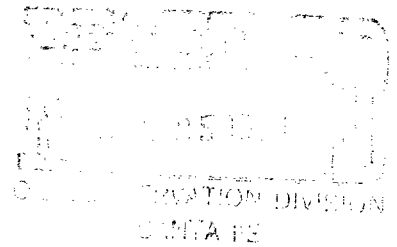


May 31, 1984



State of New Mexico,
Energy and Minerals Department,
Oil Conservation Division
P.O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

Re: Application of I & W Transportation, Inc. for
Salt Water Disposal Well

Case 8291

Gentlemen:

It is respectfully requested that the Oil Conservation Division of the Energy and Minerals Department grant their administrative approval to the application of I & W Transportation, Inc., for a salt water disposal well in Lea County, New Mexico.

The petitioner for administrative approval (I & W Transportation, Inc.) is hereby submitting Form C-108 along with all exhibits and requirements in accordance with the rules and regulations of the Commission.

The petitioner (I & W Transportation, Inc.) would like to state the following:

1. Principal address of I & W Transportation, Inc. is P.O. Box 939, Lovington, New Mexico 88260. Phone number is area code (505) 396-3331. Principal contact is Mr. Michael D. Caudill.
2. The well to be used for salt water disposal is the I & W Transportation, Inc., Sombrero "MS" State No. 2. Well is located in Unit C, 550' FNL, 1980' FWL, Section 27-T16S-R33E, Lea County, New Mexico.
3. That the manner and method of preparing the well for salt water disposal is mechanically feasible.
4. That I & W Transportation, Inc., will comply with all rules and regulations as set out by the Oil Conservation Division of the Energy and Minerals Department, State of New Mexico, as relates to salt water disposal.
5. That this application has been sent by registered, return receipt requested, mailing to all leasehold operators and the surface owners of the land within a one-half mile radius of the well location.

Respectfully submitted this 4th day of June, 1984.



Michael D. Caudill

Manager, I & W Transportation, Inc.

May 31, 1984

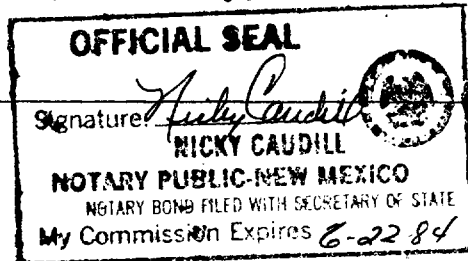
State of New Mexico
County of Lea

Before me, the undersigned authority, on this day personally appeared Michael D. Caudill, known to me to be the duly appointed agent for I & W Transportation, Inc., who upon his oath says that the foregoing is true and correct to the best of his knowledge.

Subscribed and sworn to before me the 22nd day of June, 1984.

Notary Public, Lea County, New Mexico

My Commission expires _____



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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	GAS	
OPERATOR		
PROMOTION OFFICE		

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-104
Revised 10-01-78
Format 06-01-83
Page 1

REQUEST FOR ALLOWABLE
AND
AUTHORIZATION TO TRANSPORT OIL AND NATURAL GAS

I. Operator I&W Transportation Inc.

Address P.O. Box 939, Lovington, New Mexico 88260

Reason(s) for filing (Check proper box) Other (Please explain)

<input type="checkbox"/> New Well	Change in Transporter of:	<u>Applied for conversion to salt water disposal well</u>
<input type="checkbox"/> Recompletion	<input type="checkbox"/> Oil <input type="checkbox"/> Dry Gas	
<input checked="" type="checkbox"/> Change in Ownership	<input type="checkbox"/> Casinghead Gas <input type="checkbox"/> Condensate	

If change of ownership give name and address of previous owner Hexagon Oil & Gas Inc. 411 W. 7th, Ft. Worth, Texas 76102

II. DESCRIPTION OF WELL AND LEASE

Lease Name <u>Sombrero "MB" State</u>	Well No. <u>2</u>	Pool Name, including Formation <u>Kemnitz-Lower Wolfcamp</u>	Kind of Lease State, Federal or Fee <u>State</u>	Lease No. <u>LG 3819</u>
Location				
Unit Letter <u>C</u> : <u>550</u> Feet From The <u>North</u> Line and <u>1980</u> Feet From The <u>West</u>				
Line of Section <u>27</u> Township <u>16S</u> Range <u>33E</u> , NMPM, <u>Lea</u> County				

III. DESIGNATION OF TRANSPORTER OF OIL AND NATURAL GAS

Name of Authorized Transporter of Oil <input type="checkbox"/> or Condensate <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
Name of Authorized Transporter of Casinghead Gas <input type="checkbox"/> or Dry Gas <input type="checkbox"/>	Address (Give address to which approved copy of this form is to be sent)
If well produces oil or liquids, give location of tanks.	Unit Sec. Twp. Rge. Is gas actually connected? When

If this production is commingled with that from any other lease or pool, give commingling order number: _____

NOTE: Complete Parts IV and V on reverse side if necessary.

VI. CERTIFICATE OF COMPLIANCE

I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given is true and complete to the best of my knowledge and belief.

Michael D. Canfield
(Signature)
Manager
(Title)
(Date)

OIL CONSERVATION DIVISION

APPROVED _____, 19____
BY _____
TITLE _____

This form is to be filed in compliance with RULE 1104.
If this is a request for allowable for a newly drilled or deepened well, this form must be accompanied by a tabulation of the deviation tests taken on the well in accordance with RULE 111.
All sections of this form must be filled out completely for allowable on new and recompleted wells.
Fill out only Sections I, II, III, and VI for changes of owner, well name or number, or transporter, or other such change of condition.
Separate Forms C-104 must be filed for each pool in multiply completed wells.

