

DEPARTMENT  
BUREAU

APPLICATION FOR

If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.

IV-Dist. 2

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

JAN 04 2006

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		7. If Unit or CA Agreement, Name and No.	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		8. Lease Name and Well No. <b>35356</b> Crown Royal Federal <b>06m #2</b>	
2. Name of Operator <b>Marbob Energy Corporation</b> <b>14049</b>		9. API Well No. <b>30-015-34528</b>	
3a. Address <b>PO Box 227, Artesia, NM 88220</b>	3b. Phone No. (include area code) <b>505-748-3303</b>	10. Field and Pool, or Exploratory <b>Dublin Ranch, Morrow (Gas)</b> <b>76140</b>	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface <b>1730' FSL &amp; 660' FEL</b> At proposed prod. zone <b>per attached SN dated 11-28-05 (EAH)</b>		11. Sec., T., R., M., or Blk. and Survey or Area <b>Section 26: T22S-R28E</b>	
14. Distance in miles and direction from nearest town or post office*		12. County or Parish <b>Eddy</b>	13. State <b>NM</b>
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 <b>320</b>	17. Spacing Unit dedicated to this well	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth <b>13200'</b>	20. BLM/BIA Bond No. on file <b>585716</b>	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>3126' GL</b>	22. Approximate date work will start* <b>November 16, 2005</b>	23. Estimated duration <b>35 days</b>	

24. Attachments

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.  | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).    |
| 2. A Drilling Plan.   | 5. Operator certification.   |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <b>Amy Johnson</b>	Name (Printed/Typed) <b>Amy Johnson</b>	Date <b>10/14/05</b>
Title <b>ACTING</b>		
Land Department		
Approved by (Signature) <b>/s/ Joe G. Lara</b>	Name (Printed/Typed) <b>/s/ Joe G. Lara</b>	Date <b>DEC 29 2005</b>
Title <b>FIELD MANAGER</b>	Office <b>CARLSBAD FIELD OFFICE</b>	

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**

**Carlsbad Controlled Water Basin**

**Witness Surface Casing**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
OCD-ARTESIAFORM APPROVED  
OMB No. 1004-0135  
Expires: January 31, 2004**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.****SUBMIT IN TRIPLICATE - Other instructions on reverse side**

## 1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

## 2. Name of Operator

Marbob Energy Corporation

## 3a. Address

PO. Box 227 Artesia, NM 88211-0227

## 3b. Phone No. (include area code)

505-748-3303

## 4. Location of Well (Footage, Sec., T, R., M., or Survey Description)

1730 FSL &amp; 660 FEL

Section 26-T22S-R28E

## 5. Lease Serial No.

NM-67979

## 6. If Indian, Allottee or Tribe Name

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

## 8. Well Name and No.

Crown Royal Federal Com #2

## 9. API Well No.

## 10. Field and Pool, or Exploratory Area

Dublin Ranch, Morrow (Gas)

## 11. County or Parish, State

Eddy County, NM

## 12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>Change Location</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

3. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Change Location as Follows;

From 1980' FSL &amp; 660' FEL

To 1730' FSL &amp; 660' FEL

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

Nancy Bratcher

Title Land Department

Signature

*Nancy Bratcher*

Date November 28, 2005

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by (Signature)

/s/ Joe G. Lara

Name

(Printed/Typed)

/s/ Joe G. Lara

Office

CARLSBAD FIELD OFFICE

Date

DEC 29 2005

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject land which would entitle the applicant to conduct operations thereon.

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.

(Continued on next page)

NOV 16 2005

## DISTRICT I

1625 N. FRENCH DR., HOBBS, 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

## 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

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 76140	Pool Name DUBLIN RANCH, MORROW (GAS)
Property Code	Property Name CROWN ROYAL	Well Number 2
OGRID No. 14049	Operator Name MARBOB ENERGY CORPORATION	Elevation 3123'

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	26	22-S	28-E		1730	SOUTH	660	EAST	EDDY

