

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD-HOBBS

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

|  |  |  |
|--|--|--|
| 1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER   |  | 5. Lease Serial No.<br>NM-055568 0555568                                 |
| 1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone |  | 6. If Indian, Allottee or Tribe Name                                     |
| 2. Name of Operator<br>Marbob Energy Corporation   |  | 7. If Unit or CA Agreement, Name and No.                                 |
| 3a. Address<br>P.O. Box 227, Artesia, NM 88211-0227  | 3b. Phone No. (include area code)<br>505-748-3303            | 8. Lease Name and Well No. <i>&lt;36037&gt;</i><br>Curly Federal #1      |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *)<br>At surface 1650' FSL & 1650' FEL<br>At proposed prod. zone <i>Unit 5</i>   |  | 9. API Well No.<br>30-025-38133  |
| 14. Distance in miles and direction from nearest town or post office*  |  | 10. Field and Pool, or Exploratory<br>Pearson Wolfcamp                   |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)  |  | 11. Sec., T., R., M., or Blk. and Survey or Area<br>Sec. 34, T17S - R32E |
| 16. No. of Acres in lease  | 17. Spacing Unit dedicated to this well<br>40                | 12. County or Parish<br>Lea County                                       |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.   | 19. Proposed Depth<br>9800                                   | 13. State<br>NM  |
| 20. BLM/BIA Bond No. on file<br>NM 2056  | 21. Elevations (Show whether DF, KDB, RT, GL, etc.)<br>3924' | 22. Approximate date work will start*<br>September 3, 2006               |
| 23. Estimated duration<br>25 Days  |  | 24. Attachments  |

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- Such other site specific information and/or plans as may be required by the authorized officer.

|  |   |                     |
|--|---|---------------------|
| 25. Signature <i>Nancy T. Bratcher</i>           | Name (Printed/Typed)<br>Nancy T. Bratcher | Date<br>8/3/06      |
| Title<br>Land Department                         |   |                     |
| Approved by (Signature) <i>/s/ James Stovall</i> | Name (Printed/Typed)                      | Date<br>SEP 18 2006 |
| Title <i>ACTING</i>                              | Office<br>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.

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)

GW

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

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

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102

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

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

Revised October 12, 2005  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

|                                    |   |   |
|------------------------------------|---|---|
| API Number<br><b>30-025-381-33</b> | Pool Code<br><b>49870 65580</b>                   | Pool Name<br><b>Young Pearsall Wolfcamp</b> |
| Property Code<br><b>36031</b>      | Property Name<br><b>CURLY FEDERAL</b>             | Well Number<br><b>1</b>                     |
| OGRID No.<br><b>14049</b>          | Operator Name<br><b>MARBOB ENERGY CORPORATION</b> | Elevation<br><b>3924'</b>                   |

Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| J             | 34      | 17-S     | 32-E  |         | 1650          | SOUTH            | 1650          | EAST           | 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<br><b>40</b> |         | 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<br/>NAD 27 NME<br/><br/>Y=650961.5 N<br/>X=679111.8 E<br/><br/>LAT.=32.788228° N<br/>LONG.=103.750507° W</p> |  | <p><b>OPERATOR CERTIFICATION</b></p> <p>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.</p> <p><i>Nancy T. Bratcher</i> 8/1/06<br/>Signature Date<br/><b>Nancy T. Bratcher</b><br/>Printed Name</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>JULY 18, 2006</p> <p>Date Surveyed MR<br/>Signature &amp; Seal of Professional Surveyor<br/><i>Gary Edson</i> 7/20/06<br/>06.11.1155<br/>Certificate No. GARY EDSON 12641</p> |
|--|--|--|

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

**Curly Federal #1**  
**1650' FSL & 1650' FEL, Unit J**  
**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      | 1143' | Delaware    | 4840' |
| Top of Salt  | 1270' | Bone Spring | 5890' |
| Base of Salt | 2400' | Wolfcamp    | 9540' |
| Yates        | 2550' | TD          | 9800' |
| Queen        | 3703' |             |       |

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

|             |       |     |
|-------------|-------|-----|
| Queen       | 3703' | Oil |
| Delaware    | 4840' | Oil |
| Bone Spring | 5890' | 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 - 10000' | 5 1/2"    | 17# | J-55-P110 |

**Proposed Cement Program:**

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

8 5/8" Intermediate Casing: Cement w/ 600 sx. Circulate to surface.

5 1/2" Production Casing: Cement w/ 700 sx. 200' above all oil and gas zones.

