

SWD

FORM C-108  
Revised 4-1-98

218446140

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: Secondary Recovery Pressure Maintenance  Disposal Storage  
Application qualifies for administrative approval?  Yes  No
- II. OPERATOR: MARBOB ENERGY CORPORATION  
ADDRESS: P. O. BOX 227, ARTESIA, NM 88211-0227  
CONTACT PARTY: BRIAN COLLINS PHONE: 505-748-3303
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project?  Yes  No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
  2. Whether the system is open or closed;
  3. Proposed average and maximum injection pressure;
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- \*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- \*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: BRIAN COLLINS TITLE: ENGINEER

SIGNATURE: *Brian Collins* DATE: 21 June 02

\* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: \_\_\_\_\_

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

## Marbob Energy Corporation

C-108 Application for Authorization to Inject

State HU No. 1

N-7-T19S-R28E

Eddy County, NM

(30-015-22146)

- III. Well Data: Attached
- IV. Expansion of an exiting project? No.
- V. Map is attached.
- VI. No wells of public record penetrate the proposed injection zone within the 1/2 mile radius area of review.
- VII.
  1. Average daily rate = 1,000 BWPD  
Maximum daily rate = 10,000 BWPD
  2. Closed system
  3. Maximum injection pressure = 1770 psi (8850' x 0.2psi/ft)
  4. Injection fluid analysis attached
  5. Disposal zone fluid analysis attached  
The injection and disposal zone waters are very similar in composition. No fluid compatibility problems are expected.
- VIII. Plan to dispose into the Upper Penn dolomite from 8850' to 9400'. There are no underground sources of drinking water deeper than 400'.
- IX. The Upper Penn might be acidized with up to 30,000 gallons 20% HCL acid.
- X. Logs have been filed with the Division
- XI. Fresh water source well water analysis is attached. Source well is located approximately 2000' west-southwest of the State HU No. 1. Source well is located in the NW/4 of Section 18, T19S, R28E. Sample was collected 19 June 2002.
- XII. Geologic Affidavit is attached
- XIII. Proof of Notice is attached.

INJECTION WELL DATA SHEET

OPERATOR: MARBOB ENERGY CORPORATION

WELL NAME & NUMBER: STATE HU NO. 1

WELL LOCATION: 660' FSL, 2080' FWL  
FOOTAGE LOCATION

N 7 19S 28E  
UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA  
Surface Casing

Hole Size: 17 1/2" Casing Size: 13 3/8" @400'  
Cemented with: 350 sx. or ft<sup>3</sup>  
Top of Cement: SURFACE Method Determined: CIRCULATED

SEE ATTACHED SKETCHES

Intermediate Casing

Hole Size: 12 1/4" Casing Size: 8 5/8" @2200'  
Cemented with: 800 sx. or ft<sup>3</sup>  
Top of Cement: SURFACE Method Determined: CIRCULATED

Production Casing

Hole Size: 7 7/8" Casing Size: 5 1/2" @11,275'  
Cemented with: 575 sx. or ft<sup>3</sup>  
Top of Cement: 8240' Method Determined: TEMP SURVEY  
Total Depth: 11,300'

Injection Interval

8850 feet to 9400

(Perforated) or Open Hole; indicate which)



