Release Date 5-6-92

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

April 17, 1992

State of New Mexico
OIL CONSERVATION DIVISION
P. O. Box 2088
Santa Fe, NM 87501
ATTN: Mr. David Catanach

RE: Mimosa "AHS" Federal #4
660'FSL & 1980'FWL
Sec. 4-T20S-R24E
Proposed SWD

Dear David,

Please find enclosed the Application to convert the Mimosa "AHS" #4 into a disposal well for produced waters from Dagger Draw. Pursuant to our phone conversation, casing was set into the top of the Devonian formation rather than the base of the Morrow formation. This provides for adequate separation between the proposed injection intervals and the Morrow formation. The Wood Ford Shale provides an excellent barrier at 9770 feet.

If you need more information please contact me. We greatly appreciate your cooperation in the matter.

Sincerely yours,

Paul Ragsdale

Paul Ragsdale
Operations Engineer

ENERGY AND MINERALS DEPARTMENT

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: Yates Petroleum Corporation

Address: 105 S. 4th Street

Contact party: Paul Ragsdale Phone: (505) 748-1471

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 geological data on the injection zone including appropriate lithologic detail, geological 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 source 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 source 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: Paul Ragsdale Title Petroleum Engineer

Signature: Paul Ragsdale Date: 4-15-92

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

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

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

C-108
Application For Authorization To Inject
Yates Petroleum Corporation
Mimosa "AHS" Federal #4
N 4-20S-24E
Eddy County, New Mexico

I. This well was originally drilled to test the Canyon and Morrow formations. When these zones proved unproductive the well was deepened to the Devonian, Ellenberger and Bliss Sand to be used as a disposal well for Dagger Draw Upper Pennsylvanian produced waters.

II. Operator: Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
Paul Ragsdale (505) 748-1471

III. Well Data: See Attachment A

IV. This is not an expansion of an existing project.

V. See attached map, Attachment B

VI. There are no wells within the one-half mile radius of the Mimosa AHS Federal #4 which penetrate the Devonian/Ellenberger.

VII. 1. Proposed average daily injection volume approximately 8,000 BWPD.
Maximum daily injection volume approximately 10,000 BWPD.

2. This will be a closed system.

3. Proposed average injection pressure-1500 psi.
Proposed maximum injection pressure--2200 psi.

4. Sources of injected water would be produced water from the Dagger Draw-Upper Pennsylvanian. (See Attachment C.)

5. See Attachment D.

VIII. 1. The proposed injection interval is the portion of the Devonian, Ellenberger and Bliss Sand formations consisting of porous sands and dolomites from estimated depths of 9,860' to 11,159'.

2. Fresh water zones overlie the proposed injection formations at depths to approximately 1100 feet.

IX. The proposed disposal interval will be acidized with 30,000 gallons of 15% HCL acid.

X. Logs will be furnished when the Mimosa AHS Federal #1 well is completed.

XI. Two fresh water wells exist within the one mile radius of the subject location. They are located in the NW corner of section 3-20S-24E.

The location of these wells is indicated on the map in Attachment E. Water analyses are also attached. (Attachment F)

XII. Yates Petroleum Corporation has examined geologic and engineering data and has found that there is no evidence of faulting in the proposed interval.

XIII. Proof of Notice

A. Certified letters sent to the surface owner and offset operators-attached. (Attachment G)

B. Copy of legal advertisement attached. (Attachment H)

XIV. Certification is signed.

Yates Petroleum Corporation
Mimosa "AHS" Federal #4
N 4-20S-24E

Attachment A
Page 1

III. Well Data

A. 1. Lease Name/Location:
Mimosa "AHS" Federal #4
N 4-20S-24E
660' FSL & 1980' FWL

2. Casing Strings:
a. Present Well Condition
9-5/8" 36# J-55 @ 1169' with 1500 sx (circ)
7" 26# S-95, 26# N-80, 23# N-80 casing @ 9850' w/1200 sx (circ)

TD: 11,159'

3. Tubing:
Propose to use 3-1/2" 9.2# J-55 plastic-coated tubing set at 9800'.

4. Packer:
Propose to use Guiberson Uni VI or Baker plastic-coated or nickel-plated packer set at 9800'.

B. 1. Injection Formation:
a. Devonian Dolomite @ 9814'
b. Montoya Dolomite @ 10241'
c. Ellenberger Dolomite @ 10601'
d. Bliss Sand @ 11007'

