

OCD-HOBBS

EA-668
A15 07-384
FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM-055668
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 Marbob Energy Corporation		7. If Unit or CA Agreement, Name and No.
3a. Address P.O. Box 227, Artesia, N.M. 88211-0227		8. Lease Name and Well No. <32031> Curly Federal #2
3b. Phone No. (include area code) 505-748-3303		9. API Well No. 30-025-38442
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1650' FSL & 330' FEL At proposed prod. zone Unit I		10. Field and Pool, or Exploratory Young Wolfcamp <65580>
14. Distance in miles and direction from nearest town or post office*		11. Sec., T., R., M., or Blk. and Survey or Area Section 34, T17S - R32E
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	12. County or Parish Lea County
17. Spacing Unit dedicated to this well 40	13. State NM	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth 9800'	20. BLM/BIA Bond No. on file NM-2056
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3930'	22. Approximate date work will start* April 27, 2007	23. Estimated duration 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:

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 T. Agnew** Name (Printed Typed) **Nancy Agnew** Date **3-27-07**

Land Department Approved by (Signature) **/s/ James Stovall** Name (Printed Typed) Date

Title **FIELD MANAGER** Office **CARLSBAD FIELD OFFICE** **JUN 10 2007**

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)

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Roswell Controlled Water Basin

Received
Hobbs
OCD

DISTRICT I
1628 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 October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-38442	Pool Code 65580	Pool Name YOUNG WOLFCAMP
Property Code 36031	Property Name CURLY FEDERAL	Well Number 2
OGRID No. 14049	Operator Name MARBOB ENERGY CORPORATION	Elevation 3930'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	34	17-S	32-E		1650	SOUTH	330	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 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

<p>GEODETIC COORDINATES NAD 27 NME Y=650968.7 N X=680431.4 E LAT.=32.788227° N LONG.=103.746213° W</p> <p>DETAIL</p> <p>3934.0' 3935.7' 600' 3928.4' 3921.5'</p> <p>SEE DETAIL 330' 1650'</p>	<p>OPERATOR CERTIFICATION</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 Agnew</i> 3/27/07 Signature Date Nancy Agnew Printed Name</p> <p>SURVEYOR CERTIFICATION</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>FEBRUARY 22, 2007 Date Surveyed AR Signature & Seal of Professional Surveyor <i>Gary Eidsen</i> 3/6/07 07.11.0233 Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239</p>
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MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

Curly Federal #2
1650' FSL & 330' FEL, Unit I
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'	Wolfcamp	9540'
Top of Salt	1270'	Strawn	11500'
Base of Salt	2400'	Atoka	11800'
Yates	2550'	Morrow	12350'
Queen	3703'	Chester	12600'
Delaware	4840'	TD	12800'
Bone Spring	5890'		

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

Delaware	4840'	Oil
Bone Spring	5890'	Oil
Wolfcamp	9540'	Oil
Strawn	11500'	Oil
Morrow	12350'	Gas

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 - 2600'	9 5/8"	36#	J-55
7 7/8"	0 - 10000'	5 1/2"	17#	S95-P110

Proposed Cement Program:

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

9 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:

Depth	Type	Weight (ppg)	Viscosity (sec)	Waterloss (cc)
0' - 400'	Fresh Wtr	8.4 - 9.2	32 - 36	N.C.
400' - 2600'	Brine	9.9 - 10.2	28 - 32	N.C.
2600' - TD	Cut Brine	9.2 - 9.4	30 - 34	10 cc

7. Auxiliary Equipment: Kelly Cock; Sub with full opening valve on floor; and drill pipe connections.

8. Testing, Logging and Coring Program:

No drillstem tests are anticipated.

The electric logging program will consist of Dual Laterolog Micro SFL, Spectral Density Dual Spaced Neutron Csg Log, and Depth Control Log.