Well: State HU Com. 1

Zero: 15' AGL

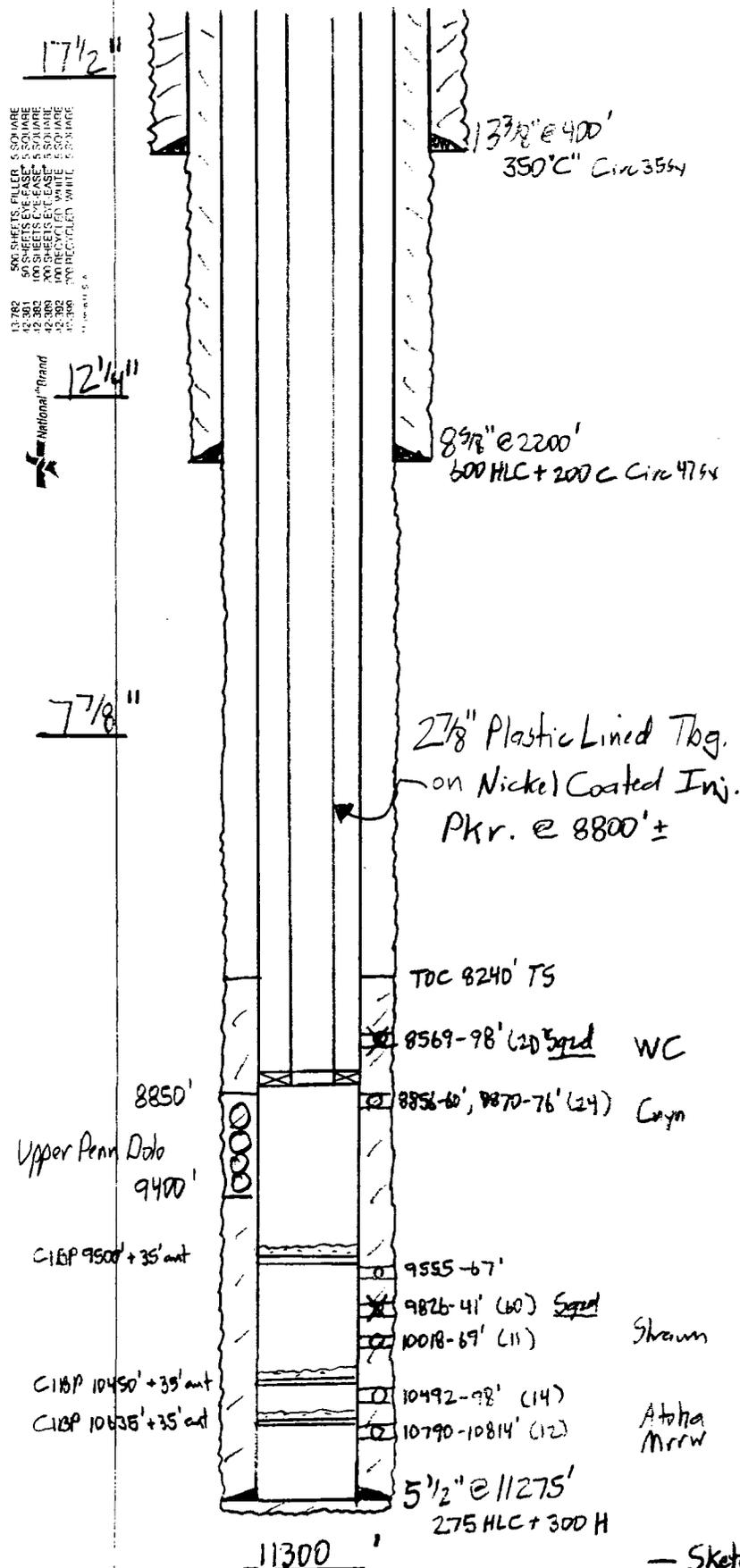
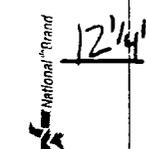
Location: 660' FSL, 2080' FWL  
N-7-193-28e  
Eddy NM

KB: 3528'  
 GL: 3513'

Casing Program:

Size	Wt.	Grade	Conn.	Depth
13 7/8"	48	J55	STC	400'
8 5/8"	24	J55	STC	2200'
5 1/2"	20	N80	LTC	89' ±
	17	N80	LTC	11142' ±
	20	N80	LTC	11275'
2 7/8"	6.5	N80	EVE	8800' ±
Plastic Lined				

500 SHEETS FULLER, 5 SQUARE  
 50 SHEETS EVEREASE, 5 SQUARE  
 100 SHEETS EVEREASE, 5 SQUARE  
 200 SHEETS EVEREASE, 5 SQUARE  
 300 SHEETS EVEREASE, 5 SQUARE  
 400 SHEETS EVEREASE, 5 SQUARE  
 500 SHEETS EVEREASE, 5 SQUARE  
 600 SHEETS EVEREASE, 5 SQUARE  
 700 SHEETS EVEREASE, 5 SQUARE  
 800 SHEETS EVEREASE, 5 SQUARE  
 900 SHEETS EVEREASE, 5 SQUARE  
 1000 SHEETS EVEREASE, 5 SQUARE



