

10/3/08 DATE IN	SUSPENSE	w Jones ENGINEER	10/6/08 LOGGED IN	DHC TYPE 4115	PKVR0828029264 APP NO.
--------------------	----------	---------------------	----------------------	---------------------	---------------------------

ABOVE THIS LINE FOR DIVISION USE ONLY

## NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



### ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

#### Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]  
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]  
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]  
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]  
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]  
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

#### [1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication  
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement  
☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify \_\_\_\_\_

#### [2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
- [B] ☐ Offset Operators, Leaseholders or Surface Owner
- [C] ☐ Application is One Which Requires Published Legal Notice
- [D] ☐ Notification and/or Concurrent Approval by BLM or SLO  
 U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] ☐ Waivers are Attached

#### [3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

BRIAN COLLINS

Print or Type Name

Signature

PETROLEUM ENGINEER

Title

09/18/08

Date

bcollins@marbob.com

e-mail Address

2008 OCT 3 PM 1:43  
 RECEIVED

District I  
1823 N. French Drive, 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 Department

Form C-107A  
Revised June 10, 2003

Oil Conservation Division

1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

APPLICATION TYPE

☒ Single Well

☐ Establish Pre-Approved Pools

EXISTING WELLBORE

☒ Yes ☐ No

APPLICATION FOR DOWNHOLE COMMINGLING

MARBOB ENERGY CORPORATION

P O BOX 227

ARTESIA, NM 88211-0027

Operator

Address

RHOID STATE #1

D-24-T18S-R33E

LEA COUNTY

Lease Well No. Unit Letter-Section-Township-Range County

OGRID No. 14049 Property Code 35924 API No. 30-025-38067 Lease Type: ☐ Federal ☒ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	<del>UNDES</del> SAN ANDRES		EK DELAWARE
Pool Code			21655
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	5334-5350' PERFORATED		5406-5661' PERFORATED
Method of Production (Flowing or Artificial Lift)	ARTIFICIAL LIFT		ARTIFICIAL LIFT
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)	EST 100 PSI PRODUCING BHP		EST 100 PSI PRODUCING BHP
Oil Gravity or Gas BTU (Degree API or Gas BTU)	31° EST		35.5°
Producing, Shut-In or New Zone	NEW ZONE		PRODUCING
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.)	Date: N/A Rates:	Date: Rates:	Date: AUGUST 2008 Rates: 2.75 BOPD 2.00 MCFD
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil Gas 90 % 96 %	Oil Gas % %	Oil Gas 10 % 4 %

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones?

Yes ☒ No ☐

If not, have all working, royalty and overriding royalty interest owners been notified by certified mail?

Yes ☐ No ☐

Are all produced fluids from all commingled zones compatible with each other?

Yes ☒ No ☐

Will commingling decrease the value of production?

Yes ☐ No ☒

If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application?

Yes ☒ No ☐

NMOCD Reference Case No. applicable to this well:

Attachments:

C-102 for each zone to be commingled showing its spacing unit and acreage dedication.

Production curve for each zone for at least one year. (If not available, attach explanation.)

For zones with no production history, estimated production rates and supporting data.

Data to support allocation method or formula.

Notification list of working, royalty and overriding royalty interests for uncommon interest cases.

Any additional statements, data or documents required to support commingling.

PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

List of other orders approving downhole commingling within the proposed Pre-Approved Pools

List of all operators within the proposed Pre-Approved Pools

Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.

Bottomhole pressure data.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Brian Collins TITLE ENGINEER DATE 09/18/08

TYPE OR PRINT NAME BRIAN COLLINS TELEPHONE NO. (505) 748-3303

E-MAIL ADDRESS engineering@marbob.com

**Engineering Summary**  
**Form C-107A**  
**Application for Downhole Commingling**

**Marbob Energy Corporation**  
**Rhoid State #1, (Unit D, Sec. 24-T18S-R33E)**

Marbob Energy proposes to downhole commingle the San Andres and the Delaware in the captioned well.

No crossflow will occur because the well will be rod pumped in a pumped down condition. The Rhoid State No. 1 is currently completed in the Delaware and a production plot with the calculated remaining ultimate recovery is attached. The proposed zonal allocation is described below.

Delaware Sand: See attached production plot.

