PLICATION FOR AUTHORIZATION TO INJ

Care 89/6

1.	Purpose: Secondary Recovery Pressure Haintenance Disposal Storage Application qualifies for administrative approval?
11.	Operator: Yates Drilling Company
	Address: 207 South 4th Street, Artesia, N.M. 88210
	Contact party: Tobin L. Rhodes Phone: (505) 746-9889
11.	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.
14.	Is this an expansion of an existing project? \square yes \square no If yes, give the Division order number authorizing the project $\underline{R-4608}$, $\underline{R-4609}$.
٧.	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.
11.	Attach data on the proposed operation, including:
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and 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.).
11.	Attach appropriate geological data on the injection zone including appropriate lithologically 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) averlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
ıx.	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.
11.	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.
11.	Applicants must complete the "Proof of Notice" section on the reverse side of this form.
IV.	Certification
	I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
	Name: Tobin L. Rhodes litle Engineer
	Signature: John Date: 11-21-85

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:
 - 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.

Case 89/6

I. Purpose:

To convert the producing well (AMU #35) to an injection well. This well is currently within the Artesia Metex Unit Waterflood. The conversion of this well will increase secondary recovery of oil within the unit.

II. The Operator is:

Yates Drilling Company 207 South 4th Street Artesia, New Mexico 88210

III. Well data:

See attached well data and schematic sheet.

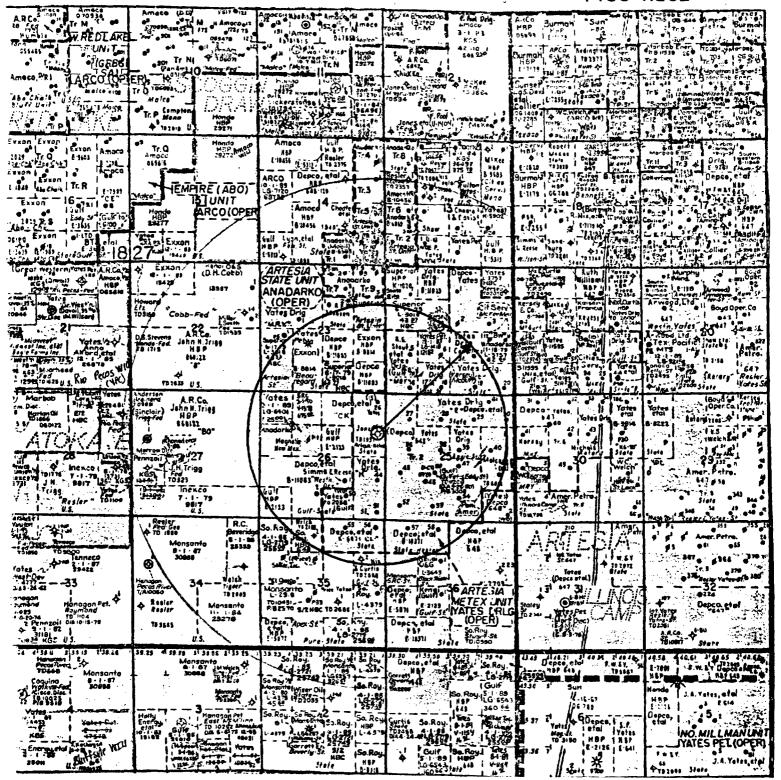
- IV. This will be an expansion within the boundaries of the Artesia Metex Unit Waterflood (Division Order No. R-4609).
- V. A land plat is attached which shows the acreage surrounding the subject well. A two mile radius circle has been drawn around the AMU #35 location to identify all lease ownership within two miles of the subject well. The smaller circle has a radius of ½ mile and identifies the area of review for the proposed injection well.
- VI. There are seven wells other than the proposed injection well within the area of review, as indicated by the attached map. Data concerning the seven wells is included in the attached tabulations.
- VII. Data on the proposed operation:
 - 1. Initially the average and maximum daily rates of fluid injection will be 250 barrels and 500 barrels respectively. However, we request permission to run a step-rate test on the subject well within 90 days of first injection and adjust our injection rate so that injection pressure is below the fracture pressure exhibited by the test.
 - 2. The subject well will be connected to the existing closed injection system of the unit.
 - 3. The proposed initial average and maximum surface injection pressures will be 1235 psig and 1400 psig. The figures were obtained by comparison of the subject well to other injection wells within the unit. See VII part 1 concerning step-rate testing and long term maximum pressure.
 - 4. The source of injection fluid will be produced water from the unit and fresh water purchased from the City of Carlsbad through its Double Eagle water line. Compatibility of this injection water with formation water has not caused a problem previously within the unit, therefore we request that water compatibility testing not be required.
 - 5. Injection into the subject well will not be for disposal purposes.

VIII. Geologic data:

The injection interval will be from +1667 to +1586 subsea. This will include the seven Metex zones of the Grayburg formation. The Metex zones are characterized by intervals of fine grained sandstone and dolomite, and intermitten streaks of shaley dolomite with traces of anhydrite.

- IX. No additional stimulation is planned at this time.
- X. Well logs have been previously submitted to the Division.
- XI. Attached you will find a water analysis for the only fresh water well within one mile of the proposed injection well. Also you will find a copy of the letter from the State Engineer's Office stating the location and estimated depth of this well.
- XII. This in not an application for a disposal well.
- XIII. Attached you will find receipts indicating that each of the offset leasehold operators and surface owners have received a copy of this application.

35	ing Company	30° FEL		18S	27E
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T19S-R27E

T19S-R28E

YATES DRILLING CO.

Artesia Metex Unit

Proposal to Convert AMU #35 to Injection

Scale : "1" : 4000'

T18S-R27E

T18S-R27E

T18S-R28E

YATES DRILLING CO.

T19S-R27E

Artesia Metex Unit

Proposal to Convert AMU #35 to Injection

SCALE : 1" : 5000

T19S-R28E

1858 1929

ivision source inc.	erosource			DACTIV	/ \					
WELL	ARTESIA METEX ARTESIA QUEEN	# 35		SIVE NE	w mexico		Neutron			
Imag Measured From	1650' FNL & 3	S Ro	e 17-E		K.B D.F G.I3525*	d Log Conforms to API RP 33 A		Run No.	The Model No.	DIEMEIS.
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						OLD HERE		Run No.	Tool Model N	Dain He Model)

LEASE NAME: A	rtesia Metex t	WELL NUMBER: 6
 		LEASE NUMBER: NM-648
FORMATION: G	rayburg	POOL: Artesia Queen-Grayburg-SA
LOCATION: 330	' FNL & 990' FWL Section 24-18S	-27E °
ELEVATION: 3568	8' GL	TOTAL DEPTH: 2150'
SURFACE CASING:	8 5/8", 24# @ 486'	CEMENT: 50 sx. TOP:
INT. CASING:		CEMENT: sx. TOP:
PROD. CASING:	5½", 14# @ 2150'	CEMENT: 370 sx. TOP:
SPUD DATE:	6-1-51	COMP. DATE: 2-11-52
PERFORATIONS:	2014-2105, 1940-88	
STIMULATION:	Shot open hole 1946-1998 with 20	0 qts. Nitro. '
	Frac 2014-2105 with 42000 gals.	gelled water and 44000# sand
<u></u>		
COMP. TYPE:	Originally completed open hole a	s oil well. Later ran 5%" csg.
	Artesia Metex Unit Injection	
	1	ч
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		•
LEASE NAME:	Artesia Metex Unit	WELL NUMBER: 26
OPERATOR:	Yates Drilling Company	LEASE NUMBER:
FORMATION:	Grayburg	POQL: Artesia Queen-Grayburg-SA
LOCATION:	330' FNL & 330' FEL Section 26-	
ELEVATION:	3536' GL	TOTAL DEPTH: 1991'
SURFACE CASING	8 5/8" @ 494'	CEMENT: 50 sx. TOP:
INT. CASING:	(4)	CEMENT: sx. TOP:
PROD. CASING:	4 1/2", 9.5# @ 1991	CEMENT: 250 sx. TOP: 1500 est.
SPUD DATE:	3-9-50	COMP. DATE: 4-18-50
PERFORATIONS:	Shot open hole 1956-1880 with	. 350 gts. Nitro.
-		with 2250 gals, 15% HCL, 20000 gals.
	gelled water and 12000# sand.	
_		
COMP. TYPE:	Originally completed open hole	e. 4½" csg. ran 4-23-74
CIPERNT CTATIO	S: Pumping oil well	
CORRENT STATES	3 i	· · · · · · · · · · · · · · · · · · ·

LEASE NAME:	Artesia Met ('nit	WELL NUMBER: 27
PERATOR:	Yates Drilling Company	LEASE NUMBER: NM-648
FORMATION:	Grayburg	POOL: Artesia Queen-Grayburg-SA
LOCATION:	990' FNL & 990' FWL Section 25	-18S-27E
ELEVATION:	3564' GL	TOTAL DEPTH: 2940'
SURFACE CASING	8 5/8" @ 496'	CEMENT: 50 sx. TOP:
INT. CASING:		CEMENT: sx. TOP:
PROD. CASING:		CEMENT: Sx. TOP:
SPUD DATE:	3-8-50	COMP. DATE: 3-31-50
PERFORATIONS:_	None	
STIMULATION:	Shot open hole 1940-2040 with	390 qts. Nitro.' •
	Frac with 40000 gals. gelled w	ater and 30000# sand
COMP. TYPE:	Completed open hole, as oil we	11.
CURRENT STATUS	Pumping oil well.	
	•	
	•	•

I.EASE NAME:	Artesia Metex Unit	WELL NUMBER: 35
OPERATOR:	Yates Drilling Company	LEASE NUMBER:
FURMATION:	Grayburg	POQL: Artesia Queen-Grayburg-SA
LOCATION:	1650' FNL & 330' FEL Section 2	26-18S-27E
ELEVATION:	3525' GL	TOTAL DEPTH: 1987'
SURFACE CASING	7", 23# @ 485'	CEMENT: 410 sx. TOP: Surface
INT. CASING:		CEMENT: sx. TOP:
PROD. CASING:_	4 ¹ 3". 10.5# @ 1987' ()	CEMENT: 175 sx. TOP: 1400 Temp. Sur
SPUD DATE:	4-27-50	COMP. DATE:
PERFORATIONS:_	1858-1939	
STIMULATION:	Frac perfs with 40000 gals. ge	elled water and 73700# sand
COMP. TYPE:	Originally drilled then P&A. F	Re-entered 4-83
	Pumping oil well	•

