

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 BWPB
Maximum daily rate = 10,000 BWPB
 - 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.

SECTION WELL DATA SHEETOPERATOR: MARBOB ENERGY CORPORATIONWELL NAME & NUMBER: STATE HU NO. 1WELL LOCATION: 660' FSL, 2080' FWL
FOOTAGE LOCATIONUNIT LETTER N SECTION 7 TOWNSHIP 19S RANGE 28EWELLBORE SCHEMATICWELL CONSTRUCTION DATASurface Casing

Hole Size: 17 1/2" Casing Size: 13 3/8" @400'
Cemented with: 350 sx. or ft³
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 ft³
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 ft³
Top of Cement: 8240' Method Determined: TEMP SURVEY
Total Depth: 11,300'

Injection Interval8850 feet to 9400(Perforated) or Open Hole; indicate which)

Well: State HU Comm.

Zero: 15' AGL

KB : 3528

GL : 3513'

Location: 660' FSL, 2080' FWL

N-7-195-28e

Eddy NM

Casing Program:

[illegible]

7/77: TCP Strawn 9826-41' (GD)
915 psi 3/4" = 13.3 mm CFD

6/82: Sg2. 7826-41' 150 5x "C"
 PorF Atoka 10790-10814' (12)
 Azdc 2500g. 7 1/2% Sm. shaw gss.
 PorF Atoka 10492-98' (14)
 Azdc 1000g. 7 1/2% Frac.
 30 psi 1/2" - ZTD MCFD

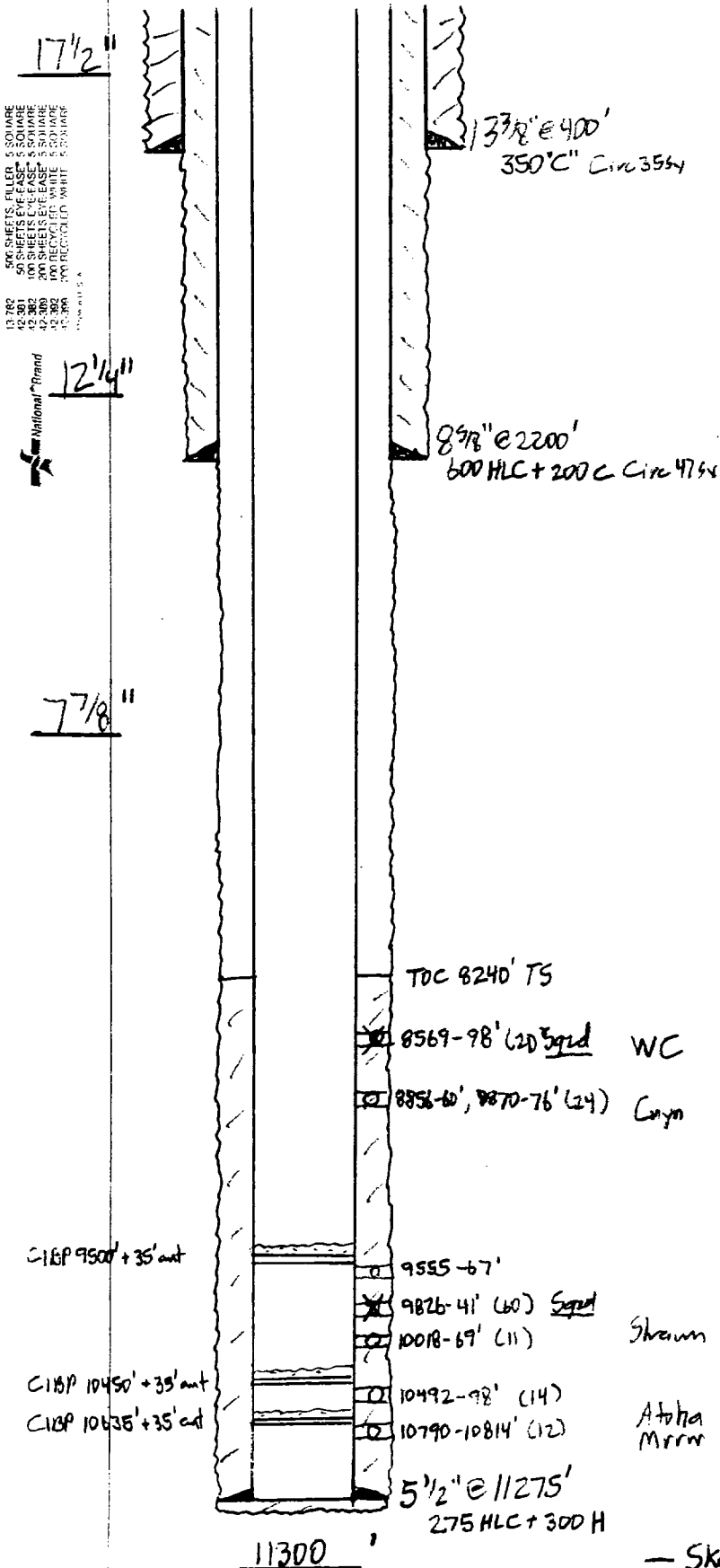
6/88 : CIBP 10635' + 35' ent. , 10450' + 35' ent.
Perf straw 10018-69' (11) Acdr 2000g 15%
Sm. shaw gab,
Perf Cnyn 9555-67' Acdr 1500g 15%
Swab dry
CIBP 9500' + 35' ent.
Perf WC 8569-98' (21) Acdr 2500g 15%
24 bagd / 308 mcf in 9 hrs.

