

DATE IN 9/28/06	SUSPENSE	ENGINEER W. Jones	LOGGED IN 10/3/06	TYPE DHC 380	APP NO. PTD50627647990
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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.**

Print or Type Name	Signature	Title	Date
e-mail Address			

District I  
1623 N. French Drive, Hobbs, NM 88240

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-107A  
Revised June 10, 2003

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

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

District III  
1000 Rio Brazos Road, Aztec, NM 87410

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

APPLICATION FOR DOWNHOLE COMMINGLING

2006 SEP 28 PM 1 50

*DJR-3810*

MARBOB ENERGY CORPORATION  
Operator

P O BOX 227  
Address

ARTESIA, NM 88211-0027

A STATE #1

D-34-17S-28E

EDDY, NM

Lease

Well No.

Unit Letter-Section-Township-Range

County

OGRID No. 14049 Property Code 35985 API No. 30-015-34394 Lease Type:  Federal  State  Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Artesia Qn-GB-SA		Artesia Glorieta/Yes
Pool Code	3230		96830
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	2250-2700' PERFORATED		3686-3929' 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)	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 estimates and supporting data.)	Date: N/A Rates:	Date: Rates:	Date: 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 69 % Gas 50 %	Oil % Gas %	Oil 31 % Gas 50 %

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 09/22/06

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  
A State #1 (Unit D, Sec. 34-T17S-R28E)

Marbob Energy proposes to downhole commingle the San Andres (Artesia Q-GB-SA 3230) and the Yeso (Artesia Glorieta Yeso 96830) in the captioned well.

No crossflow will occur because this well will be rod pumped in a pumped down condition. The proposed zonal allocation is described below. A nearby San Andres well, the Moore State #3 (attached), will be used as an analog for decline behavior over time. The best engineering estimate is that the Yeso decline behavior over time will approximate the San Andres decline behavior

Yeso: Best engineering estimate is that Yeso will come in at 20 bopd/150 mcf/d like the nearby Moore State #4. As shown on the attached production plot for the nearby Moore State #3, the best engineering estimate is that the oil will decline 45%/yr for 2 years, 20%/yr for 4 years, followed by 8%/yr thereafter. The gas will decline 70%/yr for first year, 15%/yr for 6 years, followed by 7%/yr thereafter.

Q<sub>oil</sub> = 20 bopd.  
Q<sub>2yr</sub> = 6 bopd  
Q<sub>6yr</sub> = 2.5 bopd  
Q<sub>el</sub> = 1 bopd

$$\begin{aligned} \text{EUR} &= \frac{-365 (20-6)}{\ln (1-.45)} + \frac{-365 (6-2.5)}{\ln(1-.2)} + \frac{-365 (2.5-1)}{\ln (1-.08)} \\ &= 8547 + 5725 + 6566 \text{ BO} \\ &= 20838 \text{ BO} \end{aligned}$$

Q<sub>gas</sub> = 150 mcf/d  
Q<sub>1yr</sub> = 45 mcf/d  
Q<sub>6yr</sub> = 17 mcf/d  
Q<sub>el</sub> = 3 mcf/d

$$\begin{aligned} \text{EUR gas} &= \frac{-365 (150-45)}{\ln (1-.70)} + \frac{-365 (45-17)}{\ln (1-.15)} + \frac{-365 (17-3)}{\ln (1-.07)} \\ &= 31832 + 62885 + 70414 \\ &= 165131 \text{ MCF} \end{aligned}$$

San Andres: Best engineering estimate is that San Andres will start out at 40 bopd/150 mcf and will decline as described previously.

Q<sub>oil</sub> = 40 bopd  
Q<sub>2yr</sub> = 12 bopd  
Q<sub>6yr</sub> = 5 bopd  
Q<sub>el</sub> = 1 bopd

$$\begin{aligned} \text{EUR} &= \frac{-365 (40-12)}{\ln (1-.45)} + \frac{-365 (12-5)}{\ln (1-.2)} + \frac{-365 (5-1)}{\ln (1-.08)} \\ &= 17094 + 11450 + 17510 \\ &= 46054 \text{ BO} \end{aligned}$$

Q<sub>i</sub> = 150 mcf  
Q<sub>1yr</sub> = 45 mcf  
Q<sub>7yr</sub> = 17 mcf  
Q<sub>el</sub> = 3 mcf

EUR = See Yeso calculations  
= 165131 MCF

#### Zonal Allocation

$$\text{Yeso Oil} = \frac{20838 \text{ BO}}{20838 + 46054 \text{ BO}} = 31.15\% \text{ Say } 31\%$$