LEASE NAME:	Artesia Metex it	WELL NUMBER: 36
	Yates Drilling Company	LEASE NUMBER: NM-648
	Grayburg	POOL: Artesia Queen-Grayburg-SA
	2310' FNL & 990' FWL Section	
LOCATION:	3551' GL	TOTAL DEPTH: 2004'
ELEVATION:		•
	3: 8 5/8", 24# @ 449'	CEMENT: 50 sx. TOP:
INT. CASING:_	<u> </u>	CEMENT: sx. TOP:
PROD. CASING:	4½", 11.6# @ 2004'	CEMENT: 100 sx. TOP:
SPUD DATE:	4-11-50	COMP. DATE: 5-5-50
PERFORATIONS:	1986-98, 1918-32	the second secon
STIMULATION:_	Shot open hole 1910-2001 wit	th 360 qts. Nitro.'
	Frac 1986-98 with 20000 gals	s. gelled water and 40000# of sand
	Frac 1918-32 with 20000 cals	s. gelled water and 40000# sand
COMP. TYPE:		ole, fan 4½" csg. perfed & frac'd 11-57.
	S: Pumping oil well	
		<u> </u>
LEASE NAME:	Artesia Metex Unit	well number: 44
OPERATOR:	Yates Drilling Company	LEASE NUMBER: B-11083
FORMATION:	Grayburg	POOL: Artesia Queen-Grayburg-SA
-	1650' FSL & 330' FEL Sect	, ,
ELEVATION:		TOTAL DEPTH: 2030'
41.1	NC: 8 5/8" @ 502'	CEMENT: 50 sx. TOP:
INT. CASING:		CEMENT: sx. TOP:
PROD. CASING		CEMENT: sx. TOP:
	7-31-51	COMP. DATE: 9-9-51
PERFORATIONS		
STIMULATION:		with 430 qts Nitro
	Frac Selow open hole, pa	cker 0 1845' with 40000 gals gelled, water
	and 30000# sand.	· · · · · · · · · · · · · · · · · · ·

Originally completed open hole. Re-entered 5-67, left open hole.

COMP. TYPE:

Lease name:	Artesia Mete. hit	WELL NUMBER:	45
OPERATOR:	Yates Drilling Company	LEASE NUMBER:	NM-648
FORMATION:	Grayburg	POOL: Artesia	Queen-Grayburg-SA
LOCATION	1980' FSL & 660' FWL Section 25	-18S-27E	
ELEVATION:	3552' GL	TOTAL DEPTH:	2010
SURFACE CASING	8 5/8", 28# @ 500'	CEMENT: 50	sx. TOP:
INT. CASING:_		CEMENT:	sx. TOP:
PROD. CASING:	4½", 11.6# @ 2010'	/ CEMENT: 175	sx. TOP: 1510 est.
SPUD DATE:	11-51	COMP. DATE: 10	0-51
PERFORATIONS:	1873-2005'		
STIMULATION:	Shot open hole 1925-2010 with	400 qts. Nitro.	
_	Acidized perfs. with 4000 gal	s. 15% HCL	
_	Frac 1873-2005 with 72500 gal	s oil and 14000#	sand
COMP. TYPE:	Originally completed onen hol	e. Ran 4½" csg.	1-58.
CURRENT STATU	S: Artesia Metex Injection Well	4	
	•	ι	

•

LEASE NAME:	Western Development	WELL NUMBER: 1
OPERATOR:	H&S Oil Company	LEASE NUMBER: B-11083
FURMATION:	Grayburg	POQL: Artesia Queen-Grayburg-SA
LOCATION:	1650' FSL & 1650' FEL Section	26-18S-27E " -
ELEVATION:	3522' GL	TOTAL DEPTH: 1945' PBTD 1931'
SURFACE CASING	8 5/8", 24# @ 301'	CEMENT: 50 sx. TOP:
INT. CASING:	N.	CEMENT:sx. TOP:
PROD. CASING:_	5½", 14# @ 1931' P	CEMENT: 50° sx. TOP:
SPUD DATE:	10-10-60	COMP. DATE: 10-29-60
PERFORATIONS:_	1904-08', 1912-14', 1916-18'	•
STIMULATION:	Original 20000 gals lease cru	de with 14000 # sand
	• .	
COMP. TYPE:	Oil well	
CURRENT STATUS	Pumping oil well	
	· · · · · · · · · · · · · · · · · · ·	•

APR 3 0 198



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

ROSWELL

S. E. REYNOLDS

April 29, 1985

DISTRICT II 909 E. 2nd STREET P.O.BOX 1717 ROSWELL, NEW MEXICO 88201

T.L. Rhodes, Engineer YATES DRILLING COMPANY Yates Building 207 S. 4th Street Artesia, New Mexico 88210

Dear Mr. Rhodes:

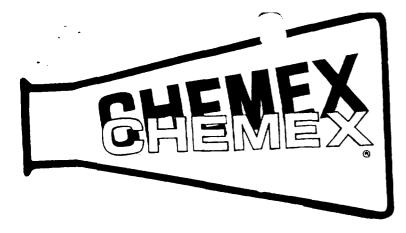
In reply to your letter of April 24, 1985, regarding water wells in the vicinity of section 26, Township 18 South, Range 27 East, this is to advise you that we have very little data in this area. There is a windmill in the $SW_4NE_4SE_4NW_4SW_4$ of Section 26 but I don't know how deep it is.

In my opinion the only fresh water in this area would be from the Artesia Group and would probably be in the upper 400 feet of the formation.

Yours truly,

James I. Wright Field Engineer

JIW/tmg cc Santa Fe



P. O. Box 423 Artesia, N. M. 88210

WATER ANALYSIS REPORT

CompanyYates Drill	ing Co.	ts	Date 11-21-85
Field Metex		_ County _ Eddy	StateNM
Lease and Well No. Fresh H	2 <mark>0 well Offset #35</mark> Prod. For	mation	
Source of Sample	· · · · · · · · · · · · · · · · · · ·		
Sample of Prod. Water□	Inj. Water⊖ OtherXX		
Date Collected	Analyst	Kent Jones	
	WATER ANALYSIS PAT		
Na* 20 15	5 0	5 10	15 20(.1-
Ca**		++++++	HCO3"
Mg**			SO ₄ =
Fe***			1
Fe L			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Dissolved Solids Constituent	MG/L (PPM)	EPM	
Calcium	nil	,	ph 6.85
Magnesium Sodium	nil	Sp	. Gravity
IronChloride	nil nil		
Bicarbonate	<u>48</u> 0		
Sulfate	_nil		
Total Hardness Total Dissolved Solids			
Hydrogen Sulfide Oxygen	nil 10+		
Remarks:		v	

PS Form 3811, July 1983 447-845	Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested. 1. Show to whom, date and address of delivery. 2. Restricted Delivery.
-845	3 Article Addressed to: Alif Oil Corperation PC Bex 1150 Midwell, Lexan 19102
	4. Type of Service: Article Number Registered Insured Cortified COD Express Mail P-C/C-CO/-9-9-7
00	Always Obtain signature of addressee or agent and DATE DELIVERED. 5. Cignature – Addressee
DOMESTIC RETURN RE	8. Addresses Address (ONLY if requestions)
RECEIPT	

and 4. O" space on the event this card from eipt fee will provide to and the date of wing services are and check box(es)	PS Form 3811, July 1983	SENDER: Complete items 1, 2, 3 and 4. Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.		
ess of delivery.	983 447-845	1. Show to whom, date and address of delivery. 2. Restricted Delivery.		
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79102	1	Horston, Day	as 17212	
e Number		4. Type of Service: Registered Insured Contified Contified Contified Contified Insured Continuous Mail	PC16-112 0 25	
or agent and		Always obtain signature of a		
DEC paid)	DOMESTIC RETURN RECEIPT	5. Signature - Addressee X 6. Signature - Agent X 7. Date of Delivery 8. Addressee's Address (ONI	PEC 0 9 1985 Y if requested and fee paid)	

LEGAL NOTICE

NOTICE OF PUBLICATION Notice is hereby given that pursuant to the New Mexico Oil Conservation Division Regulations, the following application for authorization for an additional injection well has been submitted for approval to the New Mexico Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501.

Yates Drilling Company, 207
South 4th Street, Artesia,
New Mexico, (505) 746-9889,
Tobin L. Rhodes, contact
party proposes the conversion of a producing well to an
injection well to provide additional injection capability
in the Artesia Metex Unit
Waterflood. The proposed in
Metex Unit Waterflood well
#35, 1650' FNL and 330' FSL,
Section 26-T18S-27E, Eddy
County, New Mexico.

Injection will be into the Grayburg formation between 1058' and 1939'. Maximum injection rate will be 500 barrels of water per day. Maximum injection pressure will be 1400 psi.

Interested parties must file objections or requests for hearing with the New Mexico Oil Conservation Division at the above address within 15 the conservation of the c

Published in the Artesia Daily Press, Artesia, N.M., Dec. 31, 1985.

Legal No. 11378.



PPĒICA	TION FOR AUTHORIZATION TO INJECT
1.	Purpose: Secondary Recovery Pressure Maintenance Disposal Storage Application qualifies for administrative approval? yes no
41.	Operator: Yates Drilling Company
	Address: 207 South 4th Street, Artesia, N.M. 88210
	Contact party: Tobin L. Rhodes Phone: (505) 746-9889
111.	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.
14.	is this an expansion of an existing project? \square yes \square no If yes, give the Division order number authorizing the project $\underline{R-4608}$, $\underline{R-4609}$.
٧.	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:
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and 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.).
/111.	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.
1X.	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.
ш.	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: Tobin L. Rhodes Title Engineer
	Signature: Jacq Charles Date: 11-21-85
enpw	he information required under Sections VI, VIII, X, and XI above has been previously itted, it need not be duplicated and resubmitted. Please show the date and circumstance he 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:
 - 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.

FORM C-108 SUPPLEMENT

I. Purpose:

To convert the producing well (AMU #35) to an injection well. This well is currently within the Artesia Metex Unit Waterflood. The conversion of this well will increase secondary recovery of oil within the unit.