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:

8/28/06

| Depth                   | Type      | Weight (ppg) | Viscosity (sec) | Waterloss (cc) |
|-------------------------|-----------|--------------|-----------------|----------------|
| 0' - <del>400'</del>    | Fresh Wtr | 8.4 - 9.2    | 32 - 36         | N.C.           |
| <del>400'</del> - 2300' | Brine     | 9.9 - 10.2   | 28 - 32         | N.C.           |
| 2300' - TD              | Cut Brine | 9.2 - 9.4    | 30 - 34         | 10 cc          |

1079'

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**

**Curly Federal #1**  
**1650' FSL & 1650' FEL, Unit J**  
**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:**

From The Intersection of St. Hwy. #529 and Co. Rd. L-126 (Maljamar Rd.), Go East on St. Hwy. #529 Approx. 0.7 Miles. Turn Right and Go South To Closed Gate. From Gate Location is Approx. 369 Feet Southeast.

**2. PLANNED ACCESS ROAD:**

An existing access road is already in place. The road is 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 Curly 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.

8/3/06  
Date

Marbob Energy Corporation

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.

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:

Date: August 3, 2006

Lease #: NM-055568  
Curly Federal #1

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

Formation(s): Pearsall Queen

Bond Coverage: Statewide

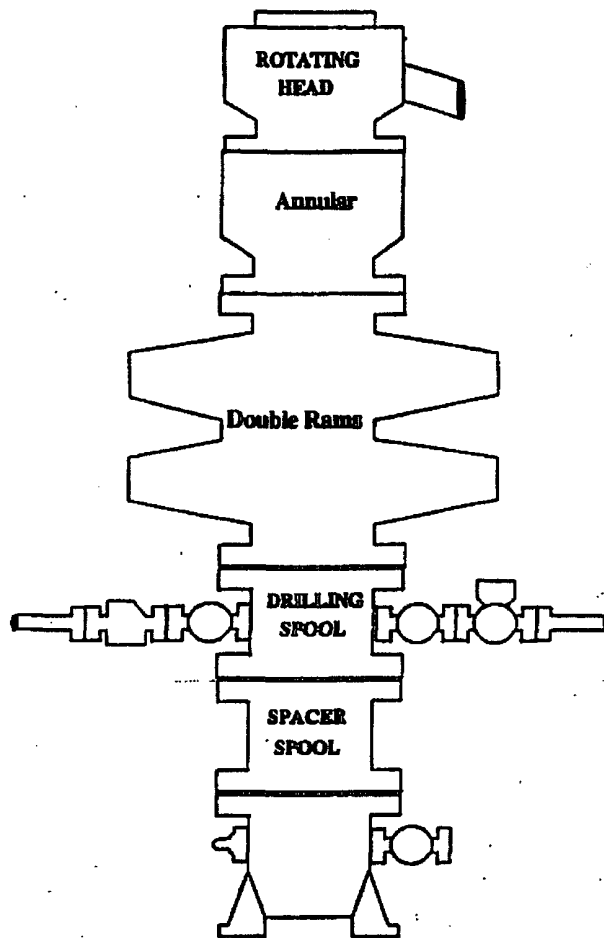
BLM Bond File #: NM 2056

Marbob Energy Corporation

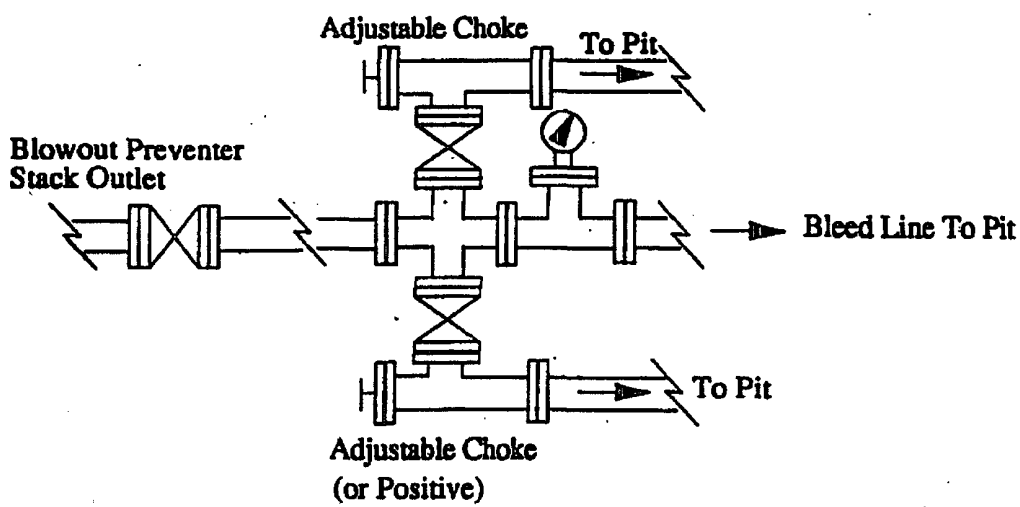
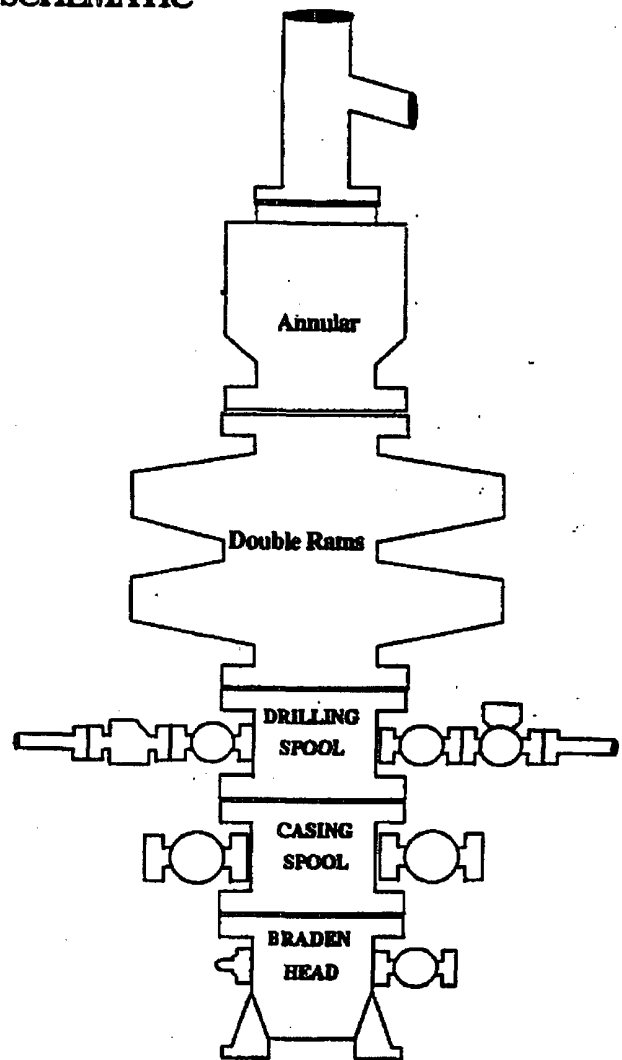
A handwritten signature in black ink, reading "Nancy T. Bratcher", is written over a horizontal line.