7/77: TCP Strawn 9826-41' (60)  
 915 psi 3/4" = 13.3 mMcFD

6/82: Sgz. 9826-41' 150 sq "C"  
 Perf Atoka 10790-10814' (12)  
 Acdz 2500g 7 1/2% Sm. show gas.  
 Perf Atoka 10492-98' (14)  
 Acdz 1000g. 7 1/2% Frac.  
 30 psi 1/2" = 270 mMcFD

6/88: CIBP 10635' + 35' ant., 10450' + 35' ant  
 Perf Strawn 10018-69' (11) Acdz 2000g 15%  
 Sm. show gas.  
 Perf Canyon 9555-67' Acdz 1500g 15%  
 Swab dry  
 CIBP 9500' + 35' ant.  
 Perf WC 8569-98' (21) Acdz 2500g 15%  
 24 bopd / 308 mMcFD in 9 hrs.

2/92: Sgz 8569-98' 100 sq "H" CD to 8900'.  
 Perf Canyon dolo 8856-60', 8870-76'  
 (24) Acdz 2500g. 20%

"AFTER"





**HALLIBURTON**  
 CENTRAL OPERATIONS LABORATORY  
 WATER ANALYSIS REPORT  
 HOBBS, NEW MEXICO

COMPANY Marbob  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

REPORT DATE W02-128  
June 18, 2002  
 DISTRICT Hobbs  
 \_\_\_\_\_

SUBMITTED BY Jim Trela  
 \_\_\_\_\_

WELL Ruger St. #1 DEPTH \_\_\_\_\_ FORMATION \_\_\_\_\_  
 COUNTY \_\_\_\_\_ FIELD \_\_\_\_\_ SOURCE \_\_\_\_\_

SAMPLE	<u>Morrow Prod. Water</u>	_____	_____	_____
Sample Temp.	<u>84</u> °F	_____ °F	_____ °F	_____ °F
RESISTIVITY	<u>0.13</u>	_____	_____	_____
SPECIFIC GR.	<u>1.040</u>	_____	_____	_____
pH	<u>6.93</u>	_____	_____	_____
CALCIUM	<u>4,500</u> mpl	_____ mpl	_____ mpl	_____ mpl
MAGNESIUM	<u>6,300</u> mpl	_____ mpl	_____ mpl	_____ mpl
CHLORIDE	<u>34,983</u> mpl	_____ mpl	_____ mpl	_____ mpl
SULFATES	<u>light</u> mpl	_____ mpl	_____ mpl	_____ mpl
BICARBONATES	<u>18</u> mpl	_____ mpl	_____ mpl	_____ mpl
SOLUBLE IRON	<u>0</u> mpl	_____ mpl	_____ mpl	_____ mpl
Sodium	_____ mpl	<u>0</u> mpl	<u>0</u> mpl	<u>0</u> mpl
TDS	_____ mpl	<u>0</u> mpl	<u>0</u> mpl	<u>0</u> mpl
OIL GRAVITY	<u>@</u> °F	<u>@</u> °F	<u>@</u> °F	<u>@</u> °F

REMARKS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

MPL = Milligrams per liter  
 Resistivity measured in: Ohm/m2/m

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management: It may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Co.

ANALYST: Mike Armstrong

*Produced Water  
 to be Injected*

*VII. 4.*

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

ARTESIA DISTRICT

LABORATORY REPORT

No. W38-92

TO Mr. Harvey Apple

Date February 14, 1992

Yates Petroleum Corporation

105 South Fourth Street

Artesia, NM 88210

This report is the property of Halliburton Services and neither it nor any part thereof, nor a copy thereof, is to be published or disclosed without first securing the express written approval of laboratory management. It may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Services