2192: Syz 8567-98' 100 sq "H" CO to 8700'.
Perf Canyon dolo 8856-60', 8870-76'
(24) Acidz 2500g. 20%

"BEFORE"

— Sketch Not To Scale —

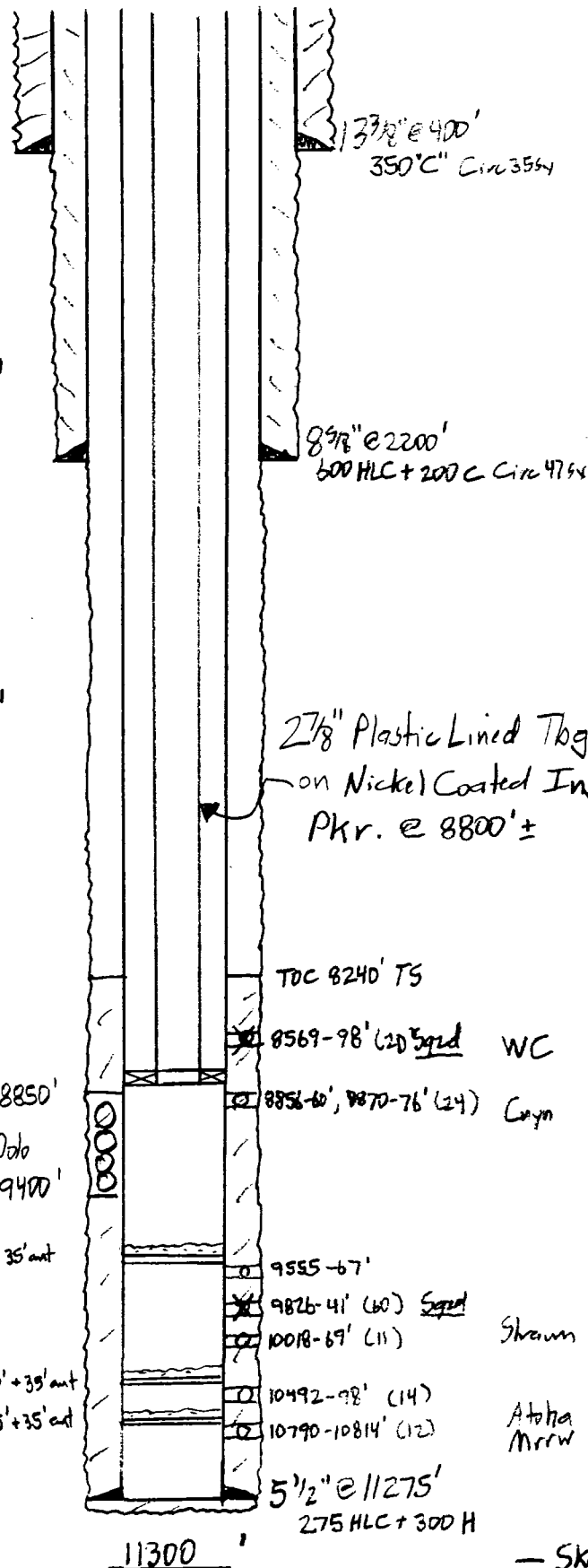
KBCollins / 5 June 02



Well: State HU Com. 1Zero: 15' AGLLocation: 660' FSL, 2080' FWLKB: 3528'GL: 3513'N-7-193-28eEddy NM

Casing Program:

Size	Wt.	Grade	Conn.	Depth
13 3/8"	48	J55	STC	450'
8 5/8"	24	J55	STC	2200'
5 1/2"	20	N80	LTC	89' ±
	17	N80	LTC	11142' ±
	20	N80	LTC	11275'
27 7/8"	6.5	N80	EVE	8800' ±
Plastic Lined				



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

6/82: Sg2. 9826-41' 150 5x "C"
Perf Atoka 10790-10814' (12)
Acidz 2500g. 7 1/2% Sm. show gas.
Perf Atoka 10492-98' (14)
Acidz 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) Acidz 2000g 15%
Sm. show gas.
Perf Cyn 9555-67' Acidz 1500g 15%
Swab dry
CIBP 9500' + 35' ant.
Perf WC 8569-98' (21) Acidz 2500g 15%
24 bopd / 308 mMcFD in 9 hrs.

