

ABOVE THIS LINE FOR DIVISION USE ONLY 3678

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.

Print or Type Name

Signature

Title

Date

e-mail Address

District I
1625 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

2006 MAR 27 PM 12:14
APPLICATION FOR DOWNHOLE COMMINGLING

MARBOB ENERGY CORPORATION P O BOX 227 Address ARTESIA, NM 88211-0027
Operator
D STATE #29 P-25-T17S-R28E EDDY, NM
Lease Well No. Unit Letter-Section-Township-Range County
OGRID No. 14049 Property Code 25375 API No. 30-015-31940 Lease Type: ☐ Federal ☒ State ☐ Fee

| DATA ELEMENT | UPPER ZONE | INTERMEDIATE ZONE | LOWER ZONE |
|---|-----------------------|-------------------|---|
| Pool Name | Artesia Qn-GB-SA | | Artesia Glorieta/Yesp |
| Pool Code | 3230 | | 96830 |
| Top and Bottom of Pay Section (Perforated or Open-Hole Interval) | 2952-3172' Perforated | | 4064-4370' 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) | 50 psi producing BHP | | 100 psi producing BHP |
| Oil Gravity or Gas BTU (Degree API or Gas BTU) | 36° | | 39° |
| 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: 02/10/06 Rates: 44 BOPD 108 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 29 % 48 % | Oil Gas % % | Oil Gas 71 % 52 % |

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: Administrative Order DHC-2906

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 03/22/06
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
D State No. 21 (I-25-T17S-R28E)
D State No. 22 (P-25-T17S-R28E)
D State No. 28 (O-25-T17S-R28E)
D State No. 29 (P-25-T17S-R28E)
DAD State No. 41 (J-25-T17S-R28E)
DAD State No. 42 (I-25-T17S-R28E)

As shown on the attached production plots, the estimated EUR for the Yeso is 42 MBO/56 MMCF and for the San Andres is 17 MBO/51 MMCF. The proposed zonal allocation is:

Oil: Yeso = $\frac{42 \text{ MBO}}{42+17}$ = 71%

San Andres 1-.71 = 29%

Gas: Yeso = $\frac{26 \text{ MMCF}}{56+51}$ = 52%

San Andres 1-.52 = 48%

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

DISTRICT II
P.O. Drawer 88, Artesia, NM 88211-0718

DISTRICT III
1000 Rio Brazos Rd., Artec, 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 |
| | 96830 | ARTESIA GLORIETTA YESO |
| Property Code | Property Name | Well Number |
| 25375 | D STATE | 29 |
| OGRID No. | Operator Name | Elevation |
| 14049 | MARBOB ENERGY CORPORATION | 3672 |

Surface Location

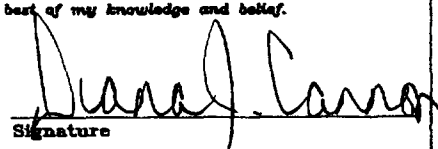
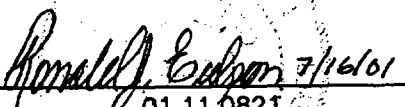
| | | | | | | | | | |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
| P | 25 | 17-S | 28-E | | 510 | SOUTH | 990' | EAST | EDDY |

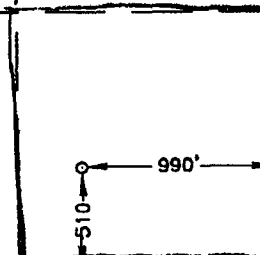
Bottom Hole Location If Different From Surface

| | | | | | | | | | |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| 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