Qi = 2.75 bopd      d=29%/yr.  
Qel = 1.00 bopd      assumed

$$EUR = \frac{-365 (2.75-1.00)}{\ln (1-.29)} = 1.9 \text{ MBO}$$

Qi = 2.0 mcf/d      d=55%/yr.  
Qel = 0.5 mcf/d      assumed

$$EUR = \frac{-365 (2-0.5)}{\ln (1-.55)} = 0.7 \text{ MMCF}$$

San Andres: There is no nearby San Andres production. The best engineering estimate is that production declines exponentially at 80%/yr. for one year, followed by 25%/yr. for oil and gas. The best engineering estimate is that the San Andres will come in at 40 BOPD and have a 1000 GOR.

Qi = 40 bopd      d=80%/yr.  
Q1yr = 8 bopd      d=25%/yr.  
Qel = 1 bopd      assumed

$$EUR = \frac{-365 (40-8)}{\ln (1-.80)} + \frac{-365 (8-1)}{\ln (1-.25)} = 16.1 \text{ MBO}$$

$Q_i = 40 \text{ mcf/d}$        $d=80\%/yr.$   
 $Q_{1yr} = 8 \text{ mcf/d}$        $d=25\%/yr.$   
 $Q_{el} = 1 \text{ mcf/d}$       assumed

$$EUR = \frac{-365 (40-8)}{\ln (1-.80)} + \frac{-365 (8-1)}{\ln (1-.25)} = 16.1 \text{ MMCF}$$

$$\text{Delaware Oil} = \frac{1.9 \text{ MBO}}{1.9 + 16.1} = .10 = 10\%$$

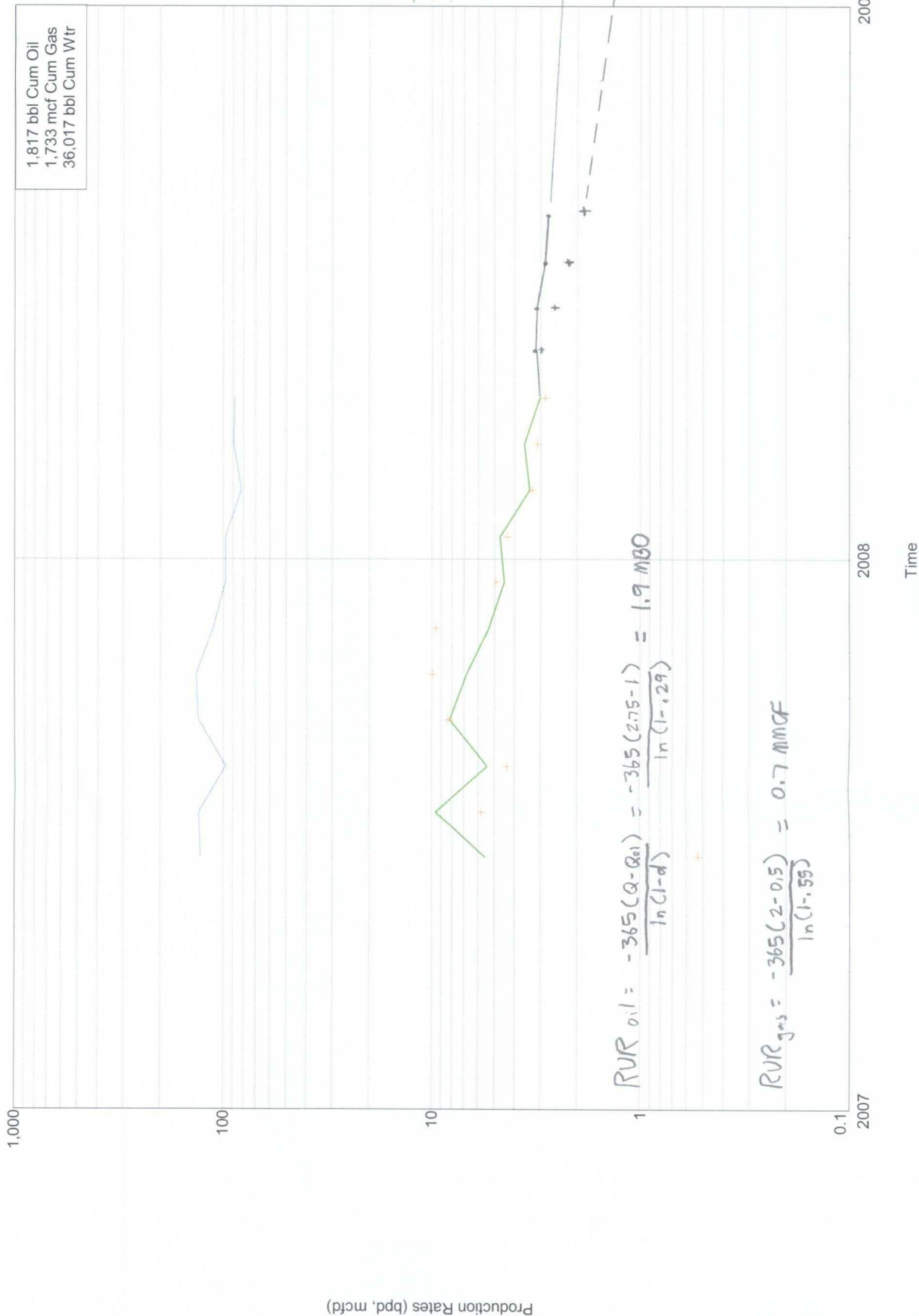
$$\text{San Andres Oil} = 1-.10 = .90 = 90\%$$

