

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986



S. P. YATES
CHAIRMAN OF THE BOARD
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TREASURER

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

February 5, 1992

CERTIFIED RETURN RECEIPT

Charles R. Martin, Inc.
P. O. Box 706
Artesia, NM 88210

Case 10463

Dear Sir,

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Red Hat SWD #1 located in Unit 0 of Section 2-16S-33E , Lea County, New Mexico.

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

Sincerely,

Jim Brown

Jim Brown
Operations Engineering Supervisor

JB/th

Enclosure

APPLICATION FOR AUTHORIZATION TO INJECT

Case 10463

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

II. Operator: Yates Petroleum CorporationAddress: 105 S. 4th Street, Artesia, NM 88210Contact party: Jim BrownPhone: (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: Jim Brown

Operations Engineering

Title SupervisorSignature: Jim BrownDate: February 5, 1992

* 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.

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 2080, 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
Red Hat SWD #1
O 2-16S-33E
Lea County, New Mexico

- I. The purpose of completing this well is to make a disposal well for produced San Andres water into the San Andres and Glorieta.
- II. Operator: Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
Jim Brown (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. No wells within the area of review penetrate the proposed injection zone.
- VII. 1. Proposed average daily injection volume approximately 4000 BWPD.
Maximum daily injection volume approximately 10,000 BWPD.

2. This will be a closed system.

3. Proposed average injection pressure-900 psi
Proposed maximum injection pressure--1150 psi.

4. Sources of injected water would be produced water from the San Andres formation from nearby wells.
(See Attachment C)

5. See Attachment C.
- VIII. 1. The proposed injection interval is the San Andres and Glorieta formations from 5805'-5818' and 5900'-5920'.

2. Ogallala zones overlie the proposed injection formations at depths to approximately 300' feet.
- IX. The proposed disposal intervals will be acidized with 2,000 gallons of 15 HCL.
- X. Well logs have been filed with the Division.

Application for Authorization to Inject
Red Hat SWD #1

-2-

- XI. 3 water wells exists within a one mile radius of the subject location. (Attachment D) Water analyses are attached.
- 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 E)
 - B. Copy of legal advertisement attached. (Attachment F)
- XIV. Certification is signed.

5. Next higher (shallower) oil or gas zone within the area of review--None
Next lower (deeper) oil or gas zone within the area of review--Wolfcamp 9849'.

ATTACHMENT A

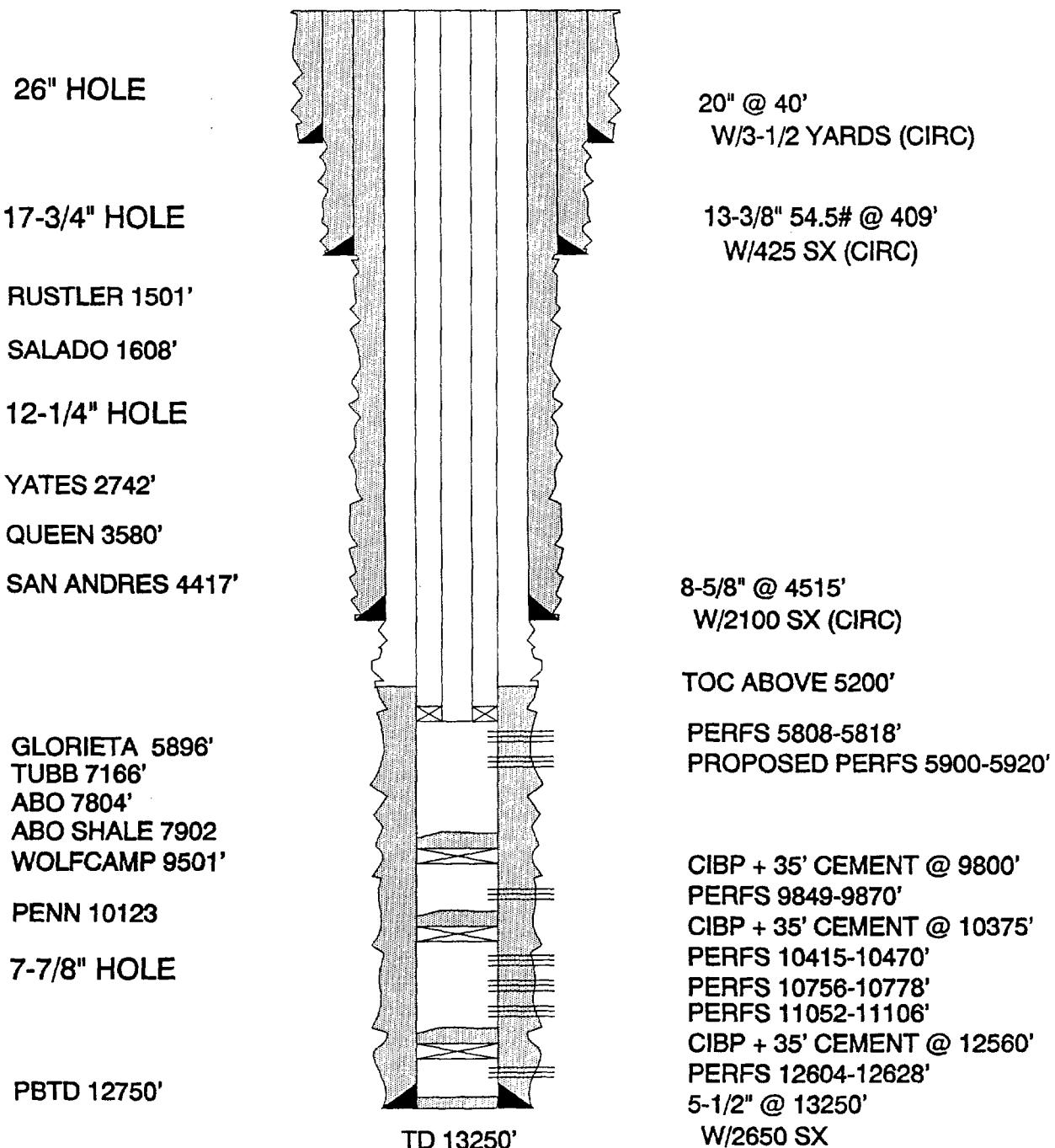
PROPOSED SWD WELLBORE SCHEMATIC

YATES PETROLEUM CORPORATION

RED HAT SWD #1

SEC. 2-T16S-R33E

LEA COUNTY, NEW MEXICO



WILL COMPLETE FOR SALT-WATER DISPOSAL WITH 2-7/8" 6.5# J-55 PLASTIC-COATED TUBING
AND GUIBERSON UNIVI OR BAKER PLASTIC-COATED OR NICKEL-PLATED PACKER @ 5700'.