Nancy T. Bratcher  
Land Department

# BOPE SCHEMATIC

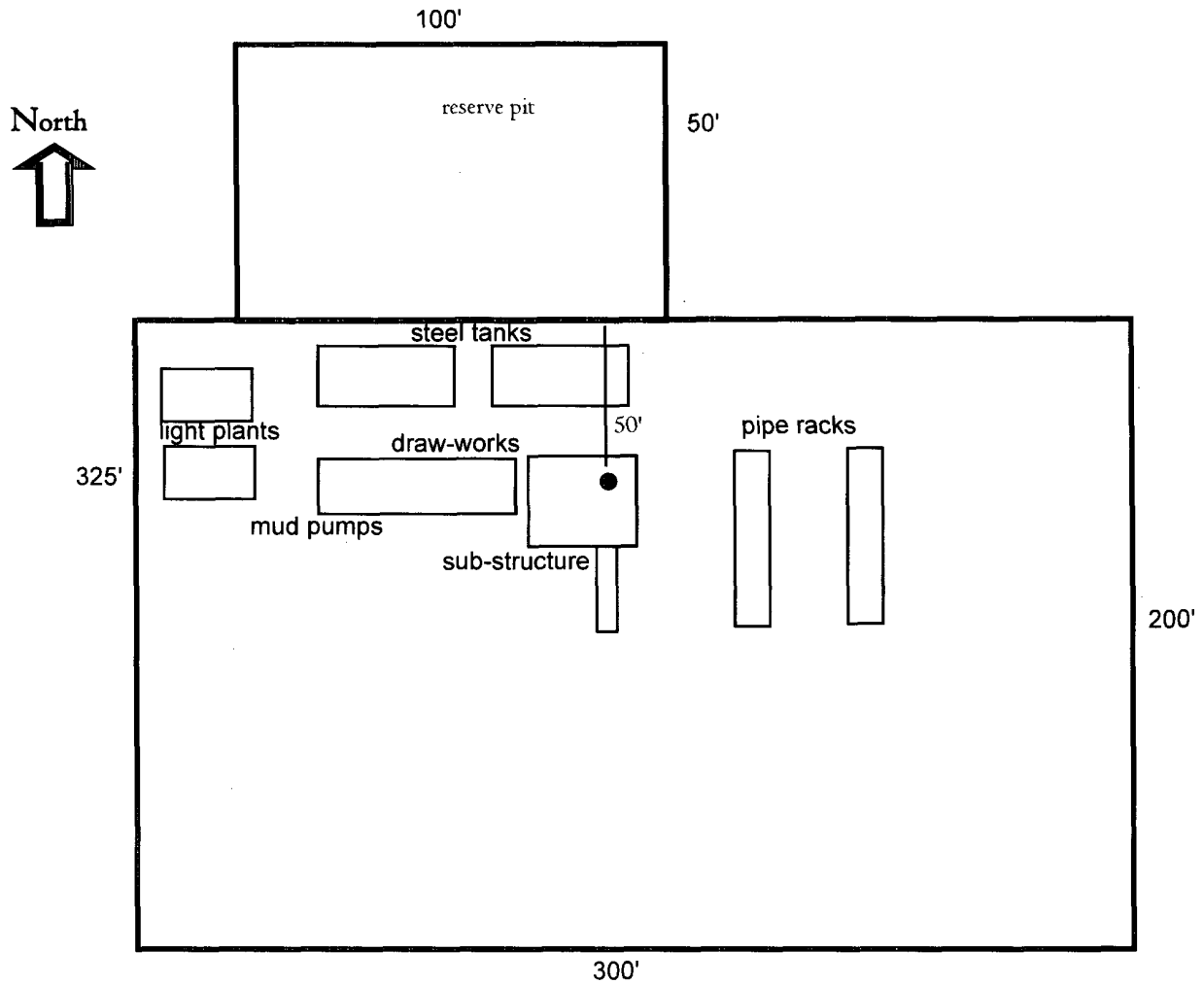


Choke Manifold



# Well Site Lay-Out Plat

(Deep)



Curly Federal #1  
1650' FSL & 1650' FEL, Unit J  
Section 34, T17S, R32E  
Lea County, New Mexico

EXHIBIT THREE

## CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Marbob Energy Corporation  
Well Name & No. Curly Federal #1  
Location: 1650FSL, 1650FEL, Section 34, T-17-S, R-32-E  
Lease: NM-055368 0555568

### 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) 234-5972 or (505) 361-2822 (After hours) - 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 should be activated prior to drilling into the Queen Formation. A copy of the plan shall be posted at the drilling site. **Hydrogen Sulfide reported in Section 27 measuring 1400 ppm in the Pearsall Queen.**

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.

6. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

7. Gamma-Ray/Neutron logs shall be run from the base of the Salado Formation to the surface; cable speed not to exceed 30 feet per minute.

### II. CASING:

1. The 13-3/8 inch surface casing shall be set at 400 feet (Lea County alternative), below usable water 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. **Fresh water must be used to drill to top of Rustler.**

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

4. The minimum required fill of cement behind the 5-1/2 inch production casing is cement shall extend upward a minimum of 200 feet into the intermediate casing.

### **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 8-5/8 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) required for drilling the surface and intermediate casing shall be 1200 psi. Minimum working pressure of the blowout preventer and related equipment (BOPE) required for drilling below the 8-5/8 inch casing shall be 3000 psi.

**NB! Based on MASP calculation using the 9.4 ppg mud, a 3M system is required below the 8-5/8 inch casing.**

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

- A variance to test the 2M to the reduced pressure of 1200 psi with the rig pumps is approved.

**Variance approved for 70% of the internal yield of the 13-3/8 inch H-40 surface casing.**

- 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.

- BOPE must be tested prior to drilling into the Wolfcamp Formation by an independent service company.

### **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:

1. Recording pit level indicator to indicate volume gains and losses.

2. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.

3. Flow-sensor on the flow line to warn of abnormal mud returns from the well.

**Engineer (after hours): 505-706-2779**



## **ALTERNATIVE CONDITIONS OF APPROVAL - DRILLING**

### **Drilling Fluids, Casing and Cementing Requirements for Most of Lea County:**

#### **Casing and Cementing**

Surface casing is to be set at a sufficient depth to protect useable water zones and cement circulated to surface. In areas where the salt section (Salado) is present, surface casing should be set at least 25 feet into the top of the Rustler Anhydrite and cement circulated to the surface.

