Form 3160-3
(September 2001)

OCD-ARTESIA

6-06-23

RECEIVED
MAY 30 2006
OCD-ARTESIA

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

5. Lease Serial No.: NM 113935

6. If Indian, Allottee or Tribe Name:

1a. Type of Work: ☑ DRILL ☐ REENTER

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

1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.: Hackberry 33 Federal Com #1 35782

2. Name of Operator: Marbob Energy Corporation 14049

9. API Well No.: 30-015-34937

3a. Address: P.O. Box 227, Artesia, NM 88211-0227

3b. Phone No. *(include area code)*: 505-748-3303

10. Field and Pool, or Exploratory: Happy Valley; Morrow

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

At surface: 2280' FNL & 360' FWL

CARLSBAD CONTROLLED WATER BASIN

At proposed prod. zone: BHL: 1980' FNL & 990' FWL

SUBJECT TO LIKE APPROVAL BY STATE

11. Sec., T., R., M., or Blk. and Survey or Area: Sec. 33 , T21S - R26E

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

12. County or Parish: Eddy County

13. State: NM

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
		320

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file
	11200'	NM 2056

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3249'	May 13, 2006	21 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	Name *(Printed Typed)*	Date
Nancy Bratcher	Nancy Bratcher	4/13/06

Title: Land Department

Approved by *(Signature)*	Name *(Printed Typed)*	Date
/s/ Tony J. Herrell	/s/ Tony J. Herrell	MAY 26 2006

Title	Office
FIELD MANAGER	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)*

Witness Surface Casing

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

29.5

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

APR 10 2006

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	Pool Code	Pool Name
	78060	HAPPY VALLEY; Morrow

Property Code	Property Name	Well Number
	HACKBERRY 33 FEDERAL COM.	1

OGRID No.	Operator Name	Elevation
14049	MARBOB ENERGY CORPORATION	3249'

Surface Location

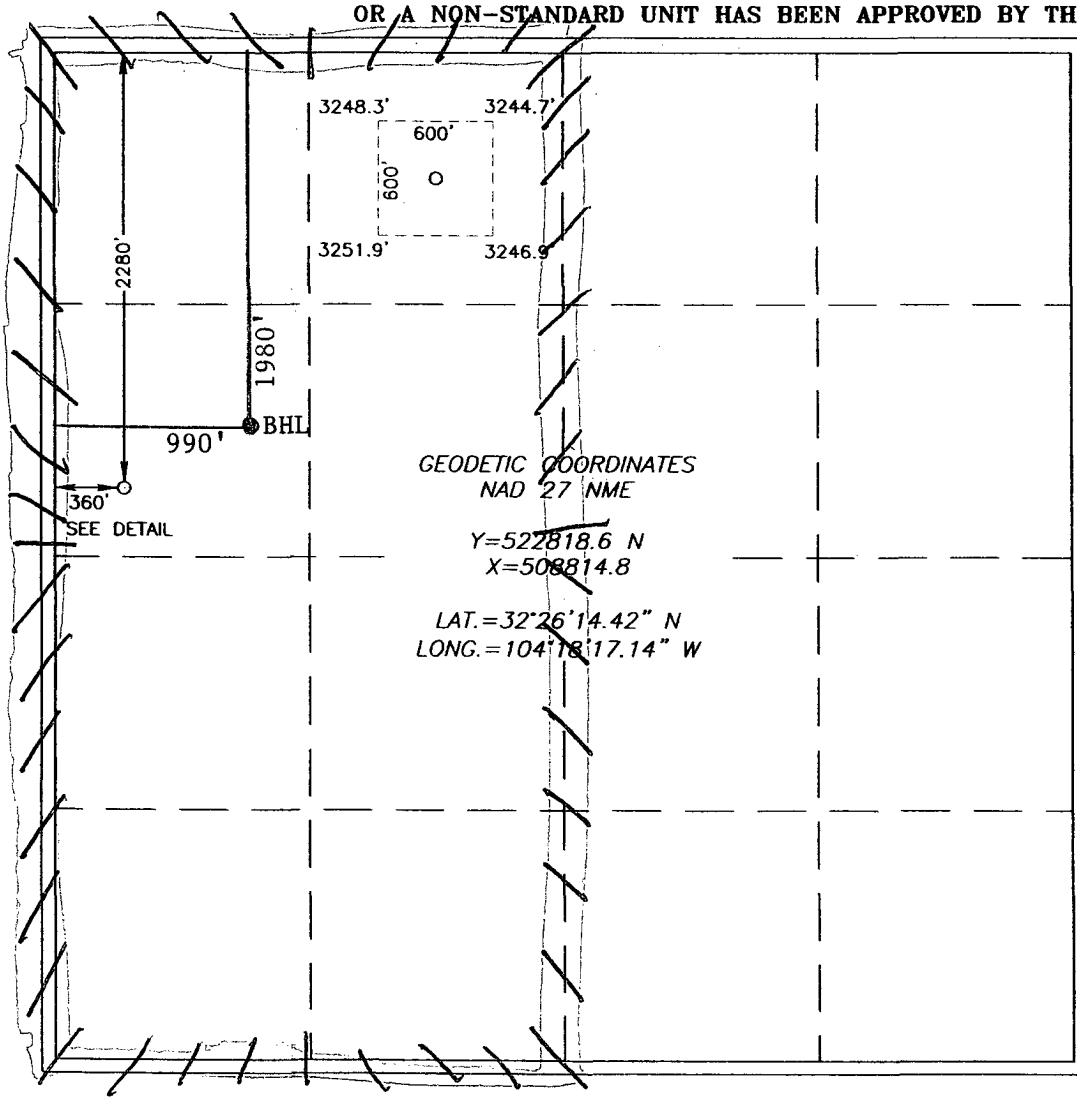
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	33	21-S	26-E		2280	NORTH	360	WEST	EDDY

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
E	33	21-S	26-E		1980	North	990	West	Eddy

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

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



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 4/13/06
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 21,2006
Date Surveyed DSR

