PWVJ 0335836022 DHC-3228 MYT State of New Mexico Form C-107A Energy, Minerals and Natural Resources Department Revised June 10, 2003 Oil Conservation Division APPLICATION TYPE 1220 South St. Francis Dr. X Single Well Santa Fe, New Mexico 87505 Establish Pre-Approved Pools **EXISTING WELLBORE** APPLICATION FOR DOWNHOLE COMMINGLING Yes No Х ARTESIA, NM 88211-0027 P O BOX 227 Address EDDY COUNTY 0-34-17S-27E Unit Letter-Section-Township-Range County OGRID No. 14049 Property Code 32848 API No. 30-015-32995 Lease Type: X Federal _State __ Fee **UPPER ZONE** INTERMEDIATE ZONE LOWER ZONE RED LAKE GLORTETA YESO NE RED LAKE Q-GB-SA 96836 2998-3280' PERFORATED 1924-2801' PERFORATED ARTIFICIAL LIFT ARTIFICAL LIFT EST. 100 PSI EST. 50 PSI PRODUCING BHP PRODUCING BHP 41.8° COMPLETION UNDERWAY NEW ZONE Date: Date: N/A N/A Rates: Rates: Gas Oil Gas Oil Gas 29 32 68 % % % % % % **ADDITIONAL DATA** Are all working, royalty and overriding royalty interests identical in all commingled zones? No If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? No X Are all produced fluids from all commingled zones compatible with each other? _ No_ ___ 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_X __ No_ R-11363 PRE-APPROVED POOL Any additional statements, data or documents required to support commingling. PRE-APPROVED POOLS

Attachments:

District I

District II

District III

Operator

Lease

Pool Name

Pool Code

District IV

1220 S. St. Francis Dr., Santa Fe, NM 43303

OD FEDERAL #1

MARBOB ENERGY CORPORATION

DATA ELEMENT

Top and Bottom of Pay Section (Perforated or Open-Hole Interval)

perforation in the lower zone is within 150% of the

Date and Oil/Gas/Water Rates of

applicant shall be required to attach production

Fixed Allocation Percentage

than current or past production, supporting data or

Will commingling decrease the value of production?

NMOCD Reference Case No. applicable to this well:

depth of the top perforation in the upper zone) Oil Gravity or Gas BTU (Degree API or Gas BTU)

Method of Production (Flowing or Artificial Lift) **Bottomhole Pressure**

Producing, Shut-In or

Last Production.

estimates and supporting data.)

explanation will be required.)

New Zone

Well No.

51300

38.5°

Date:

Rates:

Oil

71

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.

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

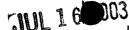
Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.

Dottomitole pressure data.									
I hereby certify that the infognation above is true and complete to the best of my knowledge and belief.									
SIGNATURE Similar TITLE	ENGINEER	DATE_	16 Dec 03						
TYPE OR PRINT NAME BRIAN COLLINS	TELEPHONE NO. (505)	748-3303						
E-MAIL ADDRESS engineering@marbob.com									

Submit 3 Copies To Appropriate District Office District I Energy, Minerals and Natural Re	Form C-103 sources Revised May 08, 2003
1625 N. French Dr., Hobbs, NM 88240	WELL API NO.
District II 1301 W. Grand Avc., Artesia, NM 88210 OIL CONSERVATION DIV	1 5 Indicate Type of Lease
District III 1220 South St. Francis D 1000 Rio Brazos Rd., Aztec, NM 87410	r. STATE FEE
1000 RIO BIAZOS Rd., AZIEC, NM 87410 Santa Fe, NM 87505 1220 S. St. Francis Dr., Santa Fe, NM 87505	6. State Oil & Gas Lease No. N/A
SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACDIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUC	
PROPOSALS.) 1. Type of Well:	8. Well Number
Oil Well Gas Well Other	1
2. Name of Operator MARBOB ENERGY CORPORATION	9. OGRID Number 14049
3. Address of Operator P O BOX 227, ARTESIA, NM 88211-0	10. Pool name or Wildcat RED LAKE GLORIETA/YESO NE
4. Well Location	
Unit Letter O : 330 feet from the SOUTH	line and 2310 feet from the EAST line
Section 34 Township 17S Range 2	7E NMPM EDDY County NM
11. Elevation (Show whether DR, RKB, 3601' GR	RT, GR, etc.)
12. Check Appropriate Box to Indicate Nature	
NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK PLUG AND ABANDON REM	SUBSEQUENT REPORT OF: EDIAL WORK ALTERING CASING
TEMPORARILY ABANDON	MENCE DRILLING OPNS PLUG AND
	NG TEST AND ABANDONMENT ENT JOB
OTHER: DOWNHOLE COMMINGLING OTH	ER:
 Describe proposed or completed operations. (Clearly state all perti of starting any proposed work). SEE RULE 1103. For Multiple Com- or recompletion. 	nent details, and give pertinent dates, including estimated date pletions: Attach wellbore diagram of proposed completion
SEE ATTACHED C-107A APPLICATION FOR DOWNHOLE CO DIVISION ORDER #R-11363 PRE-APPROVED POOLS	DMMINGLING
THE PROPOSED ALLOCATION IS: REDLAKE Q-GB-SA 5130 REDLAKE GLORIETA/YE	0 - OIL 71% - GAS 68% SO NE 96836 - OIL 29% - GAS 32%
NEW ALLOCATION WILL BE SUBMITTED IF ACTUAL WELL F	
I hereby certify that the information above is true and complete to the best of n	
SIGNATURE Shim lollin TITLE ENGINE	ER DATE 16 Dec03
Type or print name BRIAN COLLINS	Telephone No. (505) 748-3303
(This space for State use)	
APPPROVED BYTITLE Conditions of approval, if any:	DATE

