

Submit 3 Copies To Appropriate District Office
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

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised March 25, 1999

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-015-32231
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. B-7244
7. Lease Name or Unit Agreement Name: TDF State
8. Well No. 1
9. Pool name or Wildcat Red Lake Glorieta/Yeso NE

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 F : 1960 feet from the North line and 1650 feet from the West line
Section 2 Township 18S Range 27E NMPM County Eddy

10. Elevation (Show whether DR, RKB, RT, GR, etc.)
3561'

11. 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 COMPLETION ☐

OTHER: Downhole Commingling ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐
CASING TEST AND CEMENT JOB ☐

OTHER: ☐

12. 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 recompilation.

See attached C-107A Application for Downhole Commingling

Division order #R-11363 Pre-approved pools

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 20 Jan 03

Type or print name Brian Collins Telephone No. 505-748-3303

APPROVED BY Jim W. Brown TITLE District Supervisor DATE JAN 24 2004

Conditions of approval, if any:

District I
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1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-107A
Revised May 15, 2000

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505
APPLICATION FOR DOWNHOLE COMMINGLING

APPLICATION TYPE
 X Single Well
 Establish Pre-Approved Pools
EXISTING WELLBORE
 X Yes No

Operator Marbob Energy Corporation Address P. O. Box 227, Artesia, NM 88210-0227
Lease TDF State 1 Well No. F-2-18S-27E Unit Letter-Section-Township-Range Eddy County
OGRID No. 014049 Property Code 29595 API No. 30-015-32231 Lease Type: Federal X State Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Red Lake Q-GB-SA		Red Lake Glorieta Yeso NE
Pool Code	51300		96836
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	2021-2948' perforated		3210-3516' 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. 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		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: 1/15/03 Rates: 21 bopd 40 mcfpd
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 X 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 X No
Will commingling decrease the value of production? Yes No X
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. 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 20 Jan 03
TYPE OR PRINT NAME Brian Collins TELEPHONE NO. (505) 748-3303

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

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

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

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

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-102
Revised February 10, 1994
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
	96836	RED LAKE; GLORIETA YESO, NORTHEAST
Property Code	Property Name	Well Number
	TDF STATE	1
OGRID No.	Operator Name	Elevation
14049	MARBOB ENERGY CORPORATION	3561'