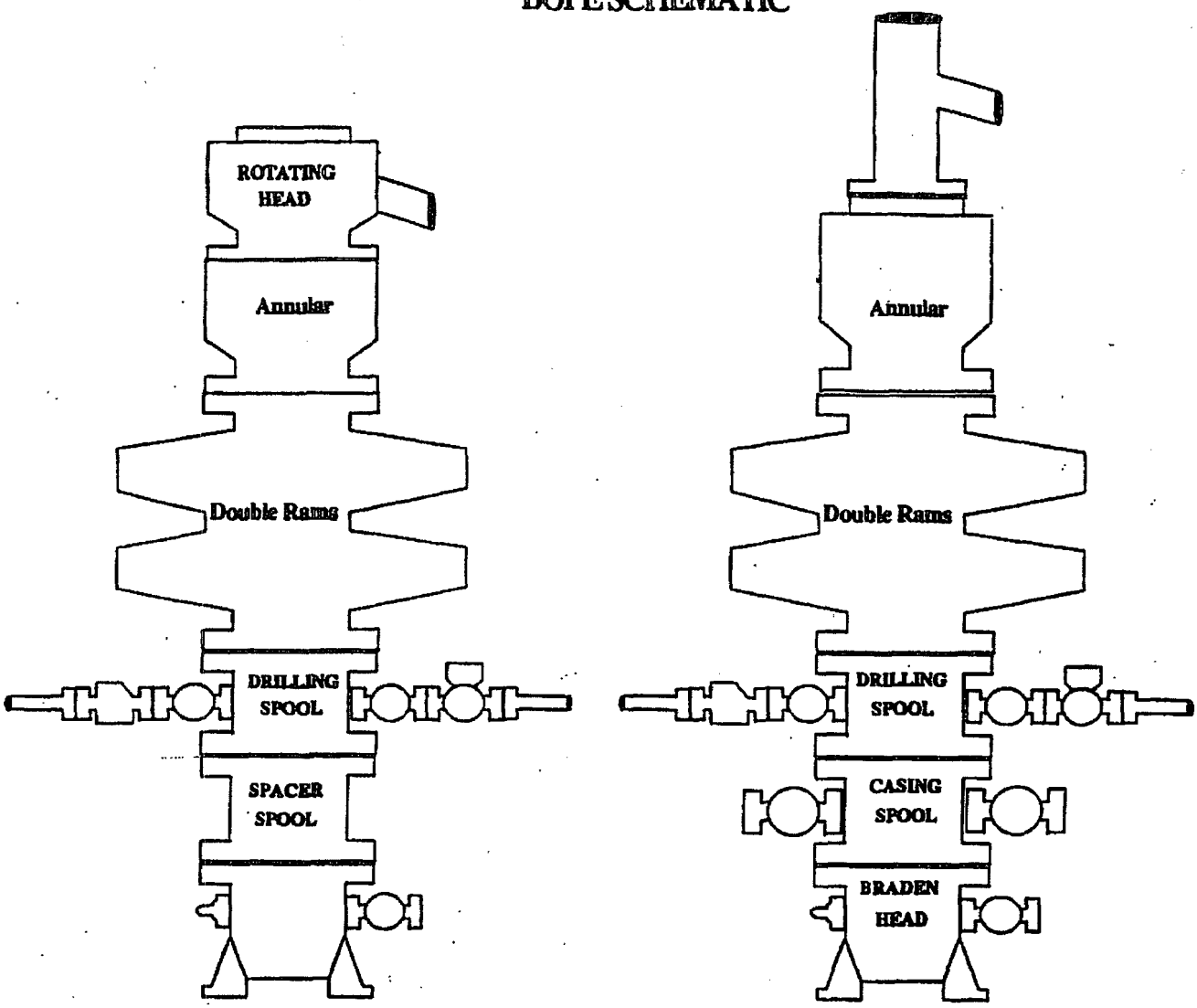
Signature & Seal of Professional Surveyor

Gary L. Eidson 4/6/06

06.11.0525

Certificate No. GARY EIDSON 12641

BOPE SCHEMATIC



Choke Manifold

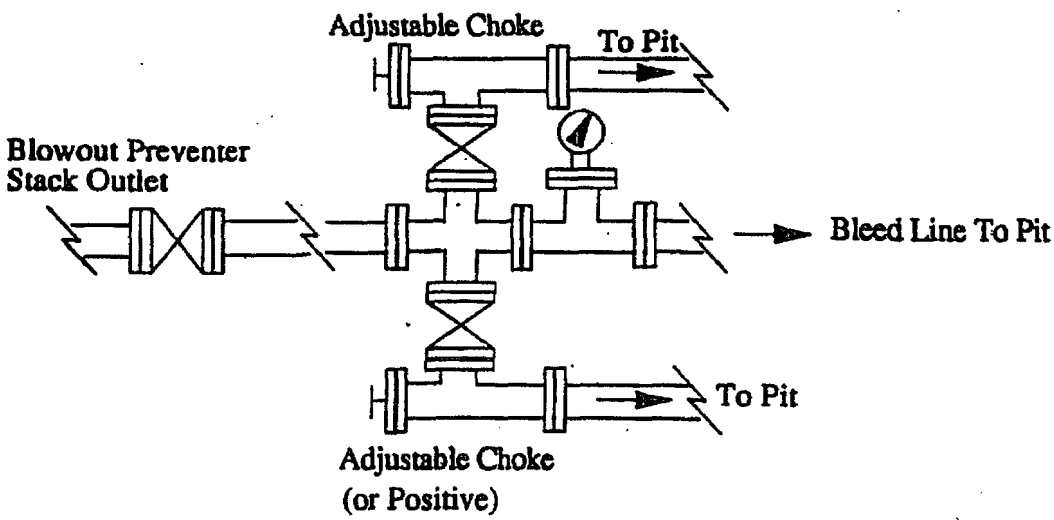
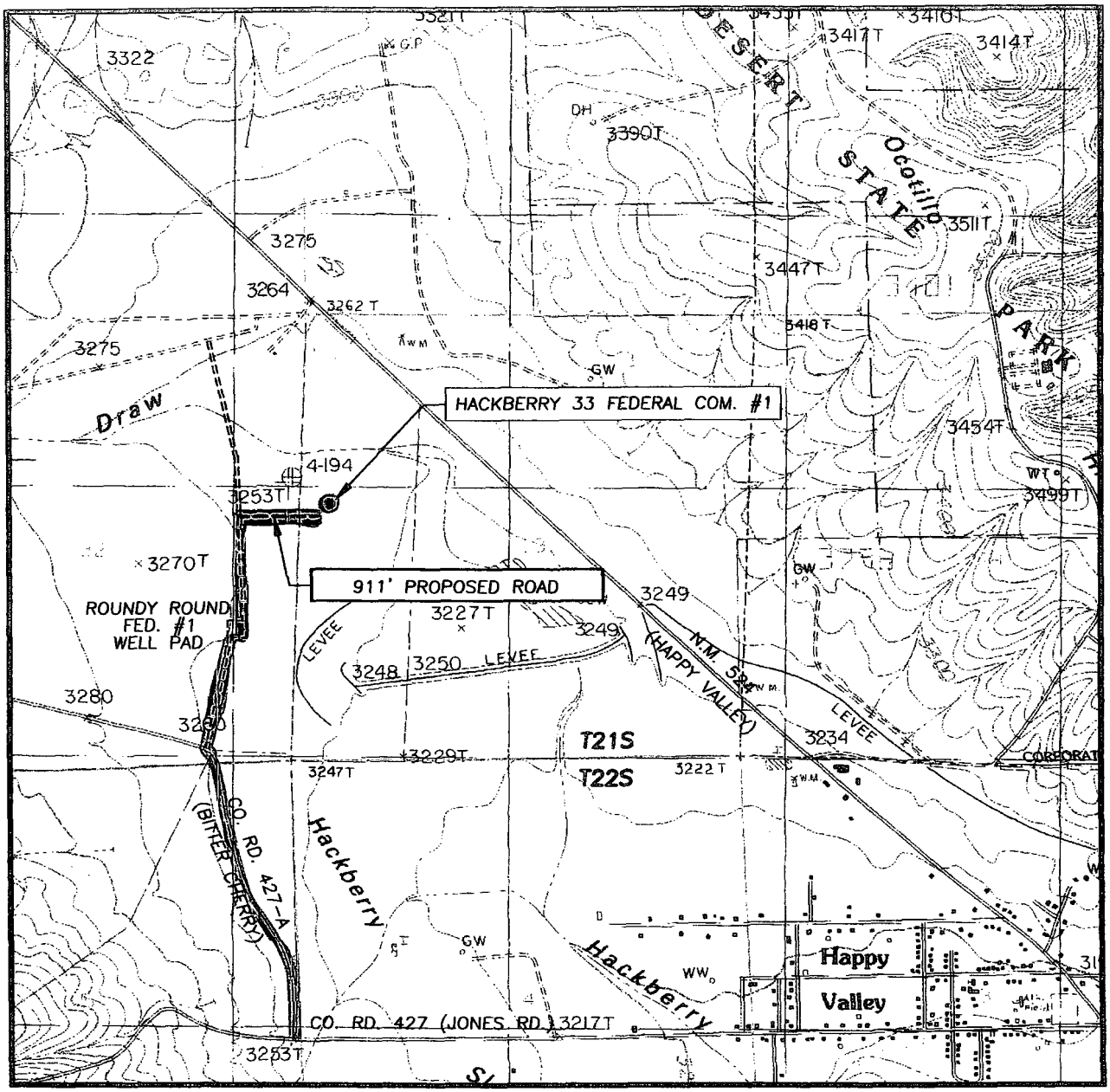


Exhibit One

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
CARLSBAD WEST, N.M. – 20'

SEC. 33 TWP. 21-S RGE. 26-E

SURVEY N.M.P.M.