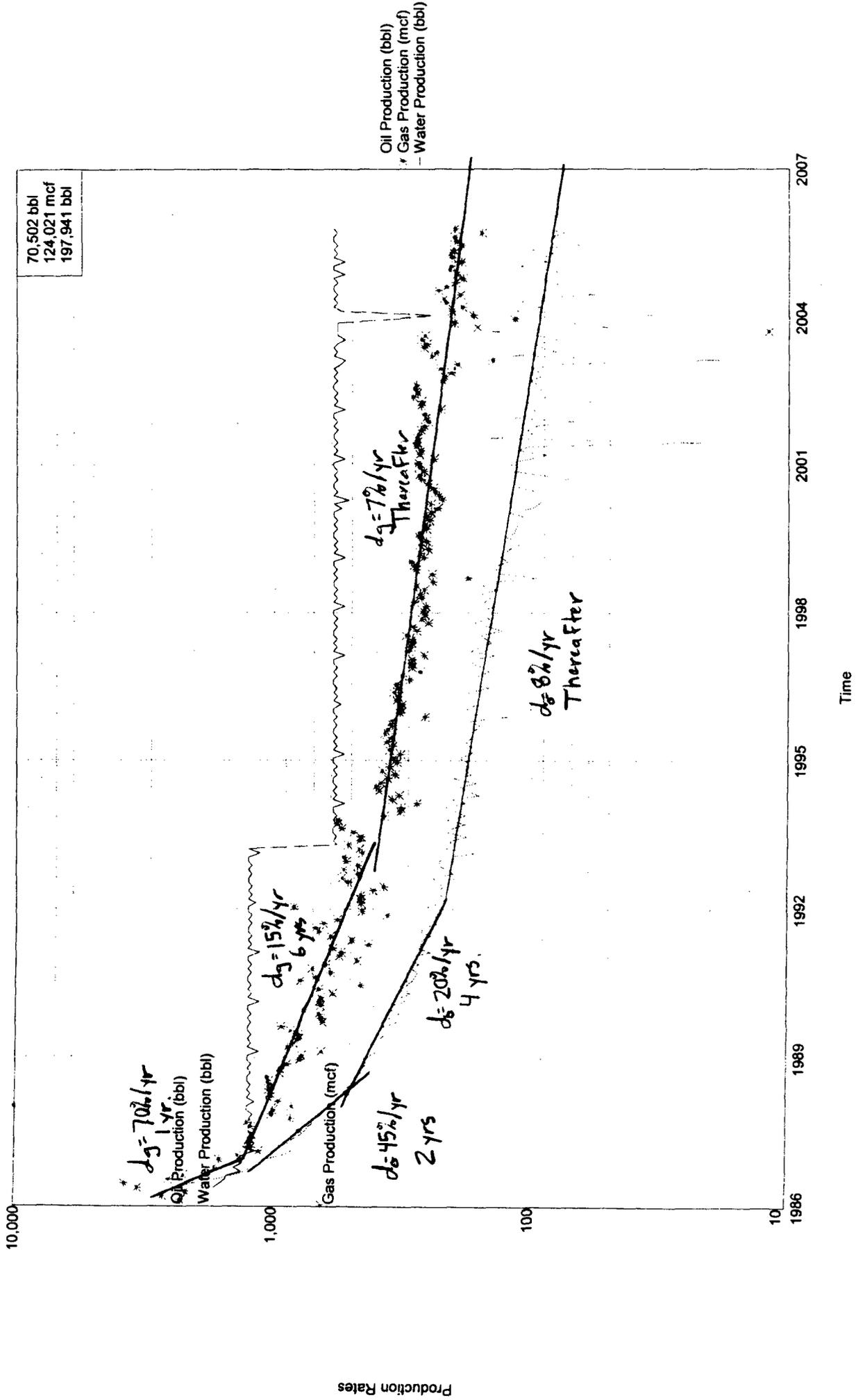
Yeso Gas = San Andres Gas = 50%

San Andres Oil = 100 - 31% = 69%

San Andres Gas = 50%

Lease Name: MOORE STATE  
 County, State: EDDY, NM  
 Operator: MARBOB ENERGY CORPORATION  
 Field: ARTESIA  
 Reservoir: QUEEN-GRAYBURG-SAN A  
 Location: 34 17S 28E SE NE

MOORE STATE 3



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**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Form C-102  
Permit 17479

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1. API Number 30-015-34394	2. Pool Code 96830	3. Pool Name ARTESIA: GLORIETA-YESO (O)
4. Property Code 35184	5. Property Name ARCO STATE	6. Well No. 001
7. OGRID No 14049	8. Operator Name MARBOB ENERGY CORP	9. Elevation 3681

**10. Surface Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
D	34	17S	28E	D	990	N	330	W	EDDY

**11. Bottom Hole Location If Different From Surface**

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
12. Dedicated Acres 40.00		13. Joint or Infill		14. Consolidation Code		15. 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**

	<b>OPERATOR CERTIFICATION</b>	
	<i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i>	
	E-Signed By: Diana Briggs Title: Production Analyst Date: 10/24/2005	
	<b>SURVEYOR CERTIFICATION</b>	
<i>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.</i>		
Surveyed By: RON EIDSON Date of Survey: 10/12/2005 Certificate Number: 3239		

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. 30-015-34394
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 A STATE
8. Well Number 1
9. OGRID Number 14049
10. Pool name or Wildcat ARTESIA GLORIETA YESO
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3681' 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 _____

**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 : 990 feet from the NORTH line and 330 feet from the WEST line  
 Section 34 Township 17S Range 28E NMPM EDDY County NM

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
3681' 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

<b>NOTICE OF INTENTION TO:</b> PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/> PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPL <input type="checkbox"/>		<b>SUBSEQUENT REPORT OF:</b> REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/> COMMENCE DRILLING OPNS. <input type="checkbox"/> P AND A <input type="checkbox"/> CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: <u>Downhole Commingling</u> <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

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: ARTESIA Q-GR-SA 3230 - OIL 69% - GAS 50%  
 ARTESIA GLORIETA YESO 96830 - OIL 31% - GAS 50%

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 09/22/06

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): \_\_\_\_\_