

LAW OFFICES

LOSEE & CARSON, P. A.

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—
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300 AMERICAN HOME BUILDING
P. O. DRAWER 239
ARTESIA, NEW MEXICO 88211-0239

AREA CODE 505
746-3508

*LICENSED IN TEXAS ONLY

22 November 1985

Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Attn: Ms. Florine Davidson

Re: Application by H & S Oil Company for Authoriza-
tion to Inject Read & Stevens, Scoggins Draw
Unit, Well No. 14

Dear Florine:

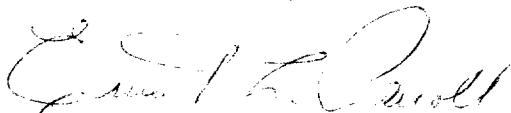
In accordance with our conversation, enclosed for filing please find three copies of the Application of H & S Oil Company for authorization to inject produced water into the Read & Stevens, Scoggins Draw Unit, Well No. 14.

This case is set for hearing before an examiner on December 18, 1985. Also enclosed is our certificate of mailing to the surface owner and all offset operators within a one-half mile radius. I would appreciate it if you would furnish me with a docket of said hearing.

Thank you.

Yours truly,

LOSEE & CARSON, P.A.


Ernest L. Carroll

ELC:bjk
Enclosures

cc w/enclosure: H & S Oil Company

100108222

Certificate of Mailing

I hereby certify that I mailed a true copy of the Application of H & S Oil Company for Authorization to Inject the Read & Stevens, Scoggins Draw Unit, Well No. 14, to the following named surface owners and all offset operators within a one-half mile radius, on this 22nd day of November, 1985:

Bureau of Land Management
P. O. Box 506
Carlsbad, New Mexico 88220

Bureau of Land Management
P. O. Box 1449
Santa Fe, New Mexico 87501

Bureau of Reclamation
800 W. Pierce
Carlsbad, New Mexico 88220

Attn: Mr. Chapman

Bassett Burney Oil Company
P. O. Box 179
El Paso, Texas 79942

Gulf Oil Corporation
Southeast Production Area
P. O. Box 7238
Odessa, Texas 79760

Rio Pecos Corporation
110 W. Louisiana, Suite 460
Midland, Texas 79701

Ms. Celeste Grynberg
c/o Mr. Jack Grynberg
5000 S. Quebec, Suite 500
Denver, Colorado 80237

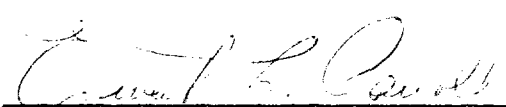
Inexco Oil Company
211 Highland Dr., Suite 201
Houston, Texas 77073

Attn: Mr. Mack Ames

Phillips Petroleum Company
4001 Penbrook
Odessa, Texas 79762

Christenson Oil Company
c/o Mr. J. K. Christenson
P. O. Box 1179
Richardson, Texas 75080

LOSEE & CARSON, P.A.

By: 
Ernest L. Carroll
P. O. Drawer 239
Artesia, New Mexico 88210
(505/746-3508)

Attorneys for H & S Oil
Company

APPLICATION FOR AUTHORIZATION TO INJECT

Read & Stevens, Scoggins Draw Unit, Well No. 14

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11. Chemical analysis
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SECTION I:
Purpose

I. Purpose

To inject produced water from the Yeso formation into the non-productive Cisco formation.

SECTION II:
Operator

II. Operator

H & S Oil Company, a partnership composed of R. L. Heinsch and Herbert R. Spencer.
Offices located in the First National Bank Bldg., Suite 303, Artesia, New Mexico. Phone Number (505) 746-6658 or (505) 748-2787

SECTION III

WELL DATA

III. Well Data

A.

1. Lease Name: Read & Stevens Scoggins Draw Unit, Well No. 14
Location: Sec. 31 - SW/SE - T18S - R27E
Footage: 2086' FEL, 766' FSL
2. Casing Strings:

8 5/8"	32# J-55	0-55'
8 5/8"	24# J-55	55-2166'
8 5/8"	32# J-55	2166-2330'

Cemented with 600 sacks Halliburton light with 5# Gilsonite per sack, 200 sacks Class "C" with 2% CaCl, 1/2# Floseal per sack.
Cement didn't circulate
Temperature survey shows top at 500'
Ran 1" to 440', circulated with 365 sacks Class "C" cement with three sacks CaCl.
3. 2 7/8" upset tubing plastic lined to be set at 7900'
4. Watson J Lok packer with nickel coating to be set at 7910'

B.

