

District I
1833 N. French Drive, Hobbs, NM 88240

District II
1301 W. Grand Avenue, Artesia, NM 88210

District III
1000 Rio Brazos Road, Arroyo, NM 87410

District IV
1720 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
AAO FEDERAL #11 M-1-T18S-R27E EDDY COUNTY, NEW MEXICO
Lease Well No. Unit Letter-Section-Township-Range County
OGRID No. 14049 Property Code 29793 API No. 30-015-34555 Lease Type: ☒ Federal ☐ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	RED LAKE O-GB-SA		RED LAKE GLORIETA YESO NE
Pool Code	51300		96836
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	2293-2679'		3623-3822'
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. 50 PSI PRODUCING BHP		EST. 100 PSI PRODUCING BHP
Oil Gravity or Gas BTU (Degree API or Gas BTU)	39.5°		41.8°
Producing, Shut-In or New Zone	NEW ZONE		NEW ZONE
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: N/A Rates:
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 71 % 68 %	Oil Gas % %	Oil Gas 29 % 32 %

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 ☐
NMOC Reference Case No. applicable to this well: R-11363 PRE-APPROVED POOL

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 03/07/06
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
AAO Federal No. 11 (Unit M, Sec. 1-T18S-R27E)

Marbob Energy proposes to downhole commingle the San Andres (Red Lake Q-GB-SA 51300) and the Yeso (Red Lake Glorieta Yeso, NE 96836) in the captioned well. This proposal is identical to the downhole comminglings that Devon Energy has done offsetting the captioned wells (Orders R-11363, DHC-2390, DHC-2685, DHC-2701).

No crossflow will occur because this well will be rod pumped in a pumped down condition. The MJ State No. 1, when completed in the Yeso, will be used as a "typical" Yeso well. The MJ State No. 2, when completed in the San Andres, will be used as a "typical" San Andres well. The proposed zonal allocation is described below.

Yeso: Production declines exponentially at 84%/yr. for one year, followed by 35%/yr. for oil and 32%/yr. for gas. (Best engineering estimate using the production history of nearby Devon wells.)

Qi	= 90 bopd	d=84%/yr.
Q1yr	= 14 bopd	d=35%/yr.
Qel	= 1.5 bopd	assumed

$$EUR = \frac{-365 (90-14)}{\ln (1-.84)} + \frac{-365 (14-1.5)}{\ln(1-.35)} = 25.7 \text{ MBO}$$

Qi	= 140 mcf/d	d=84%/yr.
Q1yr	= 22 mcf/d	d=32%/yr.
Qel	= 5 mcf/d	assumed

$$EUR = \frac{-365 (140-22)}{\ln (1-.84)} + \frac{-365 (22-5)}{\ln (1-.32)} = 39.6 \text{ MMCF}$$

San Andres: Production declines exponentially at 80%/yr. for one year, followed by 24%/yr. for oil and 20%/yr. for gas. (Best engineering estimate using the production history of nearby Devon wells.)

$$\begin{aligned} Q_i &= 145 \text{ bopd} & d &= 80\%/yr. \\ Q_{1yr} &= 29 \text{ bopd} & d &= 24\%/yr. \\ Q_{el} &= 1.5 \text{ bopd} & & \text{assumed} \end{aligned}$$

$$EUR = \frac{-365 (145-29)}{\ln (1-.80)} + \frac{-365 (29-1.5)}{\ln (1-.24)} = 62.9 \text{ MBO}$$

$$\begin{aligned} Q_i &= 180 \text{ mcf/d} & d &= 80\%/yr. \\ Q_{1yr} &= 36 \text{ mcf/d} & d &= 20\%/yr. \\ Q_{el} &= 5 \text{ mcf/d} & & \text{assumed} \end{aligned}$$

$$EUR = \frac{-365 (180-36)}{\ln (1-.80)} + \frac{-365 (36-5)}{\ln (1-.20)} = 83.4 \text{ MMCF}$$

$$\text{Yeso Oil} = \frac{25.7 \text{ MBO}}{25.7 + 62.9} = .29 = 29\%$$

$$\text{San Andres Oil} = 1-.29 = .71 = 71\%$$

$$\text{Yeso Gas} = \frac{39.6 \text{ MMCF}}{39.6 + 83.4} = .32 = 32\%$$

$$\text{San Andres Gas} = 1-.32 = .68 = 68\%$$

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

State of New Mexico
Energy, Minerals and Natural Resources Department

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

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

Form C-102
Revised JUNE 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

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

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code 96836	Pool Name RED LAKE; GLORIETA YESO, NORTHEAST
Property Code 29793	Property Name A A O FEDERAL	Well Number 11
GRID No. 14049	Operator Name MARBOB ENERGY CORPORATION	Elevation 3592'