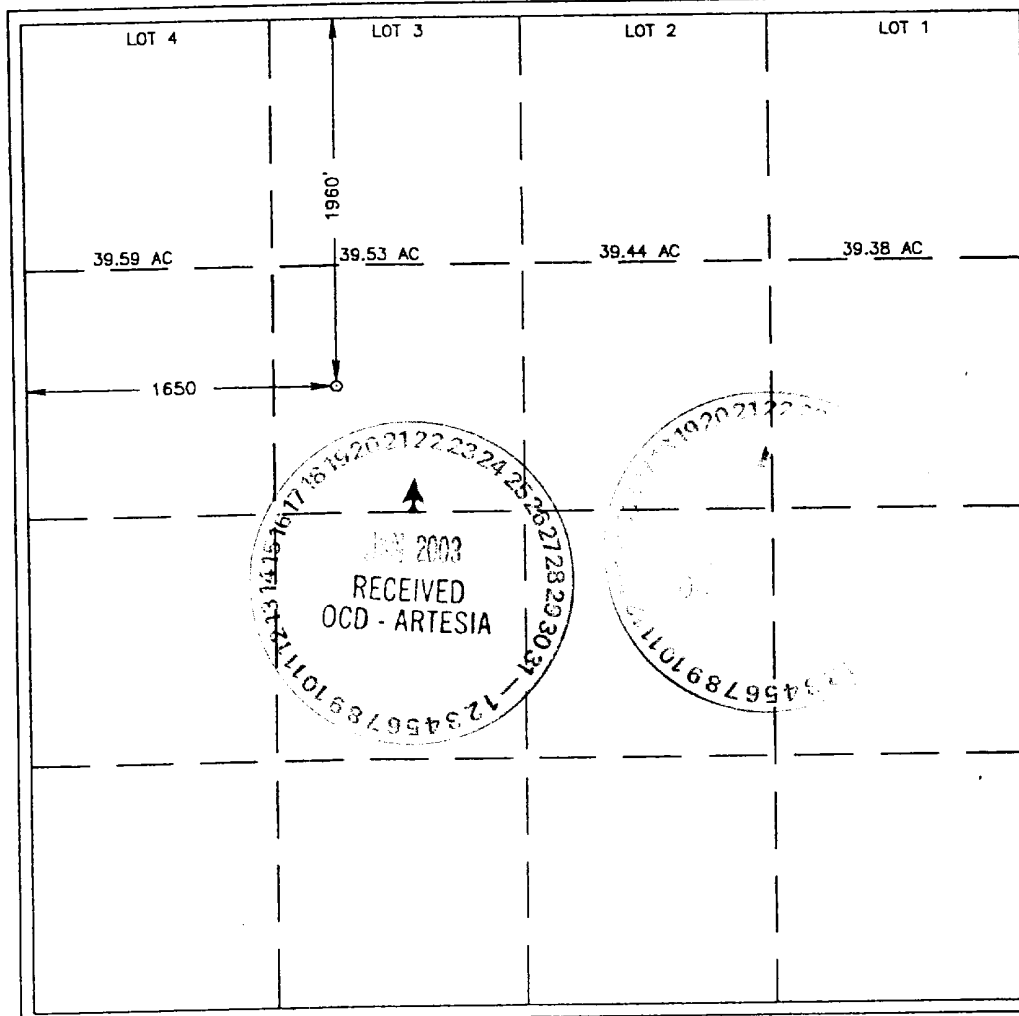
Surface Location


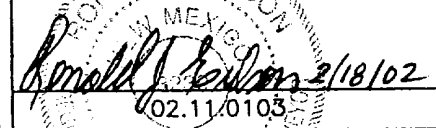
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
F	2	18-S	27-E		1960	NORTH	1650	WEST	EDDY

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
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						
40									

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 the the information contained herein is true and complete to the best of my knowledge and belief.	
	
Signature	
DIANA J. CANNON	
Printed Name	
PRODUCTION ANALYST	
Title	
MARCH 5, 2002	
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 supervision, and that the same is true and correct to the best of my belief.	
FEBRUARY 14, 2002	
Date Surveyed	
AWB	
Signature & Seal of Professional Surveyor	
	
02.11.0103	
Certificate No. RONALD J. EIDSON 3239	
GARY EIDSON 12641	

Engineering Summary
Form C-107A
Application for Downhole Commingling

Marbob Energy Corporation
TDF State No. 1 (Unit F, Sec. 2-T18S-R27E)
AAO Federal No. 1 (Lot 4, Sec. 1-T18S-R27E)
AAO Federal No. 2 (Lot 3, 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 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 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.)

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

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

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

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

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

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

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

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

KEY LEASES

Time 2002) MONTH: Jan 2002

ARCO 26 A			MJ STATE							
WTR	ELK HORN	GPM	TP	LP	Gas PREV	Gas EST	TOTAL	OIL	WTR	
302		124	—	24.9	94	92	17474	30	—	1
170		130	—	24.5	96	90	17570	30	—	2
220		126	—	24.7	95	90	17666	32	—	3
213		130	—	24.7	96	103	17771	32	—	4
357		130	—	23.1	95	94	17862	28	—	5
205		126	—	25	94	93	17952	28	—	6
193		126	—	25	94	92	18043	26	—	7
200		126		25.3	95	93	18150	32	—	8
220		124		24.2	151	115	18302	85	—	9
115		124		25.1	189	203	18443	106	—	10
267		124		25.2	220	229	18414	140	—	11
178		120		25.9	233	234	18511	110	—	12
169		140		25.5	236	240	19193	98	—	13
217		124		27.5	238	249	19422	118	—	14
165		128		25.7	258	351	19681	127	—	15
309		130		24.7	266	264	19948	172	—	16
201		135		25.1	265	274	20224	182	—	17
235		135		26.0	264	265	20478	175	—	18
204		135		25.3	263	255	20752	177	—	19
199		135		27.0	257	229	20999	161	—	20
218		126		25.0	247	202	21236	174	—	21
300		135		25.5	250	241	21493	175	—	22
176		130		26.0	276	273	21781	174	540	23
173		130		26.0	282	272	22053	173		24
										25
										26
										27
										28
										29
										30
										31

MJ St. #2 San Andres IP $\approx 175 - 30 = 145$ BOPD
 $\approx 275 - 95 = 180$ MCFD

MJ St. #1 Yeso IP ≈ 90 BOPD
 ≈ 140 MCFD (January 2002)

Yeso (MJ-1) + S. Andres (MJ St. #2)

Yeso Only (MJ St. #1)

MJ St. #2 San Andres IP $\approx 175-30 = 145$ BOPD
 $\approx 275-95 = 180$ MCFD

MJ St. #1 Yeso IP ≈ 90 BOPD
 ≈ 140 MCFD (January 2002)

Yeso Only (MJ St. #1)
 Yeso (MJ-1) + S. Andres (MJ St. #2)