II. The Operator is:

Yates Drilling Company 207 South 4th Street Artesia, New Mexico 88210

III. Well data:

See attached well data and schematic sheet.

- IV. This will be an expansion within the boundaries of the Artesia Metex Unit Waterflood (Division Order No. R-4609).
- V. A land plat is attached which shows the acreage surrounding the subject well. A two mile radius circle has been drawn around the AMU #35 location to identify all lease ownership within two miles of the subject well. The smaller circle has a radius of ½ mile and identifies the area of review for the proposed injection well.
- VI. There are seven wells other than the proposed injection well within the area of review, as indicated by the attached map. Data concerning the seven wells is included in the attached tabulations.
- VII. Data on the proposed operation:
 - 1. Initially the average and maximum daily rates of fluid injection will be 250 barrels and 500 barrels respectively. However, we request permission to run a step-rate test on the subject well within 90 days of first injection and adjust our injection rate so that injection pressure is below the fracture pressure exhibited by the test.
 - 2. The subject well will be connected to the existing closed injection system of the unit.
 - 3. The proposed initial average and maximum surface injection pressures will be 1235 psig and 1400 psig. The figures were obtained by comparison of the subject well to other injection wells within the unit. See VII part 1 concerning step-rate testing and long term maximum pressure.
 - 4. The source of injection fluid will be produced water from the unit and fresh water purchased from the City of Carlsbad through its Double Eagle water line. Compatibility of this injection water with formation water has not caused a problem previously within the unit, therefore we request that water compatibility testing not be required.
 - 5. Injection into the subject well will not be for disposal purposes.

VIII. Geologic data:

The injection interval will be from +1667 to +1586 subsea. This will include the seven Metex zones of the Grayburg formation. The Metex zones are characterized by intervals of fine grained sandstone and dolomite, and intermitten streaks of shaley dolomite with traces of anhydrite.

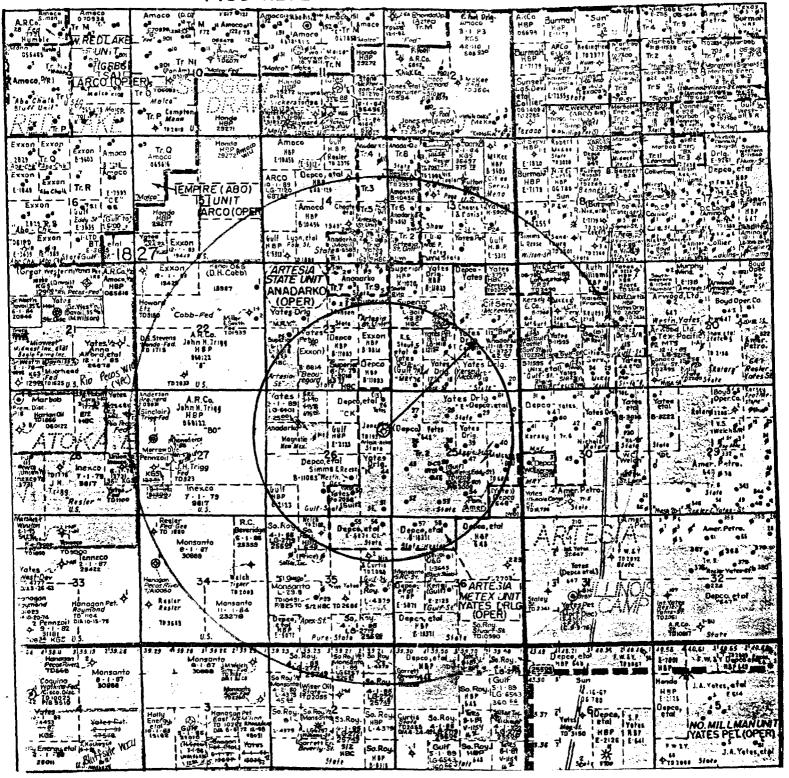
- IX. No additional stimulation is planned at this time.
- X. Well logs have been previously submitted to the Division.
- XI. Attached you will find a water analysis for the only fresh water well within one mile of the proposed injection well. Also you will find a copy of the letter from the State Engineer's Office stating the location and estimated depth of this well.
- XII. This in not an application for a disposal well.
- XIII. Attached you will find receipts indicating that each of the offset leasehold operators and surface owners have received a copy of this application.

IT NO.	1650' FNL & 330'	FEL. SLCII	ÜN	185 TOWNSHIP	27E RAIII.
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- >///		Hole size _		-	
		Long string			
		Size 412", 1	0.5# @ 1987'	* Cemented wit	h 175
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			1987		
		Injection in			
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		20 1/001	•		
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		acker 1800'			_
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ubing siz	2 3/8"	lined with	Plastic (motoria	 	net in a
Baker Pl	astic Coated AD-1		i)	1800'	fect
•	rand and model)	intro soul)			
	be any other casing	Could see 17.	9 W 1		
ther Data		Grayburg	,		
. Name o	f the injection for	mation			
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	la a new well drille			e	
If no	for what purpose w	ias the well origina	lly drillod?	Oil Producti	on
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T19S-R27E

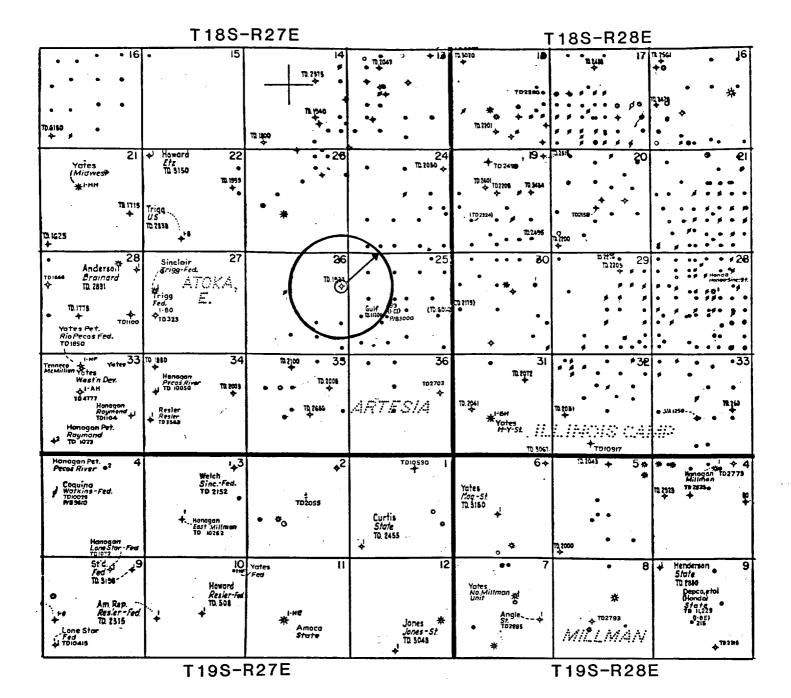
T19S-R28E

YATES DRILLING CO.

Artesia Metex Unit

Proposal to Convert AMU #35 to Injection

Scale: 1": 4000"



YATES DRILLING CO.

Artesia Metex Unit

Proposal to Convert AMU #35 to Injection

SCALE : 1" : 5000"

		MARIT NIMERA IN
TIPEKATUKA	Artesia Metex Unit Yates Drilling Company	WELL NUMBER: 16 LEASE NUMBER: NM-648
FORMATION:		POOL: Artesia Queen-Grayburg-SA
	330' FNL & 990' FWL Section 24-	The state of the s
ELEVATION: 3		TOŢAL DEPTH: . 2150'
	IG: 8 5/8", 24# @ 486'	
		CEMENT: 50 sx. TOP:
_		CEMENT: sx. TOP:
	5½", 14# @ 2150'	CEMENT: 370 sx. TOP:
	6-1-51	COMP. DATE: 2-11-52
	2014-2105, 1940-88	
STIMULATION:	Shot open hole 1946-1998 with	
•	Frac 2014-2105 with 42000 gal	s. gelled water and 44000# sand
LEASE NAME:	Artesia Metex Unit	WELL NUMBER: 26
-	Artesia Metex Unit Yates Drilling Company	WELL NUMBER: 26 LEASE NUMBER:
OPERATOR:	Yates Drilling Company	LEASE NUMBER:
OPERATOR:	Yates Drilling Company Grayburg	LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA
OPERATOR: FORMATION: LOCATION:	Yates Drilling Company Grayburg 330' FNL & 330' FEL Section	LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA
OPERATOR: FORMATION: LOCATION: ELEVATION:	Yates Drilling Company Grayburg 330' FNL & 330' FEL Section 3536' GL	LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA 26-18S-27E
OPERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CAS	Yates Drilling Company Grayburg 330' FNL & 330' FEL Section 3536' GL ING: 8 5/8" @ 494'	LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1991'
OPERATOR: FORMATION: LOCATION: ELEVATION:	Yates Drilling Company Grayburg 330' FNL & 330' FEL Section 3536' GL ING: 8 5/8" @ 494'	LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1991' CEMENT: 50 sx. TOP:
OPERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CAS INT. CASING	Yates Drilling Company Grayburg 330' FNL & 330' FEL Section 3536' GL ING: 8 5/8" @ 494' . G: 4 1/2", 9.5# @ 1991'	LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1991' CEMENT: 50 sx. TOP: CEMENT: sx. TOP:
OPERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CAS INT. CASING PROD. CASIN SPUD DATE:	Yates Drilling Company Grayburg 330' FNL & 330' FEL Section 3536' GL ING: 8 5/8" @ 494' 4 1/2", 9.5# @ 1991' 3-9-50	LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1991' CEMENT: 50 sx. TOP: CEMENT: 250 sx. TOP: 1500 est.
OPERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CAS INT. CASING PROD. CASIN SPUD DATE: PERFORATION	Yates Drilling Company Grayburg 330' FNL & 330' FEL Section 3536' GL ING: 8 5/8" @ 494' 4 1/2", 9.5# @ 1991' 3-9-50 S: Shot open hole 1956-1880 w	LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1991' CEMENT: 50 sx. TOP: CEMENT: 250 sx. TOP: CEMENT: 250 sx. TOP: 1500 est. COMP. DATE: 4-18-50 ith 350 gts. Nitro.
OPERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CAS INT. CASING PROD. CASIN SPUD DATE:	Yates Drilling Company Grayburg 330' FNL & 330' FEL Section 3536' GL ING: 8 5/8" @ 494' 4 1/2", 9.5# @ 1991' 3-9-50 S: Shot open hole 1956-1880 w	LEASE NUMBER: POQL: Artesia Oueen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1991' CEMENT: 50 sx. TOP: CEMENT: 8x. TOP: CEMENT: 250 sx. TOP: 1500 est. COMP. DATE: 4-18-50 ith 350 gts. Nitro. 951' with 2250 gals. 15% HCL. 20000 gals.
OPERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CAS INT. CASING PROD. CASIN SPUD DATE: PERFORATION	Yates Drilling Company Grayburg 330' FNL & 330' FEL Section 3536' GL ING: 8 5/8" @ 494' G: 4 1/2", 9.5# @ 1991' 3-9-50 S: Shot open hole 1956-1880 w Breakdown and frac 1856'-1	LEASE NUMBER: POQL: Artesia Oueen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1991' CEMENT: 50 sx. TOP: CEMENT: 8x. TOP: CEMENT: 250 sx. TOP: 1500 est. COMP. DATE: 4-18-50 ith 350 gts. Nitro. 951' with 2250 gals. 15% HCL. 20000 gals.