COUNTY EDDY STATE NEW MEXICO

DESCRIPTION 2280' FNL & 360' FWL

ELEVATION 3249'

OPERATOR MARBOB ENERGY CORPORATION

LEASE HACKBERRY 33 FEDERAL COM.

U.S.G.S. TOPOGRAPHIC MAP
CARLSBAD WEST, N.M.

EXISTING ROADS

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

EXHIBIT TWO

MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

Hackberry 33 Federal Com #1
2280' FNL & 360' FWL
BHL: 1980' FNL & 990' FWL
Section 33, T21S, R26E
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Marbob Energy Corporation submits the following ten items of pertinent information in accordance with BLM requirements.

1. The geological surface formation is Permian.

2. The estimated tops of geologic markers are as follows:

Yates	440'	Strawn	9700'
Capitan	630'	Atoka	10200'
Delaware	2100'	Morrow	10850'
Bone Spring	4500'	TD	11200'
Wolfcamp	8300'		

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

Reef	960'	Water
Delaware	2070'	Oil
Wolfcamp	8380'	
Strawn	9720'	Gas
Atoka	10200'	
Morrow	10775'	

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 20" casing at 300' 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 – 300'	13 3/8"	48#	H-40
12 1/4"	0 – ~~1700'~~ 1770'	9 5/8"	36#	J-55
8 3/4"	0 – 8900'	7"	23#	P110 & N-80
6 1/8"	0 – 11300'	4 1/2"	11.6#	P-110 LT&C

Proposed Cement Program:

13 3/8" Surface Casing: Cement w/ 700 sx cmt. Circulate to surface.

9 5/8" Intermediate Casing: Cement w/ 900 sx cmt. Circulate to surface.

7" Intermediate Casing: Cement w/ 1200 sx cmt. Attempt to tie in to 8 5/8" csg.

4 1/2" Production Casing: Cement w/ 700 sx cmt. Attempt to tie in to 7" csg.

5. Pressure Control Equipment: See Exhibit 1.

6. Mud Program: The applicable depths and properties of this system are as follows:

Depth	Type	Weight (ppg)	Viscosity (sec)	Waterloss (cc)
0 – 300'	Fresh Wtr	8.4 – 9.2	32 – 36	N.C.
300 – ~~1700~~ 1770'	Brine	9.9 – 10.2	28 – 32	N.C.
1770 1700 – 8900'	Fresh Wtr	8.4 – 8.6	28 – 32	N.C.
8900 – 11300'	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 Csng 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

Hackberry 33 Federal Com #1
2280' FNL & 360' FWL
BHL: 1980' FNL & 990' FWL
Section 33, T21S, R26E
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 Co. Rd. #427 (Jones Rd.) and Co. Rd. #427-A (Bitter Cherry), go northwest on Co. Rd. #427-A approx. 0.72 miles crossing cattle guard. Turn and go north approx. 0.28 miles to the Roundy Round Fed. #1 well pad. Continue north approx. 0.25 miles to a proposed road survey. Follow road survey east 911 feet to this location.

2. PLANNED ACCESS ROAD:

A new access road of 911' 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 Hackberry 33 Federal Com #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 rehabitation and/or vegetation requirements of the BLM will be complied with and will be accomplished as expeditiously as possible. All pits will be filled level within 90 days after abandonment.

7. SURFACE OWNERSHIP:

The well site and lease are located on private surface. A surface agreement will complete before construction begins.

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.

4/13/06
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_2S).

B. The proper use and maintenance of personal protective equipment and life support systems.

C. The proper use of H_2S 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_2S 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_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S 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_2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H_2S 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_2S.

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_2S detection and monitoring equipment:

2 - portable H_2S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H_2S 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_2S 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_2S service.

G. Communication:

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

WARNING

YOU ARE ENTERING AN H_2S 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 13, 2006

Lease #: NM 113935
Hackberry 33 Federal Com #1

Legal Description: Section 33: SW/4NW/4
Township 21S – Range 26E
Eddy County, New Mexico

Formation(s): Morrow

Bond Coverage: Statewide

BLM Bond File #: NM 2056

Nancy T. Bratcher
Land Department

CONDITIONS OF APPROVAL - DRILLING

Operator's Name: Marbob Energy Corporation
Well Name & No: Hackberry 33 Federal Com No 01
Location: Surface 2280' FNL & 360' FWL, Sec. 33, T. 21 S. R. 26 E.
BHL: 1980' FNL & 990 'FWL, Sec. 33, T 21 S., R. 26 E.
Lease: NMNM 113935
Eddy County, New Mexico

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: 13⅜ inch; 9 ⅝ inch; 7.0 inch; 4 ½ inch

C. BOP Tests

2. A Hydrogen Sulfide (H2S) Drilling Plan shall be in operations three days or 500 feet prior to drilling into the Top of the **Delaware** formation estimated to be 2300 ft. is not required for this well bore.

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 ⅜ inch shall be set at **300 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 9 ⅝ inch Intermediate casing is to **circulate to surface.**

3. The minimum required fill of cement behind the 7.0 inch Production casing is to **Place TOC at least 200 ft above the Top of the Wolfcamp formation (estimated to be at 8380) .**

4. The minimum required fill of cement behind the 4 ½ inch production string is to **Tie back into the 7.0 inch casing shoe 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 ⅜ 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.**

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 04/25/06**

marbob
energy corporation

June 7, 2006

Oil Conservation Division
1301 West Grand Ave.
Artesia, NM 88210

Attention: Mr. Bryan Arrant

Re: BOP Testing
Hackberry 33 Federal Com #1
2280' FNL & 360' FWL
BHL: 1980' FNL & 990' FWL
Section 33, T21S, R26E
Eddy County, New Mexico

Dear Bryan:

Marbob Energy's plans the following BOP testing procedures: We will test the BOP with an independent tester when nippled up on the 9 5/8" casing. Then daily we will function test BOP's by exercising pipe rams and we will test blind rams on trips. We will record the tests on daily IADC sheets.

If you have questions or need further information, please call.

Sincerely,

Sheryl Baker
Drilling Superintendent

SB/nb

marbob
energy corporation

June 9, 2006

Oil Conservation Division
1301 W. Grand Ave.
Artesia, NM 88210

Attention: Bryan Arrant

RE: Hackberry 33 Federal Com #1
T21S – R26E – Sec. 33
2280' FNL & 360' FWL
BHL: 1980' FNL & 990' FWL
Eddy County, New Mexico

Dear Bryan:

The nearest occupied dwelling for the above referenced is 1,242 feet away. If you have any questions please let me know. Thank you!

Sincerely,

Nancy T. Bratcher

Nancy Bratcher
Land Department

marbob
ENERGY CORPORATION
ARTESIA, NEW MEXICO

April 13, 2006

Oil Conservation Division
1301 W. Grand Ave.
Artesia, NM 88210

Attention: Bryan Arrant

Re: **Hackberry 33 Federal Com #1**
2280' FNL & 360' FWL
BHL: 1980' FNL & 990' FWL
Section 33, T21S, R26E
Eddy County, New Mexico

Dear Bryan:

We plan to complete this well in the Morrow which is sweet and we don't anticipate cutting any formations that contain H2S gas during the drilling of the above referenced well. Therefore, we do not believe that an H2S contingency plan is necessary.

If you have questions or need further information, please call.