2. Injection Interval will be in Open Hole from approximately 9,860-11,159'.

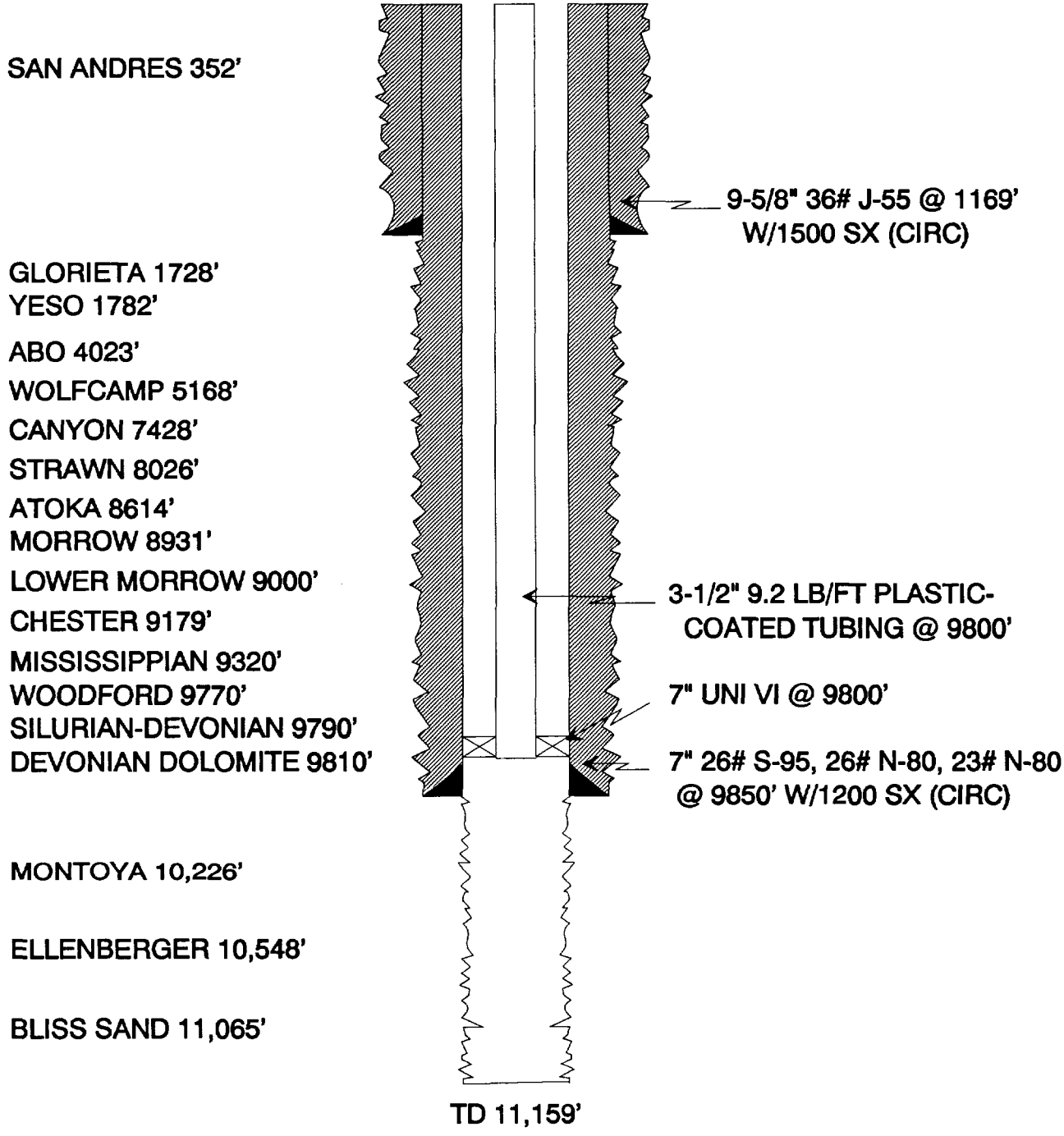
3. Well was originally drilled as an exploratory gas well, but after testing, decision made for salt water disposal well.