	Artesia Metex Unit	WELL NUMBER: 27
	Yates Drilling Company	LEASE NUMBER: NM-648
FORMATION:	Grayburg	POOL: Artesia Queen-Grayburg-SA
LOCATION:	990' FNL & 990' FWL Section	25-18S-27E
ELEVATION:	3564' GL	TOŢAL DEPTH: 2040'
SURFACE CASING	8 5/8" @ 496'	CEMENT: 50 sx. TOP:
		CEMENT: sx. TOP:
		CEMENT: sx. TOP:
SPUD DATE:		COMP. DATE: 3-31-50
PERFORATIONS:_	None	
STIMULATION:	Shot open hole 1940-2040 wit	h 390 qts. Nitro:
	Frac with 40000 gals. gelled	
COMP. TYPE:	Completed open hole, as oil	well.
CURRENT STATUS	Pumping oil well.	•
	• ·	
I.PASE NAME:	Artesia Metex Unit	WELL NUMBER: 35
I.PASE NAME:	Artesia Metex Unit Yates Drilling Company	WELL NUMBER: 35 LEASE NUMBER:
I.PASE NAME:	Artesia Metex Unit Yates Drilling Company Grayburg	WELL NUMBER: 35 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA
LEASE NAME: OPERATOR: FORMATION: LOCATION:	Artesia Metex Unit Yates Drilling Company Grayburg 1650' FNL & 330' FEL Section	WELL NUMBER: 35 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA on 26-185-27E
LEASE NAME: OPERATOR: FORMATION: LOCATION: ELEVATION:	Artesia Metex Unit Yates Drilling Company Grayburg 1650' FNL & 330' FEL Section 3525' GL	WELL NUMBER: 35 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA on 26-18S-27E TOTAL DEPTH: 1987'
LEASE NAME: OPERATOR: FORMATION: LOCATION: ELEVATION: SURPACE CASIN	Artesia Metex Unit Yates Drilling Company Grayburg 1650' FNL & 330' FEL Section 3525' GL G: 7", 23# @ 485'	WELL NUMBER: 35 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA on 26-18S-27E TOTAL DEPTH: 1987' CEMENT: 410 sx. TOP: Surface
LEASE NAME: OPERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CASIN INT. CASING:	Artesia Metex Unit Yates Drilling Company Grayburg 1650' FNL & 330' FEL Section 3525' GL G: 7", 23# @ 485'	WELL NUMBER: 35 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA on 26-18S-27E TOTAL DEPTH: 1987' CEMENT: 410 sx. TOP: Surface CEMENT: 48x. TOP:
LEASE NAME: OPERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CASING: PROD. CASING:	Artesia Metex Unit Yates Drilling Company Grayburg 1650' FNL & 330' FEL Section 3525' GL G: 7", 23# @ 485'	WELL NUMBER: 35 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA on 26-18S-27E TOTAL DEPTH: 1987' CEMENT: 410 sx. TOP: Surface CEMENT: 45 sx. TOP: Surface
LEASE NAME: OPERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CASING: PROD. CASING: SPUD DATE:	Artesia Metex Unit Yates Drilling Company Grayburg 1650' FNL & 330' FEL Section 3525' GL G: 7", 23# @ 485' 45", 10.5# @ 1987' 4-27-50	WELL NUMBER: 35 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA on 26-18S-27E TOTAL DEPTH: 1987' CEMENT: 410 sx. TOP: Surface CEMENT: 48x. TOP:
LEASE NAME: OPERATOR: FURMATION: LOCATION: ELEVATION: SURFACE CASING: PROD. CASING: SPUD DATE: PERFORATIONS:	Artesia Metex Unit Yates Drilling Company Grayburg 1650' FNL & 330' FEL Section 3525' GL G: 7", 23# @ 485' 4½". 10.5# @ 1987' 4-27-50 1858-1939	WELL NUMBER: 35 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA on 26-18S-27E TOTAL DEPTH: 1987' CEMENT: 410 sx. TOP: Surface CEMENT: sx. TOP: CEMENT: 175 sx. TOP:1400 Temp. Surface COMP. DATE: -
LEASE NAME: OFERATOR: FURMATION: LOCATION: ELEVATION: SURFACE CASING: PROD. CASING: SPUD DATE: PERFORATIONS:	Artesia Metex Unit Yates Drilling Company Grayburg 1650' FNL & 330' FEL Section 3525' GL G: 7", 23# @ 485' 4½". 10.5# @ 1987' 4-27-50 1858-1939	WELL NUMBER: 35 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA on 26-18S-27E TOTAL DEPTH: 1987' CEMENT: 410 sx. TOP: Surface CEMENT: 45 sx. TOP: Surface
LEASE NAME: OPERATOR: FURMATION: LOCATION: ELEVATION: SURFACE CASING: PROD. CASING: SPUD DATE: PERFORATIONS:	Artesia Metex Unit Yates Drilling Company Grayburg 1650' FNL & 330' FEL Section 3525' GL G: 7", 23# @ 485' 4½". 10.5# @ 1987' 4-27-50 1858-1939	WELL NUMBER: 35 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA on 26-18S-27E TOTAL DEPTH: 1987' CEMENT: 410 sx. TOP: Surface CEMENT: sx. TOP: CEMENT: 175 sx. TOP:1400 Temp. Surface COMP. DATE: -
LEASE NAME: OFERATOR: FURMATION: LOCATION: ELEVATION: SURFACE CASING: PROD. CASING: SPUD DATE: PERFORATIONS:	Artesia Metex Unit Yates Drilling Company Grayburg 1650' FNL & 330' FEL Section 3525' GL G: 7", 23# @ 485' 4½". 10.5# @ 1987' 4-27-50 1858-1939	WELL NUMBER: 35 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA on 26-18S-27E TOTAL DEPTH: 1987' CEMENT: 410 sx. TOP: Surface CEMENT: sx. TOP: CEMENT: 175 sx. TOP:1400 Temp. Surface COMP. DATE: -

EASE NAME:	Artesia Metex Unit	WELL NUMBER: 36"
ERATOR:	Yates Drilling Company	LEASE NUMBER: NM-648
RMATION:	Grayburg	POOL: Artesia Queen-Grayburg-SA
CATION:	2310' FNL & 990' FWL Section 25	5-18S-27E
EVATION:	3551' GL	TOŢAL DEPTH: 2004'
RFACE CASIN	G: 8 5/8", 24# @ 449'	CEMENT: 50 sx. TOP:
T. CASING:_		CEMENT: sx. TOP:
OD. CASING:	4½", 11.6# @ 2004'	CEMENT: 100 sx. TOP:
UD DATE:	4-11-50	COMP. DATE: 5-5-50
RFORATIONS:	1986-98, 1918-32	n.
'IMULATION:		360 qts. Nitro.'
_		gelled water and 40000# of sand
•	Frac 1918-32 with 20000 gals.	gelled water and 40000# sand
		e. fan 45" csg. perfed & frac'd 11-57
		e e e e e e e e e e e e e e e e e e e
ease name:_	Artesia Metex Unit	WELL NUMBER: 44
PERATOR:	Yates Drilling Company	LEASE NUMBER: B-11083
ORMATION:_	Grayburg	POQL: Artesia Queen-Grayburg-SA
ocation:	1650' FSL & 330' FEL Secti	on 26-18S-27E
LEVATION:_		TOTAL DEPTH: 2030'
URFACE CAS	ING: 8 5/8" @ 502"	CEMENT: 50 sx. TOP:
NT. CASING		CEMENT: sx. TOP:
	G:	CEMENT: sx. TOP:
PUD DATE:_	7-31-51	COMP. DATE: 9-9-51
		·
STIMULATION	S: None	
		with 430 gts. Nitro
	Shot open hole 1861-1971	
	Shot open hole 1861-1971 Frac below open hole, pac	ker @ 1845' with 40000 gals gelled. w
COMP. TYPE:	Shot open hole 1861-1971 Frac below open hole, pace and 30000# sand.	ker @ 1845' with 40000 gals gelled, wa