1. Formation: Cisco
2. Interval 7950' to 8220' open hole.
3. Gas well - Morrow Formation
4. Well was plugged with:

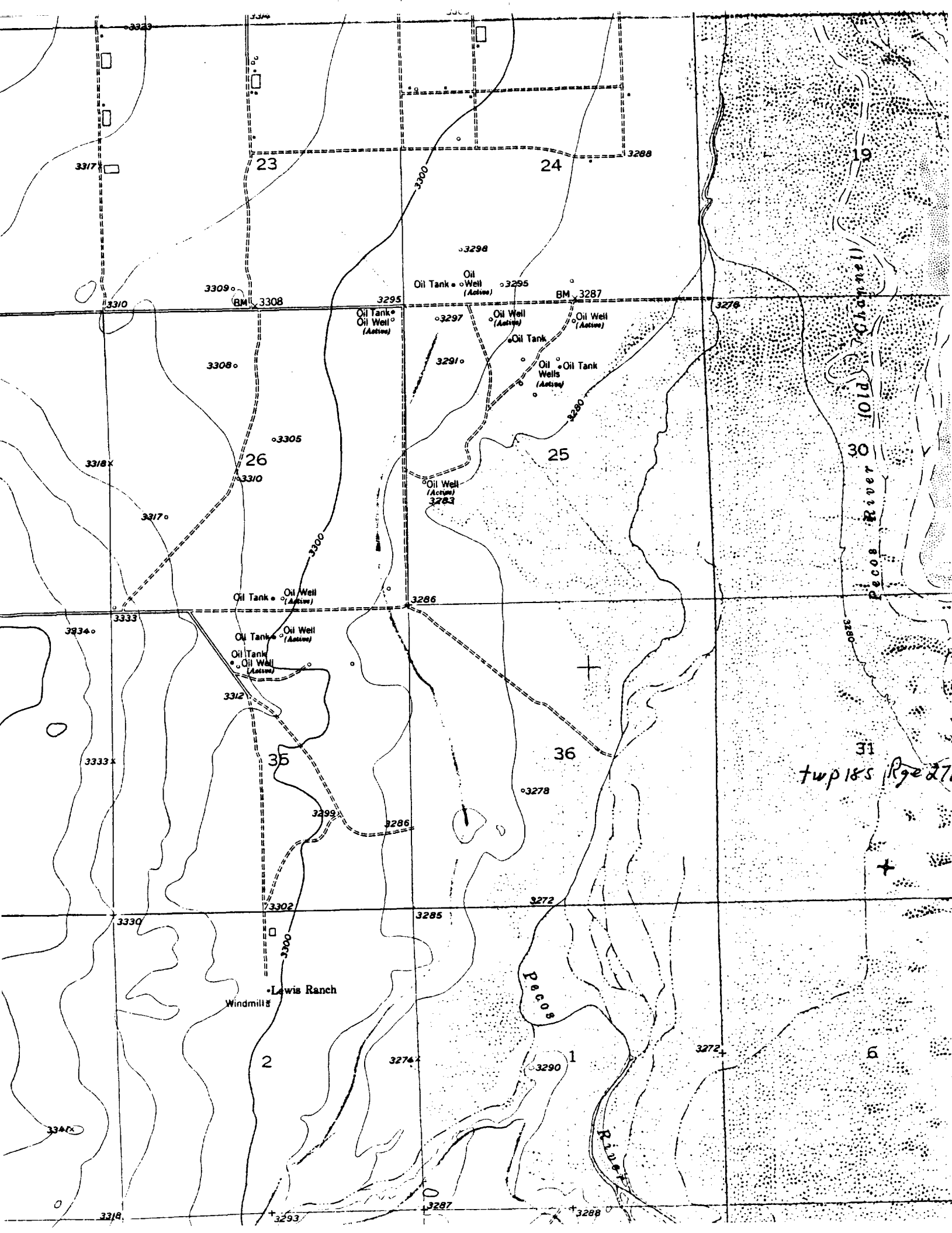
25 sacks cement	- 9541' to 9441'
25 sacks "*****"	- 8056' to 7956'
25 sacks "*****"	- 6581' to 6481'
25 sacks "*****"	- 5050' to 4950'
25 sacks "*****"	- 3490' to 3390'
25 sacks "*****"	- 2397' to 2297'
25 sacks "*****"	- 20' to 0'

with mud between plugs.
5. Canyon 8820' - Non-productive
Morrow 10,040' - Yates North Western Shores

SECTION V

AREA MAP

[illegible]



SECTION VI

TABULATION OF WELL DATA

VI. TABULATION OF WELL DATA

Not-applicable, there are no wells at this horizon for injection.