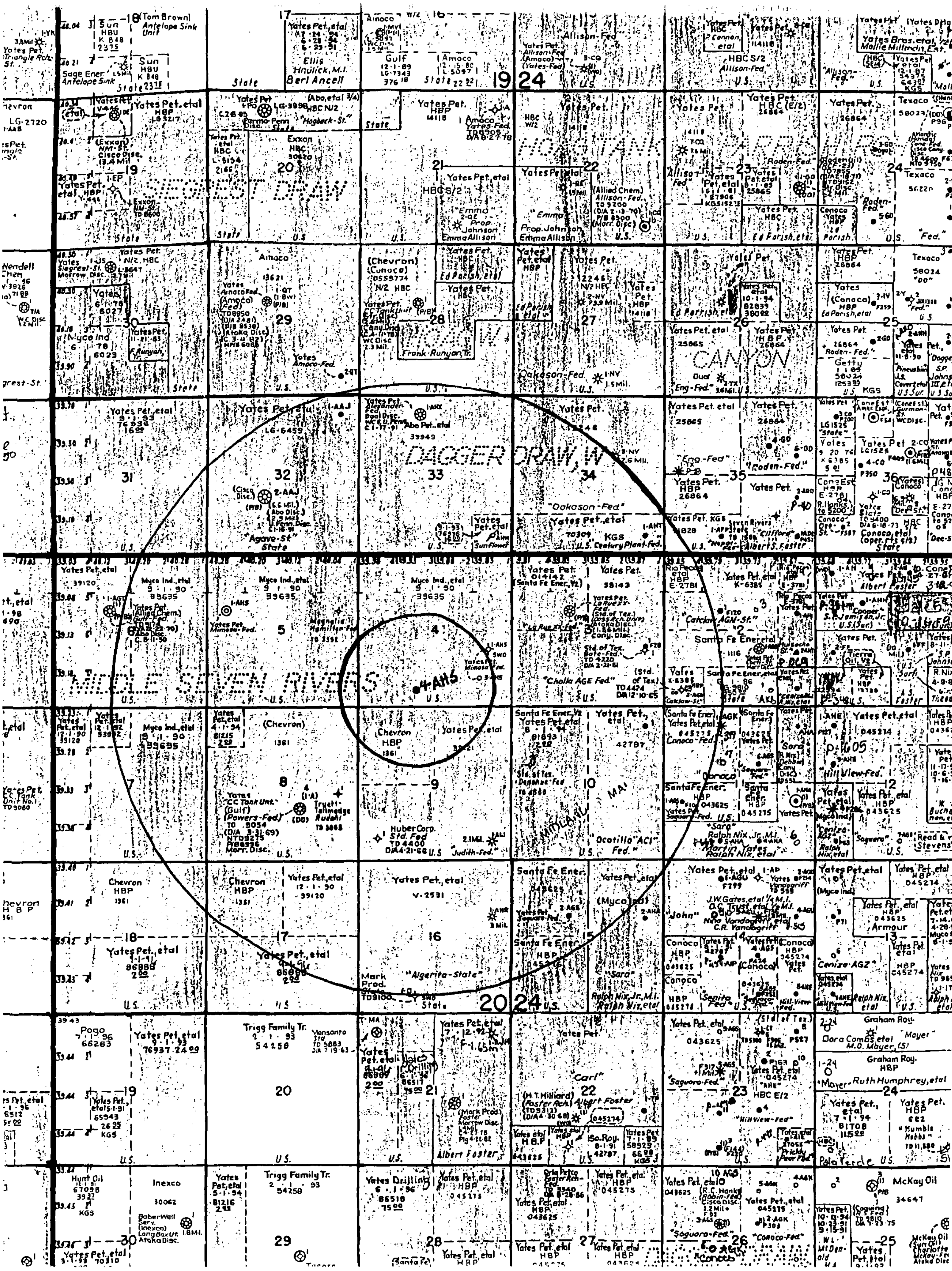
4. Perforations: Open Hole 9860-11159'

5. Next higher (shallower) oil or gas zone within 1/2 mile--NONE: within 2 miles--Canyon.
Next lower (deeper) oil or gas zone within 1/2 mile--NONE: within 2 miles--none.

YATES PETROLEUM CORPORATION
MIMOSA AHS FEDERAL #4

660'FSL & 1980'FWL
SEC. 4-T20S-R24E
EDDY COUNTY, NEW MEXICO
PROPOSED SALT WATER DISPOSAL WELL





YATES PETROLEUM CORPORATION

MIMOSA "AHS" FEDERAL #4

PROPOSED SALT WATER DISPOSAL WELL

SEC. 4-20S-24E

660'FSL & 1980'FWL

EDDY COUNTY, NEW MEXICO

ATTACHMENT B

Attachment C

HALLIBURTON DIVISION LABORATORY
HALLIBURTON SERVICES
MIDLAND DIVISION
ARTESIA, NEW MEXICO 88210

LABORATORY WATER ANALYSIS

No. W65, W66, & W67-88

To Yates Petroleum Corporation

105 South Fourth Street

Artesia, NM 88210

Date

Submitted by Date Rec.