	Artesia Metex Unit	WELL NUMBER: 45
	Yates Drilling Company	
PERATOR:	Grayburg Company	LEASE NUMBER: NM-648
FORMATION:		POOL: Artesia Queen-Grayburg-SA
OCATION:	1980' FSL & 660' FWL Section 25 3552' GL	
elevation:	The state of the s	TOTAL DEPTH: 2010
SURFACE CASING	8 5/8", 28# @ 500'	CEMENT: 50 sx. TOP:
INT. CASING:		CEMENT: sx. TOP:
ROD. CASING:_	4½", 11.6# @ 2010'	CÉMENT: 175 sx. TOP: 1510 est.
PUD DATE:	11-51	COMP. DATE: 10-51
erforations:_	1873-2005 '	
TIMULATION:	Shot open hole 1925-2010 with	400 qts. Nitro. ·
	Acidized perfs. with 4000 gal	s. 15% HCL
	Frac 1873-2005 with 72500 gal	s oil and 14000# sand
COMP. TYPE:	Originally completed open hol	e. Ran 4½" csg. 1-58
	•	•
DAGE WAYE.	Western Development	LIDIT NUMBER . 1
	Western Development	WELL NUMBER: 1
PERATOR:	H&S Oil Company	LEASE NUMBER: B-11083
OPERATOR:	H&S Oil Company Grayburg	POQL: Artesia Queen-Grayburg-SA
PERATOR: FORMATION: LOCATION:	H&S Oil Company Grayburg 1650' FSL & 1650' FEL Section	POQL: Artesia Queen-Grayburg-SA 26-18S-27E
OPERATOR: FORMATION: LOCATION: ELEVATION:	H&S Oil Company Grayburg 1650' FSL & 1650' FEL Section 3522' GL	POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1945' PBTD 1931'
PERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CASING	H&S Oil Company Grayburg 1650' FSL & 1650' FEL Section 3522' GL 6:8 5/8", 24# @ 301'	POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1945' PBTD 1931' CEMENT: 50 sx. TOP:
PERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CASING	H&S Oil Company Grayburg 1650' FSL & 1650' FEL Section 3522' GL	POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1945' PBTD 1931' CEMENT: 50 sx. TOP: CEMENT: sx. TOP:
FORMATION: LOCATION: ELEVATION: SURFACE CASING: INT. CASING: PROD. CASING:	H&S Oil Company Grayburg 1650' FSL & 1650' FEL Section 3522' GL G: 8 5/8", 24# @ 301'	POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1945' PBTD 1931' CEMENT: 50 sx. TOP: CEMENT: 50 sx. TOP: CEMENT: 50 sx. TOP:
PERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CASING: INT. CASING: PROD. CASING: SPUD DATE:	H&S Oil Company Grayburg 1650' FSL & 1650' FEL Section 3522' GL 6:8 5/8", 24# @ 301' 5½". 14# @ 1931' 10-10-60	LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1945' PBTD 1931' CEMENT: 50 sx. TOP: CEMENT: sx. TOP: CEMENT: 50 sx. TOP: CEMENT: 10-29-60
FORMATION: LOCATION: ELEVATION: SURFACE CASING: INT. CASING: PROD. CASING: SPUD DATE: PERFORATIONS:	H&S Oil Company Grayburg 1650' FSL & 1650' FEL Section 3522' GL 6:8 5/8", 24# @ 301' 5%". 14# @ 1931' 10-10-60 1904-08', 1912-14'. 1916-18'	LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1945' PBTD 1931' CEMENT: 50 sx. TOP: CEMENT: sx. TOP: CEMENT: 50 sx. TOP: CEMENT: 10-29-60
ELEVATION: SURFACE CASING: INT. CASING: PROD. CASING: SPUD DATE: PERFORATIONS:	H&S Oil Company Grayburg 1650' FSL & 1650' FEL Section 3522' GL 6:8 5/8", 24# @ 301' 5½". 14# @ 1931' 10-10-60	LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1945' PBTD 1931' CEMENT: 50 sx. TOP: CEMENT: sx. TOP: CEMENT: 50 sx. TOP: CEMENT: 10-29-60
FORMATION: LOCATION: ELEVATION: SURFACE CASING: INT. CASING: PROD. CASING: SPUD DATE: PERFORATIONS:	H&S Oil Company Grayburg 1650' FSL & 1650' FEL Section 3522' GL 6:8 5/8", 24# @ 301' 5%". 14# @ 1931' 10-10-60 1904-08', 1912-14'. 1916-18'	LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1945' PBTD 1931' CEMENT: 50 sx. TOP: CEMENT: sx. TOP: CEMENT: 50 sx. TOP: CEMENT: 10-29-60
FORMATION: LOCATION: ELEVATION: SURFACE CASING: INT. CASING: PROD. CASING: SPUD DATE: PERFORATIONS:	H&S Oil Company Grayburg 1650' FSL & 1650' FEL Section 3522' GL 6:8 5/8", 24# @ 301' 5%". 14# @ 1931' 10-10-60 1904-08', 1912-14'. 1916-18'	LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1945' PBTD 1931' CEMENT: 50 sx. TOP: CEMENT: sx. TOP: CEMENT: 50 sx. TOP: CEMENT: 10-29-60

VED APR 3 0 1985



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

ROSWELL

S. E. REYNOLDS STATE ENGINEER

April 29, 1985

DISTRICT II
909 E. 2nd STREET
P.O.BOX 1717
ROSWELL, NEW MEXICO 88201

Care 8916

T.L. Rhodes, Engineer YATES DRILLING COMPANY Yates Building 207 S. 4th Street Artesia, New Mexico 88210

Dear Mr. Rhodes:

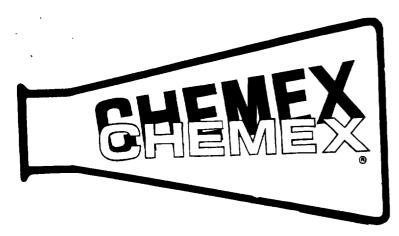
In reply to your letter of April 24, 1985, regarding water wells in the vicinity of section 26, Township 18 South, Range 27 East, this is to advise you that we have very little data in this area. There is a windmill in the $SW_4NE_4SE_4NW_4SW_4$ of Section 26 but I don't know how deep it is.

In my opinion the only fresh water in this area would be from the Artesia Group and would probably be in the upper 400 feet of the formation.

Yours truly,

James I. Wright Field Engineer

JIW/tmg cc Santa Fe



P. O. Box 423 Artesia, N. M. 88210

WATER ANALYSIS REPORT

Company Yates Drill	ling Co.		Date11-21-85
FieldMetex		County_Eddy	State NM
Lease and Well No. Fresh	1 ₂ 0 well Offset #35 Prod.		
Source of Sample			
Sample of Prod. Water□	Inj. Water□ Other X X		
Date Collected	Ana	lyst <u>Kent Jones</u>	
	WATER ANALYSIS F		
Na ⁺ 20 15	(NUMBER BESIDE ION SYMBOL INDIC 10 5 0	5 10	15 20C1-
Ca**			НСО3-
Mg ⁺⁺	+++++++++++++++++++++++++++++++++++++++	++++++	SO4 =
Fe ***			CO3=
Dissolved Solids	MC (L. (DDM)	EDM	
Constituent	MG/L (PPM) nil	EPM	
Calcium Magnesium	nil		ph 6.85 p. Gravity
Sodium	nil		
Iron	<u>nil</u>		
Chloride	<u>nil</u> 48		
Bicarbonate	0		
CarbonateSulfate	nil		
	nil		
Total Hardness Total Dissolved Solids	48		
Hydrogen Sulfide			
Oxygen	nil 10+		
Remarks:			
		1121 W. 1 114 W. 112	

8	SENDER: Complete item	s 1, 2, 3 and 4.				
Form 3811, July 1983 447-845	Put your address in the "RETURN TO" space on the saverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.					
1983	1. Show to whom, date a	nd address of delivery.				
447.5	2. 🗋 Restricted Delivery.					
2.5	3 Article Addressed to:	4 (
	Auf OI a	reperation				
	PC BG1 115	0				
	Mixland, 2	ixas 79102				
	4. Type of Service:	Article Number				
	☐ Registered ☐ Insured☐ COD☐ Express Mail	P-010-001-997				
	Alv.ays obtain signature of ac DATE DELIVERED.	idressee <u>or</u> agent and				
ğ	5 Gignature - Addressee					
Ž	X					
DOMESTIC	Signature - Agent X 2 29 Post	AND				
RETURN	7. Uste of Delivery	E 050				
Ā	8 Addressee's Address (ONL	Y if requestioned fee paid)				
RECE		15.7				

몽	SENDER: Complete items 1,	2, 3 and 4.				
S Form 3811, July 1983	Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.					
1883 4	1. E Show to whom, date and address of delivery.					
447-845	2. Restricted Delivery.					
845	3. Article Addressed to: Michie an agent for Lupener Cit PC Box 100822					
	Herston, Layer	17212				
	4. Type of Service: Ar	ticle Number				
	Registered Insured COD Express Mail	·6/6-(()_005				
	Always obtain signature of address DATE DELIVERED.	see <u>or</u> agent and				
DOM M	5. Signature - Addressee X					
ES1	6. Signature - Agent					
2	X TONY E					
RETU	7. Date of Delivery DEC	0 9 198 5 A				
DOMESTIC RETURN RECEIF	8. Addressee's Address (ONLY if	requested and jee paid)				

LEGAL NOTICE

NOTICE OF PUBLICATION Notice is hereby given that pursuant to the New Mexico Oil Conservation Division Regulations, the following application for authorization for an additional injection well has been submitted for approval to the New Mexico Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501.

Yates Drilling Company, 207
South 4th Street, Artesia,
New Mexico, (505) 746-9889,
Tobin L. Rhodes, contact
party proposes the conversion of a producing well to an
injection well to provide additional injection capability
in the Artesia Metex Unit
Waterflood. The proposed injection will be in the Artesia
Metex Unit Waterflood well
#35, 1650' FNL and 330' FSL,
Section 26-T18S-27E, Eddy

County, New Mexico.
Injection will be into the Grayburg formation between 1058' and 1939'. Maximum injection rate will be 500 barrels of water per day. Maximum injection pressure will

be 1400 psi.

Interested parties must file objections or requests for hearing with the New Mexico Oil Conservation Division at the above address within 15

Published in the Artesia Daily Press, Artesia, N.M., Dec. 31, 1985.

Legal No. 11378.

