
Formation(s): Permian

Bond Coverage: Statewide

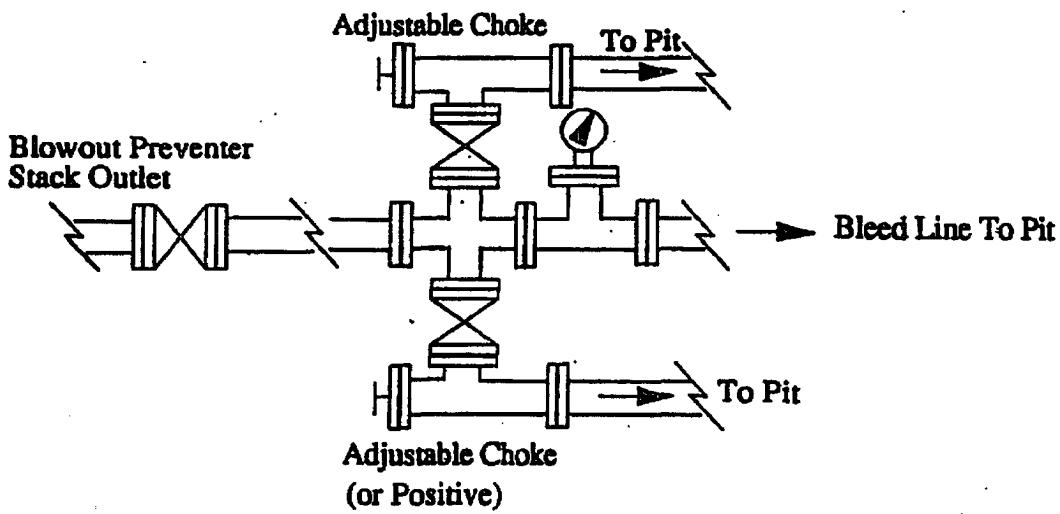
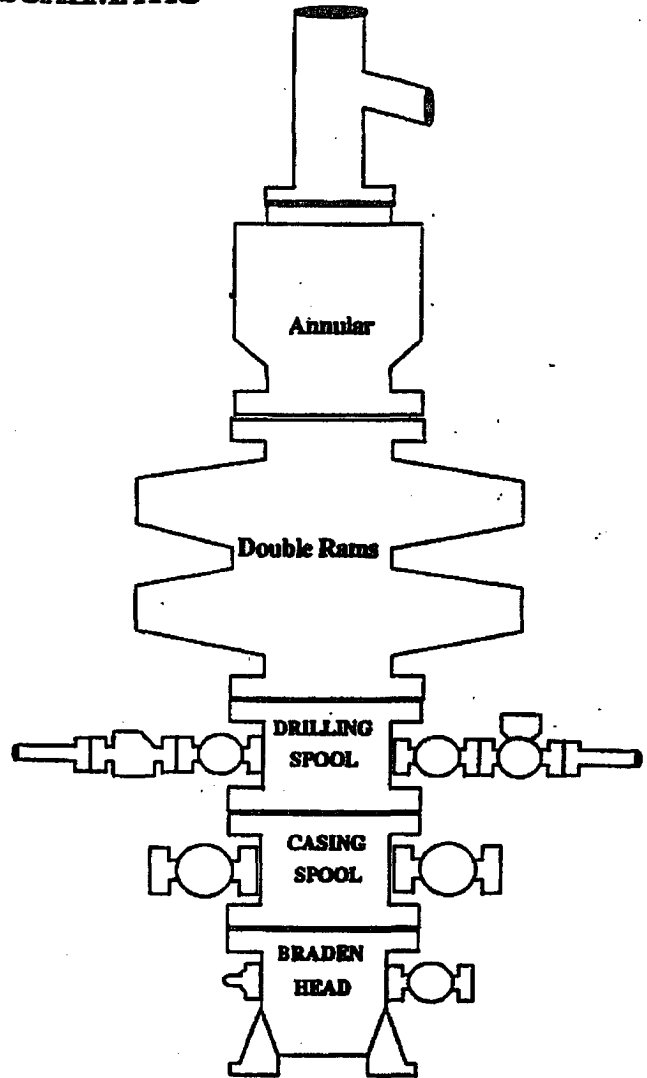
BLM Bond File #: NM 2056