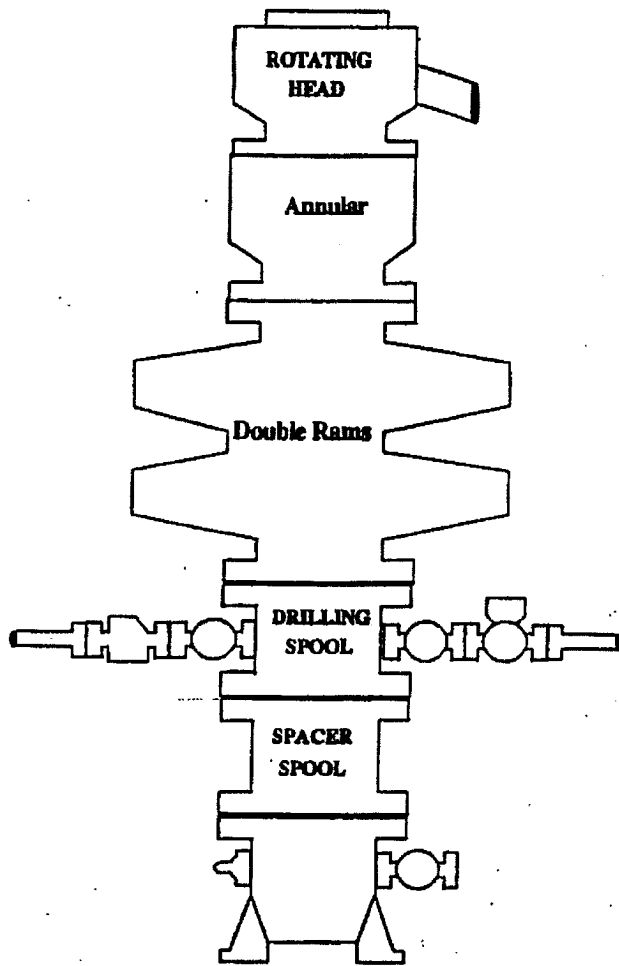
No conventional coring is anticipated.

9. No abnormal pressures or temperatures are anticipated.

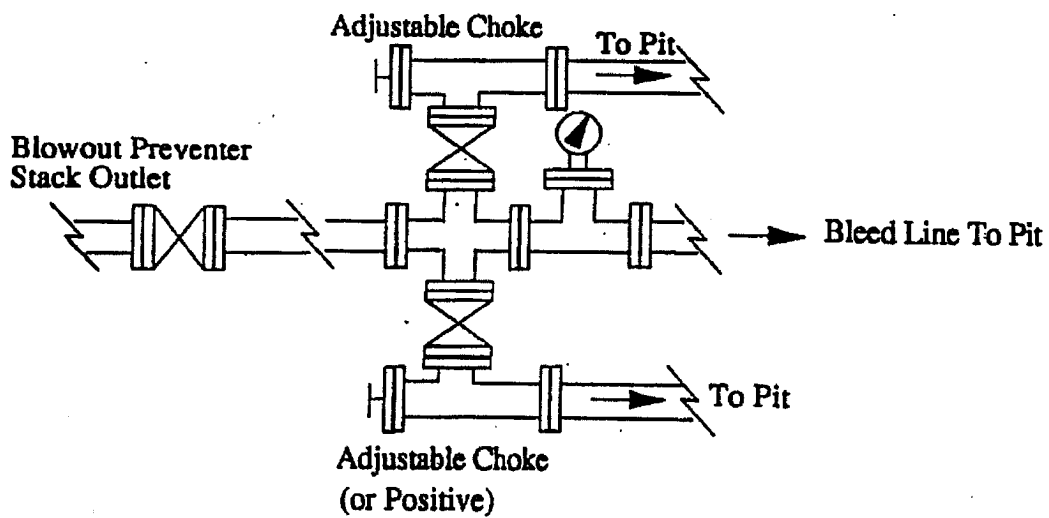
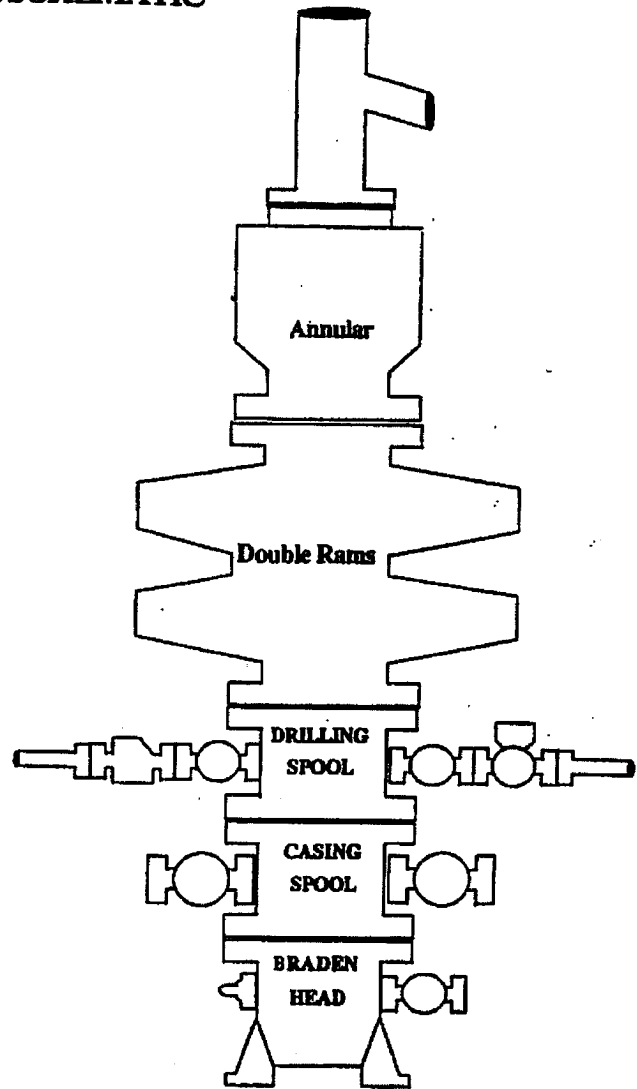
10. Anticipated starting date: As soon as possible after approval.