-	IION FOR AUTHORIZATION TO INJECT Purpose: Secondary Recovery	Pressure Maintenauce Di	Торган Польта			
	Application qualifies for adm		Dno JAN 1 51 1988			
1.	Operator: Yates Drilling Co		O. C. D.			
	Address: 207 South 4th Str	reet, Artesia, N.M. 88210	. ARTESIA, OFFICE			
	Contact party: Tobin L. Rhodes		05) 746-9889			
1.	proposed for injecti	dell 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.				
٧.	Is this an expansion of an exist If yes, give the Division order	ting project? X yes N no number authorizing the project N	608, R-4609			
٧.	Attach a map that identifies all injection well with a one-half well. This circle identifies the	wells and leases within two miles mile radius circle drawn around eache well's area of review.	of any proposed h proposed injection			
11.	penetrate the proposed injection well's type, construction, date	all wells of public record within to zone. Such data shall include a drilled, location, depth, record o illustrating all plugging detail.	description of each			
11.	Attach data on the proposed open	ration, including:				
,	 Whether the system is of J. Proposed average and management is sources and an appropriate the receiving formation. J. If injection is for dispersion one mile the dispersal zone for 	ximum daily rate and volume of flui pen or closed; ximum injection pressure; ate analysis of injection fluid and on if other than reinjected produce posal purposes into a zone not prod of the proposed well, attach a che mation water (may be measured or in nearby wells, etc.).	compatibility with d water; and uctive of oil or gas mical analysis of			
11.	Attach appropriate geological data on the injection zone including appropriate lithologically 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) averlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.					
1X.	Describe the proposed stimulation program, if any.					
x.	Attach appropriate logging and with the Division they need not	test data on the well. (If well lobe resubmitted.)	gs have been filed			
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.					
11.	examined available neologic and	ust make an affirmative statement to engineering data and find no evide ion between the disposal zone and a	ence of open faults			
11.	Applicants must complete the "P	roof of Notice" section on the rev	erse side of this form			
IV.	Certification	P				
	I hereby certify that the inforto the best of my knowledge and	mation submitted with this applicate to belief.	lion is true and corre			
	Name: Tobin L. Rhodes	/ Vitle Engin				
	Signature:	Date: _//-	21-85			
submi	he information required water Sec	ctions VI, VIII, X, and XI above has and resubmitted. Please show the	s been previously			

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.

- 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 achematics 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.

FORM C-108 SUPPLEMENT

I. Purpose:

To convert the producing well (AMU #35) to an injection well. This well is currently within the Artesia Metex Unit Waterflood. The conversion of this well will increase secondary recovery of oil within the unit.

II. The Operator is:

Yates Drilling Company 207 South 4th Street Artesia, New Mexico 88210

III. Well data:

See attached well data and schematic sheet.

- IV. This will be an expansion within the boundaries of the Artesia Metex Unit Waterflood (Division Order No. R-4609).
- V. A land plat is attached which shows the acreage surrounding the subject well. A two mile radius circle has been drawn around the AMU #35 location to identify all lease ownership within two miles of the subject well. The smaller circle has a radius of ½ mile and identifies the area of review for the proposed injection well.
- VI. There are seven wells other than the proposed injection well within the area of review, as indicated by the attached map. Data concerning the seven wells is included in the attached tabulations.
- VII. Data on the proposed operation:
 - 1. Initially the average and maximum daily rates of fluid injection will be 250 barrels and 500 barrels respectively. However, we request permission to run a step-rate test on the subject well within 90 days of first injection and adjust our injection rate so that injection pressure is below the fracture pressure exhibited by the test.
 - 2. The subject well will be connected to the existing closed injection system of the unit.
 - 3. The proposed initial average and maximum surface injection pressures will be 1235 psig and 1400 psig. The figures were obtained by comparison of the subject well to other injection wells within the unit. See VII part 1 concerning step-rate testing and long term maximum pressure.
 - 4. The source of injection fluid will be produced water from the unit and fresh water purchased from the City of Carlsbad through its Double Eagle water line. Compatibility of this injection water with formation water has not caused a problem previously within the unit, therefore we request that water compatibility testing not be required.
 - 5. Injection into the subject well will not be for disposal purposes.

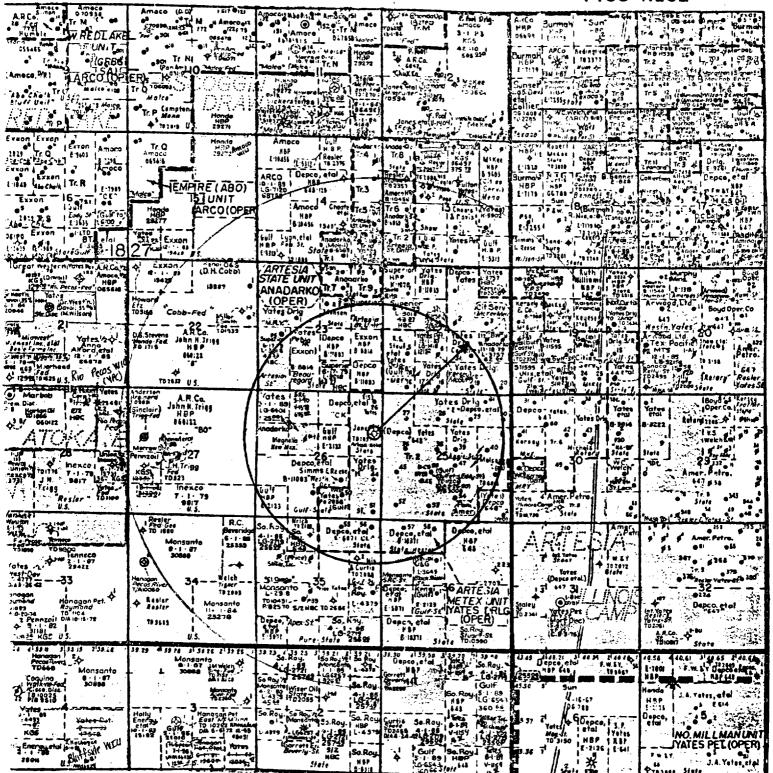
VIII. Geologic data:

The injection interval will be from +1667 to +1586 subsea. This will include the seven Metex zones of the Grayburg formation. The Metex zones are characterized by intervals of fine grained sandstone and dolomite, and intermitten streaks of shaley dolomite with traces of anhydrite.

- IX. No additional stimulation is planned at this time.
- X. Well logs have been previously submitted to the Division.
- XI. Attached you will find a water analysis for the only fresh water well within one mile of the proposed injection well. Also you will find a copy of the letter from the State Engineer's Office stating the location and estimated depth of this well.
- XII. This in not an application for a disposal well.
- XIII. Attached you will find receipts indicating that each of the offset leasehold operators and surface owners have received a copy of this application.

5	1650' FNL & 330' FEI	26	18S TOWNSHIP	27E
L NO.	LOUANCE FOCKLION	. Section .	taanziiti.	KVIII.
	4	•	Tobular Data	
7.78	TRIVIAN .	Surface Caning ".	In	(10
		•	Comented with	
			feet determined by	Circulation
		Hole size Assum	e 10	
		Intermediate Casing		
		Size	Comented with	·s
	Surf.Cs	sg. 10¢	_ feet determined by	******
	485'	Hole, size		
		Long string	•	
		Size 4½", 10.5# @	1987' Cemented with	. <u>175</u> s
		10c 1400'	feet_determined by	Temp. Surv.
		Hole size Assume		
		Total depth 1987		
		Injection interval		
		•	1 1n 1939!	foot
,)		(perforated or open	t to 1939! -hole, indicate which)er
liji		•	0	
	na -	14001		
	图 图	1400'	•	
~ //	到	•		
		ø		
		· · ·		
	Pack	∍r 1800'	ų	•
	racki	21 1000		
	Perfs	s 1858'-1939'		
		1987'	•	
Tubing siz	2 3/8"	ined withPlasti	material)	net in a
Baker Pl	lastic Coated AD-1	pack	er pt 1800'	fect
	grand and model)	hice coal)	v	
(or descr	lbe any other casing-tu	plud acess.		
Other Date	2	Grayburg		
). Name	ef the injection formal	ion	0 1 0	
2. Name	of Field or Pool (if a	oplicable) <u>Artesia O</u>	ueen-Grayburg-SA	
). la th	is a new well drilled	for injection?	No Oil Product	lon
If no	. for what purpose was	the well originally dri	lited, Off Lioduct:	LOII
المسيبي		6)		.a.fa.t
A. Has t	he well over been perf	orated in any other conscious of cement or bridg	c plug(a) used) . No	other perforat
and (iran henddrod nernes se		•	
		0		

•.



T19S-R27E

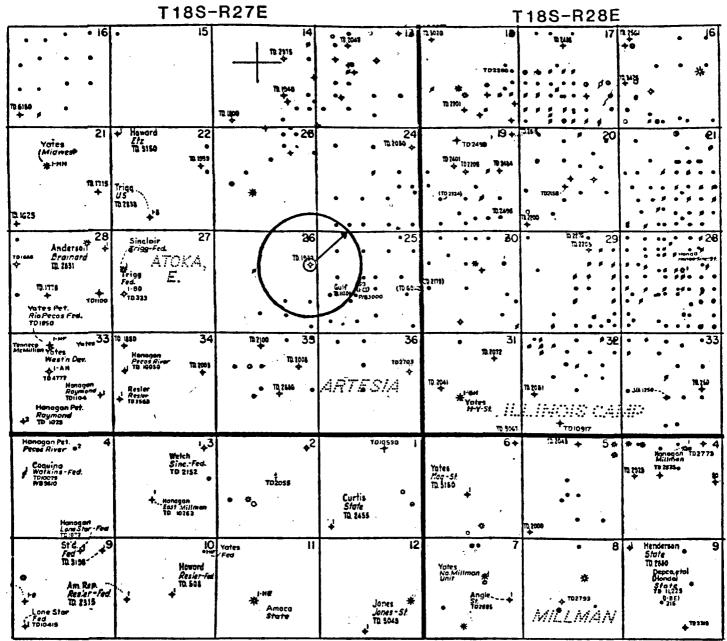
T19S-R28E

YATES DRILLING CO.

Artesia Metex Unit

Proposal to Convert AMU #35 to Injection

Scale: 1": 4000"



T19S-R27E

T19S-R28E

YATES DRILLING CO.