Sincerely,

Nancy Bratcher

Nancy Bratcher
Land Department

/nb

MARBOB ENERGY CORPORATION

HYDROGEN SULFIDE (H_2S) CONTINGENCY PLAN
FOR DRILLING/COMPLETING/WORKOVER/FACILITY
WITH THE EXPECTATION OF H_2S IN EXCESS OF 100 PPM

Hackberry 33 Federal Com #1
NEW WELL DRILL
2280' FNL & 360' FWL
BHL: 1980' FNL & 990' FWL
SECTION 33-T21S-R26E
EDDY COUNTY, NEW MEXICO

This well/facility is not expected to have H_2S, but due to the sensitive location, the following is submitted as requested.

TABLE OF CONTENTS

GENERAL H_2S EMERGENCY ACTIONS

In the event of an H_2S emergency, the following plan will be initiated:

1) All personnel will immediately evacuate to an up-wind and if possible up-hill "safe area".

2) If for any reason a person must enter the hazardous area, they must wear a SCBA (self contained breathing apparatus).

3) Always us the "buddy system".

4) Isolate the well/problem if possible.

5) Account for all personnel.

6) Display the proper colors warning all unsuspecting personnel of the danger at hand.

7) Contact the company representative as soon as possible if not at the location (use the enclosed call list as instructed).

At this point the company representative will evaluate the situation and coordinate the necessary duties to bring the situation under control, and if necessary, the notification of emergency response agencies and residents.

EMERGENCY PROCEDURES FOR AN UNCONTROLLABLE RELEASE OF H_2S

1) All personnel will don the self contained breathing apparatus.

2) Remove all personnel to the "safe area" (always use the "buddy system").

3) Contact company representative if not on location.

4) Set in motion the steps to protect and/or remove the general public to any upwind "safe area". Maintain strict security and safety procedures while dealing with the source.

5) No entry to any unauthorized personnel.

6) Notify the appropriate agencies:
   City Police – City streets
   State Police – State Roads
   County Sheriff – County Roads

7) Call the NMOCD.

If at this time the supervising person determines the release of H_2S cannot be contained to the site location and the general public is in harms way, he will immediately notify public safety personnel.

EMERGENCY CALL LIST

	Office	Mobile	Home
Marbob Energy Corp.	505-748-3303		
Sheryl Baker	505-748-3303	505-748-5489	505-748-2396
Johnny C. Gray	505-748-3303	505-748-5983	505-885-3879
Raye Miller	505-748-3303	505-513-0176	505-746-9577
Dean Chumbley	505-748-3303	505-748-5988	505-748-2426

EMERGENCY RESPONSE NUMBERS
Eddy County, New Mexico

State Police	505-748-9718
Eddy County Sheriff	505-746-2701
Emergency Medical Services (Ambulance)	911 or 505-746-2701
Eddy County Emergency Management (Harry Burgess)	505-887-9511
State Emergency Response Center (SERC)	505-476-9620
Carlsbad Police Department	505-885-2111
Carlsbad Fire Department	505-885-3125
New Mexico Oil Conservation Division	505-748-1283
Indian Fire & Safety	800-530-8693
Halliburton Services	800-844-8451

PROTECTION OF THE GENERAL PUBLIC/ROE

In the event greater than 100 ppg H_2S is present, the ROE (Radius of Exposure) calculations will be done to determine if the following is warranted:

- 100 ppm at any public area (any place not associated with this site)
- 500 ppm at any public road (any road which the general public may travel)
- 100 ppm radius of 3000' will be assumed if there is insufficient data to do the calculations, and there is a reasonable expectation that H_2S could be present in concentrations greater than 100 ppm in the gas mixture.

Calculation for the 100 ppm ROE:

$X = [(1.589)(concentration)(Q)]^{(0.6258)}$

Calculation for the 500 ppm ROE:

$X = [(0.4546)(concentration)(Q)]^{(.06258)}$

(H_2S concentrations in decimal form)
10,000 ppm + = .01
1,000 ppm + = .001
100 ppm + = .0001
10 ppm + = .00001

EXAMPLE: If a well/facility has been determined to have 150 ppm H_2S in the gas mixture and the well/facility is producing at a gas rate of 200 MCFD then:

ROE for 100 ppm $X=[(1.589)(.00010)(200,000)]^{(0.6258)}$
$X=8.8'$

ROE for 500 ppm $X=[(.4546)(.00050)(200,000)]^{(0.6258)}$
$X=10.9'$

These calculations will be forwarded to the appropriate NMOCD district office when applicable.

PUBLIC EVACUATION PLAN

When the supervisor has determined that the general public will be involved, the following plan will be implemented.

1) Notification of the emergency response agencies of the hazardous condition and implement evacuation procedures.

2) A trained person in H_2S safety shall monitor with detection equipment the H_2S concentration, wind and area of exposure. This person will determine the outer perimeter of the hazardous area. The extent of the evacuation area will be determined from the data being collected. Monitoring shall continue until the situation has been resolved. All monitoring equipment shall be UL approved for use in Class I Groups A, B, C & D, Division I hazardous locations. All monitors will have a minimum capability of measuring H_2S, oxygen, and flammable values.

3) Law enforcement shall be notified to set up necessary barriers and maintain such for the duration of the situation as well as aid in the evacuation procedure.

4) The company representative shall stay in communication with all agencies throughout the duration of the situation and inform such agencies when the situation has been contained and the effected area is safe to enter.

PROCEDURE FOR IGNITING AN UNCONTROLLABLE CONDITION

The decision to ignite a well should be a last resort and one, if not both, of the following pertain:

1) Human life and/or property are in danger.

2) There is no hope of bringing the situation under control with the prevailing conditions at the site.

INSTRUCTIONS FOR IGNITION

1) Two people are required. They must be equipped with positive pressure, self contained breathing apparatus and a "D"-ring style, full body, OSHA approved safety harness. Non-flammable rope will be attached.

2) One of the people will be a qualified safety person who will test the atmosphere for H_2S, oxygen and LFL. The other person will be the company representative.

3) Ignite up-wind from a distance no closer than necessary. Make sure that where you ignite from has the maximum escape avenue available. A 25 mm flare gun shall be used, with a +-500' range to ignite the gas.

4) Prior to ignition, make a final check for combustible gases.

5) Following ignition, continue with the emergency actions and procedures as before.

REQUIRED EMERGENCY EQUIPMENT

1) Breathing Apparatus

- Rescue Packs (SCBA) – 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
- Work/Escape Packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
- Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation.

2) Signage and Flagging

- One Color Code Condition Sign will be placed at the entrance to the site reflecting the possible conditions at the site.
- A Colored Condition flag will be on display reflecting the condition at the site at that time.

3) Briefing Area

- Two perpendicular areas will be designated by signs and readily accessible.

4) Wind Socks

- Two windsocks will be placed in strategic locations, visible from all angles.

5) H_2S Detectors and Alarm

- The stationary detector with three (3) sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible alarm @ 15 ppm. Calibrate a minimum of every 30 days or as needed. The three sensors will be placed in the following places: (Gas sample tubes will be stored in the safety trailer)

  - Rig floor
  - Bell nipple
  - End of flow line or where well bore fluid is being discharged

6) Auxiliary Rescue Equipment

- Stretcher
- Two OSHA full body harnesses
- 100' of 5/8" OSHA approved rope
- One 20 lb. Class ABC fire extinguisher
- Communication via cell phones on location and vehicles on location

USING SELF-CONTAINED BREATHING AIR EQUIPMENT (SCBA)

1) SCBA should be worn when any of the following are performed:

- Working near the top or on top of a tank.
- Disconnecting any line where H_2S can reasonably be expected.
- Sampling air in the area to determine if toxic concentrations of H_2S exist.
- Working in areas where over 10 ppm of H_2S has been detected.
- At any time there is a doubt of the level of H_2S in the area.

2) All personnel shall be trained in the use of SCBA prior to working in a potentially hazardous location.

3) Facial hair and standard eyeglasses are not allowed with SCBA.

4) Contact lenses are never allowed with SCBA.

5) Air quality shall be continuously checked during the entire operation.

6) After each use, the SCBA unit shall be cleaned, disinfected, serviced and inspected.