PROPOSE TO INJECT CANYON PRODUCED WATERS INTO THE SAN ANDRES AND GLORIETA
FORMATION FROM APPROXIMATELY 5808-5818' AND 5900-5920'.

1. G.L. Deall	G - 1 - 93	10. 1 - 93	12. 1 - 92	8. 1 - 93	9. 1 - 94
1. 1 - 90	55958	VN 101	LH 2032	6 2227	V. 1353
0. 1 - 90		10150	10789	12234	12. 1 - 89
0. 1 - 90			Yates Pet.	12234	V. 1301
0. 1 - 90			Echeverry St.	22932	22932
Mary & Gilmore, et al.	U.S., MI	Sit of Tex.	To 10, 865		V. 2122
Sams & Dean Cattle Co. (S)		State State (S)			8750
Jerry G. Bob Dean Peabisc		Pet.			
20					
Lynx Pet.					
4. 1 - 93					
V.A. 19 5612					
T.M. Beall	R.G. Bar - Marshall	Exxon	24		
1. 1 - 90	Winston	10. 1 - 93			
8. 21 - 90	6. 1 - 93	10. 10 - 91			
8. 19 - 90	61591	10. 10 - 91			
Josafita Etche-		10. 10 - 91			
verry, et al., MI	U.S., MI	10. 10 - 91			
Dan E. Mike Field(S)		10. 10 - 91			
State		F213			
1. D. Colomich	Yates Pet, et al.	Ashland &	State	State	State
10. 1 - 91	2. 1 - 92	Monroe,	State	State	State
V. 1020	V. 2194	1. 1 - 93	State	State	State
4152	2542	1. 1 - 93	State	State	State
29	Yates Pet, et al.	Phillips	State	State	State
Alcohol	2. 1 - 92	1. 1 - 93	State	State	State
H.B.P.	V. 2194	1. 1 - 93	State	State	State
1. 1 - 92	2. 1 - 92	1. 1 - 93	State	State	State
Union	V. 2194	1. 1 - 93	State	State	State
Tex.	2542	1. 1 - 93	State	State	State
Calonach	10. 1 - 91	1. 1 - 93	State	State	State
H. B. P.	V. 1020	1. 1 - 93	State	State	State
4152	4152	1. 1 - 93	State	State	State
State					
1. 1 - 90	Yates Pet, et al.	Cal-Won	State	State	State
V. 1050	4. 1 - 92	Fe Engg.	State	State	State
4152	V. 2269	1. 1 - 93	State	State	State
4122	4122	V. 2797	State	State	State
32	State	7250	State	State	State
33	T.V. Dryer	5. V. 1 - 92	State	State	State
1. 1 - 90		7250	State	State	State
State					
1. 1 - 92	Mobil 1/2 MI	Santa Fe Ener.	State	State	State
1. 1 - 92	Dan E. Mike Field(S)	5. V. 1 - 92	State	State	State
34	R33E	7250	State	State	State
1. 1 - 92					
1. 1 - 92	Yates Pet, et al.	Yates Pet, et al.	State	State	State
1. 1 - 92	V. 3541	2. 1 - 92	State	State	State
1. 1 - 92	1. 1 - 93	V. 2197	State	State	State
1. 1 - 92	1. 1 - 93	1. 1 - 93	State	State	State
State		1. 1 - 93	State	State	State
1. 1 - 92	Yates Pet, et al.	Gulf	State	State	State
1. 1 - 92	V. 3541	Ex-51-AE	State	State	State
1. 1 - 92	1. 1 - 93	TD 3331	State	State	State
State					
1. 1 - 92	Yates Pet, et al.	Humble	State	State	State
1. 1 - 92	V. 3541	Penn Disc.	State	State	State
1. 1 - 92	1. 1 - 93	F 153	State	State	State
State					
1. 1 - 92	Yates Pet, et al.	Malodor Pet.	State	State	State
1. 1 - 92	V. 2197	1. 1 - 93	State	State	State
1. 1 - 92	1. 1 - 93	8325	State	State	State
State					
1. 1 - 92	Yates Pet, et al.	Coyman	State	State	State
1. 1 - 92	V. 2197	Hel-51	State	State	State
1. 1 - 92	1. 1 - 93	2702	State	State	State
State					
1. 1 - 92	Yates Pet, et al.	Yates Pet, et al.	State	State	State
1. 1 - 92	V. 2197	1. 1 - 93	State	State	State
1. 1 - 92	1. 1 - 93	3135	State	State	State
State					
1. 1 - 92	Yates Pet, et al.	Exxon	State	State	State
1. 1 - 92	V. 1682	1. 1 - 93	State	State	State
1. 1 - 92	1. 1 - 93	1802	State	State	State
State					
1. 1 - 92	Yates Pet, et al.	Red Hat St. Unit	State	State	State
1. 1 - 92	V. 1682	Gallins E.	State	State	State
1. 1 - 92	1. 1 - 93	1. 1 - 93	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Gulf	State	State	State
1. 1 - 92	V. 1682	Penrose	State	State	State
1. 1 - 92	1. 1 - 93	10102	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Penrose	State	State	State
1. 1 - 92	V. 1682	10102	State	State	State
1. 1 - 92	1. 1 - 93	DA 8 643	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State
1. 1 - 92	1. 1 - 93	V. 3366	State	State	State
State		State			
1. 1 - 92	Yates Pet, et al.	Collins & Ware	State	State	State
1. 1 - 92	V. 3213	8. 1 - 95	State	State	State</

ATTACHMENT C

THE WESTERN COMPANY OF NORTH AMERICA
WATER ANALYSIS

ANALYSIS NO: 920203C

GENERAL INFORMATION

OPERATOR: YATES PET.
 WELL: EIDSON RANCH UNIT#1 DEPTH: +/- 5700'
 FIELD: EIDSON RANCH UNIT DATE SAMPLED: 2-3-92
 FORMATION: SAN ANDRES DATE RECEIVED: 2-3-92
 COUNTY: EDDY SUBMITTED BY: RAY STALL
 STATE: NM WORKED BY: SHEPHERD
 PHONE: 505-392-5556

SAMPLE DESCRI: POST TREATMENT ANALYSIS.