Well No. Depth Formation

County Field Source

	Ross EG Fed. #2	Foster AN Com. #1	Parish IV Comm.	
Resistivity	.91 @ 60°	.9 @ 60°	.89 @ 60°	
Specific Gravity	1.005 @ 60°	1.005 @ 60°	1.005 @ 60°	
pH	7.5	7.3	7.0	
Calcium (Ca)	1,000	1,000	1,000	*MPL
Magnesium (Mg)	600	500	650	
Chlorides (Cl)	4,000	5,000	5,000	
Sulfates (SO_4)	Heavy	Heavy	Heavy	
Bicarbonates (HCO_3)	1,200	1,000	1,100	
Soluble Iron (Fe)	Nil	Nil	Nil	

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Art Carrasco - District Engineer

HALLIBURTON COMPANY

cc:

NOTICE

This report is limited to the described sample tested. Any use of this report agrees that Halliburton shall not be liable

HALLIBURTON SERVICES

ARTESIA DISTRICT

LABORATORY REPORT

No. W531-90

TO Mr. Harvey Apple

Yates Petroleum Corporation

105 South Fourth Street

Artesia, NM 88210

Date September 20, 1990

Submitted by Danny Panzer Date Rec. September 20, 1990

Well No. State D #1 Depth 10963' - 11052' Formation Bliss Sand

Field County Source

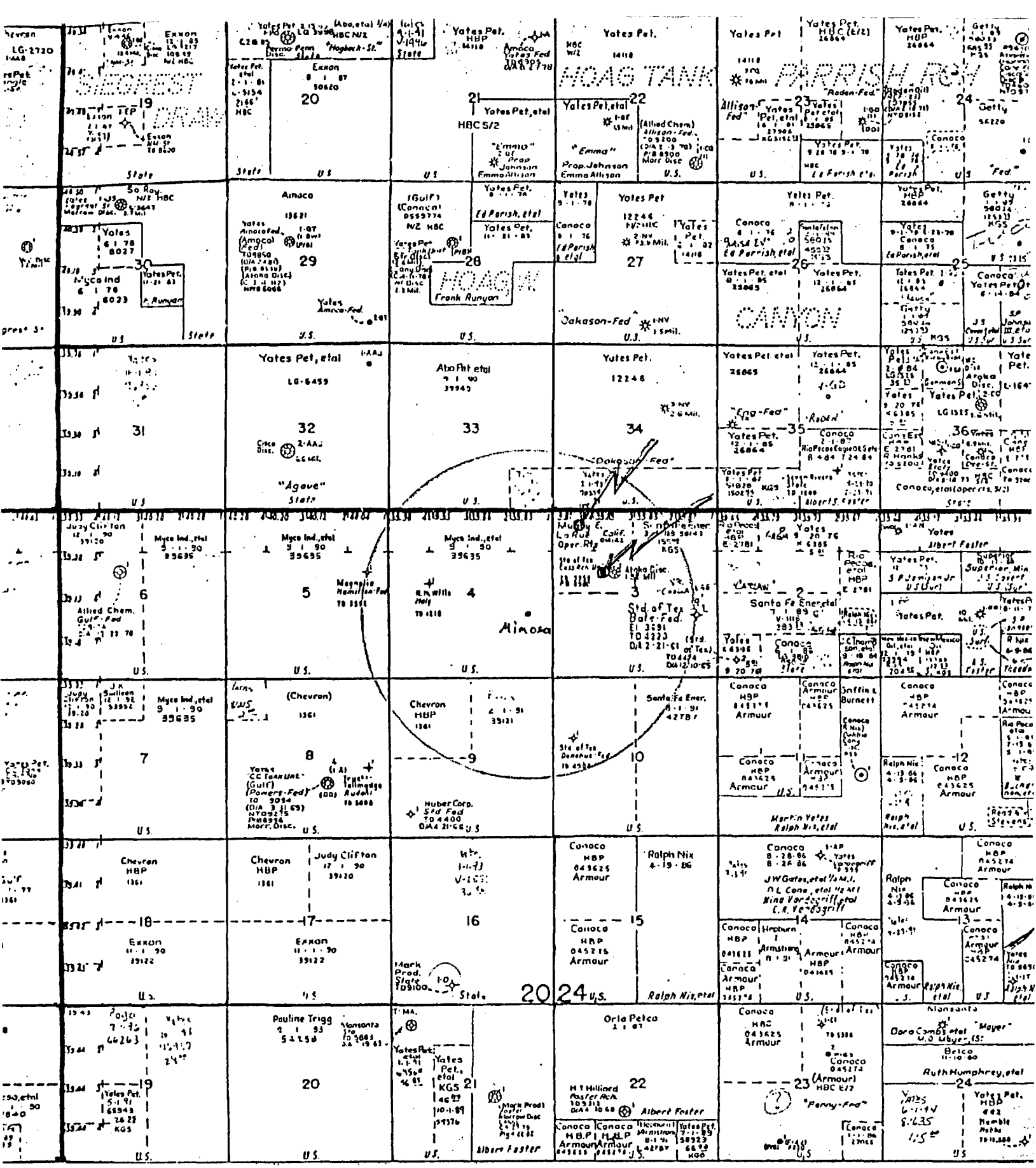
Resistivity	0.052		
Specific Gravity ..	1.1706		
pH	6.5		
Calcium	29,025		
Magnesium	392		
Chlorides	157,000		
Sulfates	700		
Bicarbonates	305		
Soluble Iron	500		
KCL	.5%		