2/92: Sg2 8569-98' 100 5x "H" CO to 8900'.
Perf Canyon dolo 8856-60', 8870-76'
(24) Acidz 2500g. 20%

"AFTER"

- Sketch Not To Scale -

KBCollins / 5 June 02

This figure is a detailed map of Texas, densely packed with labels for oil and gas fields. The map is organized into a grid-like structure, with each cell representing a specific geographic area. Each cell contains text identifying the field name, the owning company, and often numerical data representing production or reserves. The labels are in various sizes and orientations, reflecting the complexity of the data. The map covers the entire state of Texas, from the Gulf of Mexico in the south to the New Mexico border in the west, and from the Oklahoma border in the north to the Louisiana border in the south. The density of labels is particularly high in the central and eastern parts of the state, indicating more prolific oil and gas fields. The map is a technical representation of the state's hydrocarbon resources, providing a comprehensive overview of the Texas oil and gas industry's footprint.



HALLIBURTON

CENTRAL OPERATIONS LABORATORY
WATER ANALYSIS REPORT
HOBBS, NEW MEXICOCOMPANY 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

Resitivity 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. W38-92TO Mr. Harvey AppleDate February 14, 1992Yates Petroleum Corporation105 South Fourth StreetArtesia, 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, 1992Well No. _____ State HU #1 _____ Depth _____ Formation Upper PennField _____ County _____ Source Swab

Resistivity _____

Specific Gravity .. _____

pH 7.5Calcium 3,643Magnesium 1,588Chlorides 32,000Sulfates 1,500Bicarbonates 854Soluble Iron 0

Remarks:

Disposal Zone Formation WaterE. 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 resulting from the use hereof.



HALLIBURTON

CENTRAL OPERATIONS LABORATORY
WATER ANALYSIS REPORT
HOBBS, NEW MEXICO

COMPANY Marbob

REPORT W02-130
DATE 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

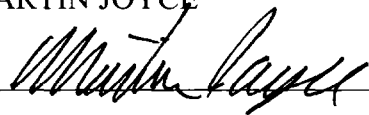
**MARBOB ENERGY CORPORATION
STATE HU NO. 1**

AFFIRMATIVE STATEMENT

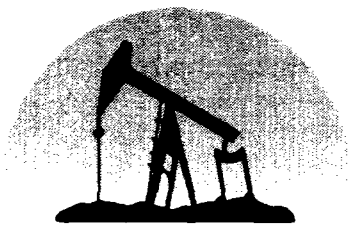
I have examined all geologic and engineering data available for the Millman field and find no evidence of open faults and other hydrologic connection between the disposal zone and any underground drinking water sources.

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

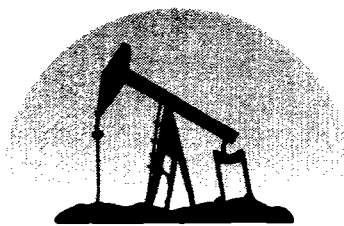
BC/dlw

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

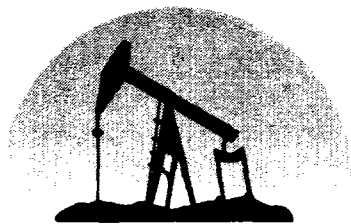
BC/dlw
enclosure

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

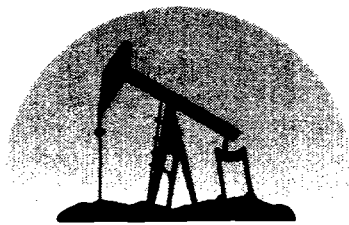
BC/dlw
enclosure

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

By: _____

Title: _____

Date: _____



marbob
energy corporation

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

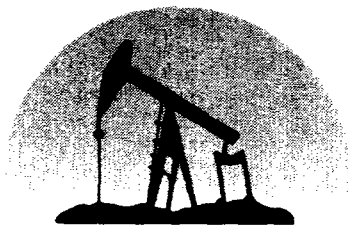
BC/dlw
enclosure

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

By: _____

Title: _____

Date: _____



marbob
energy corporation

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

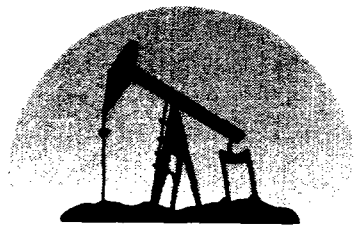
BC/dlw
enclosure

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. 4th 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

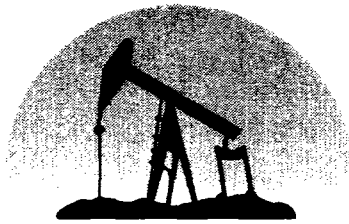
BC/dlw
enclosure

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: _____