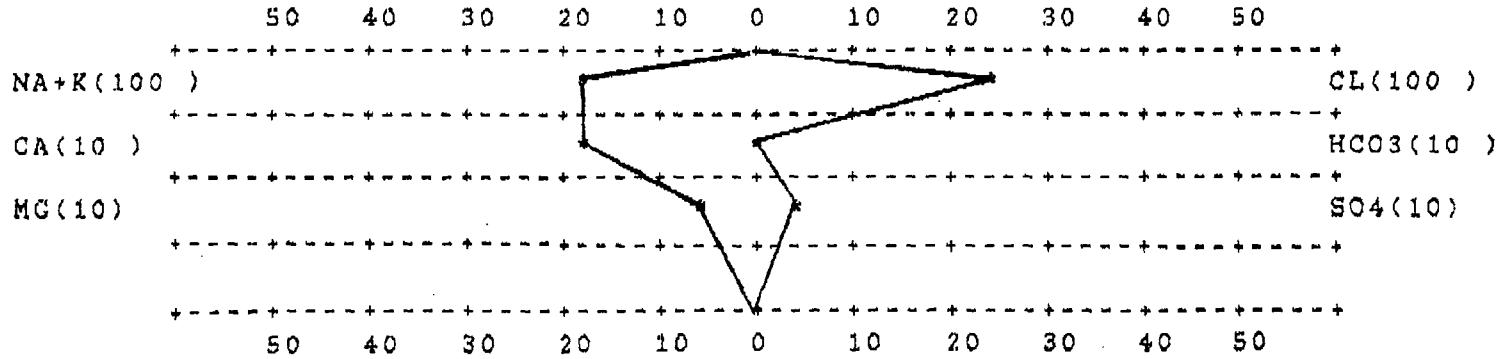
PHYSICAL AND CHEMICAL DETERMINATIONS

SPECIFIC GRAVITY: 1.110 AT 69 DEG. F PH = 6.05

IRON:	NOT DETERMINED	SULFATE:	2297	PPM
FE2+:	+/- 3 PPM	CHLORIDE:	87368	PPM
SODIUM+POTASS:	52837 PPM	SODIUM CHLORIDE (CALC):	144025	PPM
CALCIUM:	3319 PPM	BICARBONATE:	385	PPM
MAGNESIUM:	635 PPM	TOT. HARDNESS AS CACO ₃ :	10911	PPM
PHOSPHATE:	NOT DETERMINED	TOT. DISSOLVED SOLIDS:	153797	PPM
RESISTIVITY (CALCULATED): 0.054 OHM/METER @ 75 DEGREES F.				
REMARKS: NO KCL IN SAMPLE.				

OIL GRAV. IS 26.8 API CORRECTED TO 60°F.

STIFF TYPE PLOT (IN MEQ/L)



ANALYST

X Shepherd

SHEPHERD

ATTACHMENT D

BUTTER

24

6-1-92

V-2353

12244

12-1-89

V-1301

22952

Amerada
12-1-89
V-2127
8750

DAISEY

19

DAISEY

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DAISEY

TREтолITE

Chemicals and Services

ATTACHMENT D
Well A



16010 Barker's Point Lane • Houston, Texas 77079
713 558-5200 • Telex: 4620346 • FAX: 713 589-4737

Reply to: P.O. Box FF
Artesia, New Mexico 88210
(505) 746-3588 Phone
(505) 746-3580 Fax

WATER ANALYSIS REPORT

Company	:	YATES PETROLEUM	Date	:	12/09/91
Address	:	ARTESIA, NM	Date Sampled	:	12/08/91
Lease	:	WINDMILL	Analysis No.	:	001
Well	:	NORTHWEST			
Sample Pt.	:	PUMP			

ANALYSIS		mg/L	* meq/L	
1.	pH	7.5		
2.	H ₂ S	0		
3.	Specific Gravity	1.000		
4.	Total Dissolved Solids		572.4	
5.	Suspended Solids			
6.	Dissolved Oxygen			
7.	Dissolved CO ₂		20 PPM	
8.	Oil In Water			
9.	Phenolphthalein Alkalinity (CaCO ₃)			
10.	Methyl Orange Alkalinity (CaCO ₃)			
11.	Bicarbonate	HCO ₃	219.0	HCO ₃ 3.6
12.	Chloride	Cl	85.0	Cl 2.4
13.	Sulfate	SO ₄	100.0	SO ₄ 2.1
14.	Calcium	Ca	80.0	Ca 4.0
15.	Magnesium	Mg	34.1	Mg 2.8
16.	Sodium (calculated)	Na	29.3	Na 1.3
17.	Iron	Fe	0.0	
18.	Barium	Ba	25.0	
19.	Strontium	Sr	0.0	
20.	Total Hardness (CaCO ₃)		340.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		
4	*Ca ----- *HCO ₃	4
3	/-----> *Mg ----- > *SO ₄	2
1	<-----/ *Na -----> *Cl	2

Saturation Values Dist. Water 20 C
 CaCO₃ 13 mg/L
 CaSO₄ * 2H₂O 2090 mg/L
 BaSO₄ 2.4 mg/L

Compound	Equiv wt	X meq/L	=	mg/L
Ca(HCO ₃) ₂	81.0	3.6	291	
CaSO ₄	68.1	0.4	27	
CaCl ₂	55.5			
Mg(HCO ₃) ₂	73.2			
MgSO ₄	60.2	1.7	101	
MgCl ₂	47.6	1.1	53	
NaHCO ₃	84.0			
Na ₂ SO ₄	71.0			
NaCl	58.4	1.3	75	

REMARKS:

----- L. MALLETT / MLAB / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT

TRETOOLITE®

Chemicals and Services

ATTACHMENT D
Well B

PETROLITE

16010 Barker's Point Lane • Houston, Texas 77079
713 558-5200 • Telex: 4620346 • FAX: 713 589-4737

Reply to: P.O. Box FF
 Artesia, New Mexico 88210
 (505) 746-3588 Phone
 (505) 746-3580 Fax

WATER ANALYSIS REPORT

Company : YATES PETROLEUM Date : 12/13/91
 Address : ARTESIA, NM Date Sampled : 12/13/91
 Lease : WINDMILL Analysis No. : 002
 Well : NORTHEAST
 Sample Pt. : WELLHEAD