(Schematic enclosed)

COMPANY H & S Oil Co.
LEASE & WELL NO. Scoggins Draw
FORMATION 440-365
COUNTY & STATE 58s - Eddy - N.M.
800 SKs to 500 ft.
by Temp Survey

8 5/8 @ 2330

5 1/2 Csg @ 7950'

open hole to approx 8220'

SECTION VII:
PROPOSED OPERATION DATA

SECTION VII

- (1) Proposed injection rates:
 - (a) average daily injection rate: 2000 Barrels per day
 - (b) maximum daily injection rate: 2 wells x 350 barrels per day =
4200 barrels per day maximum
- (2) Proposed system will be open: Top Tank
- (3) Proposed injection pressure:
 - (a) average injection pressure: unknown
 - (b) maximum injection pressure: 1580 PSI
- (4) Type of injection fluid from Glorieta/Yeso wells, is produced water
- (5) Analysis of disposal formation water if not produced within one mile:
See Section XI - Chemical Section

SECTION VIII:
Geological Data

SECTION VIII

Geological Data:

- (1) Geological names of injection zones:
Cisco
- (2) Lithological detail of injection zones: Top of Cisco is lime at 7948' intermittent porosity streaks. Top of Canyon limestone is 8228'
- (3) Thickness of injection zone:
 - a. Average thickness - 280'
- (4) Depth to injection zone
 - a. Average depth 7950' - 8220'
 - b. Range of depth 270'
- (5) Geologic name and depth of bottom of all underground sources of drinking water (TDS of 10,000 mg/l or less) overlying or immediately under injection zone:

Base of fresh water in area is 870 feet.
No drinking or fresh water underlies the proposed injection.

SECTION IX:

Proposed Stimulation Program

IX. Proposed Stimulation Program

A stimulation program is currently planned that may include:

Injection of 3000-6000 gallons of 15% N.E. Regular Acid,
and letting it soak.

SECTION X:

Copy of well log

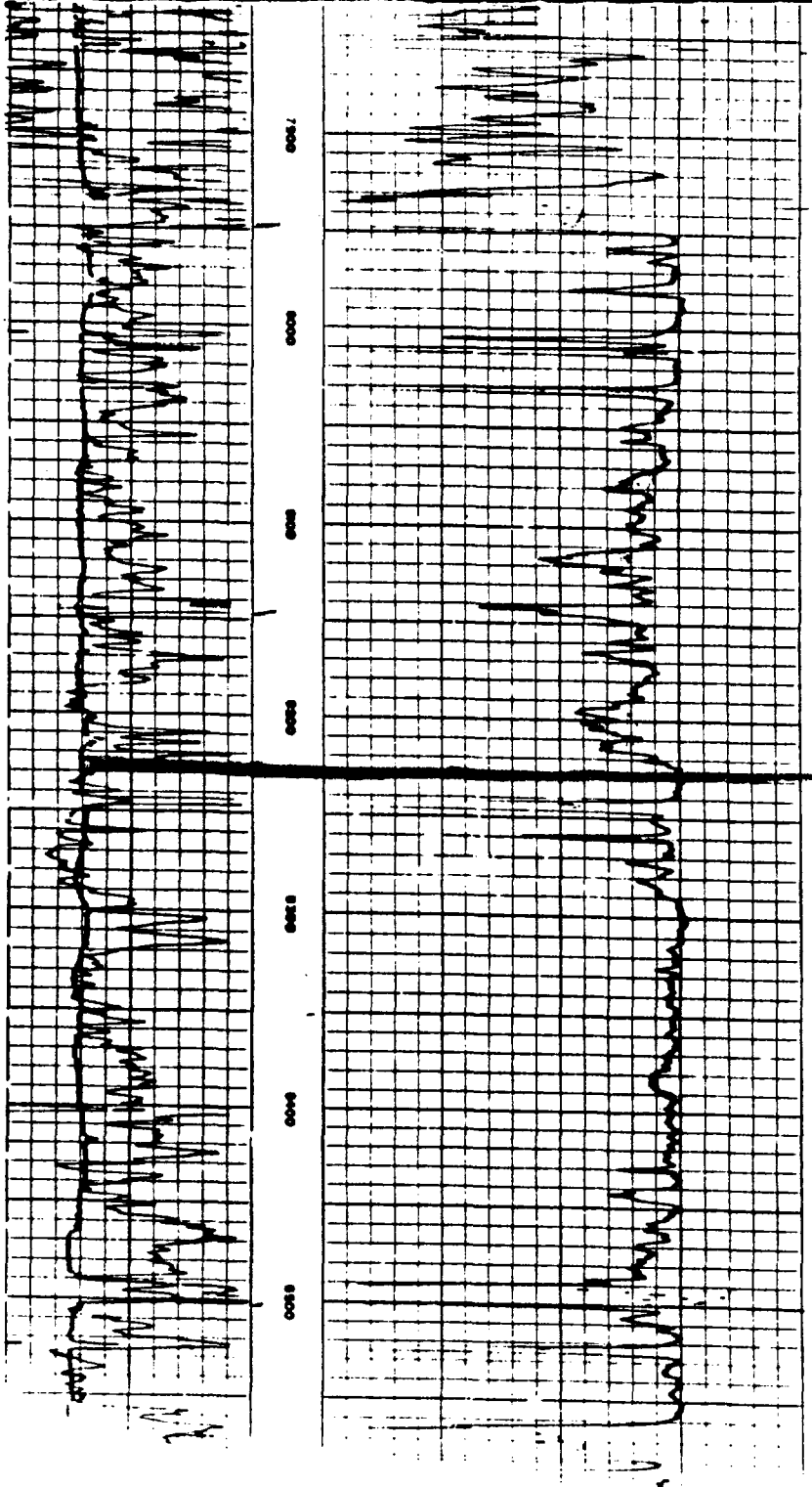
1120 n of Stevens
S. 177140 Deep Unit.
51-18-27

T. Cisco ls
7948

T. Cisco ls
8048

T. Canyon
8148

top 82



ILLEGIBLE

SECTION XI:

Chemical Analysis

UNICHEM INTERNATIONAL

601 NORTH LEECH

P.O. BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : BLANCO ENGINEERING
DATE : 7-19-84
FIELD LEASE & WELL : CHEVRON-C.R. MARTIN #1
SAMPLING POINT: WELLHEAD
DATE SAMPLED : 7-17-84

SPECIFIC GRAVITY = 1.03
TOTAL DISSOLVED SOLIDS = 44903
PH = 7.12

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	53.3	1068.
MAGNESIUM	(MG)+2	24.6	299.
SODIUM	(NA).CALC.	493.	15936.
ANIONS			
BICARBONATE	(HCO3)-1	8.4	512.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	1.7	86
CHLORIDES	(CL)-1	761	27000
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)	NOT RUN	
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) = .825

SCALING INDEX

TEMP

CARBONATE INDEX
CALCIUM CARBONATE SCALING

30C
86F
.238
LIKELY

CALCIUM SULFATE INDEX
CALCIUM SULFATE SCALING

-54.
UNLIKELY

UNICHEM INTERNATIONAL

601 NORTH LEECH

P.O. BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : H AND S OIL
DATE : 12-21-84
FIELD, LEASE & WELL : LATTION #1
SAMPLING POINT: WELLHEAD
DATE SAMPLED : 12-17-84

SPECIFIC GRAVITY = 1.135
TOTAL DISSOLVED SOLIDS = 201652
PH = 6.45

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	133.	2672
MAGNESIUM	(MG)+2	26.4	324.
SODIUM	(NA).CALC.	3257.	74894.
ANIONS			
BICARBONATE	(HCO3)-1	8.4	512.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	109.	5250
CHLORIDES	(CL)-1	3300	<u>118000</u>
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)		2.5
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) = 3.825

SCALING INDEX	TEMP
	30C
	86F
CARRONATE INDEX	.447
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	10.9
CALCIUM SULFATE SCALING	LIKELY