DISTRICT II

DISTRICT IV



State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102 Revised February 10, 1994 Submit to Appropriate District Office

State Lease - 4 Copies Fee Lease - 3 Copies

☐ AMENDED REPORT

P.O. Drawer DD, Artesia, NM 88211-0719

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

P.O. BOX 2088, SANTA PR. N.M. 87504-2088

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number			Pool Code 96836			Pool Name RED LAKE; GLORIETA YESO, NORTHEAST					
Property Co	ode		1	FEDERAL Well Number				aber			
ogrid no. 14049			MA	ARBOB	ENERG	erator Name Elevation 3601'					
					Surfac	e Loc					
UL or lot No.	Section 34	Township 17-S	Range 27–E	Lot Idn	Feet from		North/South line SOUTH		Feet from the 2310	East/West line EAST	County EDDY
			Bottom	Hole Loc	cation If	Diffe	rent From Su	ırfa	ce		
UL or lot No.	Section	Township	Range	Lot Idn	Feet from	n the	North/South line	•	Feet from the	East/West line	County
Dedicated Acres	Joint of	r Infili Co	nsolidation (Code Or	der No.			. <u></u> ,		<u> </u>	<u> </u>
NO ALLOV	VABLE W						NTIL ALL INT			EEN CONSOLIDA	ATED
	- 								I hereb contained hereis best of my know Signature Melani Printed Nam Land D Title July 3 Date SURVEYO	epartment 0. 2003 OR CERTIFICAT that the well locate	TION
		GEODETIC CO NAD 27 Y = 649 X = 521 LAT. 32*47' LONG. 104*15	9005.1 021.8 03.07*N 5'53.75*W	į 5	3600		0'	->	actual surveys supervison an correct to the Date Surveye Signature Professional	Seal of Surveyor 7	L.A.

District I

State of New Mexico Energy, Minerals and Natural Resources Department

Form C-107A Revised June 10, 2003

District II

District III
1000 Rio Brazos Road, 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

APPLICATION TYPE X Single Well
Establish Pre-Approved Pools
EXISTING WELLBORE

APPLICATION FOR DOWNHOLE COMMINGLING

X Yes ___No

MARBOB ENERGY CORPORAT			ESIA, NM 88211-0027			
perator "O	Add		COUNTY			
OD FEDERAL #2	0-34-17 Well No. Unit Letter-S	S-2/E EDD1 Section-Township-Range	COUNTY			
OGRID No. 14049 Property Co		15-32986 Lease Type: X	_FederalStateFee			
DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE			
Pool Name	RED LAKE Q-GB-SA		RED LAKE GLORIETATYESO			
Pool Code	51300		96836			
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	1933-2790' PERFORAT	ED	3059-3295' PERFORATED			
Method of Production (Flowing or Artificial Lift)	ARTIFICAL LIFT		ARTIFICAL 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)	38.5°		41.8°			
Producing, Shut-In or New Zone	NEW ZONE		COMPLETION UNDERWAY			
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production	Date: N/A	Date:	Date: N/A			
estimates and supporting data.)	Rates:	Rates:	Rates:			
Fixed Allocation Percentage (Note: If allocation is based upon something other	Oil Gas	Oil Gas	Oil Gas			
than current or past production, supporting data or explanation will be required.)	71 % 68 %	% %	29 % 32 %			
	ADDITION	NAL DATA				
Are all working, royalty and overriding f not, have all working, royalty and ov	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	Yes X No No No			
Are all produced fluids from all commingled zones compatible with each other? Yes X No						
Vill commingling decrease the value o	of production?		Yes NoX			
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 X No						
NMOCD Reference Case No. applicab	le to this well:R-11363 PI	RE-APPROVED POOL				
Attachments: C-102 for each zone to be comming Production curve for each zone for For zones with no production histo Data to support allocation method Notification list of working, royalty	gled showing its spacing unit and ac at least one year. (If not available, bry, estimated production rates and s	creage dedication. attach explanation.) supporting data. or uncommon interest cases.				
	PRE-APPRO	OVED POOLS				
If application is	s to establish Pre-Approved Pools, the	he following additional information wi	ill be required:			
List of other orders approving downho List of all operators within the propose Proof that all operators within the prop Bottomhole pressure data.	ed Pre-Approved Pools	••				
I hereby certify that the information above is true and complete to the best of my knowledge and belief.						
SIGNATURE Skmit	Indler' TITLE	ENGINEER	DATE 16 Dec 03			
TYPE OR PRINT NAME BRIA	N COLLINS	TELEPHONE NO. (748-3303			
E-MAIL ADDRESS engin	eering@marbob.com					