ANALYSIS		mg/L	* meq/L		
1.	pH	7.8			
2.	H ₂ S	0			
3.	Specific Gravity	1.000			
4.	Total Dissolved Solids		1458.7		
5.	Suspended Solids				
6.	Dissolved Oxygen				
7.	Dissolved CO ₂				
8.	Oil In Water				
9.	Phenolphthalein Alkalinity (CaCO ₃)				
10.	Methyl Orange Alkalinity (CaCO ₃)				
11.	Bicarbonate	HCO ₃	171.0	HCO ₃	2.8
12.	Chloride	Cl	511.0	Cl	14.4
13.	Sulfate	SO ₄	250.0	SO ₄	5.2
14.	Calcium	Ca	64.0	Ca	3.2
15.	Magnesium	Mg	4.9	Mg	0.4
16.	Sodium (calculated)	Na	432.8	Na	18.8
17.	Iron	Fe	0.0		
18.	Barium	Ba	25.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO ₃)		180.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt	X meq/L	= mg/L
3	*Ca <---- *HCO ₃	Ca(HCO ₃) ₂	81.0	2.8	227
0	/-----> *Mg -----> *SO ₄	CaSO ₄	68.1	0.4	27
19	<-----/ *Na -----> *Cl	CaCl ₂	55.5		
		Mg(HCO ₃) ₂	73.2		
		MgSO ₄	60.2	0.4	24
		MgCl ₂	47.6		
		NaHCO ₃	84.0		
	Saturation Values Dist. Water 20 C	Na ₂ SO ₄	71.0	4.4	313
	CaCO ₃ 13 mg/L	NaCl	58.4	14.4	842
	CaSO ₄ * 2H ₂ O 2090 mg/L				
	BaSO ₄ 2.4 mg/L				

REMARKS:

----- L. MALLETT / MLAB / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT

PETROLITE

SCALE TENDENCY REPORT

Company	:	YATES PETROLEUM	Date	:	12/13/91
Address	:	ARTESIA, NM	Date Sampled	:	12/13/91
Lease	:	WINDMILL	Analysis No.	:	002
Well	:	NORTHEAST	Analyst	:	STEVE TIGERT
Sample Pt.	:	WELLHEAD			

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
CaCO₃ Scaling Tendency

S.I. =	0.2	at 80 deg. F or 27 deg. C
S.I. =	0.3	at 100 deg. F or 38 deg. C
S.I. =	0.4	at 120 deg. F or 49 deg. C
S.I. =	0.5	at 140 deg. F or 60 deg. C
S.I. =	0.5	at 160 deg. F or 71 deg. C

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS
(Skillman-McDonald-Stiff Method)
Calcium Sulfate

S =	1217	at 80 deg. F or 27 deg C
S =	1207	at 100 deg. F or 38 deg C
S =	1198	at 120 deg. F or 49 deg C
S =	1189	at 140 deg. F or 60 deg C
S =	1136	at 160 deg. F or 71 deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT

TRETOOLITE®

Chemicals and Services

ATTACHMENT D
Well C

PETROLITE

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713 558-5200 • Telex: 4620346 • FAX: 713 589-4737

Reply to: P.O. Box FF
 Artesia, New Mexico 88210
 (505) 746-3588 Phone
 (505) 746-3580 Fax

WATER ANALYSIS REPORT

Company : YATES PETROLEUM Date : 12/13/91
 Address : ARTESIA, NM Date Sampled : 12/13/91
 Lease : WINDMILL (NORTH) Analysis No. : 001
 Well : NORTH
 Sample Pt. : WELLHEAD

ANALYSIS		mg/L	* meq/L	
1.	pH	7.5		
2.	H ₂ S	0		
3.	Specific Gravity	1.000		
4.	Total Dissolved Solids		587.2	
5.	Suspended Solids			
6.	Dissolved Oxygen			
7.	Dissolved CO ₂			
8.	Oil In Water			
9.	Phenolphthalein Alkalinity (CaCO ₃)			
10.	Methyl Orange Alkalinity (CaCO ₃)			
11.	Bicarbonate	HCO ₃	158.0	HCO ₃ 2.6
12.	Chloride	Cl	107.0	Cl 3.0
13.	Sulfate	SO ₄	125.0	SO ₄ 2.6
14.	Calcium	Ca	68.0	Ca 3.4
15.	Magnesium	Mg	7.3	Mg 0.6
16.	Sodium (calculated)	Na	96.9	Na 4.2
17.	Iron	Fe	0.0	
18.	Barium	Ba	25.0	
19.	Strontium	Sr	0.0	
20.	Total Hardness (CaCO ₃)		200.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		
3	*Ca ----- *HCO ₃	3
	/----->	
1	*Mg -----> *SO ₄	3
	<-----/	
4	*Na -----> *Cl	3

Saturation Values Dist. Water 20 C
 CaCO₃ 13 mg/L
 CaSO₄ * 2H₂O 2090 mg/L
 BaSO₄ 2.4 mg/L

Compound	Equiv wt	X meq/L	=	mg/L
Ca(HCO ₃) ₂	81.0	2.6	210	
CaSO ₄	68.1	0.8	55	
CaCl ₂	55.5			
Mg(HCO ₃) ₂	73.2			
MgSO ₄	60.2	0.6	36	
MgCl ₂	47.6			
NaHCO ₃	84.0			
Na ₂ SO ₄	71.0	1.2	85	
NaCl	58.4	3.0	176	

REMARKS:

----- L. MALLETT / MLAB / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT

APPLICATION FOR AUTHORIZATION TO INJECT

ALL CHARGED - IN DIVISION

(Case 10463)

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

II. Operator: Yates Petroleum Corporation (934)

Address: 105 S. 4th Street, Artesia, NM 88210

Contact party: Jim Brown 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: Jim Brown

Operations Engineering
Title Supervisor

Signature: Jim Brown Date: February 5, 1992

* 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.

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
Red Hat SWD #1
O 2-16S-33E
Lea County, New Mexico

- I. The purpose of completing this well is to make a disposal well for produced San Andres water into the San Andres and Glorieta.
- II. Operator: Yates Petroleum Corporation
105 South Fourth Street
Artesia, NM 88210
Jim Brown (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. No wells within the area of review penetrate the proposed injection zone.
- VII. 1. Proposed average daily injection volume approximately 4000 BWPD.
Maximum daily injection volume approximately 10,000 BWPD.
2. This will be a closed system.
3. Proposed average injection pressure-900 psi
Proposed maximum injection pressure--1150 psi.
4. Sources of injected water would be produced water from the San Andres formation from nearby wells.
(See Attachment C)
5. See Attachment C.
- VIII. 1. The proposed injection interval is the San Andres and Glorieta formations from 5805'-5818' and 5900'-5920'.
2. Ogallala zones overlie the proposed injection formations at depths to approximately 300' feet.
- IX. The proposed disposal intervals will be acidized with 2,000 gallons of 15 HCL.
- X. Well logs have been filed with the Division.

Application for Authorization to Inject
Red Hat SWD #1
-2-

- XI. 3 water wells exists within a one mile radius of the subject location. (Attachment D) Water analyses are attached.
- 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 E)
 - B. Copy of legal advertisement attached. (Attachment F)
- XIV. Certification is signed.

5. Next higher (shallower) oil or gas zone within the area of review--None
Next lower (deeper) oil or gas zone within the area of review--Wolfcamp 9849'.