Remarks:

Respectfully submitted

Analyst: Eric Jacobson - Field Engineer

HALLIBURTON SERVICES


Exxon
Seaboard
Draw
Yates Pet.
HBC
Hoag Tank
Parrish Fed.
Getty
So. Ray
Amoco
Gulf
Hoag
Frank Runyan
Yates
Canyon
Ed Parish, etal
Yates Pet, etal
Atoka Pet, etal
Agave
Judy Clifton
Myco Ind., etal
Magnolia
Mimosa
Mobil E. La Rue
Std. of Tex
Santa Fe Energy
Chevron
Huber Corp.
Conoco
Armour
Ralph Nix
Judy Clifton
Mark Prod.
Pauline Trigg
Monsanto
Orla Petco
Ruth Humphrey, etal
Yates Pet.
Hobbs
Humble
Attachment E

C/P

WATER ANALYSIS REPORT
furnished by TRETOLITE CHEMICALS

COMPANY:	YATES PET.
LEASE:	LARUE WATER WELL
SAMPLE POINT:	WELL
SAMPLE DATE:	10-9-90
SAMPLE TEMP.:	N/A

pH:	7.5
H2S:	NO
SPECIFIC GRAVITY:	1.015

TITRATED AND CALCULATED IONS

	MILLIGRAMS PER LITER	MILLIEQUIVALENTS PER LITER
HCO3	280.60	4.60
Cl	256.00	7.21
SO4	200.00	4.17
Ca	528.00	26.40
Mg	65.61	5.38
Na	0.00	0.00

IONIC STRENGTH =	0.04
TOTAL HARDNESS =	1590.0 mg/ltr.
TOTAL DISSOLVED SOLIDS =	1056.6 mg/ltr.

PROBABLE MINERAL COMPOSITION AND ION PAIRING

	MILLIEQUIVALENTS PER LITER	MILLIGRAMS PER LITER
Ca(HCO3)2	4.60	372.78
CaSO4	4.17	283.63
CaCl2	7.21	400.23
Mg(HCO3)2	0.00	0.00
MgSO4	0.00	0.00
MgCl2	0.00	0.00
NaHCO3	0.00	0.00
Na2SO4	0.00	0.00
NaCl	0.00	0.00

CALCULATED SCALING TENDENCIES

SCALING INDEX

CaCO3 @ 80 DEG F. = 1.2
CaCO3 @ 120 DEG F. = 1.5

SATURATION POINT

CaSO4 @ 70 DEG F. = 1775.1 MG/LTR.
CaSO4 @ 110 DEG F. = 1829.4 MG/LTR.