7) All SCBA shall be inspected monthly.

RESCUE & FIRST AID FOR VICTIMS OF H_2S POISONING

- Do not panic.
- Remain calm & think.
- Get on the breathing apparatus.
- Remove the victim to the safe breathing area as quickly as possible, upwind and uphill from source or cross wind to achieve upwind.
- Notify emergency response personnel.
- Provide artificial respiration and/or CPR as necessary.
- Remove all contaminated clothing to avoid further exposure.
- A minimum of two (2) personnel on location shall be trained in CPR and First Aid.

H_2S TOXIC EFFECTS

H_2S is extremely toxic. The acceptable ceiling for eight hours of exposure is 10 ppm, which is .001% by volume. H_2S is approximately 20% heavier than air (Sp.Gr=1.19 / Air=1) and colorless. It forms an explosive mixture with air between 4.3% and 46.0%. By volume hydrogen sulfide (H_2S) is almost as toxic as hydrogen cyanide and is 5-6 times more toxic than carbon monoxide.

Various Gases

Common Name	Chemical Abbrev.	Sp. Gr.	Threshold Limits	Hazardous Limits	Lethal Concentration
Hydrogen Sulfide	H_2S	1.19	10 ppm 15 ppm	100 ppm/hr	600 ppm
Hydrogen Cyanide	HCN	0.94	10 ppm	150 ppm/hr	300 ppm
Sulfur Dioxide	SO_2	2.21	2 ppm	N/A	1000 ppm
Chlorine	CL_2	2.45	1 ppm	4 ppm/hr	1000 ppm
Carbon Monoxide	CO	0.97	50 ppm	400 ppm/hr	1000 ppm
Carbon Dioxide	CO_2	1.52	5000 ppm	5%	10%
Methane	CH_4	0.55	90,000	Combustible @ 5%	N/A

1 Threshold limit – Concentrations at which it is believed that all workers may be repeatedly exposed, day after day, without adverse effects
2 Hazardous limit – Concentration that may cause death
3 Lethal concentration – Concentration that will cause death with short-term exposure
4 Threshold limit – 10 ppm – NIOSH guide to chemical hazards
5 Short-term threshold limit

PHYSICAL EFFECTS OF HYDROGEN SULFIDE (H_2S)

CONCENTRATIONS		PHYSICAL EFFECTS
.001%	10 ppm	Obvious and unpleasant odor. Safe for 8 hr. exposure
.005%	50 ppm	Can cause some flu-like symptoms and can cause pneumonia
.01%	100 ppm	Kills the sense of smell in 3-15 minutes. May irritate eyes and throat
.02%	200 ppm	Kills the sense of smell rapidly. Severely irritates eyes and throat. Severe flu-like symptoms after 4 or more hrs. May cause lung damage and/or death.
.06%	600 ppm	Loss of consciousness quickly, death will result if not rescued promptly.

MARBOB ENERGY CORPORATION
DRILLING AND OPERATIONS PROGRAM

Hackberry 33 Federal Com #1
2280' FNL & 360' FWL
BHL: 1980' FNL & 990' FWL
Section 33, T21S, R26E
Eddy County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Marbob Energy Corporation submits the following ten items of pertinent information in accordance with BLM requirements.

1. The geological surface formation is Permian.

2. The estimated tops of geologic markers are as follows:

Yates	440'	Strawn	9700'
Capitan	630'	Atoka	10200'
Delaware	2100'	Morrow	10850'
Bone Spring	4500'	TD	11200'
Wolfcamp	8300'		

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

Reef	960'	Water
Delaware	2070'	Oil
Wolfcamp	8380'	
Strawn	9720'	Gas
Atoka	10200'	
Morrow	10775'	

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 20" casing at 300' 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 – 300'	13 3/8"	48#	H-40
12 1/4"	0 – 1700'	9 5/8"	36#	J-55
8 3/4"	0 – 8900'	7"	23#	P110 & N-80
6 1/8"	0 – 11300'	4 1/2"	11.6#	P-110 LT&C

Proposed Cement Program:

13 3/8" Surface Casing: Cement w/ 700 sx cmt. Circulate to surface.

9 5/8" Intermediate Casing: Cement w/ 900 sx cmt. Circulate to surface.

7" Intermediate Casing: Cement w/ 1200 sx cmt. Attempt to tie in to 8 5/8" csg.

4 1/2" Production Casing: Cement w/ 700 sx cmt. Attempt to tie in to 7" csg.

5. Pressure Control Equipment: See Exhibit 1.

6. Mud Program: The applicable depths and properties of this system are as follows:

Depth	Type	Weight (ppg)	Viscosity (sec)	Waterloss (cc)
0 – 300'	Fresh Wtr	8.4 – 9.2	32 – 36	N.C.
300 – 1700'	Cut Brine	9.9 – 10.2	28 – 32	N.C.
1700 – 8900'	Fresh Wtr	8.4 – 8.6	28 – 32	N.C.
8900 – 11300'	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 Csng 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

Hackberry 33 Federal Com #1
2280' FNL & 360' FWL
BHL: 1980' FNL & 990' FWL
Section 33, T21S, R26E
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 Co. Rd. #427 (Jones Rd.) and Co. Rd. #427-A (Bitter Cherry), go northwest on Co. Rd. #427-A approx. 0.72 miles crossing cattle guard. Turn and go north approx. 0.28 miles to the Roundy Round Fed. #1 well pad. Continue north approx. 0.25 miles to a proposed road survey. Follow road survey east 911 feet to this location.

2. PLANNED ACCESS ROAD:

A new access road of 911' 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 Hackberry 33 Federal Com #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 rehabitation and/or vegetation requirements of the BLM will be complied with and will be accomplished as expeditiously as possible. All pits will be filled level within 90 days after abandonment.

7. SURFACE OWNERSHIP:

The well site and lease are located on private surface. A surface agreement will complete before construction begins.

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.

MARBOB ENERGY CORPORATION

Nancy T. Bratcher

Date

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_2S).

B. The proper use and maintenance of personal protective equipment and life support systems.

C. The proper use of H_2S 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_2S 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_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S 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_2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H_2S 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_2S.

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_2S detection and monitoring equipment:

2 - portable H_2S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H_2S 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_2S 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_2S service.

G. Communication:

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

WARNING

YOU ARE ENTERING AN H_2S 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 13, 2006

Lease #: NM 113935
Hackberry 33 Federal Com #1

Legal Description: Section 33: SW/4NW/4
Township 21S – Range 26E
Eddy County, New Mexico

Formation(s): Morrow

Bond Coverage: Statewide

BLM Bond File #: NM 2056

Marbob Energy Corporation

Nancy T. Bratcher

Nancy T. Bratcher
Land Department

Pathfinder Energy
Planning Report

Company:	Marbob Energy	**Date:** 6/9/2006 **Time:** 09:49:50	**Page:** 1
Field:	Hackbury 33 Fed Com #1	**Co-ordinate(NE) Reference:**	Site: Hackbury 33 Fed Com #1, Grid North
Site:	Hackbury 33 Fed Com #1	**Vertical (TVD) Reference:**	System: Mean Sea Level
Well:	Hackbury 33 Fed Com #1	**Section (VS) Reference:**	Well (0.00N,0.00E,64.54Azi)
Wellpath:	Orignal Hole	**Plan:**	Plan #1 6-8-06

Field: Hackbury 33 Fed Com #1
Eddy County, New Mexico

Map System:	US State Plane Coordinate System 1927	**Map Zone:**	New Mexico, Western Zone
Geo Datum:	NAD27 (Clarke 1866)	**Coordinate System:**	Site Centre
Sys Datum:	Mean Sea Level	**Geomagnetic Model:**	igrf2000