ATTACHMENT A

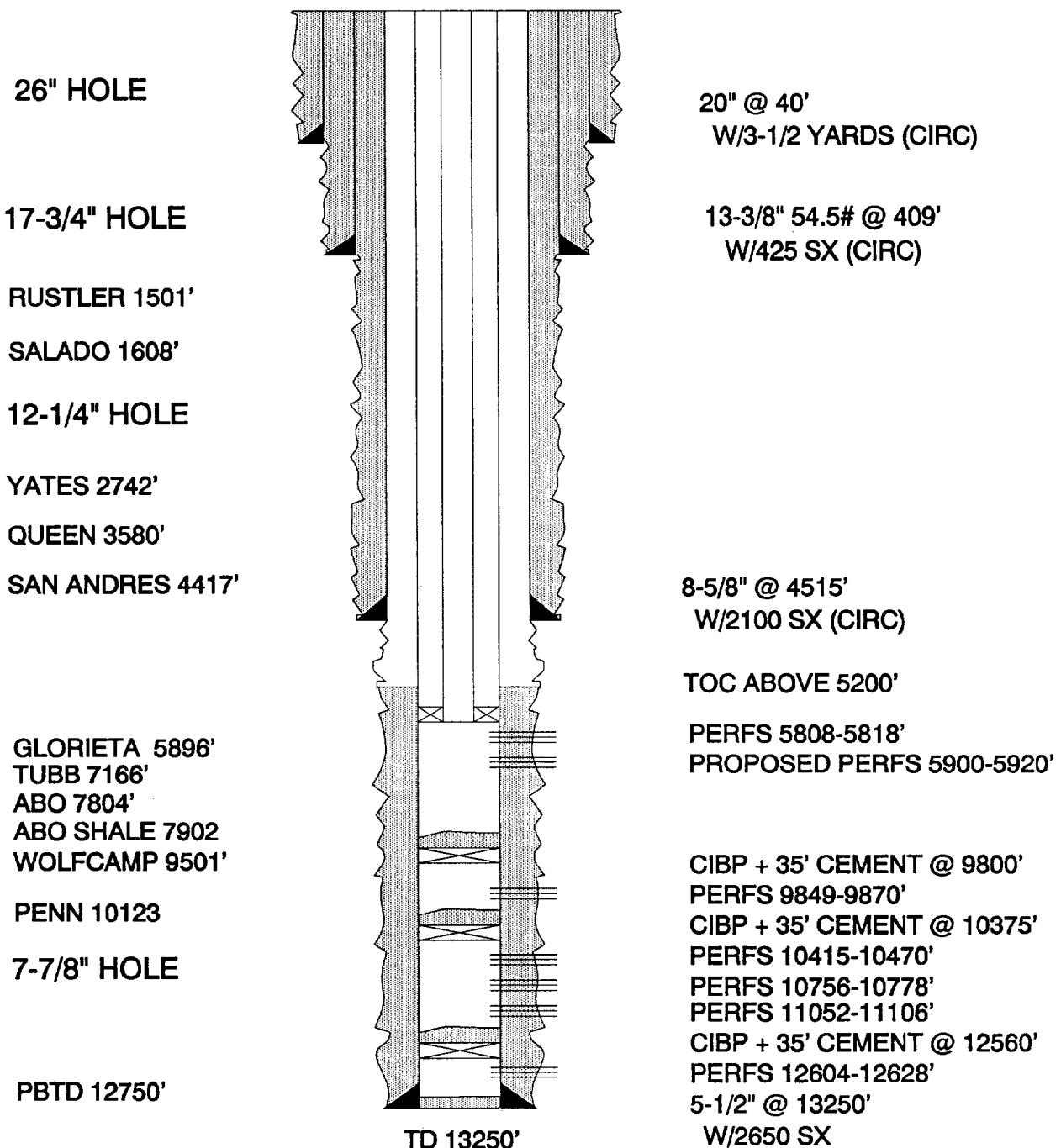
PROPOSED SWD WELLBORE SCHEMATIC

YATES PETROLEUM CORPORATION

RED HAT SWD #1

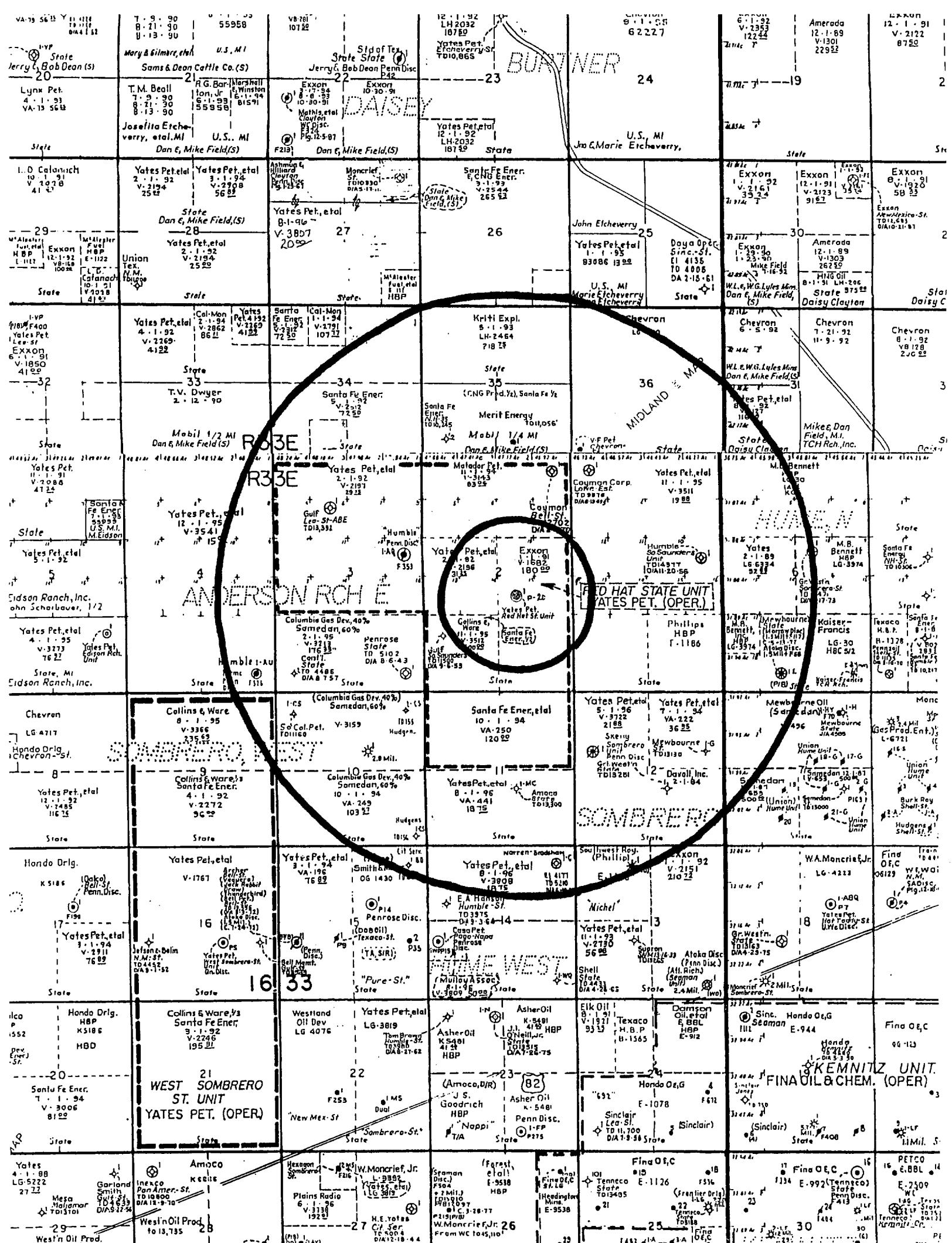
SEC. 2-T16S-R33E

LEA COUNTY, NEW MEXICO



WILL COMPLETE FOR SALT-WATER DISPOSAL WITH 2-7/8" 6.5# J-55 PLASTIC-COATED TUBING
AND GUIBERSON UNI VI OR BAKER PLASTIC-COATED OR NICKEL-PLATED PACKER @ 5700'.

PROPOSE TO INJECT CANYON PRODUCED WATERS INTO THE SAN ANDRES AND GLORIETA
FORMATION FROM APPROXIMATELY 5808-5818' AND 5900-5920'.



YATES PETROLEUM CORPORATION

RED HAT SWD #1

PROPOSED SALT WATER DISPOSAL

SEC. 2-16S-33E

3300'FSL & 1980'FEL

LEA COUNTY, NEW MEXICO

ATTACHMENT B

ATTACHMENT C
 THE WESTERN COMPANY OF NORTH AMERICA
 WATER ANALYSIS

ANALYSIS NO: 920203C

GENERAL INFORMATION

OPERATOR:	YATES PET.	DEPTH:	+/- 5700'
WELL:	EIDSON RANCH UNIT#1	DATE SAMPLED:	2-3-92
FIELD:	EIDSON RANCH UNIT	DATE RECEIVED:	2-3-92
FORMATION:	SAN ANDRES	SUBMITTED BY:	RAY STALL
COUNTY:	EDDY	WORKED BY:	SHEPHERD
STATE:	NM	PHONE:	505-392-5556