As an alternative, surface casing may be set through the Santa Rosa Formation or other potable water bearing zones and circulate cement to surface. For wells requiring an intermediate casing string, such string shall be cemented to the ground surface. In the case where intermediate casing is not required the operator shall case and cement the production hole to the ground surface.

While drilling from the surface casing to the Rustler formation it is recommended that operators periodically sweep the hole with viscous low water loss pills to help build a filter cake across useable water zones in the redbeds.

#### **Drilling Fluid**

Fresh water or fresh water spud mud shall be used to drill to surface casing depth. If surface casing is set at a lesser depth than the top of the Rustler formation, fresh water spud mud may be used to drill down to the first salt in the Rustler Formation. after which brine or fresh water may be used.

Non-toxic or biodegradable water based polymers, drilling paper, starch and gels may be used in the mud system in order to retard seepage into the redbeds.

Two to five percent diesel or crude oil may be used in the redbed section in order to control heaving shales and mudstones.

Caustics and Lime shall not be used in the red beds but may be added when the Rustler formation is reached. However, sodium carbonate maybe used for alkalinity or ph control while drilling the redbeds above the Rustler formation.

Additionally, questions of whether an additive may be used should be referred to the Roswell Field office.

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-144  
March 12, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.  
For downstream facilities, submit to Santa Fe office.

**Pit or Below-Grade Tank Registration or Closure**

Is pit or below-grade tank covered by a "general plan"? Yes ☒ No ☐

Type of action: Registration of a pit or below-grade tank ☒ Closure of a pit or below-grade tank ☐

Operator: **Marbob Energy Corporation**

Telephone: **505-748-3303**

e-mail address: **landtech@marbob.com**

Address: **PO Box 227, Artesia, NM 88211-0227**

Facility or well name: **Curly Federal #1**

API #: **30-025-38133** U/L or Qtr/Qtr **NWSE** Sec **34** T **17S** R **32E**

County: **Lea** Latitude \_\_\_\_\_ Longitude \_\_\_\_\_ NAD: 1927 ☐ 1983 ☐ Surface Owner Federal ☒ State ☐ Private ☐ Indian ☐

**Pit**

Type: Drilling ☒ Production ☐ Disposal ☐

Workover ☐ Emergency ☐

Lined ☒ Unlined ☐

Liner type: Synthetic ☒ Thickness **12** mil Clay ☐ Volume \_\_\_\_\_ bbl

**Below-grade tank**

Volume: \_\_\_\_\_ bbl Type of fluid: \_\_\_\_\_

Construction material: \_\_\_\_\_

Double-walled, with leak detection? Yes ☐ If not, explain why not. \_\_\_\_\_

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.)

Less than 50 feet

50 feet or more, but less than 100 feet

100 feet or more

(20 points)

(10 points) ✓

(0 points)

**0 points**

Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)

Yes

No ☒

(20 points)

(0 points)

**0 points**

Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)

Less than 200 feet

200 feet or more, but less than 1000 feet

1000 feet or more

(20 points)

(10 points)

(0 points)

**0 points**

**Ranking Score (Total Points)**

**0 points**

**If this is a pit closure:** (1) attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location:

onsite ☐ offsite ☐ If offsite, name of facility \_\_\_\_\_. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface \_\_\_\_\_ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☒, or an (attached) alternative OCD-approved plan ☐.  
Date: August 3, 2006

Printed Name/Title: **Nancy T. Bratcher / Land Department**

Signature *Nancy T. Bratcher*

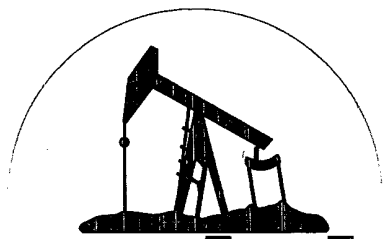
Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:

Date: **9/25/06**

Printed Name/Title: **GARY W. WINK / STAFF MGR**

Signature *Gary W. Wink*



**marbob**  
energy corporation

August 3, 2006



Oil Conservation Division  
1301 W. Grande Ave.  
Artesia, N.M. 88210

Attention: Bryan Arrant

RE: Curly Federal #1  
1650' FSL & 1650' FEL  
Section 34, T17S, R32E  
Lea County, New Mexico

Dear Bryan:

Marbob Energy has conducted a review to determine if an H2S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal. H2S concentrations of wells in this area from surface to TD are low enough; therefore we do not believe that an H2S Contingency Plan would be necessary.

Please advise us if you feel differently or need further information.

Sincerely,

Nancy T. Bratcher  
Land Department

/nb