Submitted by \_\_\_\_\_ Date Rec. February 14, 1992

Well No. \_\_\_\_\_ State HU #1 \_\_\_\_\_ Depth \_\_\_\_\_ Formation Upper Penn

Field \_\_\_\_\_ County \_\_\_\_\_ Source Swab

Resistivity ..... \_\_\_\_\_

Specific Gravity .. \_\_\_\_\_

pH ..... 7.5

Calcium ..... 3,643

Magnesium ..... 1,588

Chlorides ..... 32,000

Sulfates ..... 1,500

Bicarbonates ..... 854

Soluble Iron ..... 0

Remarks:

Disposal Zone Formation Water

E. D. Jacobson  
Respectfully submitted

VII. 5.

Analyst: Eric Jacobson - Operations Engineer

HALLIBURTON SERVICES

NOTICE:

This report is for information only and the content is limited to the sample described. Halliburton makes no warranties, express or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton shall not be liable for any loss or damage, direct or indirect, resulting from the use hereof.



# HALLIBURTON

CENTRAL OPERATIONS LABORATORY  
 WATER ANALYSIS REPORT  
 HOBBS, NEW MEXICO

COMPANY Marbob  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

REPORT DATE W02-130  
June 20, 2002  
 DISTRICT Hobbs

SUBMITTED BY \_\_\_\_\_

WELL BJ Smith FW Well DEPTH \_\_\_\_\_ FORMATION \_\_\_\_\_  
 COUNTY \_\_\_\_\_ FIELD \_\_\_\_\_ SOURCE \_\_\_\_\_

SAMPLE	#1	#2		
Sample Temp.	64 °F	64 °F		
RESISTIVITY	15.8	15.8		
SPECIFIC GR.	1.001	1.001		
pH	7.61	7.57		
CALCIUM	400 mpl	400 mpl		
MAGNESIUM	420 mpl	300 mpl		
CHLORIDE	142 mpl	183 mpl		
SULFATES	150 mpl	150 mpl		
BICARBONATES	24 mpl	24 mpl		
SOLUBLE IRON	0 mpl	0 mpl		
KCL	0	0		
Sodium			0 mpl	0 mpl
TDS			0 mpl	0 mpl
OIL GRAVITY	@ °F	@ °F	@ °F	@ °F

REMARKS NW 1/4 18-19S-28E  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

MPL = Milligrams per liter  
 Resistivity measured in: Ohm/m2/m

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Co.

ANALYST: Mike Armstrong

*Fresh Water Well ± 2000' W-SW of State HU # 1*

XI.

**APPLICATION FOR AUTHORIZATION TO INJECT**

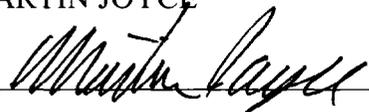
**MARBOB ENERGY CORPORATION  
STATE HU NO. 1**

**AFFIRMATIVE STATEMENT**

I have examined all geologic and engineering data available for the Millman field and find no evidence of open faults and other hydrologic connection between the disposal zone and any underground drinking water sources.

Name: MARTIN JOYCE

Date: 6/21/02

Signature: 

Title: CHIEF GEOLOGIST



**marbob**  
energy corporation

June 21, 2002

Artesia Daily Press  
P. O. Box 190  
Artesia, NM 88210

Re: Legal Notice  
Salt Water Disposal Well

Gentlemen:

Enclosed is a legal notice regarding New Mexico Oil Conservation Division C-108 Application for Authorization to Inject for a salt water disposal well.

Please run this notice and return the proof of notice to the undersigned at Marbob Energy Corporation, P. O. Box 227, Artesia, NM 88211-0227.

Sincerely,

Brian Collins  
Petroleum Engineer

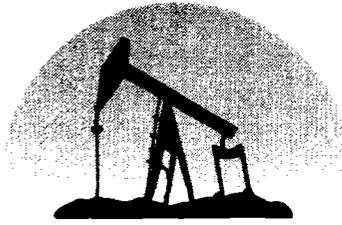
BC/dlw

enclosure

**ARTESIA DAILY PRESS**  
**LEGAL NOTICES**

Marbob Energy Corporation, Post Office Box 227, Artesia, New Mexico, 88211-0227, has filed Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the State HU No. 1 is located 660' FSL and 2080' FWL, Section 7, Township 19 South, Range 28 East, Eddy County, New Mexico. Disposal water will be sourced from area wells producing from the Morrow, Atoka and Strawn formations. The disposal water will be injected into the Upper Penn formation at a depth of 8850' - 9400' at a maximum surface pressure of 1770 psi and a maximum rate of 10,000 BWPD. Any interested party who has an objection to this must give notice in writing to the Oil Conservation Division, 1220 South Saint Francis Street, Santa Fe, New Mexico, 87505, within fifteen (15) days of this notice. Any interested party with questions or comments may contact Brian Collins at Marbob Energy Corporation, Post Office Box 227, Artesia, New Mexico 88211-0227, or call 505-748-3303.