BOPE SCHEMATIC



Choke Manifold



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 (H₂S).
- 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.

W A R N I N G

**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

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Marbob Energy Corporation
Well Name & No. 2-Curly Federal
Location: 1650 FSL, 0330 FEL, Section 34, T-17-S, R-32-E
Lease: NM-0555568

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I. DRILLING OPERATIONS REQUIREMENTS:

- A. The Bureau of Land Management (BLM) is to be notified a minimum of 4 hours in advance for a representative to witness:
1. Spudding well
 2. Setting and/or Cementing of all casing strings
 3. BOPE tests
- Lea County call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (505) 393-3612
- B. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. H₂S has been reported in Sec 27, T-17-S, R-32-E from the Pearsall Queen measuring 400 ppm in the gas stream.**
- C. 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.
- D. If floor controls are required, (3M or Greater) controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

II. CASING:

- A. The 13-3/8 inch surface casing shall be set at approximately 400 feet and cemented to the surface. **Fresh water mud must be used to top of the Rustler Anhydrite approximately 1080 feet. Mud to include fluid loss materials and high starch content to help in building a filter cake.**
1. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
 2. Wait on cement (WOC) time for a primary cement job will be a minimum of 18 hours for a water basin or 500 pounds compression strength, whichever is greater. (This is to include the lead cement)
 3. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.
 4. If cement falls back, remedial action will be done prior to drilling out that string.

Possible lost circulation in the Grayburg and San Andres formations.

Possible water and brine flows in the Salado and Artesia Groups.

- B. The minimum required fill of cement behind the 9-5/8 inch intermediate casing is **cement shall circulate to surface**. If cement does not circulate see A.1 thru 4.**
- C. The minimum required fill of cement behind the 5-1/2 inch production casing is **cement shall extend a minimum of 200 feet inside of the intermediate casing**.**
- D. If hardband drill pipe is rotated inside casing; returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.**

III. PRESSURE CONTROL:

- A. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2.**
- B. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M) PSI**.**
- C. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8" intermediate casing shoe shall be **3000 (3M) PSI**.**
- D. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.**
 - 1. The tests shall be done by an independent service company.**
 - 2. The results of the test shall be reported to the appropriate BLM office.**
 - 3. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
 - 4. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi in accordance with API RP 53 Sec. 17. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.**
 - 5. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.**
 - 6. A variance to test the surface casing and BOP/BOPE to the reduced pressure of 1000 psi with the rig pumps is approved.**

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.

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 on call phone: 505-706-2779

WWI 040907

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 #2**

API #: **30-025-38442** U/L or Qtr/Qtr **NESE** 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

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) **~ 75'**

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

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

Below-grade tank

Volume: _____ bbl Type of fluid: _____

Construction material: _____

Double-walled, with leak detection? Yes ☐ If not, explain: _____

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

Yes

No

(20 points)

(0 points)

0 points

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)

10

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: March 28, 2007

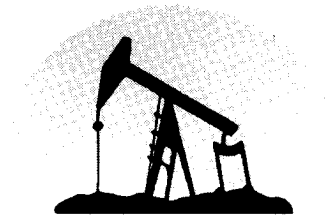
Printed Name/Title: **Nancy T. Agnew / Land Department** Signature Nancy T. Agnew

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: 6/20/07

Printed Name/Title: CHRIS WILLIAMS / DIST. SURV. Signature Chris Williams



marbob
energy corporation

March 28, 2007

Oil Conservation Division
1625 N. French Drive
Hobbs, NM 88240

Attention: Donna Mull

RE: Larry Federal #1	330' FSL & 1650' FEL	Sec 34, T17S-R32E	Lea County
Larry Federal #2	330' FSL & 330' FEL	Sec 34, T17S-R32E	Lea County
Curly Federal #2	1650' FSL & 330' FEL	Sec 34, T17S-R32E	Lea County

Dear Donna:

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 Agnew
Landman

/na