  
Nancy T. Bratcher  
Land Department

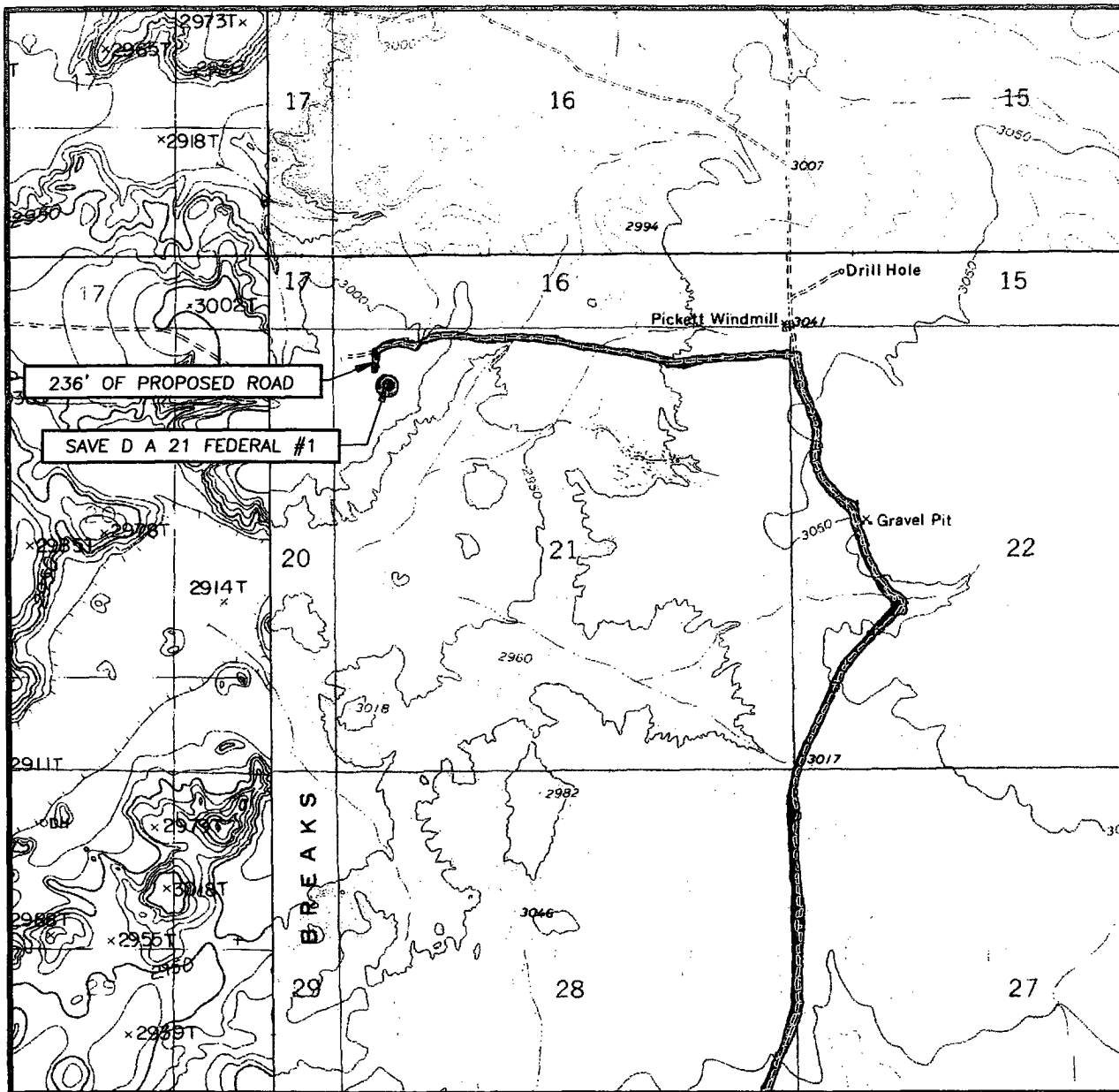
# BOPE SCHEMATIC



**Choke Manifold**



# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

SEC. 21 TWP. 25-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 660' FNL & 660' FWL

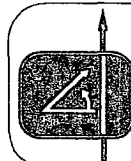
ELEVATION 2939'

OPERATOR MARBOB ENERGY CORPORATION


LEASE SAVE D A 21 FEDERAL

U.S.G.S. TOPOGRAPHIC MAP  
ROSS RANCH, N.M.

CONTOUR INTERVAL:  
ROSS RANCH, N.M. - 10'  
MALAGA, N.M. - 10'  
RED BLUFF, N.M. - 10'  
PIERCE CANYON, N.M. - 10'



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

 EXISTING ROADS

## EXHIBIT TWO

## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Marbob Energy Corporation

Well Name & No: Save D A 21 No. 01

Location: Surface 660' FNL & 660' FWL, Sec. 21, T. 25 S. R. 29 E.

Lease: NMNM 96848

Eddy County, New Mexico

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### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell, NM 88201, (505) 627-0272 for wells in Chaves and Roosevelt Counties; the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County; and the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612 for wells in Lea County, in sufficient time for a representative to witness:

A. Spudding

B. Cementing casing: 13 3/8 inch; 8 5/8 inch; 5 1/2 inch.

C. BOP Tests

2. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan is not required for this well bore, there is no specific citing of H<sub>2</sub>S production. . The operator has included an H<sub>2</sub>S Drilling Operations Plan.

3. 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.

4. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

5. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

### II. CASING:

1. The 13 3/8 inch shall be set at 350 Feet with cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the 8 5/8 inch Intermediate casing is to circulate to surface.

3. The minimum required fill of cement behind the 5 1/2 inch Production casing is to cover all potential hydro carbon bearing formations by at least 200 feet.

### 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 13 3/8 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.

**(III Cont):**

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **3 M psi**. A variance to use the rig pumps and test a 2 M surface BOPE to 1000 psig is approved. A minimum of a **3 M BOPE** shall be in operations according to Onshore Orders No. 02 prior to drilling below the 8 5/8 inch casing shoe at approximately 2750 feet.

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

- The test shall be done by an independent service company
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures.
- Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in safe workman-like manner. Hard line connections shall be required.
- Both low pressure and high pressure testing of BOPE is required.

**G. Gourley RFO 4/17/06**