YATES PETROLEUM CORPORATION

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

S. P. YATES
PRESIDENT
JOHN A. YATES
VICE PRESIDENT
B. W. HARPER
SEC. - TREAS.

Date: October 26, 1987

State of N.M.
Energy & Minerals Dept.
Oil Conservation Division
P.O. Box 2088
Santa Fe, N.M. 87501

Attn: William J. LeMay - Director

Dear Sir:

Herewith is C-108 to convert the Lucas Store "KT" State #1 to SWD. All parties within the area of review have been notified. We expect no objections, but if there is, you may place this application on Docket.

Thank you.

Eddie M. Mahfood
Senior Engineer

EMM/gb

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: 207 So. Fourth Street, Artesia, N.M. 88210

Contact party: Eddie Mahfood 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: Eddie Mahfood Title Senior Engineer

Signature: Eddie Mahfood Date: October 16, 1987

* 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 district office

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.

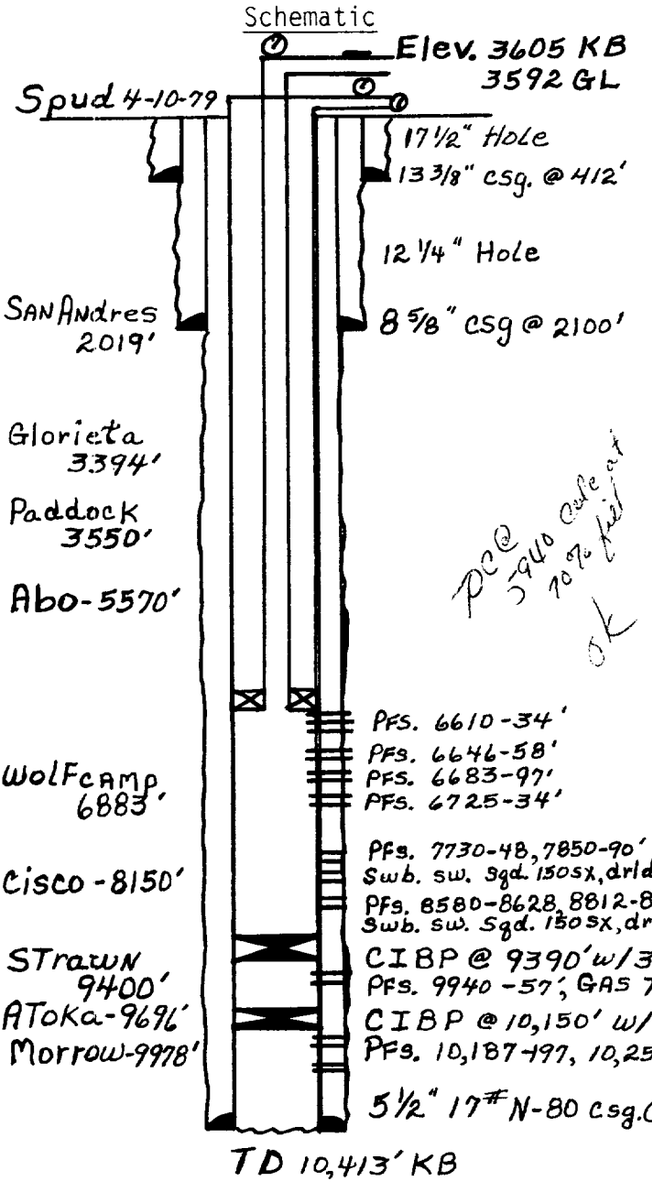
INJECTION WELL DATA SHEET

Yates Petroleum Corporation — Operator
Lucas Store "KT" State — Lease

Well No.	Footage Location	Section	Township	Range
1	1980' FNL 1980' FEL	22	17S	28E

Eddy Undesignated Group 7

Schematic



Tubular Data

Surface Casing

Size 13 3/8" Cemented with 375 sx.
TOC Surface Feet determined by circulated
Hole size 17½

Intermediate Casing

Size 8 5/8" Cemented with 1045 sx.
TOC surface Feet determined by circulated
Hole size 12¼"

Long String

Size 5½" Cemented with 935 sx.
TOC 6000 Feet determined by
Hole ~~size~~ 7 7/8"
Total depth 10398'

Injection Interval

6610 feet to 6734 feet
(perforated ~~or~~ ~~open hole~~)

Tubing size 2 7/8" lined with Plasticoat Set in a
Baker Lokset (or Guiberson UNI-VI) packer at 6550 feet
(brand and model)
(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Abo
2. Name of Field or Pool (if applicable) Eddy Undesignated Group 7
3. Is this a new well drilled for injection? ☐ Yes ☒ No
   If no, for what purpose was the well originally drilled? Morrow test, not commercial in Morrow or Strawn. Completed in Abo for oil & gas.
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) Morrow perfs 10188-262 CIBP @ 10150 w/35sx cmt on top; Strawn pfs 9440-57 CIBP @ 9390 w/35 sx cmt on top. Cisco pfs 8580-8828, cmt sqd 150sx. Wolfcamp pfs 7431-7890 cmt sqd 225 sx.
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. The next higher oil & gas zone is the Grayburg fm. 1850-2018'. There is San Andres pay in nearby wells but not in this well. All lower zones have been tested and are non-commercial.