Site: Hackbury 33 Fed Com #1

Site Position:		**Northing:**	522818.60 ft	**Latitude:**	32 26 14.378	N
From:	Map	**Easting:**	508814.80 ft	**Longitude:**	107 48 17.142	W
Position Uncertainty:	0.00 ft			**North Reference:**	Grid	
Ground Level:	0.00 ft			**Grid Convergence:**	0.02 deg	

Well: Hackbury 33 Fed Com #1 **Slot Name:**

Well Position:	+N/-S 0.00 ft	**Northing:**	522818.60 ft	**Latitude:**	32 26 14.378	N
	+E/-W 0.00 ft	**Easting :**	508814.80 ft	**Longitude:**	107 48 17.142	W
Position Uncertainty:	0.00 ft					

Wellpath: Orignal Hole **Drilled From:** Surface
Tie-on Depth: 0.00 ft

Current Datum:	Mean Sea Level	**Height**	0.00 ft	**Above System Datum:**	Mean Sea Level
Magnetic Data:	6/8/2006			**Declination:**	0.00 deg
Field Strength:	0 nT			**Mag Dip Angle:**	0.00 deg

Vertical Section:	**Depth From (TVD)** ft	**+N/-S** ft	**+E/-W** ft	**Direction** deg
	0.00	0.00	0.00	64.54

Plan: Plan #1 6-8-06 **Date Composed:** 6/8/2006
Version: 1
Principal: No **Tied-to:** From Surface

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	64.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5500.00	0.00	64.54	5500.00	0.00	0.00	0.00	0.00	0.00	0.00	
6131.27	9.47	64.54	6128.40	22.38	46.99	1.50	1.50	0.00	64.54	
10056.35	9.47	64.54	10000.00	300.00	630.00	0.00	0.00	0.00	0.00	PBHL

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.00	0.00	64.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	64.54	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	64.54	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	64.54	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	64.54	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	64.54	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	64.54	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	64.54	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	64.54	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	64.54	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1000.00	0.00	64.54	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1100.00	0.00	64.54	1100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1200.00	0.00	64.54	1200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1300.00	0.00	64.54	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1400.00	0.00	64.54	1400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1500.00	0.00	64.54	1500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1600.00	0.00	64.54	1600.00	0.00	0.00	0.00	0.00	0.00	0.00	

Pathfinder Energy
Planning Report

Company:	Marbob Energy	**Date:**	6/9/2006	**Time:**	09:49:50 **Page:** 2
Field:	Hackbury 33 Fed Com #1	**Co-ordinate(NE) Reference:**	Site: Hackbury 33 Fed Com #1, Grid North		
Site:	Hackbury 33 Fed Com #1	**Vertical (TVD) Reference:**	System: Mean Sea Level		
Well:	Hackbury 33 Fed Com #1	**Section (VS) Reference:**	Well (0.00N,0.00E,64.54Azi)		
Wellpath:	Orignal Hole	**Plan:**	Plan #1 6-8-06		

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
1700.00	0.00	64.54	1700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1800.00	0.00	64.54	1800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1900.00	0.00	64.54	1900.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	64.54	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2100.00	0.00	64.54	2100.00	0.00	0.00	0.00	0.00	0.00	0.00	
2200.00	0.00	64.54	2200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2300.00	0.00	64.54	2300.00	0.00	0.00	0.00	0.00	0.00	0.00	
2400.00	0.00	64.54	2400.00	0.00	0.00	0.00	0.00	0.00	0.00	
2500.00	0.00	64.54	2500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2600.00	0.00	64.54	2600.00	0.00	0.00	0.00	0.00	0.00	0.00	
2700.00	0.00	64.54	2700.00	0.00	0.00	0.00	0.00	0.00	0.00	
2800.00	0.00	64.54	2800.00	0.00	0.00	0.00	0.00	0.00	0.00	
2900.00	0.00	64.54	2900.00	0.00	0.00	0.00	0.00	0.00	0.00	
3000.00	0.00	64.54	3000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3100.00	0.00	64.54	3100.00	0.00	0.00	0.00	0.00	0.00	0.00	
3200.00	0.00	64.54	3200.00	0.00	0.00	0.00	0.00	0.00	0.00	
3300.00	0.00	64.54	3300.00	0.00	0.00	0.00	0.00	0.00	0.00	
3400.00	0.00	64.54	3400.00	0.00	0.00	0.00	0.00	0.00	0.00	
3500.00	0.00	64.54	3500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3600.00	0.00	64.54	3600.00	0.00	0.00	0.00	0.00	0.00	0.00	
3700.00	0.00	64.54	3700.00	0.00	0.00	0.00	0.00	0.00	0.00	
3800.00	0.00	64.54	3800.00	0.00	0.00	0.00	0.00	0.00	0.00	
3900.00	0.00	64.54	3900.00	0.00	0.00	0.00	0.00	0.00	0.00	
4000.00	0.00	64.54	4000.00	0.00	0.00	0.00	0.00	0.00	0.00	
4100.00	0.00	64.54	4100.00	0.00	0.00	0.00	0.00	0.00	0.00	
4200.00	0.00	64.54	4200.00	0.00	0.00	0.00	0.00	0.00	0.00	
4300.00	0.00	64.54	4300.00	0.00	0.00	0.00	0.00	0.00	0.00	
4400.00	0.00	64.54	4400.00	0.00	0.00	0.00	0.00	0.00	0.00	
4500.00	0.00	64.54	4500.00	0.00	0.00	0.00	0.00	0.00	0.00	
4600.00	0.00	64.54	4600.00	0.00	0.00	0.00	0.00	0.00	0.00	
4700.00	0.00	64.54	4700.00	0.00	0.00	0.00	0.00	0.00	0.00	
4800.00	0.00	64.54	4800.00	0.00	0.00	0.00	0.00	0.00	0.00	
4900.00	0.00	64.54	4900.00	0.00	0.00	0.00	0.00	0.00	0.00	
5000.00	0.00	64.54	5000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5100.00	0.00	64.54	5100.00	0.00	0.00	0.00	0.00	0.00	0.00	
5200.00	0.00	64.54	5200.00	0.00	0.00	0.00	0.00	0.00	0.00	
5300.00	0.00	64.54	5300.00	0.00	0.00	0.00	0.00	0.00	0.00	
5400.00	0.00	64.54	5400.00	0.00	0.00	0.00	0.00	0.00	0.00	
5500.00	0.00	64.54	5500.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP @ 5500' MD / 5500' TV
5600.00	1.50	64.54	5599.99	0.56	1.18	1.31	1.50	1.50	0.00	
5700.00	3.00	64.54	5699.91	2.25	4.73	5.23	1.50	1.50	0.00	
5800.00	4.50	64.54	5799.69	5.06	10.63	11.77	1.50	1.50	0.00	
5900.00	6.00	64.54	5899.27	9.00	18.89	20.92	1.50	1.50	0.00	
6000.00	7.50	64.54	5998.57	14.05	29.50	32.68	1.50	1.50	0.00	
6100.00	9.00	64.54	6097.54	20.22	42.46	47.03	1.50	1.50	0.00	
6131.27	9.47	64.54	6128.40	22.38	46.99	52.05	1.50	1.50	0.00	Start Hold @ 6131' MD / 6
6200.00	9.47	64.54	6196.19	27.24	57.20	63.35	0.00	0.00	0.00	
6300.00	9.47	64.54	6294.83	34.31	72.05	79.80	0.00	0.00	0.00	
6400.00	9.47	64.54	6393.47	41.38	86.91	96.26	0.00	0.00	0.00	
6500.00	9.47	64.54	6492.11	48.46	101.76	112.71	0.00	0.00	0.00	
6600.00	9.47	64.54	6590.74	55.53	116.61	129.16	0.00	0.00	0.00	
6700.00	9.47	64.54	6689.38	62.60	131.47	145.61	0.00	0.00	0.00	
6800.00	9.47	64.54	6788.02	69.68	146.32	162.06	0.00	0.00	0.00	