$$\text{Delaware Gas} = \frac{0.7 \text{ MMCF}}{0.7+16.1} = .04 = 4\%$$

$$\text{San Andres Gas} = 1-.04 = .96 = 96\%$$

Lease Name: RHOID STATE  
 County, State: LEA, NM  
 Operator: MARBOB ENERGY CORPORATION  
 Field: E-K  
 Reservoir: DELAWARE  
 Location: 24 18S 33E NW NW NW

RHOID STATE 1 30025380670000



## DISTRICT I

1625 N. FRENCH DR., HOBBS, NM 88240

## DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## DISTRICT IV

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

## State of New Mexico

Energy, Minerals and Natural Resources Department

## OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.

Santa Fe, New Mexico 87505

Form C-102

Revised 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 30-025-38067	Pool Code 21655	Pool Name E-K DELAWARE
Property Code 135924	Property Name RHOD STATE	Well Number 1
OGRID No. 14049	Operator Name MARBOB ENERGY CORPORATION	Elevation 3903'

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	24	18-S	33-E		330	NORTH	330	WEST	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</p> <p>Y=633434.7 N X=718243.8 E</p> <p>LAT.=32.739397° N LONG.=103.623562° 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>[Signature]</i> 7/17/07 Signature Date</p> <p>DIANA J. BRIGGS Printed Name</p> <p>PRODUCTION ANALYST</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>AUGUST 01, 2006</p> <p>Date Surveyed MR</p> <p>Signature &amp; Seal of Professional Surveyor <i>[Signature]</i> 8/8/06 RONALD J. EIDSON</p> <p>Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239</p>

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Ave., 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, NM 87505

WELL API NO. 30-025-38067
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name RHOD STATE
8. Well Number 1
9. OGRID Number 14049
10. Pool name or Wildcat EK DELAWARE

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

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

2. Name of Operator  
MARBOB ENERGY CORPORATION

3. Address of Operator P O BOX 227  
ARTESIA, NM 88211-0227

4. Well Location  
Unit Letter D : 330 feet from the NORTH line and 330 feet from the WEST line  
Section 24 Township 18S Range 33E NMPM LEA County NM

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
3903' GR

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type \_\_\_\_\_ Depth to Groundwater \_\_\_\_\_ Distance from nearest fresh water well \_\_\_\_\_ Distance from nearest surface water \_\_\_\_\_

Pit Liner Thickness: \_\_\_\_\_ mil Below-Grade Tank: Volume \_\_\_\_\_ bbls; Construction Material \_\_\_\_\_

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐  
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐  
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: DOWNHOLE COMMINGLING ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐  
COMMENCE DRILLING OPNS. ☐ P AND A ☐  
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

SEE ATTACHED C-107A APPLICATION FOR DOWNHOLE COMMINGLING

THE PROPOSED ALLOCATION IS: UNDES. SAN ANDRES - OIL 90% - GAS 96%  
EK DELAWARE 21655 - OIL 10% - GAS 4%

NEW ALLOCATIONS WILL BE SUBMITTED IF ACTUAL WELL PRODUCTION IS SIGNIFICANTLY DIFFERENT THAN THAT ABOVE.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any 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 ☐.

SIGNATURE Brian Collins TITLE PETROLEUM ENGINEER DATE 09/18/08

Type or print name BRIAN COLLINS

E-mail address: bcollins@marbob.com Telephone No. 575-748-3303

For State Use Only

APPROVED BY: \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

Conditions of Approval (if any):



**marbob**  
energy corporation

September 18, 2008

New Mexico State Land Office  
Oil, Gas & Minerals Division  
P. O. Box 1148  
Santa Fe, NM 87504-1148

Attn: Ms. Jamie Bailey

Re: C-107A Downhole Commingling Application  
Rhoid State #1  
Township 18 South, Range 33 East, NMPM  
Sec. 24: Unit D  
Lea County, New Mexico

Dear Ms. Bailey:

Enclosed is the \$30.00 application fee and copy of the Form C-107A Application for Downhole Commingling that we submitted to the NMOCD for the referenced well located in Lea County.