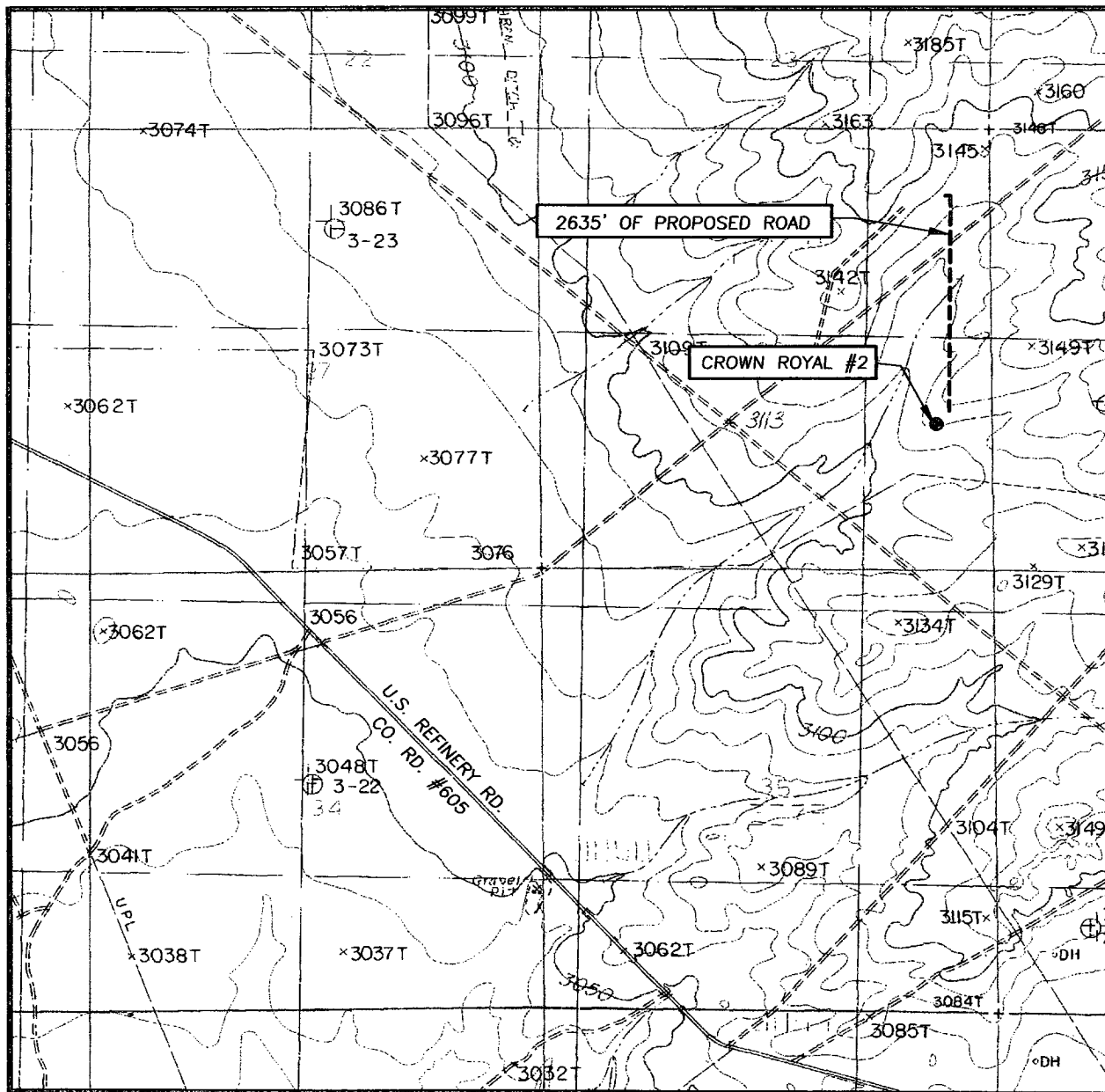
## Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 320	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

<p>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=495218.4 N X=586998.3 E</p> <p>LAT.=32°21'40.16" N LONG.=104°03'05.69" W</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><u>Nancy Bratcher</u> Signature</p> <p>Nancy T. Bratcher Printed Name</p> <p>Land Department Title</p> <p>November 28, 2005 Date</p>
	<p><b>SURVEYOR CERTIFICATION</b></p> <p>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.</p> <p>NOVEMBER 10, 2005 Date Surveyed</p> <p>Signature &amp; Seal of Professional Surveyor <u>Ronald J. Edson</u> 11/15/05</p> <p>05.11.1739</p> <p>Certificate No. GARY EDSON 12841 RONALD J. EDSON 3239</p>

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:  
LOVING, N.M. - 10'

SEC. 26 TWP. 22-S RGE. 28-E

SURVEY N.M.P.M.