Pathfinder Energy
Planning Report

Company:	Marbob Energy	**Date:** 6/9/2006 **Time:** 09:49:50 **Page:** 3	
Field:	Hackbury 33 Fed Com #1	**Co-ordinate(NE) Reference:**	Site: Hackbury 33 Fed Com #1, Grid North
Site:	Hackbury 33 Fed Com #1	**Vertical (TVD) Reference:**	System: Mean Sea Level
Well:	Hackbury 33 Fed Com #1	**Section (VS) Reference:**	Well (0.00N,0.00E,64.54Azi)
Wellpath:	Orignal Hole	**Plan:**	Plan #1 6-8-06

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
6900.00	9.47	64.54	6886.66	76.75	161.17	178.51	0.00	0.00	0.00	
7000.00	9.47	64.54	6985.29	83.82	176.03	194.96	0.00	0.00	0.00	
7100.00	9.47	64.54	7083.93	90.89	190.88	211.42	0.00	0.00	0.00	
7200.00	9.47	64.54	7182.57	97.97	205.73	227.87	0.00	0.00	0.00	
7300.00	9.47	64.54	7281.21	105.04	220.59	244.32	0.00	0.00	0.00	
7400.00	9.47	64.54	7379.84	112.11	235.44	260.77	0.00	0.00	0.00	
7500.00	9.47	64.54	7478.48	119.19	250.29	277.22	0.00	0.00	0.00	
7600.00	9.47	64.54	7577.12	126.26	265.15	293.67	0.00	0.00	0.00	
7700.00	9.47	64.54	7675.76	133.33	280.00	310.13	0.00	0.00	0.00	
7800.00	9.47	64.54	7774.39	140.41	294.85	326.58	0.00	0.00	0.00	
7900.00	9.47	64.54	7873.03	147.48	309.71	343.03	0.00	0.00	0.00	
8000.00	9.47	64.54	7971.67	154.55	324.56	359.48	0.00	0.00	0.00	
8100.00	9.47	64.54	8070.31	161.63	339.41	375.93	0.00	0.00	0.00	
8200.00	9.47	64.54	8168.94	168.70	354.27	392.38	0.00	0.00	0.00	
8300.00	9.47	64.54	8267.58	175.77	369.12	408.84	0.00	0.00	0.00	
8400.00	9.47	64.54	8366.22	182.85	383.97	425.29	0.00	0.00	0.00	
8500.00	9.47	64.54	8464.86	189.92	398.83	441.74	0.00	0.00	0.00	
8600.00	9.47	64.54	8563.49	196.99	413.68	458.19	0.00	0.00	0.00	
8700.00	9.47	64.54	8662.13	204.06	428.53	474.64	0.00	0.00	0.00	
8800.00	9.47	64.54	8760.77	211.14	443.39	491.09	0.00	0.00	0.00	
8900.00	9.47	64.54	8859.40	218.21	458.24	507.54	0.00	0.00	0.00	
9000.00	9.47	64.54	8958.04	225.28	473.10	524.00	0.00	0.00	0.00	
9100.00	9.47	64.54	9056.68	232.36	487.95	540.45	0.00	0.00	0.00	
9200.00	9.47	64.54	9155.32	239.43	502.80	556.90	0.00	0.00	0.00	
9300.00	9.47	64.54	9253.95	246.50	517.66	573.35	0.00	0.00	0.00	
9400.00	9.47	64.54	9352.59	253.58	532.51	589.80	0.00	0.00	0.00	
9500.00	9.47	64.54	9451.23	260.65	547.36	606.25	0.00	0.00	0.00	
9600.00	9.47	64.54	9549.87	267.72	562.22	622.71	0.00	0.00	0.00	
9700.00	9.47	64.54	9648.50	274.80	577.07	639.16	0.00	0.00	0.00	
9800.00	9.47	64.54	9747.14	281.87	591.92	655.61	0.00	0.00	0.00	
9900.00	9.47	64.54	9845.78	288.94	606.78	672.06	0.00	0.00	0.00	
10000.00	9.47	64.54	9944.42	296.01	621.63	688.51	0.00	0.00	0.00	
10056.35	9.47	64.54	10000.00	300.00	630.00	697.78	0.00	0.00	0.00	PBHL

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude ---> Deg Min Sec	<--- Longitude ---> Deg Min Sec
PBHL -Plan hit target			10000.00	300.00	630.00	523118.60	509444.80	32 26 17.345 N	107 48 9.790 W

Annotation

MD ft	TVD ft	
5500.00	5500.00	KOP @ 5500' MD / 5500' TVD Build 1.5°/100
6131.27	6128.40	Start Hold @ 6131' MD / 6128' TVD Inc. 9.47°

Marbob Energy

PATHFINDER

Field: Hackbury 33 Fed Com #1
Site: Hackbury 33 Fed Com #1
Well: Hackbury 33 Fed Com #1
Wellpath: Orignal Hole
Plan: Plan #1 6-8-06

COMPANY DETAILS

Marbob Energy
2208 W. Main St.
Artesia, New Mexico

Calculation Method: Minimum Curvature
Error System: Systematic Ellipse
Scan Method: Closest Approach 3D
Error Surface: Elliptical Conic
Warning Method: Error Ratio

SITE DETAILS

Hackbury 33 Fed Com #1

Site Centre Northing: 522818.60
Easting: 508814.80

Water Depth: 0.00
Positional Uncertainty: 0.00
Convergence: 0.02

ANNOTATIONS

No.	TVD	MD	Annotation
1	5500.00	5500.00	KOP @ 5500' MD / 5500' TVD Build 1.5°/100
2	6128.40	6131.27	Start Hold @ 6131' MD / 6128' TVD Inc. 9.47°

SECTION DETAILS

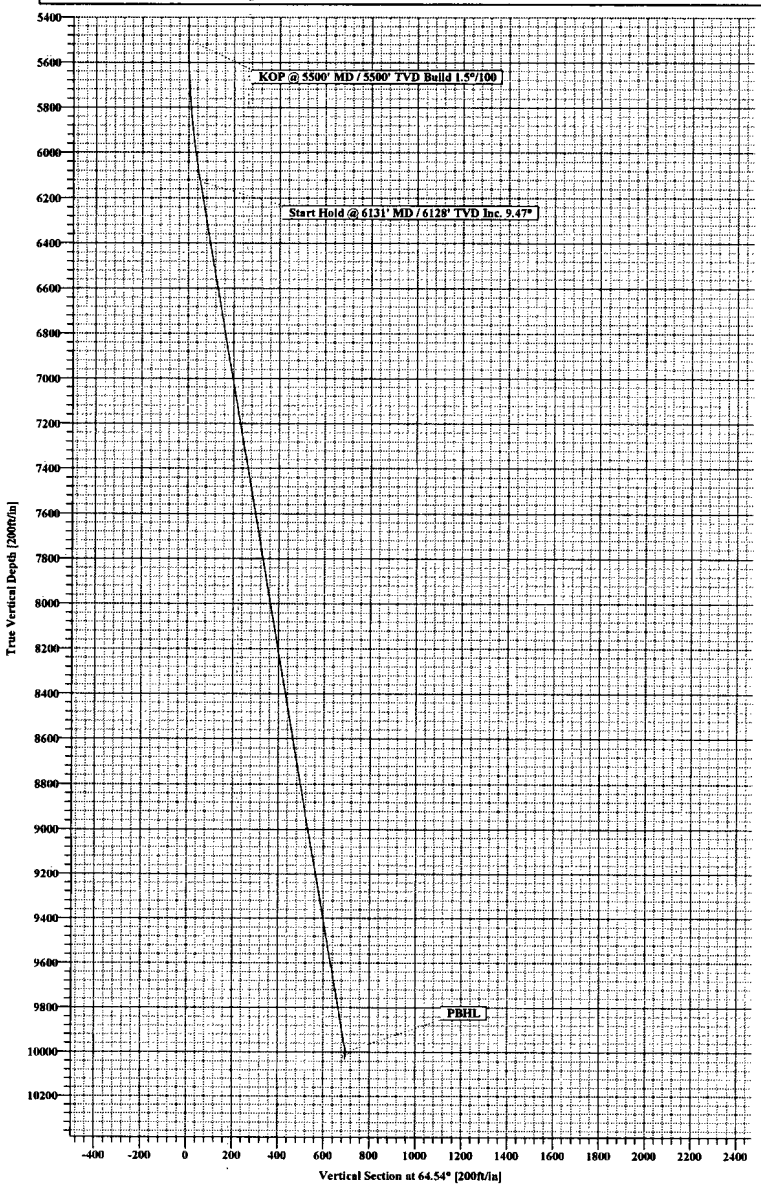
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	64.54	0.00	0.00	0.00	0.00	0.00	0.00	
2	5500.00	0.00	64.54	5500.00	0.00	0.00	0.00	0.00	0.00	
3	6131.27	9.47	64.54	6128.40	22.38	46.99	1.50	64.54	52.05	
4	10056.35	9.47	64.54	10000.00	300.00	630.00	0.00	0.00	697.78	PBHL