(THIS SAMPLE CONTAINED 283.6 MG/LTR. CaSO4)

WATER ANALYSIS REPORT
furnished by TRETOLITE CHEMICALS

COMPANY:	YATES PET.
LEASE:	WINDMILL
SAMPLE POINT:	OVERFLOW
SAMPLE DATE:	10-8-90
SAMPLE TEMP.:	N/A

pH:	7.7
H2S:	NO
SPECIFIC GRAVITY:	1

TITRATED AND CALCULATED IONS

	MILLIGRAMS PER LITER	MILLIEQUIVALENTS PER LITER
HCO3	329.40	5.40
Cl	213.00	6.00
SO4	1375.00	28.65
Ca	600.00	30.00
Mg	133.65	10.95
Na	0.00	0.00

IONIC STRENGTH =	0.08
TOTAL HARDNESS =	2050.0 mg/ltr.
TOTAL DISSOLVED SOLIDS =	2641.4 mg/ltr.

PROBABLE MINERAL COMPOSITION AND ION PAIRING

	MILLIEQUIVALENTS PER LITER	MILLIGRAMS PER LITER
Ca(HCO3)2	5.40	437.62
CaSO4	24.60	1674.52
CaCl2	0.00	0.00
Mg(HCO3)2	0.00	0.00
MgSO4	4.05	243.52
MgCl2	6.00	285.72
NaHCO3	0.00	0.00
Na2SO4	0.00	0.00
NaCl	0.00	0.00

CALCULATED SCALING TENDENCIES

SCALING INDEX

CaCO3 @ 80 DEG F. = 1.4
CaCO3 @ 120 DEG F. = 1.8

SATURATION POINT

CaSO4 @ 70 DEG F. = 2369.1 MG/LTR.
CaSO4 @ 110 DEG F. = 2425.9 MG/LTR.

(THIS SAMPLE CONTAINED 1674.5 MG/LTR. CaSO4)

Attachment G

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

April 17, 1992

CERTIFIED RETURN RECEIPT

Randolph Richardson
P. O. Box 2423
Roswell, NM 88201

Dear Sir:

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Mimosa AHS Federal #4 located in Unit N of Section 4-T20S-R24E.

Should you have any questions, please feel free to contact me at (505) 748-1471.

Sincerely,

Paul Ragsdale
Petroleum Engineer

PR/th

Enclosure

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

April 17, 1992

CERTIFIED RETURN RECEIPT

Chevron USA, Inc.
P. O. Box 1150
Midland, TX 79702

Dear Sir:

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Mimosa AHS Federal #4 located in Unit N of Section 4-T20S-R24E.

Should you have any questions, please feel free to contact me at (505) 748-1471.

Sincerely,

Paul Ragsdale
Petroleum Engineer

PR/th

Enclosure

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

April 17, 1992

CERTIFIED RETURN RECEIPT

Santa Fe Energy
500 W. Illinois
Suite 500
Midland, TX 79702

Dear Sir:

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Mimosa AHS Federal #4 located in Unit N of Section 4-T20S-R24E.

Should you have any questions, please feel free to contact me at (505) 748-1471.

Sincerely,

Paul Ragsdale
Petroleum Engineer

PR/th

Enclosure

YATES PETROLEUM CORPORATION

105 SOUTH FOURTH STREET
ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

April 17, 1992

Artesia Daily Press
503 W. Main
Artesia, NM 88210

Gentlemen,

Yates Petroleum Corporation desires to place a public notice in your newspaper for one day. The notice is enclosed.

Please place this notice in your paper on Thursday, April 23, 1992 and forward a copy of it along with your billing as soon as possible to:

Yates Petroleum Corporation
105 S. 4th Street
Artesia, NM 88210
Attn: Paul Ragsdale

If you have any questions, please contact me at 748-1471, Ext. 187. Thank you for your cooperation in this matter.

Sincerely,

Paul Ragsdale
Petroleum Engineer

PR/th

Enclosure

Attachment H

Legal Notice

Yates Petroleum Corporation, 105 South Fourth Street, Artesia, NM 88210, has filed from C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for an injection well. The proposed well, the "Mimosa AHS Federal #4" located 660'FSL & 1980'FWL of Section 4, Township 20 South, Range 24 East of Eddy County, New Mexico, will be used for saltwater disposal only. Disposal waters from the Dagger Draw Pennsylvanian will be re-injected into the Devnonian, Ellenberger and Bliss Sand formations at a depth of 9860-11,150 feet with a maximum pressure of 2200 psi and a maximum rate of 10,000 BWPD.

All interested parties opposing the aforementioned must file objections or requests for a hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, NM 87501, within 15 days. Additional information can be obtained by contacting Paul Ragsdale at (505) 748-1471.