WELL DATA

Application for SWD

Lucas Store "KT" State No. 1

III. A. 1.) Lucas Store "KT" State No. 1, Sec 22-T17S-R28E, 1980' FNL, 1980' FEL.

2.) 13 3/8" 48# csg @ 412', cmtd w/375 sx, 17½" hole, cmt. circulated to surface.
8 5/8" 32# csg @ 2100'. DV tool at 1786', 1045sx, 12¼" hole circ. to surface.
5½" csg @ 10398', DV tool @ 8039', 935 sx, 7 7/8" hole, cmt top @ 6000' by temperature survey.

3.) 2 7/8" tbg to be plastic-coated and set at about 6550'.

4.) Packer to be Baker Lok-set or Guiberson UNI-VI, nickel plated, at about 6550'.

B. 1.) The injection formation is Abo, Eddy Undesignated Group 7.

2.) The injection interval 6610-6734'(Abo), perforated.

3.) Well was drilled to 10413' as Morrow test, plug back and completed in Abo for oil and gas production.

VI. There are 42 other wells within the Area of Review, mostly Red Lake Yates-Seven Rivers (700-800') and Artesia Queen-Grayburg-San Andres (1600-2900'), producers and plugged holes, but no other well that penetrated the Abo formation or deeper.

VII. The proposed operation of this SWDW is as follows:

1.) Maximum rate and volume: 8000 BWPD; Average: 4500 BWPD.

2.) The system will be closed, with filters & storage tanks.

3.) Maximum injection pressure: 1980 psi; average: 1050 psi.

4.) Sources of the injection fluids will include Queen, Grayburg, San Andres, Yeso, Abo, Upper & Lower Penn produced waters. Disposal fluids will be similar or more salty than Abo water. Copies of chemical analyses of waters from the proposed disposal zone are attached.

VIII. The injection zone is in the back reef of the Abo formation, a biohermal mass of Leonard series in the Permian system. Porosity is in clean dolomite, light tan to gray or buff in color, very fine to coarse crystalline in structure, sucrosic with some secondary clear rhombic crystals, some pin-point to coarse vugs, some fractured intercrystalline porosity, and some breccia or crinoidal fossil fragments with limestone. This back-reef has about 1270 feet gross thickness with 250 feet of porous zone in its basal interval, (6600-6850').

Underground sources of drinking water in the general area is apparently thin strata of sands in the Rustler redbeds, varying in depth with the local topography at 77 to 120 feet. There are no other known source of potable water overlying or underlying the injection zone.

IX. The injection zone is already stimulated, but periodic additional stimulation will consist of varying small quantities of acid with bacteriacide & scale inhibitors.

X. Logging and test data are on file with the NMOCD.

XI. We have no chemical analyses of fresh water in the area of review, but the analysis described in Table 3 of Ground-water Report 3, published by New Mexico institute of Mining and Technology, Socorro, in 1952, from a well in NE/4 of Sec 14 T17S-R28E to have 3920 PPM total dissolved solids.

XII. Applicant has 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. Proof of Notice is submitted herewith, showing the legal advertisement as published in the Artesia Daily Press, Eddy County, on October 20, 1987. The surface owner and leasehold operators within the review area have been furnished a copy of this application by Certified Mail.

Affidavit of Publication

No. 12128

STATE OF NEW MEXICO,
County of Eddy:

Gary D. Scott being duly sworn, says: That he is the Publisher of The Artesia Daily Press, a daily newspaper of general circulation, published in English at Artesia, said county and state, and that the hereto attached Legal Notice

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico for 1 consecutive days weeks on the same day as follows:

First Publication October 20, 1987

Second Publication

Third Publication

Fourth Publication

and that payment therefore in the amount of $

has been made.

Gary D. Scott

Subscribed and sworn to before me this 23rd day of October, 19 87

Barbara Ann Price

Notary Public, Eddy County, New Mexico

My Commission expires September 23, 1991

Copy of Publication

LEGAL NOTICE

Pursuant to the New Mexico Oil [illegible] reg-
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ti[illegible] tion,
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ing with the Oil [illegible] vation
Division [illegible] 2088,
[illegible] 87501,
[illegible] Daily
Press, Artesia, New Mexico, a newspaper published in Eddy County, on October 20, 1987.