Artesia Metex Unit

Proposal to Convert AMU #35 to Injection

SCALE : 1" : 5000"

LEASE NAME:	Artesia Mete: hit	WELL NUMBER: 16
	Yates Drilling Company	LEASE NUMBER: NM-648
FORMATION:	Grayburg	POOL: Artesia Queen-Grayburg-SA
LOCATION: 33	0' FNL & 990' FWL Section 24-	18S-27E
ELEVATION: 35	68' GL	TOTAL DEPTH: 2150'
SURFACE CASING	8: 8 5/8", 24# @ 486'	CEMENT: 50 sx. TOP:
INT. CASING:_		CEMENT: sx. TOP:
_	55", 14# @ 2150'	CEMENT: 370 sx. TOP:
SPUD DATE:	6-1-51	COMP. DATE: 2-11-52
PERFORATIONS:	2014-2105, 1940-88	
STIMULATION:	Shot open hole 1946-1998 with	200 qts. Nitro.
_	Frac 2014-2105 with 42000 gals	s. gelled water and 44000# sand
_		
COMP. TYPE:	Originally completed open hole	e as oil well Later ran 5½" csg.
		•
CURRENT STATU	S: Artesia Metex Unit Inject:	ion Well
CURRENT STATU	S: Artesia Metex Unit Inject:	ion Well
	Artesia Metex Unit Injecti	WELL NUMBER: 26
i.ease name:_		u .
i.ease name:_	Artesia Metex Unit Yates Drilling Company	WELL NUMBER: 26
LEASE NAME: OPENATOR: FORMATION:	Artesia Metex Unit Yates Drilling Company	WELL NUMBER: 26 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA
LEASE NAME: OPENATOR: FORMATION:	Artesia Metex Unit Yates Drilling Company Grayburg 330' FNL & 330' FEL Section 2	WELL NUMBER: 26 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA
LEASE NAME: OPERATOR: FORMATION: LOCATION: ELEVATION:	Artesia Metex Unit Yates Drilling Company Grayburg 330' FNL & 330' FEL Section 2 3536' GL	WELL NUMBER: 26 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1991'
LEASE NAME: OPERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CASI	Artesia Metex Unit Yates Drilling Company Grayburg 330' FNL & 330' FEL Section 2 3536' GL NG: 8 5/8" @ 494'	WELL NUMBER:26 LEASE NUMBER: POQL:Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH:1991' CEMENT:50sx. TOP:
LEASE NAME: OPERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CASI	Artesia Metex Unit Yates Drilling Company Grayburg 330' FNL & 330' FEL Section 2 3536' GL NG: 8 5/8" @ 494'	WELL NUMBER:26 LEASE NUMBER: POQL:Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH:1991' CEMENT:50sx. TOP:
LEASE NAME: OPERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CASI INT. CASING: PROD. CASING	Artesia Metex Unit Yates Drilling Company Grayburg 330' FNL & 330' FEL Section 2 3536' GL NG: 8 5/8" @ 494'	WELL NUMBER: 26 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1991' CEMENT: 50 sx. TOP:
LEASE NAME: OPERATOR: FORMATION: LOCATION: ELEVATION: SURFACE CASI INT. CASING: PROD. CASING SPUD DATE:	Artesia Metex Unit Yates Drilling Company Grayburg 330' FNL & 330' FEL Section 2 3536' GL NG: 8 5/8" @ 494' 4 1/2", 9.5# @ 1991' 3-9-50	WELL NUMBER: 26 LEASE NUMBER: POQL: Artesia Oueen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1991' CEMENT: 50 sx. TOP: CEMENT: 8x. TOP: CEMENT: 250 sx. TOP: 1500 est. COMP. DATE: 4-18-50
LEASE NAME: OFERATOR: FURMATION: LOCATION: ELEVATION: SURFACE CASI INT. CASING: PROD. CASING SPUD DATE: PERFORATIONS	Artesia Metex Unit Yates Drilling Company Grayburg 330' FNL & 330' FEL Section 2 3536' GL NG: 8 5/8" @ 494' 4 1/2", 9.5# @ 1991' 3-9-50 Shot open hole 1956-1880 wi	WELL NUMBER: 26 LEASE NUMBER: POQL: Artesia Queen-Grayburg-SA 26-18S-27E TOTAL DEPTH: 1991' CEMENT: 50 sx. TOP: CEMENT: 8x. TOP: CEMENT: 250 sx. TOP: 1500 est.

Originally completed open hole.

COMP. TYPE:_

CURRENT STATUS: Pumping oil well

4½" csg. ran 4-23-74

_	~	an
LEASE NAME:	Artesia Mete nit	WELL NUMBER: 27
PERATOR:	Yates Drilling Company	LEASE NUMBER: NM-648
FORMATION:	Grayburg	POOL: Artesia Queen-Grayburg-SA
LOCATION:	990' FNL & 990' FWL Section 2	25-18S-27E
ELEVATION:	3564' GL	TOȚAL DEPTH: 2040'
SURFACE CASING	8 5/8" @ 496'	CEMENT: 50 sx. TOP:
INT. CASING:		CEMENT: sx. TOP:
		CEMENT: sx. TOP:
SPUD DATE:		COMP. DATE: 3-31-50
PERFORATIONS:	None	
STIMULATION:	Shot open hole 1940-2040 with	a 390 qts. Nitro.' •
	Frac with 40000 gals. gelled	water and 30000# sand
		0.9
COMP. TYPE:	Completed open hole, as oil w	well.
CURRENT STATUS	Pumping oil well.	
		a a
I.EASE NAME:	Artesia Metex Unit	WELL NUMBER: 35
OPERATOR:	Yates Drilling Company	LEASE NUMBER:
TURMATION:	Grayburg	POQL: Artesia Queen-Grayburg-SA
LOCATION:	1650' FNL & 330' FEL Section	n 26-18S-27E
ELEVATION:	35 25' GL	TOTAL DEPTH: 1987'
SURFACE CASIN	iG: 7", 23# @ 485'	CEMENT: 410 sx. TOP: Surface
INT. CASING:	•	CEMENT: sx. TOP:
PROD. CASING:	45", 10.5# @ 1987'	CEMENT: 175 sx. TOP:1400 Temp. Sur
SPUD DATE:	4-27-50	COMP. DATE:
PERFORATIONS:	1858-1939	•
STIMULATION:	Frac perfs with 40000 gals.	gelled water and 73700# sand
· •		
-		
(101/D #WDD.	Originally drilled then P&A	

CURRENT STATUS: Pumping oil well

PERATOR:		
	Yates Drilling Company	LEASE NUMBER: NM-648
RMATION:	Grayburg	POOL: Artesia Queen-Grayburg-SA
CATION:	2310' FNL & 990' FWL Section 2	
EVATION:	3551' GL	TOTAL DEPTH: 2004'
RFACE CASIN	G: 8 5/8", 24# @ 449'	CEMENT: 50 sx. TOP:
T. CASING:_		CEMENT: sx. TOP:
OD. CASING:	4½", 11.6# @ 2004'	CEMENT: 100 sx. TOP:
UD DATE:	4-11-50	COMP. DATE: 5-5-50
REFORATIONS:	1986-98, 1918-32	
IMULATION:_	Shot open hole 1910-2001 wit	th 360 qts. Nitro.
	Frac 1986-98 with 20000 gals	s. gelled water and 40000# of sand
_	Frac 1918-32 with 20000 cals	s gelled water and 40000# sand
OMP. TYPE:	(ole, fan 4½" csg. perfed & frac'd 11-57.
	JS: Pumping oil well	
		0
	Access to Makesa Water	UPI I NIMBED.
_		WELL NUMBER: 44
PERATOR:	Yates Drilling Company	LEASE NUMBER: B-11083
PERATOR:ORMATION:	Yates Drilling Company Grayburg	LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA
PERATOR: ORMATION: OCATION:	Yates Drilling Company Grayburg 1650' FSL & 330' FEL Sect	LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA tion 26-185-27E
PERATOR: ORMATION: OCATION: LEVATION:	Yates Drilling Company Grayburg 1650' FSL & 330' FEL Sect	LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA tion 26-18S-27E TOTAL DEPTH: 2030'
PERATOR: ORMATION: OCATION: LEVATION: URFACE CASI	Yates Drilling Company Grayburg 1650' FSL & 330' FEL Sect NG: 8 5/8" @ 502'	LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA tion 26-18S-27E TOTAL DEPTH: 2030' CEMENT: 50 sx. TOP:
PERATOR: ORMATION: OCATION: LEVATION: URFACE CASI NT. CASING:	Yates Drilling Company Grayburg 1650' FSL & 330' FEL Sect NG: 8 5/8" @ 502'	LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA tion 26-18S-27E TOTAL DEPTH: 2030' CEMENT: 50 Sx. TOP: CEMENT: 8x. TOP:
PERATOR: ORMATION: OCATION: LEVATION: SURFACE CASI NT. CASING: PROD. CASING	Yates Drilling Company Grayburg 1650' FSL & 330' FEL Sect NG: 8 5/8" @ 502'	LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA tion 26-18S-27E TOTAL DEPTH: 2030' CEMENT: 50 Sx. TOP: CEMENT: 8x. TOP: Sx. TOP:
PERATOR: ORMATION: OCATION: CLEVATION: SURFACE CASI OT. CASING: PROD. CASING	Yates Drilling Company Grayburg 1650' FSL & 330' FEL Sect NG: 8 5/8" @ 502' 7-31-51	LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA tion 26-18S-27E TOTAL DEPTH: 2030' CEMENT: 50 Sx. TOP: CEMENT: 8x. TOP:
OPERATOR: ORMATION: OCATION: CLEVATION: SURFACE CASING: PROD. CASING: SPUD DATE: PERFORATION:	Yates Drilling Company Grayburg 1650' FSL & 330' FEL Sect NG: 8 5/8" @ 502' 7-31-51 None	LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA ion 26-18S-27E TOTAL DEPTH: 2030' CEMENT: 50 Sx. TOP: CEMENT: sx. TOP: CEMENT: sx. TOP: COMP. DATE: 9-9-51
OPERATOR: ORMATION: OCATION: CLEVATION: SURFACE CASING: PROD. CASING: SPUD DATE: PERFORATION:	Yates Drilling Company Grayburg 1650' FSL & 330' FEL Sect NG: 8 5/8" @ 502' 7-31-51 None	LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA ion 26-18S-27E TOTAL DEPTH: 2030' CEMENT: 50 sx. TOP: CEMENT: sx. TOP: CEMENT: sx. TOP: COMP. DATE: 9-9-51
SURFACE CASING: INT. CASING: PROD. CASING SPUD DATE: PERFORATION:	Yates Drilling Company Grayburg 1650' FSL & 330' FEL Sect NG: 8 5/8" @ 502' 7-31-51 None Shot open hole 1861-1971	LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA tion 26-18S-27E TOTAL DEPTH: 2030' CEMENT: 50 sx. TOP: CEMENT: sx. TOP: Sx. TOP:

COMP. TYPE: Originally completed open hole. Re-entered 5-67, left open hole.

CURRENT STATUS: Pumping oil well

and 30000# sand.