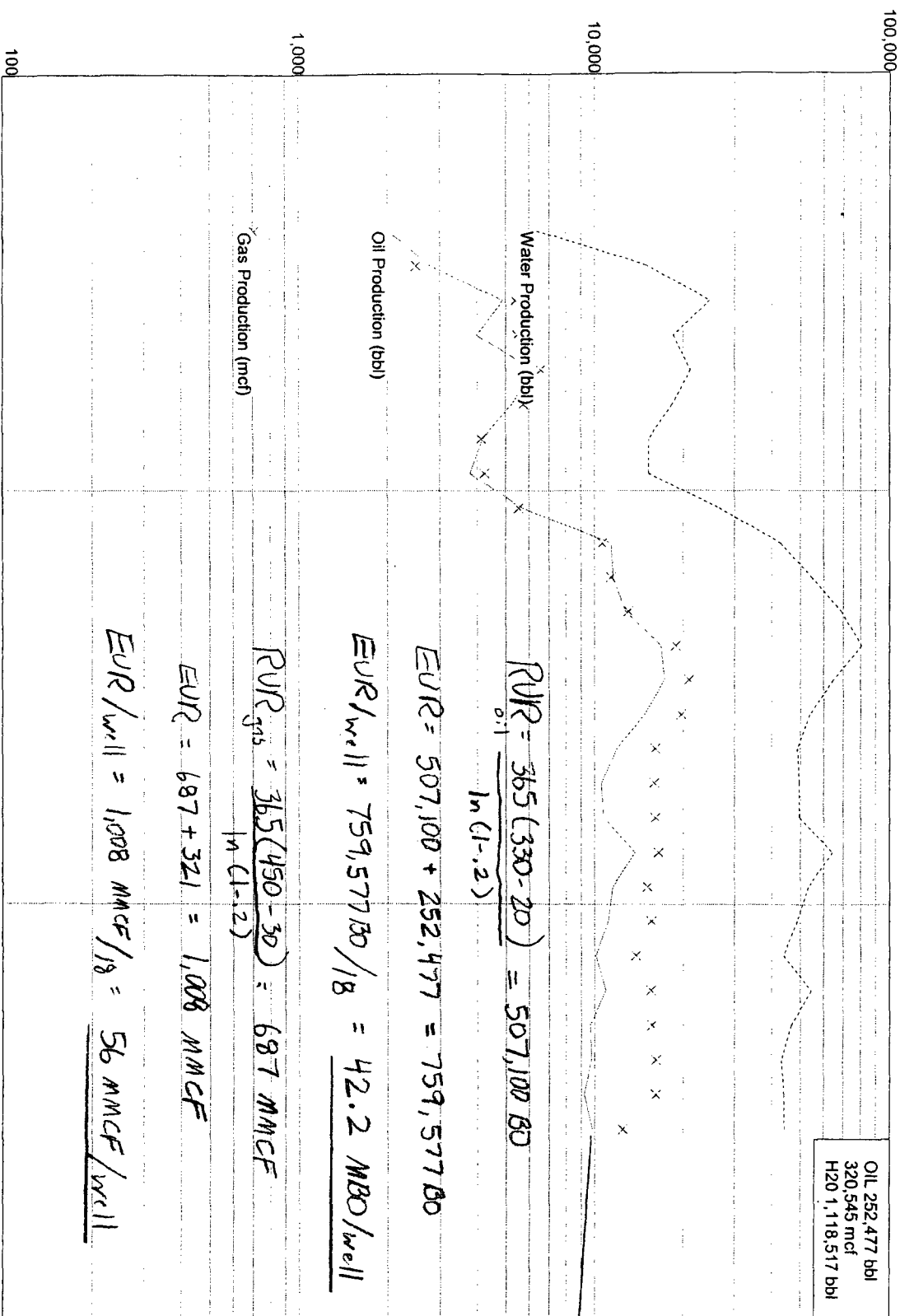
| | | | | | | |
|--|--|--|--|--|---|--|
| | | | | | OPERATOR CERTIFICATION | |
| | | | | | I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. | |
| | | | | |  Signature | |
| | | | | | DIANA J. CANNON Printed Name | |
| | | | | | PRODUCTION ANALYST Title | |
| | | | | | AUGUST 7, 2001 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. | |
| | | | | | JULY 11, 2001 | |
| | | | | | Date Surveyed AWB | |
| | | | | | Signature & Seal of Professional Surveyor | |
| | | | | |  7/16/01 01.11.0821 | |
| | | | | | Certificate No. RONALD J. EDSON 3239 GARY EDSON 12841 | |
| | | | | | | |



18 wells Yaso Production

Lease Name: D STATE
 County, State: EDDY, Unknown
 Operator: MARBOB ENERGY CORPORATION
 Field: ARTESIA
 Reservoir: MULTIPLE
 Location:

D STATE - [MULTIPLE



OIL 252,477 bbl
 320,345 mcf
 H2O 1,118,517 bbl

$d = 20 \frac{1}{4}''$

Oil Production (bb)
 Gas Production (mcf)
 Water Production (bb)

Production Rates

Gas Production (mcf)

Oil Production (bb)

Water Production (bb)