Legal 12128

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

YATES PETROLEUM CORPORATION

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

S. P. YATES
PRESIDENT
JOHN A. YATES
VICE PRESIDENT
B. W. HARPER
SEC. - TREAS.

Date: October 19, 1987

To: Surface Owner/
Offset Leasehold Operators

From: Yates Petroleum Corporation, Artesia, N.M. 88210

Re: Injection of Produced Water

As provided by NMOCD Rule 701-B-3, copy of our Application for Injection of Produced Water into the Abo formation in our Lucas Store "KT" State No. 1, G-Sec 21-T17S-R28E, Eddy County, is hereby furnished to you. If you have any objection to this application, you have 15 days in which to file a written objection to the NMOCD director in Santa Fe.

Thank you.

Eddie Mahfood, Sr. Engineer
Yates Petroleum Corporation

cc: Bogle Farms, P.O. Box 358, Dexter, NM 88230
Attn: Mr. Stuart Bogle
J.B. Adamson, 2002 Center, Artesia, NM 88210
Chevron USA, P.O. Box 1150 Midland, TX 79702
Kersey and Company, 808 W. Grand, Artesia, NM88210
Kincaid & Watson Drlg., Petroleum Bldg., Artesia,NM88210
Marbob Energy Corp., P.O. Drawer 217, Artesia, NM88210
Hanson Oil Corp., 400 N. Pennsylvania, Roswell, NM88201
JFG Enterprise, 701 E. Main, Artesia, NM 88210
Challenger Energy, Inc., 517 Center Row, Artesia,NM88210
Frostman Oil Co., P.O. Drawer W, Artesia, NM 88210

HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. 479-421

To Yates Petroleum Corporation

207 S. 4th Street

Artesia, New Mexico

Date 5-2-79

Submitted by _____ Date Rec. 5-2-79

Well No. Lucas Stone KT St. #1 Depth 4713' Formation Lower Abo

County Eddy Field W.C. Source DST #2

	Sampler	Top of Fluid	Fluid Change
Resistivity	0.180 @ 74°F.	0.218 @ 74°F.	0.218 @ 74°F.
Specific Gravity	1.030		
pH	7.0		
Calcium (Ca)	3,000		*MPL
Magnesium (Mg)	Nil		
Chlorides (Cl)	22,500	14,500	14,500
Sulfates (SO_4)	2,300		
Bicarbonates (HCO_3)	2,025		
Soluble Iron (Fe)	Nil		

Filt Sample - Res. @ 74°F. - 0.281 Chlorides, grl - 11,000

K_w = 0.109 @ 74°

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

HALLIBURTON COMPANY

cc:

By _____
CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE RESULTS OF SAMPLE TESTED AND DOES NOT

Marbob Energy Corp.
P.O. DRAWER 217
Artesia, N.M. 88210

Postage	39
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	70
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	1.84
Postmark or Date	10-19-87

Form 3800, June 1985 U.S.G.P.O. 153-506

P-580 492 635

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

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

Postage	39
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	70
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	1.84
Postmark or Date	OCT 19 1987

Form 3800, June 1985 U.S.G.P.O. 153-506

P-580 492 638

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

FROSTMAN OIL CO.
P.O. DRAWER W
Artesia, NM 88210

Postage	39
Certified Fee	.75¢
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	70
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	1.84
Postmark or Date	10-19-87

Form 3800, June 1985 U.S.G.P.O. 153-506

P-580 492 639

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Bogle Farms
P.O. Box 358
Dexter, N.M. 88230

Postage	39
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	70
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	1.84
Postmark or Date	10-19-87

Form 3800, June 1985 U.S.G.P.O. 153-506

P-580 492 633

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

CHALLENGER ENERGY, INC.
517 Center Row
Artesia, NM 88210

Postage	39
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	70
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	1.84
Postmark or Date	10-19-87

Form 3800, June 1985 U.S.G.P.O. 153-506

P-580 492 636

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Kersey & Co.
808 W. Grand
Artesia NM 88210

Postage	39
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	70
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	1.84
Postmark or Date	10-19-87

Form 3800, June 1985 U.S.G.P.O. 153-506

P-580 492 635

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Hanson Oil Corp.
400 N. Pennsylvania
Roswell, N.M. 88201

Postage	39
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	70
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	1.84
Postmark or Date	OCT 19 1987 10-19-87

Form 3800, June 1985 U.S.G.P.O. 153-506

P-580 492 638

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

JFG Enterprise
701 E. Main
Artesia, NM 88210

Postage	39
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	70
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	1.84
Postmark or Date	10-19-87

Form 3800, June 1985 U.S.G.P.O. 153-506

P-580 492 639

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

JB Adamson
2002 Center
Artesia NM 88210

Postage	39
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	70
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	1.84
Postmark or Date	11-17-87

Form 3800, June 1985 U.S.G.P.O. 153-506

P-580 492 633

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

KINCAID & WATSON
PETROLEUM BLDG.
ARTESIA, NM 88210

Postage	39
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	70
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	1.84
Postmark or Date	OCT 19 1987 10-19-87

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