



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

OIL CONSERVATION DIVISION
BOX 2088
SANTA FE, NEW MEXICO 87501

Still pending
8-20-82

DATE 6-24-81

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed SWD α _____
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated 6-22-81
for the Citric Service Co. Federal E# 2 H-28-19N-5W
Operator Lease and Well No. Unit, S-T-R

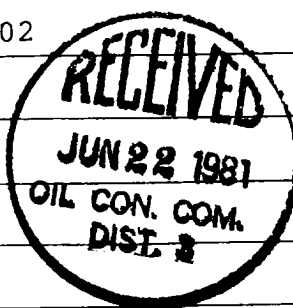
and my recommendations are as follows:

Approve

Yours truly,

Frank T. Chaz

NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Cities Service Company		ADDRESS P.O. Box 1919- Midland, Texas 79702			
LEASE NAME Federal E		WELL NO. 2	FIELD Undes. Entrada		COUNTY McKinley
LOCATION					
UNIT LETTER H		WELL IS LOCATED 1650		North 990	
East		LINE, SECTION 28	TOWNSHIP 19N	RANGE 5W	NMPM.
CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	9-5/8"	223'	110	surface	circulated
INTERMEDIATE	7"	3335'	775	605'	Temp. Survey
LONG STRING	4-1/2" liner 3040-5355'	140	3040'	---	
TUBING	2-3/8"	5150	NAME, MODEL AND DEPTH OF TUBING PACKER Baker Lok-Set @ 5100 ±		
NAME OF PROPOSED INJECTION FORMATION Entrada			TOP OF FORMATION 5157'		BOTTOM OF FORMATION 5328'
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLE? Perforations		PROPOSED INTERVAL(S) OF INJECTION 5200 - 5300'	
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Oil well			HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? No
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH None					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 150' Est		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA None		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA None	
ANTICIPATED DAILY INJECTION VOLUME (BBLs.)	MINIMUM 500	MAXIMUM 7500	OPEN OR CLOSED TYPE SYSTEM Closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure	APPROX. PRESSURE (PSI) 750#
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -			WATER TO BE DISPOSED OF No	NATURAL WATER IN DISPOSAL ZONE No	ARE WATER ANALYSES ATTACHED? Yes
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) Federal Land - USGS in Farmington, New Mexico					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL Cities Service Company - P.O. Box 1919 - Midland, Texas 79702					
					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?		SURFACE OWNER No		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL N/A	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)		PLAT OF AREA Yes		ELECTRICAL LOG None has been run	
				THE NEW MEXICO STATE ENGINEER No	
				DIAGRAMMATIC SKETCH OF WELL Yes	

I hereby certify that the information above is true and complete to the best of my knowledge and belief.


 (Signature)

Region Opr. Mgr. - Prod

(Title)

June 17, 1981

(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

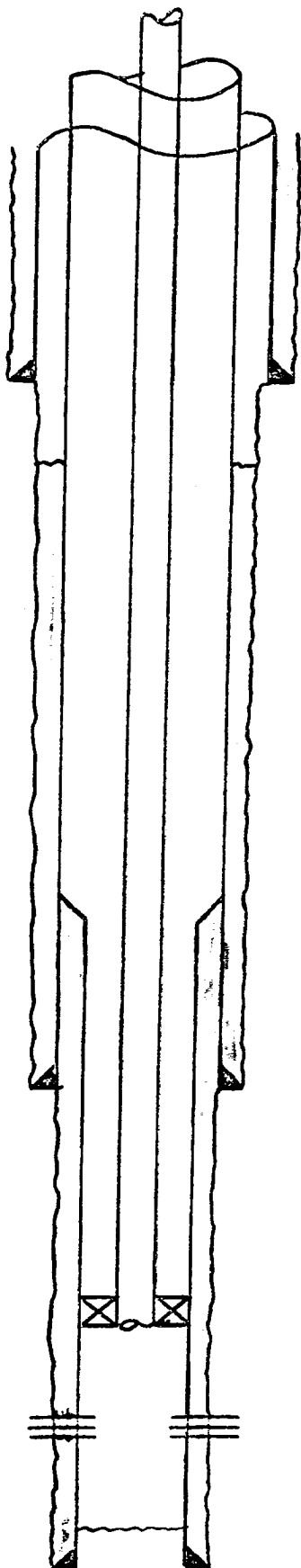
FEDERAL E # 2

1650' FNL & 990' FEL

SEC 28-T19N-R5W

MCKINLEY COUNTY, NEW MEXICO

GROUND LEVEL ELEVATION: 6645'



9 5/8" OD 32.3 # 8R H40 ST.C @ 223' Cmt. Circ.