$$RUR = \frac{365(330-20)}{\ln(1.2)} = 507,100 \text{ BO}$$

$$EUR = 507,100 + 252,477 = 759,577 \text{ BO}$$

$$EUR/well = 759,577 \text{ BO} / 18 = 42.2 \text{ MBO/well}$$

$$RUR_{gas} = \frac{365(450-30)}{\ln(1.2)} = 687 \text{ MMCF}$$

$$EUR = 687 + 321 = 1,008 \text{ MMCF}$$

$$EUR/well = 1,008 \text{ MMCF} / 18 = 56 \text{ MMCF/well}$$

Time

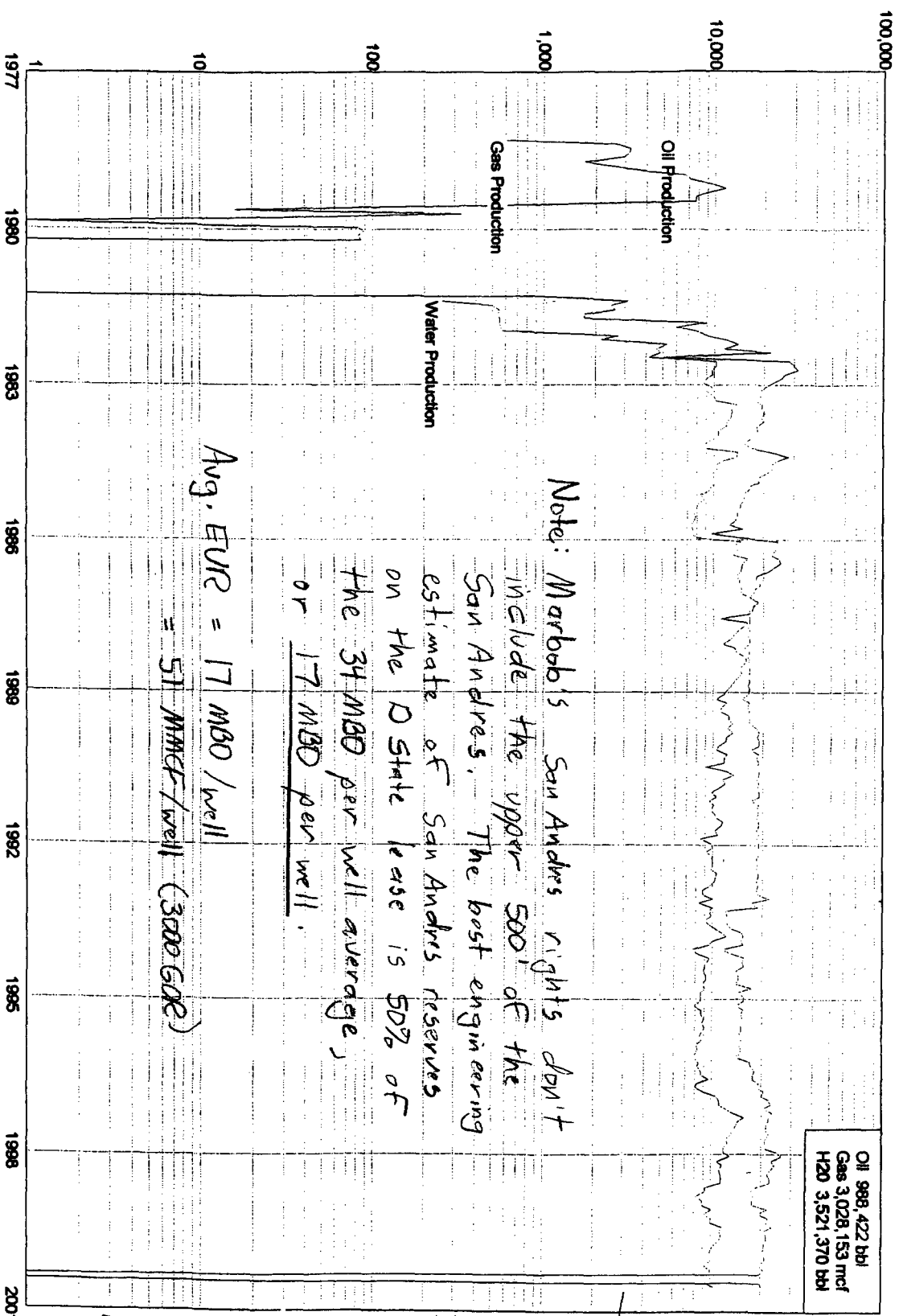
Sec. 26, 27, 34 - 175-28e
Eddy, NM

Lease Name: MULTIPLE
County, State: EDDY, Unknown
Operator: MARBOB ENERGY CORPORATION
Field: MULTIPLE
Reservoir: QUEEN-GRAYBURG-SAN A
Location:

MULTIPLE - MULTIPLE

Avg. EUR per well = 33.9 MBO
San Andres
Avg. GOR = 3000 (Avg 101.7 MMCF/w)

Production Rates



Note: Marbob's San Andres rights don't include the upper 500' of the San Andres. The best engineering estimate of San Andres reserves on the D State lease is 50% of the 34 MBO per well average, or 17 MBO per well.

Avg. EUR = 17 MBO / well
= 51 MMCF / well (3000 GOR)

$d_{exp} = 13\% / yr.$

Oil Production
Gas Production
Water Production

$RUR = -365 (Q_1 - Q_2) / \ln (1 - d)$

$Q_1 = 110 bopd$
 $Q_2 = 60 bopd (33\%)$
 $d = 13\% / yr$

$RUR = -365 (110 - 60) / \ln (1 - .13)$
= 131,048 bopd

EUR = 988,422
+ 131,048
1,119,470 BBO

EUR / well =
 $\frac{1,119,470 BBO}{33}$
= 33,923 BBO

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
May 27, 2004

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

| |
|--|
| WELL API NO. 30-015-31940 |
| 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 D STATE |
| 8. Well Number 29 |
| 9. OGRID Number 14049 |
| 10. Pool name or Wildcat ARTESIA GLORIETA/YESO |
| 11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3672' GR |
| Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/> |
| 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
ADMINISTRATIVE ORDER DHC-2906

THE PROPOSED ALLOCATION IS: ARTESIA QN-GB-SA - OIL 29% - GAS 48%
ARTESIA GLORIETA/YESO - OIL 71% - GAS 52%

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 ENGINEER DATE 03/22/06

Type or print name BRIAN COLLINS

E-mail address:
engineering@marbob.com

Telephone No.
505-748-3303

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):