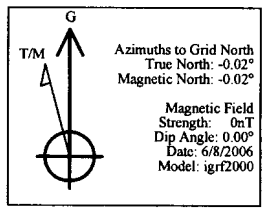
FIELD DETAILS

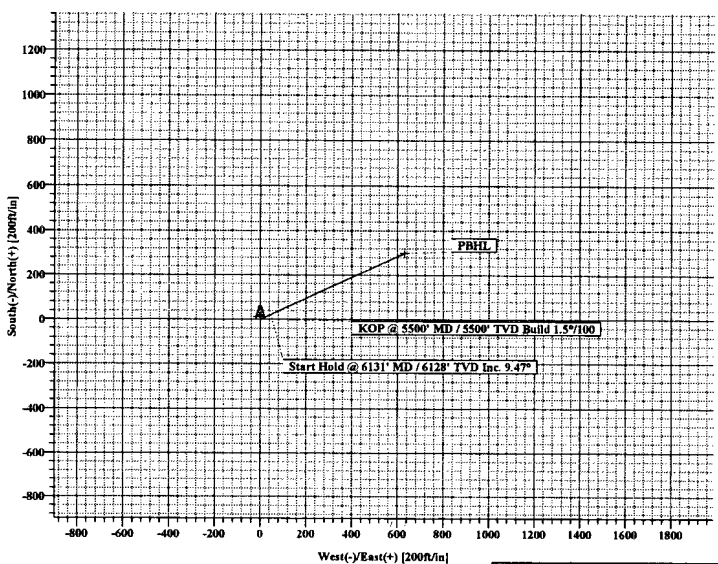
Hackbury 33 Fed Com #1
Eddy County, New Mexico

Geodetic System: US State Plane Coordinate System 1927
Ellipsoid: NAD27 (Clarke 1866)
Zone: New Mexico, Western Zone
Magnetic Model: igrf2000

System Datum: Mean Sea Level
Local North: Grid North







Plan: Plan #1 6-8-06 (Hackbury 33 Fed Com #1/Original Hole)
Created By: bill Date: 6/9/2006

State of New Mexico
Energy, Minerals and Natural Resources Department

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

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	Pool Code	Pool Name
	78060	HAPPY VALLEY; Morrow

Property Code	Property Name	Well Number
	HACKBERRY 33 FEDERAL COM.	1

OGRID No.	Operator Name	Elevation
14049	MARBOB ENERGY CORPORATION	3249'

Surface Location

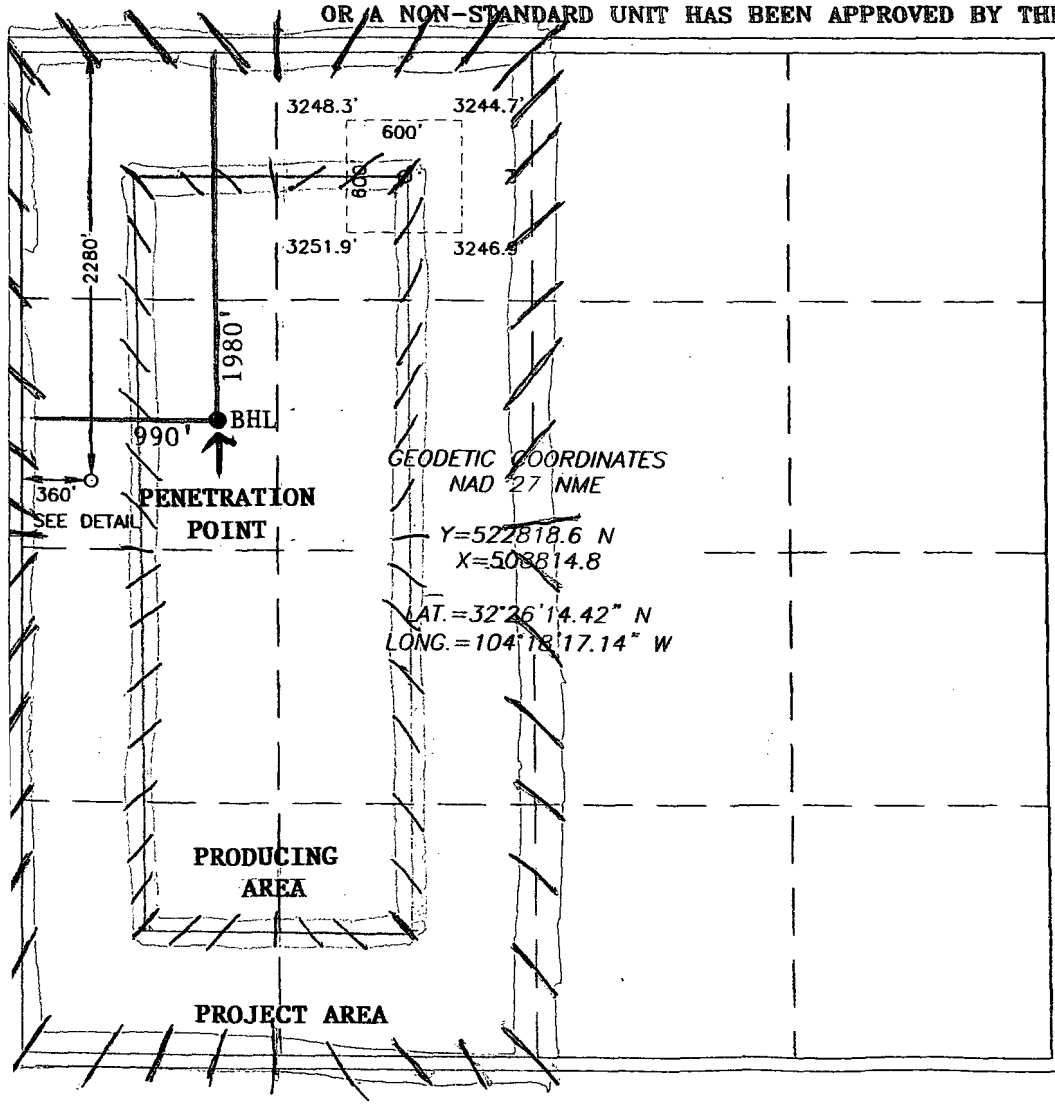
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	33	21-S	26-E		2280	NORTH	360	WEST	EDDY

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
E	33	21-S	26-E		1980	North	990	West	Eddy

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

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



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 4/13/06
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 21,2006
Date Surveyed DSR

Signature & Seal of Professional Surveyor

Gary L. Eidson 4/6/06

06.11.0525

Certificate No. GARY EIDSON 12641