COUNTY EDDY

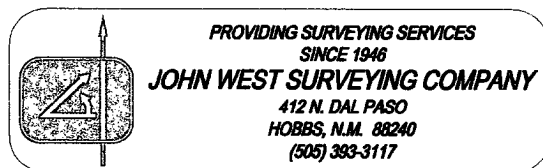
DESCRIPTION 1730' FSL & 660' FEL

ELEVATION 3123'

OPERATOR MARBOB ENERGY CORPORATION

LEASE CROWN ROYAL

U.S.G.S. TOPOGRAPHIC MAP  
LOVING, N.M.



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

**Crown Royal Federal Com #2**  
**1980' FSL & 660' FEL, Unit I**  
**Section 26, T22S, R28E**  
**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:

Top of Salt	770'	Strawn	11450'
Base of Salt	2630'	Atoka	11700'
Delaware	2870'	Morrow	12400'
Bone Spring	6430'	TD	13200'
Wolfcamp	9920'		

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

Delaware	2870'	Oil
Wolfcamp	9920'	
Strawn	11450'	Gas
Atoka	11700'	
Morrow	12400'	

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 4 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	<b>WITNESS</b>
17 1/2"	0 - 400'	13 3/8"	48#	H-40	
12 1/4"	0 - 2750'	9 5/8"	36#	J-55	
8 3/4"	0 - 9900'	7"	23#	L80 - P110	
6 1/8"	0 - 13200'	4 1/2"	11.6#	S95 - P110	

Proposed Cement Program:

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

9 5/8" Intermediate Casing: Cement w/ 700 sx cmt. Circulate to surface.

7" Intermediate Casing: Cement w/ 1050 sx cmt. Attempt to tie in to 9 5/8" csg.

4 1/2" Production Casing: Cement w/ 300 sx cmt. TOC <sup>500'</sup>~~280'~~ above all oil and gas bearing zones

5. Pressure Control Equipment: See Exhibit 1. Marbob proposes to nipple up on the 13 3/8" and 9 5/8" casing with a 2M system, testing it to 1000# with rig pumps, then nipple up on the 7" 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 – 400'	Fresh Wtr	8.4 – 9.2	32 – 36	N.C.
400 – 2750'	Brine	9.9 – 10.2	28 – 32	N.C.
2750 – 9900'	Cut Brine	8.9 – 9.2	28 – 32	N.C.
9900 – 13200'	Cut Brine	8.7 – 9.5	28 – 34	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 Csg 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**

**Crown Royal Federal Com #2**  
**1980' FSL & 660' FEL, Unit I**  
**Section 26, T22S, R28E**  
**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 red on Exhibit 2.

**DIRECTIONS:**

From the intersection of US Hwy 62-180 and County Rd #605 (US Refinery Rd.), go southeast on County Road #605 approx. 8.4 miles. Turn left (east) and go approx. 0.5 miles. Follow road right (east) and go approx. 0.2 miles to proposed road survey on right (south). This location is approx. 0.4 miles south along proposed road survey.

**2. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:**

A. Marbob Energy Corporation proposes a collection facility, if well is productive, to be located on Crown Royal Federal #2.

**3. PLANNED ACCESS ROAD:**

A new access road of 2107' will be necessary. The new road will be constructed as follows:

B. 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.

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

D. No turnouts are planned.

- E. No culverts, cattleguard, gates, low-water crossings, or fence cuts are necessary.
- F. 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.
- G. The proposed access road as shown in Exhibit 2 has been centerline flagged by John West Engineering.

#### **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

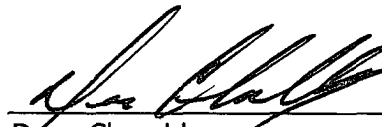
B. Through Drilling Operations

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.