IONIC STRENGTH IS TOO HIGH FOR CARBONATE METHOD

UNICHEM INTERNATIONAL

601 NORTH LEECH

P.O. BOX 1499

MORRIS, NEW MEXICO 88240

COMPANY : BLANCO ENGINEERING
DATE : 7-19-84
FIELD LEASE & WELL : SCRIPPS #4M
SAMPLING POINT: WELLHEAD
DATE SAMPLED : 7-17-84

SPECIFIC GRAVITY = 1.133
TOTAL DISSOLVED SOLIDS = 196954
PH = 6.21

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	140	2605
MAGNESIUM	(MG)+2	120	1458
SODIUM	(NA).CALC.	3133	72048
ANIONS			
BICARBONATE	(HCO3)-1	10	610
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	83.9	4031
CHLORIDES	(CL)-1	3300	3300
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)	NOT RUN	
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) = 3.802

SCALING INDEX	TEMP
	30C
	86F
CARBONATE INDEX	298
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	-1.3
CALCIUM SULFATE SCALING	UNLIKELY

IONIC STRENGTH IS TOO HIGH FOR CARBONATE METHOD

UNICHEM INTERNATIONAL

601 NORTH LEECH

P.O. BOX 1199

HOBBS, NEW MEXICO 88240

COMPANY : BLANCO ENGINEERING
 DATE : 7-19-84
 FIELD LEASE & WELL : WILLIAMS #8
 SAMPLING POINT: WELLHEAD
 DATE SAMPLED : 7-17-84

SPECIFIC GRAVITY = 1.135
 TOTAL DISSOLVED SOLIDS = 201607
 PH = 6.31

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	126.	2538.
MAGNESIUM	(MG)+2	143.	1742.
SODIUM	(NA).CALC.	3217.	73978.
ANIONS			
BICARBONATE	(HCO3)-1	9.8	597.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	78.0	3750
CHLORIDES	(CL)-1	3400	13300 00
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)	NOT RUN	
BARIUM	(BA)+2	NOT RUN	
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) = 3.903

SCALING INDEX	TEMP
	30C
	86F
CARBONATE INDEX	.379
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	-9.6
CALCIUM SULFATE SCALING	UNLIKELY

IONIC STRENGTH IS TOO HIGH FOR CARBONATE METHOD

SECTION XII:

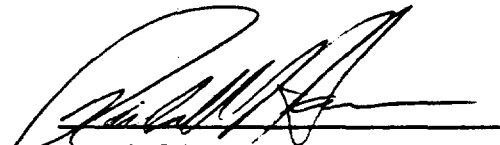
Affirmative Statement

Harris Petroleum Consultants

H & S Oil Company
First National Bank
Artesia, New Mexico

Dear Sir:

I have examined all available geologic and engineering data in and around Section 31-T18S-R27E Eddy County New Mexico. I have found no evidence of any open faults or hydrologic connection between your proposed injection zone 7948-8220 (Cisco Formation) and any underground source of drinking water.



Randall L. Harris
Geologist

SECTION XIII

PROOF OF NOTICE

XIII. Proof of Notice

Owner of surface - U.S. Government under the BLM and the Bureau
of Reclamation

Leasehold operator within $\frac{1}{2}$ mile radius-

Section 31, T18S, R27E

SENE	Christenson Oil Company and Celeste Grynberg
SWNW	" " " " " "
NWSW	" " " " " "
S/2SW	" " " " " "
SENW	Inexco Oil Company
SWNE	" " "
NESW	" " "
SE/4	" " "

Section 6, T19S, R27E

N/2NW	Rio Pecos Corporation and Phillips Petroleum Company
E/2NE	" " " " " "
NWNE	Bassett Burney Oil Company
S/2NW	Rio Pecos Corporation
SWNE	" " "

Section 32, T19S, R27E

W/2SW	Christenson Oil Company and Celeste Grynberg
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Section 5, T19S, R27E

NWNW	Gulf Oil Corporation
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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 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, NM 87501, within 15 days.

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

NOTICE: SURFACE OWNERS OF OFFSET OPERATORS MUST FILE ANY OBJECTION OR REQUESTS FOR HEARING OF ADMINISTRATIVE APPLICATION WITHIN 15 DAYS FROM THE DATE THIS APPLICATION WAS MAILED TO THEM.

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no
- II. Operator: _____
Address: _____
Contact party: _____ Phone: _____
- 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: R.L. HEINSCH/ H. & S. OIL COMPANY Title SEPTEMBER 10, 1985
Signature: *R.L. Heinsch* Date: 9/10/85
- * 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.