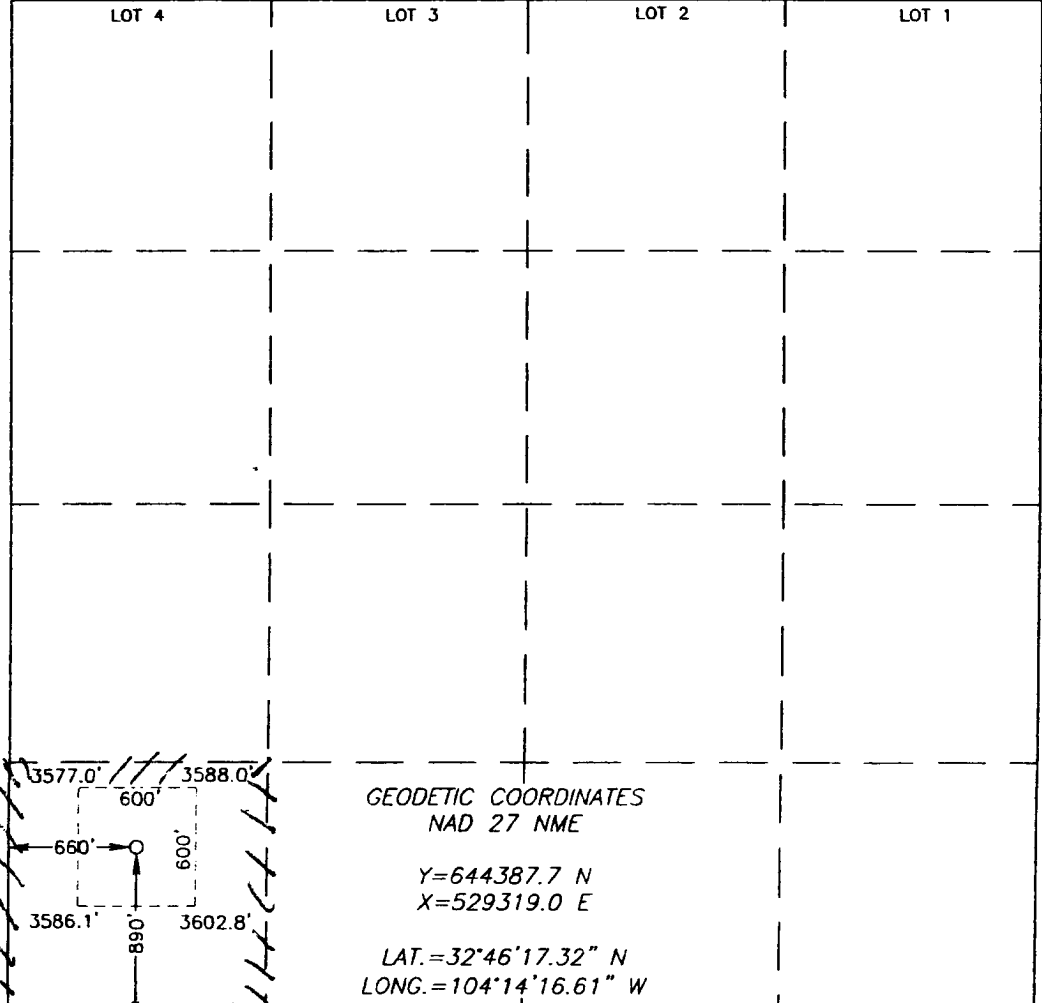
Surface Location

UL or lot No. M	Section 1	Township 18-S	Range 27-E	Lot Idn	Feet from the 890	North/South line SOUTH	Feet from the 660	East/West line WEST	County EDDY
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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

LOT 4	LOT 3	LOT 2	LOT 1
			
<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><u>Nancy Bratcher</u> Signature Nancy T. Bratcher Printed Name Land Department Title 12/6/2005 Date</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>NOVEMBER 7, 2005 Date Surveyed LA Signature & Seal of Professional Surveyor <u>Ronald J. Eidson 11/10/05</u> 05.11.1702 Certificate No. RONALD J. EIDSON 3239</p>			

OCD-ARTESIA
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: March 31, 2007

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		MAR 15 2006 OCD-ARTESIA	5. Lease Serial No. NMNM0557371
2. Name of Operator MARBOB ENERGY CORPORATION		6. If Indian, Allottee or Tribe Name	
3a. Address P. O. BOX 227, ARTESIA, NM 88211-0227		7. If Unit or CA/Agreement, Name and/or No.	
3b. Phone No. (include area code) 27 505-748-3303		8. Well Name and No. AAO FEDERAL #11	
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) SEC. 1-T18S-R27E, UNIT M 890 FSL 660 FWL, NW/4SW/4		9. API Well No. 30-015-34555	
		10. Field and Pool, or Exploratory Area RED LAKE GLORIETA/YESO NE	
		11. County or Parish, State EDDY COUNTY, NM	

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

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

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

SEE ATTACHED C-107A APPLICATION FOR DOWNHOLE COMMINGLING
DIVISION ORDER #R-11363 PRE-APPROVED POOLS

THE PROPOSED ALLOCATION IS: REDLAKE Q-GR-SA 51300 - OIL 71% - GAS 68%
REDLAKE GLORIETA/YESO NE 96836 - OIL 29% - GAS 32%

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

**SUBJECT TO
LIKE APPROVAL
BY NMOC**

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) BRIAN COLLINS		Title ENGINEER
Signature		Date 03/07/06

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by DAVID E. CLARK Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Date MAR 13 2006 Office
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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.