Published in the Artesia Daily Press, Artesia, New Mexico  
\_\_\_\_\_, 2002.



**marbob**  
energy corporation

June 21, 2002

Harvard Petroleum Corporation  
P. O. Box 936  
Roswell, NM 88202-0936

Re: Application to Inject  
State HU No. 1  
Township 19 South, Range 28 East, NMPM  
Section 7: 660' FSL, 2080' FWL  
Eddy County, New Mexico

Gentlemen:

Enclosed for your review is a copy of Marbob Energy Corporation's application to convert the referenced well into a saltwater disposal well. As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as an operator or surface owner. Any objections must be submitted in writing to NMOCD, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within fifteen (15) days of receipt of this letter. If you have no objections to our application, please indicate below and return one copy of this letter to our office.

Please do not hesitate to contact us should you have any questions.

Sincerely,

Brian Collins  
Petroleum Engineer

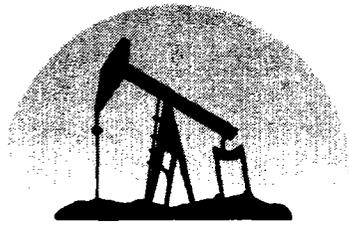
BC/dlw  
enclosure

**Harvard Petroleum Corporation has no objection to the proposed disposal well:**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



**marbob**  
energy corporation

June 21, 2002

Dominion Exploration & Production  
14000 Quail Springs Parkway, Ste. 600  
Oklahoma City, OK 73134-2600

Re: Application to Inject  
State HU No. 1  
Township 19 South, Range 28 East, NMPM  
Section 7: 660' FSL, 2080' FWL  
Eddy County, New Mexico

Gentlemen:

Enclosed for your review is a copy of Marbob Energy Corporation's application to convert the referenced well into a saltwater disposal well. As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as an operator or surface owner. Any objections must be submitted in writing to NMOCD, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within fifteen (15) days of receipt of this letter. If you have no objections to our application, please indicate below and return one copy of this letter to our office.

Please do not hesitate to contact us should you have any questions.

Sincerely,

Brian Collins  
Petroleum Engineer

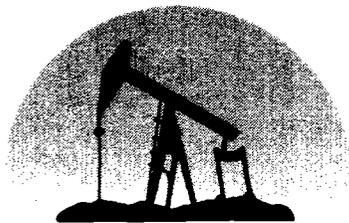
BC/dlw  
enclosure

**Dominion Exploration & Production has no objection to the proposed disposal well:**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



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**marbob**  
energy corporation

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June 21, 2002

Meg Muhlinghouse, Landman  
Devon SFS Operating, Inc.  
20 N. Broadway, Ste. 1500  
Oklahoma City, OK 73102

Re: Application to Inject  
State HU No. 1  
Township 19 South, Range 28 East, NMPM  
Section 7: 660' FSL, 2080' FWL  
Eddy County, New Mexico

Dear Ms. Muhlinghouse:

Enclosed for your review is a copy of Marbob Energy Corporation's application to convert the referenced well into a saltwater disposal well. As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as an operator or surface owner. Any objections must be submitted in writing to NMOCD, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within fifteen (15) days of receipt of this letter. If you have no objections to our application, please indicate below and return one copy of this letter to our office.

Please do not hesitate to contact us should you have any questions.