We are seeking approval to downhole commingle the Delaware and San Andres zones to extend the economic life of the well and maximize the financial benefit to the State of New Mexico.

If you have any questions, please call me at 505-748-3303.

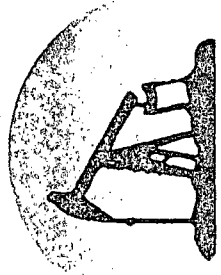
Sincerely,

Brian Collins  
Petroleum Engineer

BC/dlw  
enclosures




INVOICE DATE	INVOICE NO.	DESCRIPTION	INVOICE TOTAL	ADJUSTMENTS	DISCOUNT	NET AMOUNT
10/1/08		APPLICATION FEE/RHOID ST #1	\$ 30.00			\$ 30.00



**MARBOB ENERGY CORPORATION**  
 2208 W. MAIN  
 P.O. BOX 227  
 ARTESIA, NEW MEXICO 88211-0227  
 (505) 748-3303

056092

PLEASE DETACH BEFORE DEPOSITING. RETAIN TOP PORTION FOR YOUR RECORDS.

 <p><b>MARBOB</b> energy corporation</p>		<p>2208 W. MAIN P.O. BOX 227 ARTESIA, NEW MEXICO 88211-0227 (505) 748-3303</p>		<p>056092</p> <p>95-43/1122</p>	
<p>*****THIRTY DOLLARS AND 00/100*****</p>					
<p>PAY TO THE ORDER OF</p>		<p>NEW MEXICO STATE LAND OFFICE OIL, GAS &amp; MINERALS DIVISION PO BOX 1148 SANTA FE, NM 87504-1148</p>			
<p>FIRST NATIONAL BANK P.O. DRAWER AA ARTESIA, NM 88210</p>		<p>10/1/08</p>			
<p>DATE</p>		<p>CHECK AMOUNT</p>			
<p>10/1/08</p>		<p>\$30.00</p>			
<p>MARBOB ENERGY CORPORATION</p> <p><i>Don Ambley</i></p>					

056092 1122004391 46512710

RECEIVED  
2008 NOV 3 PM 1 47



PATRICK H. LYONS  
COMMISSIONER

*State of New Mexico*  
*Commissioner of Public Lands*

310 OLD SANTA FE TRAIL  
P.O. BOX 1148  
SANTA FE, NEW MEXICO 87504-1148

COMMISSIONER'S OFFICE

Phone (505) 827-5760

Fax (505) 827-5766

[www.nmstatelands.org](http://www.nmstatelands.org)

October 22, 2008

Marbob Energy Corp.  
P.O. Box 227  
Artesia, New Mexico 88211-0227

Attn: Mr. Brian Collins

Re: Downhole Commingling Application  
Rhoid State Well No. 1 ( API # 30-025-38067)  
Unit Letter D, Section 24-18S-33E  
Undesignated San Andres and EK Delaware Pools  
Lea County, New Mexico

Dear Mr. Collins:

Thank you for your application to downhole commingle the Undesignated San Andres and EK Delaware pools from the referenced well in Lea County, New Mexico.

Since it appears that all the New Mexico Oil Conservation's (OCD) rules and regulations have been complied with, and there will be no loss of revenue to the State of New Mexico as a result of your proposed operation, your application is approved. Any deviation from the substance of your application will be cause for rescinding our approval, and approval is subject to like approval by the OCD.

Your filing fee in the amount of \$30.00 has been received.

If you have any questions or if we may be of further help, please contact Pete Martinez at (505) 827-5791.

Very truly yours,

PATRICK H. LYONS  
COMMISSIONER OF PUBLIC LANDS

BY:

JAMI BAILEY, Director  
Oil, Gas and Minerals Division  
PL/JB/jm  
Enclosure

xc: Reader File      OCD—Ed Martin,

-State Land Office Beneficiaries -

Carrie Tingley Hospital • Charitable Penal & Reform • Common Schools • Eastern NM University • Rio Grande Improvement • Miners' Hospital of NM • NM Boys School • NM Highlands University • NM Institute of Mining & Technology • New Mexico Military Institute • NM School for the Deaf • NM School for the Visually Handicapped • NM State Hospital • New Mexico State University • Northern NM Community College • Penitentiary of New Mexico • Public Buildings at Capital • State Park Commission • University of New Mexico • UNM Saline Lands • Water Reservoirs • Western New Mexico University