10-17-05  
Date

  
\_\_\_\_\_  
Dean Chumbley  
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.

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<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:

**Marbob Energy Corporation**  
**PO Box 227**  
**Artesia, NM 88211-0227**

Date: October 5, 2005

Lease #: NM 67979  
Crown Royal Federal Com #2

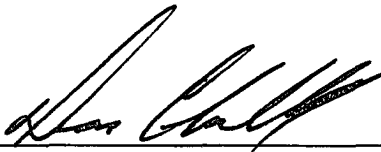
Legal Description: Section 26: S/2  
Township 22S – Range 28E  
Eddy County, New Mexico

Formation(s): Morrow

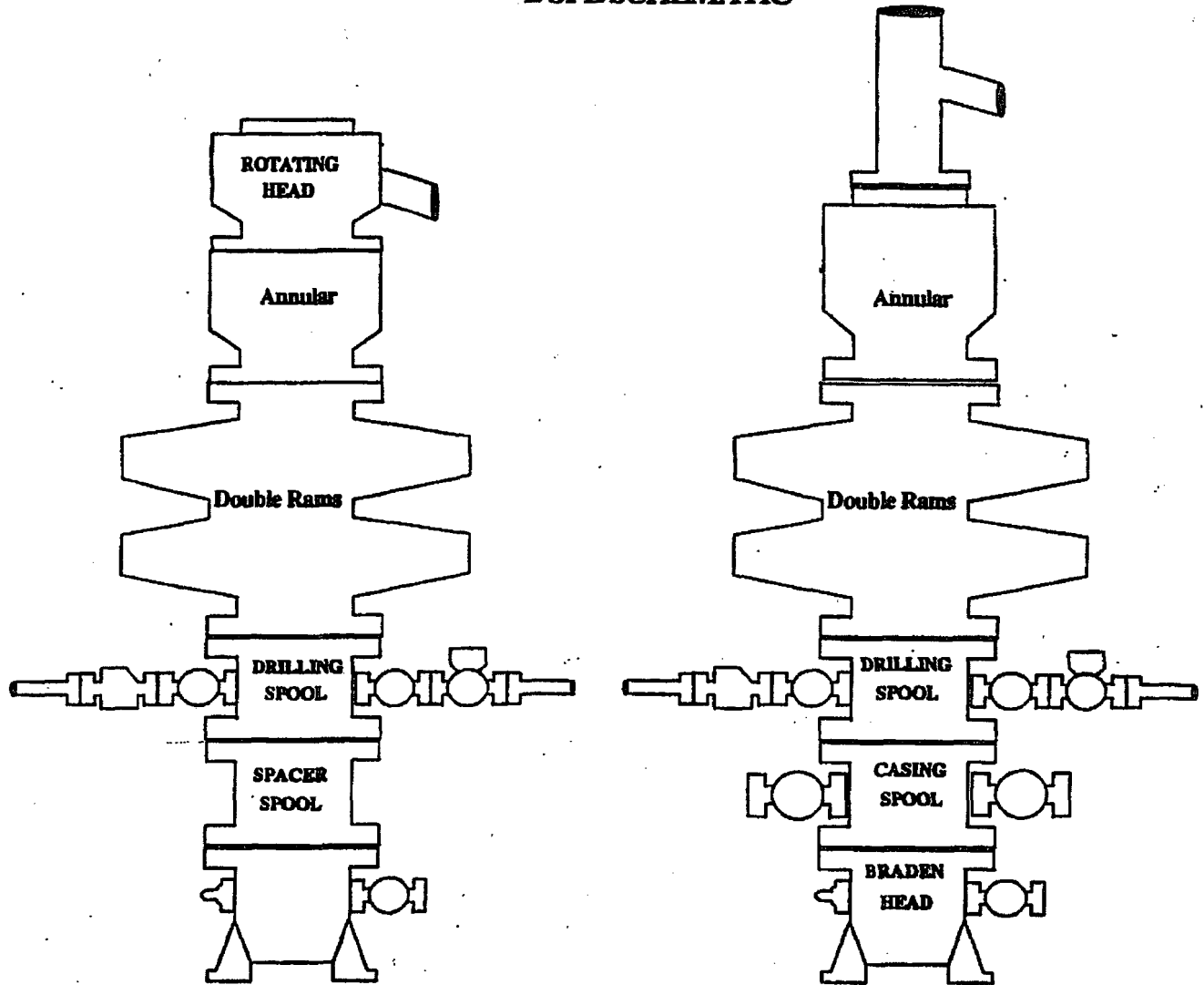
Bond Coverage: Statewide

BLM Bond File #: NM 2056

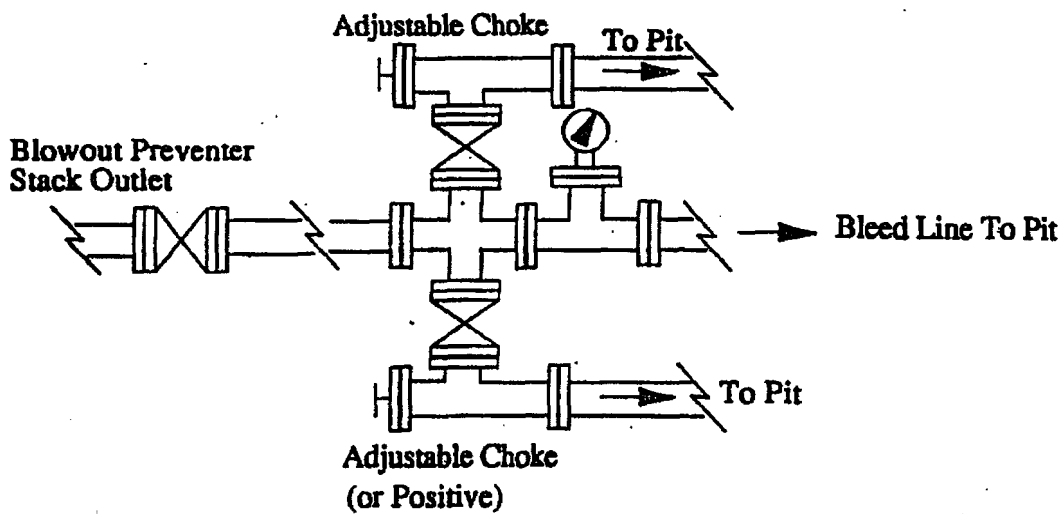
Authorized Signature

  
\_\_\_\_\_  
Dean Chumbley  
Land Department

# BOPE SCHEMATIC



**Choke Manifold**



## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Marbob Energy Corporation  
Well Name & No. Crown Royal Federal #2  
Location: 1730 1980' FSL, 660' FEL, Section 26, T. 22 S., R. 28 E., Eddy County, New Mexico  
Lease: NM-67979

*per attached SN dated 11-28-05 E-TAD*

### I. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field 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: 13-3/8 inch 9-5/8 inch 7 inch 4-1/2 inch

C. BOP tests

2. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Operation Contingency Plan shall be activated prior to drilling into the formation. A copy of the plan shall be posted at the drilling site.

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 surface casing shall be set at approximately 400 feet and 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 9-5/8 inch intermediate casing is to be circulated to the surface.

3. The minimum required fill of cement behind the 7 inch casing is to be sufficient to tie back at least 200 feet into the 9-5/8 inch intermediate casing.

3. The minimum required fill of cement behind the 4-1/2 inch production casing is to be sufficient to reach at least 500 feet above the top of the uppermost hydrocarbon productive interval.

### 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.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) below the surface casing shall be 2000 psi. A variance to test the BOP's with the rig pump to 1000 psi is granted.

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3. Minimum working pressure of the blowout preventer and related equipment (BOPE) below the 1st intermediate casing (9-5/8 inch) shall be 3000 psi.

4. Minimum working pressure of the blowout preventer and related equipment (BOPE) below the 2<sup>nd</sup> intermediate casing (7 inch) shall be 5000 psi.

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

- The tests 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 a safe workman-like manner. Hard line connections shall be required.

#### **IV. DRILLING MUD:**

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

- Recording pit level indicator to indicate volume gains and losses.
- Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
- Flow-sensor on the flow-line to warn of abnormal mud returns from the well.

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