Submit 3 Copies To Appropriate District Office State of New Mexico	Form C-103
District I 1625 N. French Dr., Hobbs, NM 88240	Revised May 08, 2003 WELL API NO.
District II 1301 W. Grand Avc., Artesia, NM 88210 OIL CONSERVATION DIVISION	30-015-32986 5. Indicate Type of Lease
District III 1000 Rio Brazos Rd., Aztec, NM 87410 Santa Fe, NM 87505	STATE FEE
District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505	6. State Oil & Gas Lease No. N/A
SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A	7. Lease Name or Unit Agreement Name
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	OD FEDERAL
1. Type of Well: Oil Well Gas Well Other	8. Well Number 2
2. Name of Operator MARBOB ENERGY CORPORATION	9. OGRID Number
3. Address of Operator P O BOX 227, ARTESIA, NM 88211-0227	14049 10. Pool name or Wildcat
4. Well Location	RED LAKE GLORIETA/YESO NE
	655 feet from the EAST line
Section 34 Township 17S Range 27E 11. Elevation (Show whether DR, RKB, RT, GR, etc.)	NMPM EDDY County NM
3604' GR 12. Check Appropriate Box to Indicate Nature of Notice	Penart or Other Date
	SSEQUENT REPORT OF:
PERFORM REMEDIAL WORK PLUG AND ABANDON REMEDIAL WO	RK ALTERING CASING
TEMPORARILY ABANDON CHANGE PLANS COMMENCE DE	RILLING OPNS PLUG AND ABANDONMENT
PULL OR ALTER CASING MULTIPLE CASING TEST A CEMENT JOB	
OTHER: DOWNHOLE COMMINGLING OTHER:	
13. Describe proposed or completed operations. (Clearly state all pertinent details of starting any proposed work). SEE RULE 1103. For Multiple Completions: A or recompletion.	
SEE ATTACHED C-107A APPLICATION FOR DOWNHOLE COMMINGLED DIVISION ORDER #R-11363 PRE-APPROVED POOLS	NG
THE PROPOSED ALLOCATION IS: REDLAKE Q-GB-SA 51300 - OIL 71 REDLAKE GLORIETA/YESO NE 96	
NEW ALLOCATION WILL BE SUBMITTED IF ACTUAL WELL PRODUCT THAN THAT ABOVE.	ION IS SIGNIFICANTLY DIFFERENT
I hereby certify that the information above is true and complete to the best of my knowled	
SIGNATURE 2 millim TITLE ENGINEER	DATE 16 Dec03
Type or print name BRIAN COLLINS	Telephone No. (505) 748-3303
(This space for State use)	
APPPROVED BYTITLE Conditions of approval, if any:	DATE

DISTRICT" I P.O. Box 1980, Hobbs, NM 88241-1980

P.O. Drawer DD, Artesia, NM 88211-0719

Consolidation Code

State of New Mexico

Energy, Minerals and Natural Resources Departm

Form C-102 Revised February 10, 1994 Submit to Appropriate District Office

OIL CONSERVATION DIVISION

P.O. Box 2088

State Lease - 4 Copies Fee Lease - 3 Copies

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

Dedicated Acres

DISTRICT II

DISTRICT IV P.O. BOX 2088, SANTA FE, N.M. 87504-2088

Joint or Infill

WELL LOCATION AND ACREAGE DEDICATION PLAT

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

API	Number	Pool Code Pool Name							
				96836	REI	RED LAKE; GLORIETA YESO, NORTHEAST			
Property	Code	Property Name OD FEDERAL						Well Number	
0GRID N	0.		Operator Name MARBOB ENERGY CORPORATION					Elevation 3604'	
Surface Location									
UL or lot No.	Section 34	Township Range Lot Idn Feet from the North/South line Feet from the 17-S 27-E 990 SOUTH 1655				East/West line EAST	County EDDY		
Bottom Hole Location If Different From Surface									
UL or lot No.	Section	Township	ownship Range Lot Idn Feet from the North/South line Feet from the						County

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED

Order No.