TOC @ 650'

DV TOOL @ 2481'

TOP OF 4 1/2" LINER @ 3040'



7" OD 20 # 8R K55 ST.C LSG @ 3335'

2 3/8" OD 4.7 # 8R J55 EUE TUBING
W/PACKER SET @ ± 5100'

PROPOSED ENTRADA PERFORATIONS
(TO BE DETERMINED FROM CASED HOLE ϕ LOG)

4 1/2" OD 9.5 # 8R K55 ST.C LINER @ 5355'

T.D. 5355'

WELLS WITHIN A 2 MILE RADIUS OF THE PROPOSED SWD WELL

<u>OPERATOR</u>	<u>WELL NAME & NO.</u>	<u>LOCATION</u>	<u>PRODUCING FORMATION & INTERVAL</u>
DOME PETROLEUM	FEDERAL 15 #1	F-Sec. 15-T19N-R5W	ENTRADA (5160-5169)
DOME PETROLEUM	FEDERAL 15 #2	E-Sec. 15-T19N-R5W	ENTRADA (5184-5192)
DOME PETROLEUM	NAVAJO 15 #3	K-Sec. 15-T19N-R5W	ENTRADA (5140-5148)
DOME PETROLEUM	NAVAJO 15 #4	L-Sec. 15-T19N-R5W	ENTRADA (5200-5207)
DOME PETROLEUM	NAVAJO 15 #6	N-Sec. 15-T19N-R5W	T.D. 5396 P&A
DOME PETROLEUM	NAVAJO 16 #1	I-Sec. 16-T19N-R5W	ENTRADA (5185-5190)
DOME PETROLEUM	STATE 2 #2	H-Sec. 16-T19N-R5W	T.D. 5383 P&A
DOME PETROLEUM	NAVAJO 22-A #1	C-Sec. 22-T19N-R5W	ENTRADA (5136-5143)
DOME PETROLEUM	NAVAJO 22-A #2	J-Sec. 22-T19N-R5W	T.D. 5355 P&A
CLAUDE C. KENNEDY	FEDERAL 22-A #3	K-Sec. 22-T19N-R5W	T.D. 550 P&A
EASTERN PETROLEUM	PAPERTHIN #1	F-Sec. 26-T19N-R5W	MANCOS (2892-2960)
SCHWETZ ET AL	PAPERTHIN #2	D-Sec. 26-T19N-R5W	T.D. 3083 P&A
DOME PETROLEUM	FEDERAL 26 #1	M-Sec. 26-T19N-R5W	T.D. 8936 P&A
EASTERN PETROLEUM	FEDERAL #1-27	J-Sec. 27-T19N-R5W	T.D. 2114 P&A
CITIES SERVICE CO.	FEDERAL E #1	B-Sec. 28-T19N-R5W	TODILTO (5168-5170) ENTRADA (5171-5173)
CITIES SERVICE CO.	FEDERAL M #1	P-Sec. 21-T19N-R5W	T.D. 5492' SHUT-IN
CITIES SERVICE CO.	FEDERAL E #2	H-Sec. 28-T19N-R5W	T.D. 5355' WAITING APPROVAL TO CONVERT TO SWD

P. O. BOX 1468
MONAHAN, TEXAS 79756
PHONE 943-3234 OR 563-1040

Martin Water Laboratories, Inc

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

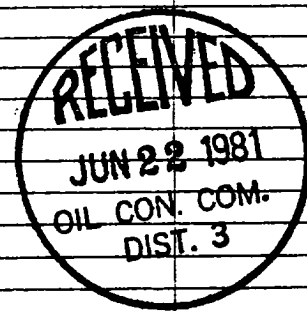
TO: Mr. Alex Irnes LABORATORY NO. 68044
P.O. box 1919, Midland, Texas SAMPLE RECEIVED 6-4-80
RESULTS REPORTED 6-6-80

COMPANY Cities Service Company LEASE Federal "E" #1
FIELD OR POOL _____
SECTION _____ BLOCK _____ SURVEY _____ COUNTY McKinley STATE New Mexico
SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Recovered water - sample chamber. 6-4-80 (ENTRADA FORMATION)
NO. 2 _____
NO. 3 _____
NO. 4 _____