SAMPLE DESCRIPTIVE: POST TREATMENT ANALYSIS.

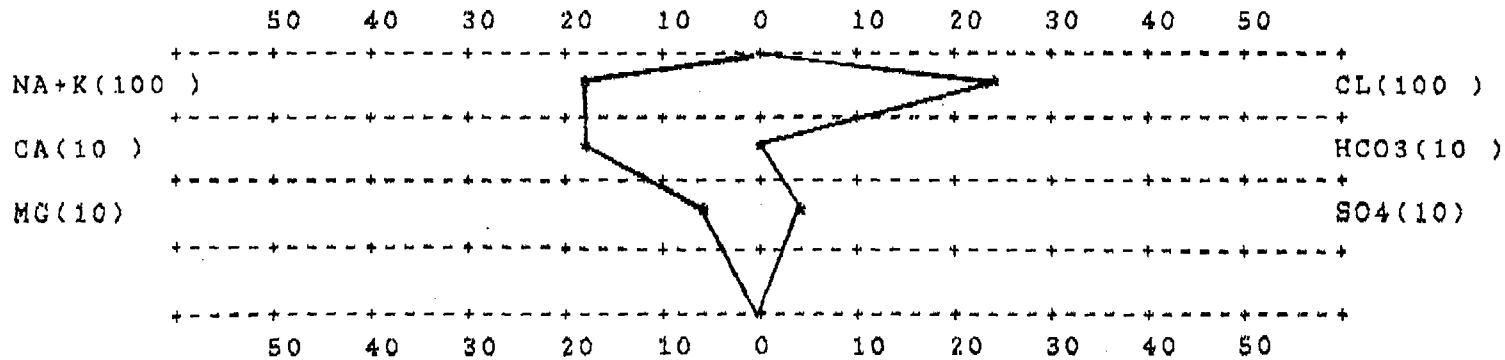
PHYSICAL AND CHEMICAL DETERMINATIONS

SPECIFIC GRAVITY: 1.110 AT 69 DEG. F PH = 6.05

IRON:	NOT DETERMINED	SULFATE:	2297	PPM
FE ²⁺ :	+/- 3 PPM			
SODIUM+POTASS:	52837 PPM	CHLORIDE:	87368	PPM
CALCIUM:	3319 PPM	SODIUM CHLORIDE (CALC):	144025	PPM
MAGNESIUM:	635 PPM	BICARBONATE:	385	PPM
PHOSPHATE:	NOT DETERMINED	TOT. HARDNESS AS CACO ₃ :	10911	PPM
RESISTIVITY (CALCULATED):	0.054 OHM/METER @ 75 DEGREES F.	TOT. DISSOLVED SOLIDS:	153797	PPM
REMARKS:	NO KCL IN SAMPLE.			

OIL GRAV. IS 26.8 API CORRECTED TO 60°F.

STIFF TYPE PLOT (IN MEQ/L)



ANALYST

Shepherd

SHEPHERD

TRETOLITE

Chemicals and Services

ATTACHMENT D

Well A

16010 Barker's Point Lane • Houston, Texas 77079
713 558-5200 • Telex: 4620346 • FAX: 713 589-4737Reply to: P.O. Box FF
Artesia, New Mexico 88210
(505) 746-3588 Phone
(505) 746-3580 Fax

WATER ANALYSIS REPORT

Company : YATES PETROLEUM
 Address : ARTESIA, NM
 Lease : WINDMILL
 Well : NORTHWEST
 Sample Pt. : PUMP