	A	
EASE NAME:		WELL NUMBER: 45
PERATOR:		LEASE NUMBER: NM-648
ORMATION:	Grayburg	POOL: Artesia Queen-Grayburg-SA
OCATION:	1980' FSL & 660' FWL Section 25-	8S-27E
LEVATION:		TOTAL DEPTH: 2010
URFACE CASING	8 5/8", 28# @ 500'	CEMENT: 50 sx. TOP:
NT. CASING:		CEMENT: sx. TOP:
ROD. CASING:	4½", 11.6# @ 2010'	CEMENT: 175 sx. TOP: 1510 est
PUD DATE:	11-51	COMP. DATE: 10-51
ERFORATIONS:	1873-2005'	
TIMULATION:	Shot open hole 1925-2010 with 4	00 qts. Nitro.'
	Acidized perfs. with 4000 gals.	15% HCL
	Acidized perfs. with 4000 gals. Frac 1873-2005 with 72500 gals Originally completed open hole. Startesia Metex Injection Well	oil and 14000# sand
	Frac 1873-2005 with 72500 gals Originally completed open hole.	oil and 14000# sand
URRENT STATUS	Frac 1873-2005 with 72500 gals Originally completed open hole.	oil and 14000# sand
urrent Status Ease Name:	Frac 1873-2005 with 72500 gals Originally completed open hole. S: Artesia Metex Injection Well	oil and 14000# sand Ran 4½" csg. 1-58. WELL NUMBER: 1
PERATOR:	Frac 1873-2005 with 72500 gals Originally completed open hole. S: Artesia Metex Injection Well Western Development	well number: 1 LEASE NUMBER: B-11083
EASE NAME:	Frac 1873-2005 with 72500 gals Originally completed open hole. S: Artesia Metex Injection Well Western Development H&S Oil Company	well number: 1 LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA
EASE NAME: PERATOR: ORMATION:	Frac 1873-2005 with 72500 gals Originally completed open hole. S: Artesia Metex Injection Well Western Development H&S Oil Company Grayburg	well number: 1 LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA 6-18S-27E
EASE NAME: PERATOR: ORMATION: OCATION:	Frac 1873-2005 with 72500 gals Originally completed open hole. S: Artesia Metex Injection Well Western Development H&S Oil Company Grayburg 1650' FSL & 1650' FEL Section 2 3522' GL	well number: 1 LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA 6-18S-27E TOTAL DEPTH: 1945' PBTD 1931'
PERSE NAME: PERATOR: ORMATION: OCATION: LEVATION: SURFACE CASIN	Frac 1873-2005 with 72500 gals Originally completed open hole. S: Artesia Metex Injection Well Western Development H&S Oil Company Grayburg 1650' FSL & 1650' FEL Section 2	well number: 1 LEASE Number: B-11083 POQL: Artesia Queen-Grayburg-SA 6-18S-27E TOTAL DEPTH: 1945' PBTD 1931' CEMENT: 50 sx. TOP:
EASE NAME: PERATOR: OCATION: LEVATION: SURFACE CASING:	Frac 1873-2005 with 72500 gals Originally completed open hole. S: Artesia Metex Injection Well Western Development H&S Oil Company Grayburg 1650' FSL & 1650' FEL Section 2 3522' GL G: 8 5/8", 24# @ 301'	well number: 1 LEASE Number: B-11083 POQL: Artesia Queen-Grayburg-SA 6-18S-27E TOTAL DEPTH: 1945' PBTD 1931' CEMENT: 50 sx. TOP: CEMENT: 8x. TOP:
LEASE NAME: OFERATOR: OCATION: LEVATION: SURFACE CASING: PROD. CASING:	Frac 1873-2005 with 72500 gals Originally completed open hole. S: Artesia Metex Injection Well Western Development H&S Oil Company Grayburg 1650' FSL & 1650' FEL Section 2 3522' GL G: 8 5/8", 24# @ 301'	well number: 1 LEASE Number: B-11083 POQL: Artesia Queen-Grayburg-SA 6-18S-27E TOTAL DEPTH: 1945' PBTD 1931' CEMENT: 50 sx. TOP: CEMENT: 50 sx. TOP: CEMENT: 50 sx. TOP:
LEASE NAME: LOCATION: LOCATION: ELEVATION: SURFACE CASING: PROD. CASING: SPUD DATE:	Frac 1873-2005 with 72500 gals Originally completed open hole. S: Artesia Metex Injection Well Western Development H&S Oil Company Grayburg 1650' FSL & 1650' FEL Section 2 3522' GL G: 8 5/8", 24# @ 301'	WELL NUMBER: 1 LEASE NUMBER: B-11083 POQL: Artesia Queen-Grayburg-SA 6-18S-27E TOTAL DEPTH: 1945' PBTD 1931' CEMENT: 50 sx. TOP: CEMENT: 8x. TOP:

COMP. TYPE: 0il well

CURRENT STATUS: Pumping oil well

APR 3 0 199E



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

ROSWELL

S. E. REYNOLDS STATE ENGINEER

April 29, 1985

DISTRICT II
909 E. 2nd STREET
P.O.BOX 1717
ROSWELL, NEW MEXICO 88201

T.L. Rhodes, Engineer YATES DRILLING COMPANY Yates Building 207 S. 4th Street Artesia, New Mexico 88210

Dear Mr. Rhodes:

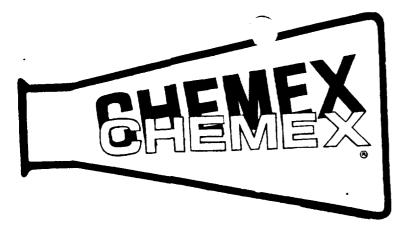
In reply to your letter of April 24, 1985, regarding water wells in the vicinity of section 26, Township 18 South, Range 27 East, this is to advise you that we have very little data in this area. There is a windmill in the SW $\frac{1}{4}NE\frac{1}{4}SE\frac{1}{4}NW\frac{1}{4}SW\frac{1}{4}$ of Section 26 but I don't know how deep it is.

In my opinion the only fresh water in this area would be from the Artesia Group and would probably be in the upper 400 feet of the formation.

Yours truly,

James I. Wright Field Engineer

JIW/tmg cc Santa Fe



P. O. Box 423 Artesia, N. M. 88210

WATER ANALYSIS REPORT

Company Yates Dril	ling Co.			Date11-21-85
Field Metex	***			StateNM
Lease and Well No. Fresh	H ₂ O well Offse	#35 Prod. Form	nation	
Source of Sample	· · · · · · · · · · · · · · · · · · ·			
Sample of Prod. Water	Inj. Water	Other X X		
Date Collected		Analyst	Kent Jones	
	WATER (NUMBER BESIDE ION	ANALYSIS PATT		
- Na* 20 15	10 5	0	5 10	15 20(1-
(a ¹¹ 1 1 1 1 1 1 1 1 1	++++++	 	+++++	HCO3~
Мв**				504=
Fe				
re				CO3=
ssolved Solids onstituent	MG/L (PPM)		EPM	
doium	nil nil			ph <u>6.85</u>
Magnesium	nil			Sp. Gravity
on nloride	nil nil	_		
arbonate	<u>48</u> 0	q		
sulfate	nil	-		
Tetal Hardness	nil 48	0	····	
Stal Dissolved Solids Hadrogen Sulfide				
, gen	104	-		
on Warks				
		4 6		

SENDER: Complete items 1, 2, 3 and 4. Put your address in the "RETURN TO" space on the averse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested. 1. Show to whom, date and address of delivery. 2. 🔲 Restricted Delivery. 3 Article Addressed to: Hit CI Corporation

Place 1150 Mediani, Lixas 19102 Article Number ☐ Insured ☐ COD P-010-001-947 Algebra deturn signature of addressee or agent and DACL DELIVERED. - ghature - Addressee DOMESTIC RETURN RECEIPT eddic see's Address (ONLY if requered)

SENDER: Complete items 1, 2, 3 and 4. Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check boxies for service(s) requested. 1. E Show to whom, date and address of delivery. 2. Restricted Delivery. 3. Article Addressed to:
Picker on a gent for Augume, Con Picker, Con a gent for Augume, Con Picker, Augus 17012 4. Type of Service: Article Number Registered Insured Con Picker Continued Con Picker Continued Con Picker Continued Con Picker Continued Continue
Picker on a gent for Augume, Con Picker, Con a gent for Augume, Con Picker, Augus 17012 4. Type of Service: Article Number Registered Insured Con Picker Continued Con Picker Continued Con Picker Continued Con Picker Continued Continue
Picker on a gent for Augume, Con Picker, Con a gent for Augume, Con Picker, Augus 17012 4. Type of Service: Article Number Registered Insured Con Picker Continued Con Picker Continued Con Picker Continued Con Picker Continued Continue
Always obtain signature of addressee or agent and DATE DELIVERED.
4. Type of Service: Article Number Registered Insured Con Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
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Registered Insured Cortified COD Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
Always obtain signature of addressee or agent and DATE DELIVERED.
DATE DELIVERED.
5. Signature - Addressee
X X
6. Signature - Agent
5 X TONY F
5. Signature - Addressee X 6. Signature - Agent X 7. Date of Delivery DEC 0 9 1985 ** 8. Addressee's Address (ONLY if requested and fee paid)
8. Addressee's Address (ONLY if requested and fee paid)
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LEGAL NOTICE

NOTICE OF PUBLICATION Notice is hereby given that pursuant to the New Mexico Oil Conservation Division Regulations, the following application for authorization for an additional injection well has been submitted for approval to the New Mexico Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501.

Yates Drilling Company, 207
South 4th Street, Artesia,
New Mexico, (505) 746-9889,
Tobin L. Rhodes, contact
party proposes the conversion of a producing well to an
injection well to provide additional injection capability
in the Artesia Metex Unit
Waterflood. The proposed injection will be in the Artesia
Metex Unit Waterflood well
#35, 1650' FNL and 330' FSL,
Section 26-T18S-27E, Eddy
County, New Mexico.

Injection will be into the Grayburg formation between 1058' and 1939'. Maximum injection rate will be 500 barrels of water per day. Maximum injection pressure will be 1400 psi.

Interested parties must file objections or requests for hearing with the New Mexico Oil Conservation Division at the above address within 15 days.

Published in the Artesia Daily Press, Artesia, N.M., Dec. 31, 1985.

Legal No. 11378.