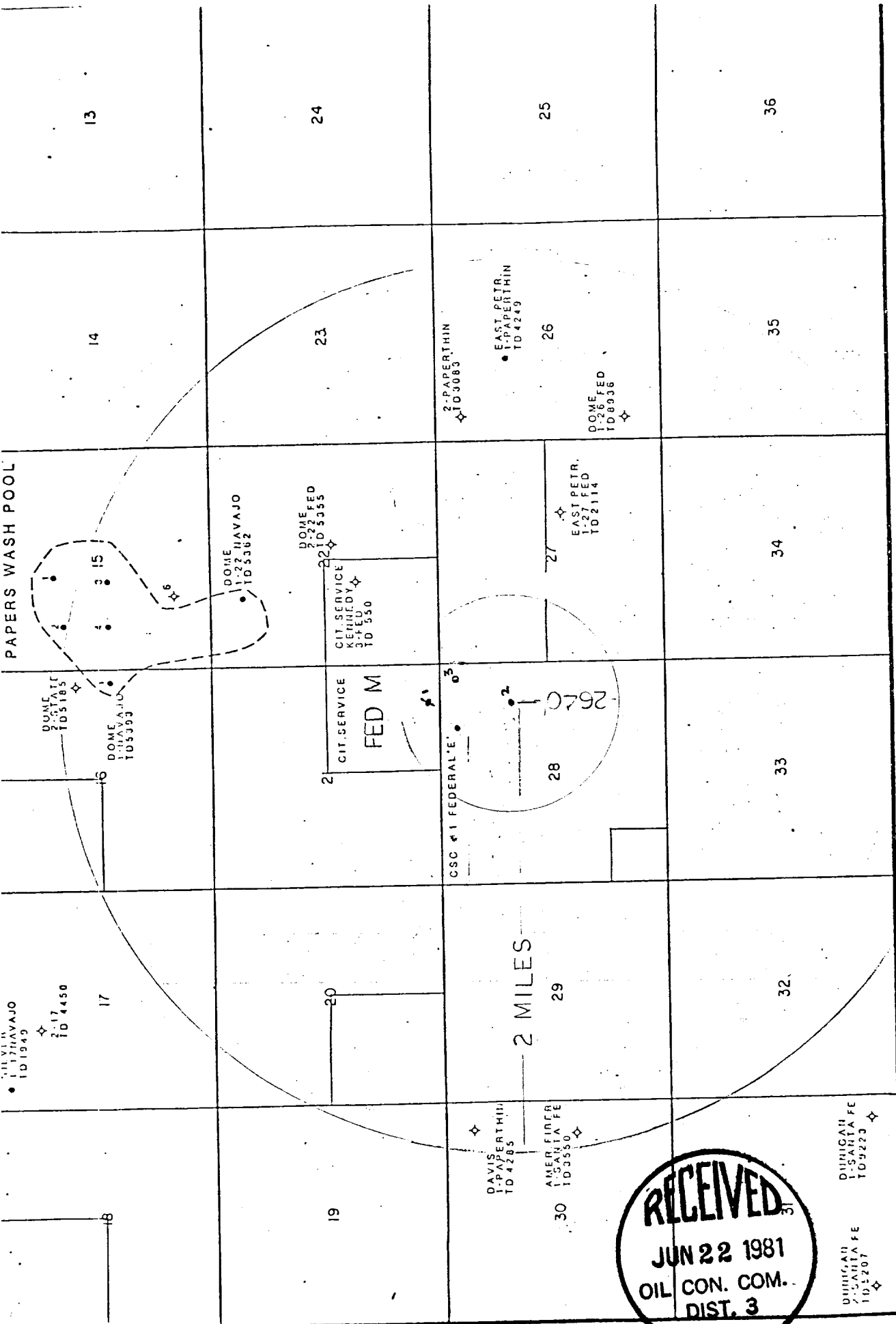
REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0067			
pH When Sampled				
pH When Received	7.2			
Bicarbonate as HCO ₃	708			
Supersaturation as CaCO ₃				
Undersaturation as CaCO ₃				
Total Hardness as CaCO ₃	90			
Calcium as Ca	20			
Magnesium as Mg	4			
Sodium and/or Potassium	1.346			
Sulfate as SO ₄	1.763			
Chloride as Cl	426			
Iron as Fe	83.3			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	4,276			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F.	1.80			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				



Results Reported As Milligrams Per Liter

Additional Determinations And Remarks Please contact us if we can be of any assistance in interpretation of the above results.



Cities Service Company's
FEDERAL "E" No. SWD
Section 28-19N-5W
McKinley County, New Mexico
Lease No. NM-6999

R. 5 W.

RECEIVED
JUN 22 1981
OIL CON. COM.
DIST. 3