			N APPROVED BY TH	STS HAVE BEEN CONSULIDATED IE DIVISION
X LAT.	ETIC COORDINATES NAD 27 NME (= 649666.1 = 521672.8 . 32'47'09.61"N . 104'15'46.12"W	000	03.8'	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. Signature Melanie J. Parker Printed Name Land Department Title July 30, 2003 Date 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 supervison and that the same is true and correct to the best of my belief. JULY 11, 2003 Date Surveyed LA. Signature & Seal of Professional Surveyor MANUAL Surveyor ACTIFICATION LA. Correct to the Dest of my belief. Certificate No. RONALD J. EIDSON 3239 GARY EIDSON 3239 GARY EIDSON 12641

Engineering Summary Form C-107A Application for Downhole Commingling

Marbob Energy Corporation
OD Federal No. 1 (Unit O, Sec. 34-T17S-R27E)
OD Federal No. 2 (Unit O, Sec. 34-T17S-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 wells. 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 these wells will be rod pumped in a pumped down condition. The MJ State No. 1 is currently completed in the Yeso and will be used as a "typical" Yeso well. The MJ State No. 2 is currently completed in the San Andres and 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 mcfd d=84%/yr.
Q1yr = 22 mcfd d=32%/yr.
Qel = 5 mcfd assumed

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

<u>San Andres</u>: 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.)

Qi = 145 bopd d=80%/yr. Q1yr = 29 bopd d=24%/yr. Qel = 1.5 bopd assumed

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

Qi = 180 mcfd d=80%/yr. Q1yr = 36 mcfd d=20%/yr. Qel = 5 mcfd assumed

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

(E'S LEASES	10 2002) MONTH: 1910 5	001 =
ARCO 26 A	MJ STATE TP LP PREV EST TOTAL	# #
WTR ELK HORN GPM	TP LP PREV EST TOTAL	OIL WTR
302 184/	- 249 94 92 17474	OIL WTR 5
170 130	- 24.5 91. 90 17570	70 - 2
220 120	- 24.7.95 90 17WW	32 - 3 =
1213 130	- 299 96 NOS 17771	$\frac{32}{32} - \frac{3}{4} = 0$
1357 /30	- 23.1 95 94 17862	28 5
126	- 25 94 93 17952	
193 /126	- 25 94 92 18043	de - 7
200 / 126	253 95 93 19150	32 - 8
220 / 124	24.2 151 115 18302	85 — 9 106 — 10
1:15	35.7.330 339 18414	140 — 11
178/ / 120	25.9 233 234 15950	110 - 12
169 \ 140	35.5 336 340 19193	98 - 13
217 1/ 124	29.5 238 249 19422	118 - 14
145 X 128	25.1 258 351 19681,	127 - 15
309 ./\ 130	241 266 264 19948	1112 - 16
301 / \ 135	25.1 265 2014 20234	183 - 17
235/ /35	26.0 264 265 20418	175 - 18
234/ /35	253 263 255 20152	1111
199 \ 135	25.0 241 202 21236	161 - 20 55 174 - 21 5
$\frac{3}{4}$ 0 \ $\frac{135}{135}$	255 250 241 21493	- I I I I I I I I I I I I I I I I I I I
130	240 216 213 21181	101 6110 22
1 /13	26.0 282 212 22053	1/13 24 8
		25
	1J5+, #2 San Andres IP & 175	193 24 25 25 30 = 145 BOPD 26 +
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	· · · · · · · · · · · · · · · · · · ·	95 = 180 MCFD 27
	- an ann	75 = 180 MCPD 27 28 29 30 31 39
	JSt.#1 Yeso IP & 90 BOPD (= 140 MCFD)	January 2002) 29
	~ 170 more)	30 5
1	· · · · · · · · · · · · · · · · · · ·	31 >2

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December 11, 2003

Bureau of Land Management 2909 W. 2nd St. Roswell, NM 88201

Attn: Mr. Armando Lopez

Re: Downhole Commingling Application

OD Federal #1 - Unit O, Sec. 34-T17S-R27E OD Federal #2 - Unit O, Sec. 34-T17S-R27E

Eddy County, New Mexico

Dear Mr. Lopez:

Enclosed are copies of the downhole commingling applications submitted to the NMOCD for the captioned wells.

Please contact me at 505-748-3303 if you have any questions.

Sincerely,

Brian Collins

Petroleum Engineer

BC/dlw enclosure