Date : 12/09/91
 Date Sampled : 12/08/91
 Analysis No. : 001

ANALYSIS		mg/L	* meq/L	
1.	pH	7.5		
2.	H ₂ S	0		
3.	Specific Gravity	1.000		
4.	Total Dissolved Solids		572.4	
5.	Suspended Solids			
6.	Dissolved Oxygen			
7.	Dissolved CO ₂		20 PPM	
8.	Oil In Water			
9.	Phenolphthalein Alkalinity (CaCO ₃)			
10.	Methyl Orange Alkalinity (CaCO ₃)			
11.	Bicarbonate	HCO ₃	219.0	HCO ₃ 3.6
12.	Chloride	Cl	85.0	Cl 2.4
13.	Sulfate	SO ₄	100.0	SO ₄ 2.1
14.	Calcium	Ca	80.0	Ca 4.0
15.	Magnesium	Mg	34.1	Mg 2.8
16.	Sodium (calculated)	Na	29.3	Na 1.3
17.	Iron	Fe	0.0	
18.	Barium	Ba	25.0	
19.	Strontium	Sr	0.0	
20.	Total Hardness (CaCO ₃)		340.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt	X meq/L =	mg/L
4	*Ca <----- *HCO ₃	4	Ca(HCO ₃) ₂	81.0	3.6 291
	/----->		CaSO ₄	68.1	0.4 27
3	*Mg -----> *SO ₄	2	CaCl ₂	55.5	
	<-----/		Mg(HCO ₃) ₂	73.2	
1	*Na -----> *Cl	2	MgSO ₄	60.2	1.7 101
			MgCl ₂	47.6	1.1 53
Saturation Values Dist. Water 20 C		NaHCO ₃	84.0		
CaCO ₃	13 mg/L	Na ₂ SO ₄	71.0		
CaSO ₄ * 2H ₂ O	2090 mg/L	NaCl	58.4	1.3	75
BaSO ₄	2.4 mg/L				

REMARKS:

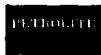
L. MALLETT / MLAB / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT

TRETOOLITE®

Chemicals and Services

ATTACHMENT D
Well B16010 Barker's Point Lane • Houston, Texas 77079
713 558-5200 • Telex: 4620346 • FAX: 713 589-4737Reply to: P.O. Box FF
Artesia, New Mexico 88210
(505) 746-3588 Phone
(505) 746-3580 Fax

WATER ANALYSIS REPORT

Company : YATES PETROLEUM Date : 12/13/91
 Address : ARTESIA, NM Date Sampled : 12/13/91
 Lease : WINDMILL Analysis No. : 002
 Well : NORTHEAST
 Sample Pt. : WELLHEAD

ANALYSIS		mg/L	* meq/L	
1.	pH	7.8		
2.	H ₂ S	0		
3.	Specific Gravity	1.000		
4.	Total Dissolved Solids		1458.7	
5.	Suspended Solids			
6.	Dissolved Oxygen			
7.	Dissolved CO ₂			
8.	Oil In Water			
9.	Phenolphthalein Alkalinity (CaCO ₃)			
10.	Methyl Orange Alkalinity (CaCO ₃)			
11.	Bicarbonate	HCO ₃	171.0	HCO ₃ 2.8
12.	Chloride	Cl	511.0	Cl 14.4
13.	Sulfate	SO ₄	250.0	SO ₄ 5.2
14.	Calcium	Ca	64.0	Ca 3.2
15.	Magnesium	Mg	4.9	Mg 0.4
16.	Sodium (calculated)	Na	432.8	Na 18.8
17.	Iron	Fe	0.0	
18.	Barium	Ba	25.0	
19.	Strontium	Sr	0.0	
20.	Total Hardness (CaCO ₃)		180.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt	X meq/L	= mg/L
3	*Ca <----- *HCO ₃	3	Ca(HCO ₃) ₂	81.0	2.8 227
0	/-----> *Mg -----> *SO ₄	5	CaSO ₄	68.1	0.4 27
19	<-----/ *Na -----> *Cl	14	CaCl ₂	55.5	
			Mg(HCO ₃) ₂	73.2	
			MgSO ₄	60.2	0.4 24
			MgCl ₂	47.6	
			NaHCO ₃	84.0	
	Saturation Values Dist. Water 20 C		Na ₂ SO ₄	71.0	4.4 313
	CaCO ₃ 13 mg/L		NaCl	58.4	14.4 842
	CaSO ₄ * 2H ₂ O 2090 mg/L				
	BaSO ₄ 2.4 mg/L				

REMARKS:

----- L. MALLETT / MLAB / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT

PETROLITE

SCALE TENDENCY REPORT

Company	:	YATES PETROLEUM	Date	:	12/13/91
Address	:	ARTESIA, NM	Date Sampled	:	12/13/91
Lease	:	WINDMILL	Analysis No.	:	002
Well	:	NORTHEAST	Analyst	:	STEVE TIGERT
Sample Pt.	:	WELLHEAD			

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
CaCO₃ Scaling Tendency

S.I. =	0.2	at	80 deg. F or	27 deg. C
S.I. =	0.3	at	100 deg. F or	38 deg. C
S.I. =	0.4	at	120 deg. F or	49 deg. C
S.I. =	0.5	at	140 deg. F or	60 deg. C
S.I. =	0.5	at	160 deg. F or	71 deg. C

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS
(Skillman-McDonald-Stiff Method)
Calcium Sulfate

S =	1217	at	80 deg. F or	27 deg C
S =	1207	at	100 deg. F or	38 deg C
S =	1198	at	120 deg. F or	49 deg C
S =	1189	at	140 deg. F or	60 deg C
S =	1136	at	160 deg. F or	71 deg C

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT

TRETOLITE®

Chemicals and Services

ATTACHMENT D

Well C

PETROLITE

16010 Barker's Point Lane • Houston, Texas 77079
713 558-5200 • Telex: 4620346 • FAX: 713 589-4737

Reply to: P.O. Box FF
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WATER ANALYSIS REPORT

Company : YATES PETROLEUM Date : 12/13/91
 Address : ARTESIA, NM Date Sampled : 12/13/91
 Lease : WINDMILL (NORTH) Analysis No. : 001
 Well : NORTH
 Sample Pt. : WELLHEAD

ANALYSIS

mg/L

* meq/L

1.	pH	7.5		
2.	H ₂ S	0		
3.	Specific Gravity	1.000		
4.	Total Dissolved Solids		587.2	
5.	Suspended Solids			
6.	Dissolved Oxygen			
7.	Dissolved CO ₂			
8.	Oil In Water			
9.	Phenolphthalein Alkalinity (CaCO ₃)			
10.	Methyl Orange Alkalinity (CaCO ₃)			
11.	Bicarbonate	HCO ₃	158.0	HCO ₃
12.	Chloride	Cl	107.0	Cl
13.	Sulfate	SO ₄	125.0	SO ₄
14.	Calcium	Ca	68.0	Ca
15.	Magnesium	Mg	7.3	Mg
16.	Sodium (calculated)	Na	96.9	Na
17.	Iron	Fe	0.0	
18.	Barium	Ba	25.0	
19.	Strontium	Sr	0.0	
20.	Total Hardness (CaCO ₃)		200.0	