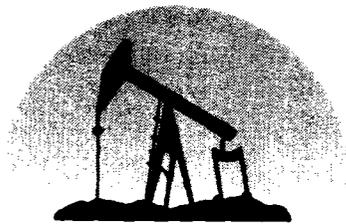
Sincerely,

Brian Collins  
Petroleum Engineer

BC/dlw  
enclosure

**Devon SFS Operating, Inc. has no objection to the proposed disposal well:**

By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_



**marbob**  
energy corporation

June 21, 2002

Harvey E. Yates Company  
P. O. Box 1933  
Roswell, NM 88202-1933

Re: Application to Inject  
State HU No. 1  
Township 19 South, Range 28 East, NMPM  
Section 7: 660' FSL, 2080' FWL  
Eddy County, New Mexico

Gentlemen:

Enclosed for your review is a copy of Marbob Energy Corporation's application to convert the referenced well into a saltwater disposal well. As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as an operator or surface owner. Any objections must be submitted in writing to NMOCD, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within fifteen (15) days of receipt of this letter. If you have no objections to our application, please indicate below and return one copy of this letter to our office.

Please do not hesitate to contact us should you have any questions.

Sincerely,

Brian Collins  
Petroleum Engineer

BC/dlw  
enclosure

**Harvey E. Yates Company has no objection to the proposed disposal well:**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



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**marbob**  
energy corporation

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June 21, 2002

Rodney Webb dba Webb Oil Co.  
2409 Cerro Rd.  
Artesia, NM 88210

Re: Application to Inject  
State HU No. 1  
Township 19 South, Range 28 East, NMPM  
Section 7: 660' FSL, 2080' FWL  
Eddy County, New Mexico

Gentlemen:

Enclosed for your review is a copy of Marbob Energy Corporation's application to convert the referenced well into a saltwater disposal well. As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as an operator or surface owner. Any objections must be submitted in writing to NMOCD, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within fifteen (15) days of receipt of this letter. If you have no objections to our application, please indicate below and return one copy of this letter to our office.

Please do not hesitate to contact us should you have any questions.

Sincerely,

Brian Collins  
Petroleum Engineer

BC/dlw  
enclosure

**Rodney Webb dba Webb Oil Co. has no objection to the proposed disposal well:**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



---

**marbob**  
energy corporation

---

June 21, 2002

Yates Petroleum Corporation  
104 S. 4<sup>th</sup> St.  
Artesia, NM 88210

Re: Application to Inject  
State HU No. 1  
Township 19 South, Range 28 East, NMPM  
Section 7: 660' FSL, 2080' FWL  
Eddy County, New Mexico

Gentlemen:

Enclosed for your review is a copy of Marbob Energy Corporation's application to convert the referenced well into a saltwater disposal well. As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as an operator or surface owner. Any objections must be submitted in writing to NMOCD, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within fifteen (15) days of receipt of this letter. If you have no objections to our application, please indicate below and return one copy of this letter to our office.

Please do not hesitate to contact us should you have any questions.

Sincerely,

Brian Collins  
Petroleum Engineer

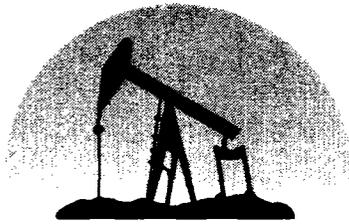
BC/dlw  
enclosure

**Yates Petroleum Corporation has no objection to the proposed disposal well:**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



**marbob**  
energy corporation  
June 21, 2002

New Mexico State Land Office  
Commissioner of Public Lands  
P. O. Box 1148  
Santa Fe, NM 87504-1148

Re: Application to Inject  
State HU No. 1  
Township 19 South, Range 28 East, NMPM  
Section 7: 660' FSL, 2080' FWL  
Eddy County, New Mexico

Gentlemen:

Enclosed for your review is a copy of Marbob Energy Corporation's application to convert the referenced well into a saltwater disposal well. As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as an operator or surface owner. Any objections must be submitted in writing to NMOCD, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within fifteen (15) days of receipt of this letter. If you have no objections to our application, please indicate below and return one copy of this letter to our office.

Please do not hesitate to contact us should you have any questions.

Sincerely,

Brian Collins  
Petroleum Engineer

BC/dlw  
enclosure

**New Mexico State Land Office has no objection to the proposed disposal well:**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_