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter			Compound	Equiv wt	X meq/L	=	mg/L
3	*Ca <----- *HCO ₃	3	Ca(HCO ₃) ₂	81.0	2.6	210	
	/----->		CaSO ₄	68.1	0.8	55	
1	*Mg -----> *SO ₄	3	CaCl ₂	55.5			
	<-----/-----/		Mg(HCO ₃) ₂	73.2			
4	*Na -----> *Cl	3	MgSO ₄	60.2	0.6	36	
			MgCl ₂	47.6			
Saturation Values Dist. Water 20 C			NaHCO ₃	84.0			
CaCO ₃	13 mg/L		Na ₂ SO ₄	71.0	1.2	85	
CaSO ₄ * 2H ₂ O	2090 mg/L		NaCl	58.4	3.0	176	
BaSO ₄	2.4 mg/L						

REMARKS:

----- L. MALLETT / MLAB / FILE

Petrolite Oilfield Chemicals Group

Respectfully submitted,
STEVE TIGERT

ATTACHMENT E

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986



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

S. P. YATES
CHAIRMAN OF THE BOARD
JOHN A. YATES
PRESIDENT
PEYTON YATES
EXECUTIVE VICE PRESIDENT
RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

February 5, 1992

CERTIFIED RETURN RECEIPT

10463

State of New Mexico
OIL CONSERVATION DIVISION
P. O. Box 2088
Santa Fe, NM 87501

Dear Sir,

Enclosed please find our application for authorization to inject for the Red Hat SWD #1 located in Section 2-16S-33E of Lea County.

If you have any questions, you may contact me at (505) 748-1471 Ext. 167. Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Jim Brown".

Jim Brown
Operations Engineering Supervisor

JB/th

Enclosures

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
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DENNIS G. KINSEY
TREASURER

February 5, 1992

CERTIFIED RETURN RECEIPT

104103

Plains Radio Petroleum Company
P. O. Box 9354
Amarillo, TX 79105

Dear Sir,

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Red Hat SWD #1 located in Unit 0 of Section 2-16S-33E , Lea County, New Mexico.

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

Sincerely,

Jim Brown

Jim Brown
Operations Engineering Supervisor

JB/th

Enclosure

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1912 - 1985
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TREASURER

February 5, 1992

CERTIFIED RETURN RECEIPT

10463

Matador Petroleum Corporation
8340 Meadow Road
St. 158, Pecan Creek
Dallas, TX 75231

Dear Sir,

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Red Hat SWD #1 located in Unit 0 of Section 2-16S-33E , Lea County, New Mexico.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Jim Brown".

Jim Brown
Operations Engineering Supervisor

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February 5, 1992

CERTIFIED RETURN RECEIPT

102163

Exxon Corporation
P. O. Box 1600
Midland, TX 79702

Dear Sir,

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Red Hat SWD #1 located in Unit 0 of Section 2-16S-33E , Lea County, New Mexico.

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

Sincerely,

Jim Brown

Jim Brown
Operations Engineering Supervisor

JB/th

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TREASURER

February 5, 1992

CERTIFIED RETURN RECEIPT

104163

Santa Fe Energy Resources, Inc.
550 W. Texas, St. 1330
Midland, TX 79701

Dear Sir,

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Red Hat SWD #1 located in Unit O of Section 2-16S-33E , Lea County, New Mexico.

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

Sincerely,

Jim Brown

Jim Brown
Operations Engineering Supervisor

JB/th

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TREASURER

February 5, 1992

CERTIFIED RETURN RECEIPT

10463

Collins & Ware, Inc.
303 W. Wall Ave., St. 2200
Midland, TX 79701

Dear Sir,

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Red Hat SWD #1 located in Unit 0 of Section 2-16S-33E , Lea County, New Mexico.

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

Sincerely,

Jim Brown

Jim Brown
Operations Engineering Supervisor

JB/th

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TREASURER

February 5, 1992

CERTIFIED RETURN RECEIPT

10463

Dan Field
P. O. Box 1105
Lovington, NM 88260

Dear Sir,

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Red Hat SWD #1 located in Unit 0 of Section 2-16S-33E , Lea County, New Mexico.

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

Sincerely,

Jim Brown

Jim Brown
Operations Engineering Supervisor

JB/th

Enclosure

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TREASURER

February 5, 1992

CERTIFIED RETURN RECEIPT

104163

Charles R. Martin, Inc.
P. O. Box 706
Artesia, NM 88210

Dear Sir,

Enclosed please find a copy of form C-108 (Application for Authority to Inject) on Yates' Red Hat SWD #1 located in Unit 0 of Section 2-16S-33E , Lea County, New Mexico.

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

Sincerely,

Jim Brown

Jim Brown
Operations Engineering Supervisor

JB/th

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TREASURER

February 5, 1992

Hobbs News Sun
503 W. Main
Hobbs, NM 88240

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 Friday, February 14, 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: Jim Brown

If you have any questions, please contact me at 748-1471, Ext. 167. Thank you for your cooperation in this matter.

Sincerely,

Jim Brown

Jim Brown
Operations Engineering Supervisor

JB/th

Enclosure

Attachment F

Legal Notice

Yates Petroleum Corporation, 105 South Fourth Street, Artesia, NM 88210, has filed form 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 "Red Hat SWD #1" located 3300' FSL & 1980' FEL of Section 2, Township 16 South, Range 33 East of Lea County, New Mexico, will be used for saltwater disposal. Disposal waters from the Wolfcamp will be re-injected into the Delaware formation at a depth of 5746'-5870' feet with a maximum pressure of 1100 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 Jim Brown at (505) 748-1471.

AFFIDAVIT OF PUBLICATION

OIL CONSERVATION DIVISION

REF ID: A40

State of New Mexico,
County of Lea.

'92 FE-24 AM 9 01

I, Kathi Bearden

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period

of _____

One _____ weeks.
Beginning with the issue dated

Feb. 14, 1992
and ending with the issue dated

Feb. 14, 1992

Kathi Bearden
General Manager
Sworn and subscribed to before

me this 18 day of

February, 1992

Paula Phinney
Notary Public.

My Commission expires _____

Aug. 5, 1995
(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE

February 14, 1992

Yates Petroleum Corporation, 105 South Fourth Street, Artesia, NM 88210, has filed form 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 "Red Hat SWD #1" located 3300' FSL & 1980' FEL of Section 2, Township 16 South, Range 33 East of Lea County, New Mexico, will be used for saltwater disposal. Disposal waters from the Wolfcamp will be re-injected into the Delaware formation at a depth of 5746'-5780' feet with a maximum pressure of 1100 psi and a maximum rate of 10,000 BWPD.

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