IV. COMPLETION DATA

Designate Type of Completion - (X)		Oil Well	Gas Well	New Well	Workover	Deepen	Plug Back	Same Res'v.	Diff. Res'v.
Date Spudded	Date Compl. Ready to Prod.		Total Depth			P.B.T.D.			
Elevations (DF, RKB, RT, GR, etc.)	Name of Producing Formation		Top Oil/Gas Pay			Tubing Depth			
Perforations						Depth Casing Shoe			
TUBING, CASING, AND CEMENTING RECORD									
HOLE SIZE	CASING & TUBING SIZE		DEPTH SET			SACKS CEMENT			

V. TEST DATA AND REQUEST FOR ALLOWABLE (Test must be after recovery of total volume of load oil and must be equal to or exceed top allowable for this depth or be for full 24 hours)

Date First New Oil Run To Tanks	Date of Test	Producing Method (Flow, pump, gas lift, etc.)	
Length of Test	Tubing Pressure	Casing Pressure	Choke Size
Actual Prod. During Test	Oil-Bbls.	Water-Bbls.	Gas-MCF

GAS WELL

Actual Prod. Test-MCF/D	Length of Test	Bbls. Condensate/MMCF	Gravity of Condensate
Testing Method (pilot, back pr.)	Tubing Pressure (Shut-in)	Casing Pressure (Shut-in)	Choke Size

Case 8291

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no
- II. Operator: I & W Transportation Inc.
Address: P. O. Box 939, Lovington, New Mexico 88260
Contact party: Michael D. Caudill Phone: 505-396-3331
- 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: Michael D. Caudill Title: Manager
Signature: Michael D. Caudill Date: March 31, 1984
- * 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. X. Well logs were submitted October 1980.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

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

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

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OPERATOR	

5a. Indicate Type of Lease	
State <input checked="" type="checkbox"/>	Fee <input type="checkbox"/>
5. State Oil & Gas Lease No. LG 3819	

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- Salt Water Disposal		7. Unit Agreement Name
2. Name of Operator I & W Transportation Inc.		8. Farm or Lease Name Sombrero "MS" State
3. Address of Operator P. O. Box 939, Lovington, New Mexico 88260		9. Well No. 2
4. Location of Well UNIT LETTER C 550 FEET FROM THE North LINE AND 1980 FEET FROM THE West LINE, SECTION 27 TOWNSHIP 16S RANGE 33E NMPM.		10. Field and Pool, or Wildcat Kemnitz-Lower Wolfcam
15. Elevation (Show whether DF, RT, GR, etc.) 4194° FL ; 4208° KB		12. County Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input checked="" type="checkbox"/> Conversion to Disposal Well	CASING TEST AND CEMENT JOB <input type="checkbox"/>	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

PBTD 11,450'. Present perforations: 10,694-10,857' ; 10,894-10,936' ; 10,992-11,030' ; 11,188-11,200' ; 11,308-11,310' ; 11,340-11,348' .

We propose to remove the rods,pump, and tubing from this well as soon as possible upon notification of approval as a disposal well.

We then propose to set a baker model "R" packer at 10,500' with 2-3/8" plastic lined tubing.

We anticipate this well to take fluid on a vacuum. If, however, the well doesn't take fluid on a vacuum, we propose to set it up on injection pump.

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

Michael D. Caudill

SIGNED Michael D. Caudill TITLE Manager DATE 3-31-84

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

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LAND OFFICE	
OPERATOR	

Form C-105
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease
State ☒ Fee ☐

5. State Oil & Gas Lease No.
LG 4076

1a. TYPE OF WELL
OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER ☐

b. TYPE OF COMPLETION
NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER ☐

7. Unit Agreement Name
New Mexico 22 State

8. Farm or Lease Name
1

9. Well No.
1

10. Field and Pool, or Wildcat
Kemnitz-wolfcamp

2. Name of Operator
Westland Oil Development Corp.

3. Address of Operator
One Energy Square, Abilene, Texas 79602

4. Location of Well

UNIT LETTER **K** 1980 West 1980

15. Date Spudded **7-30-77** 16. Date T.O. Reached **10-8-77** 17. Date Compl. (Ready to Prod.) **4200.6' Gr.; 421' O RKB 2478'**

20. Total Depth **13,705** 21. Plug Back T.O. **10,550** 22. O-T.D. **0-T.D.**

24. Producing Interval(s), of this completion - Top, Bottom, Name
10,728'-10,777' Kemnitz

25. Type Electric and Other Logs Run
DLL, SNP-CNL

26. Was Directional Survey Made
No

27. Was Well Cased
No

CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8"	43#	410'	17-1/2"	425 sxs. Class "C"	0
8-5/8"	32#	4500'	12-1/4"	1600 sxs. Class "H"	0
5-1/2"	17# & 20#	13702'	7-7/8"	600 sxs. Class "H" thru shoe	0
				585 sxs. lite & "H" thru BV @ 11782'	

LINER RECORD				TUBING RECORD			
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
None					2-3/8"	10660	10660

28. Perforation Record (Interval, size and number)
11,596'-11,626' - 0.41" - 80 holes - P&A with CIBP at 11,570' with 20' cement 11/9/77. 10,728'-32'; 10,740'-42'; 10,770'-77' - 0.41" - 26 holes.

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
11,596'-636'	8000 gals. acid frac - P&A
10,728'-777'	1500 gals. MOD 202 acid

33. PRODUCTION

Date First Production **11-13-77** Production Method (Flowing, gas lift, pumping - Size and type pump) **Flowing** Well Status (Prod. or Shut-in) **Producing**

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
11-18-77	24	20/64"		253	400	9	1581
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)	
400	Packer		253	400	9	37 deg. @ 60	

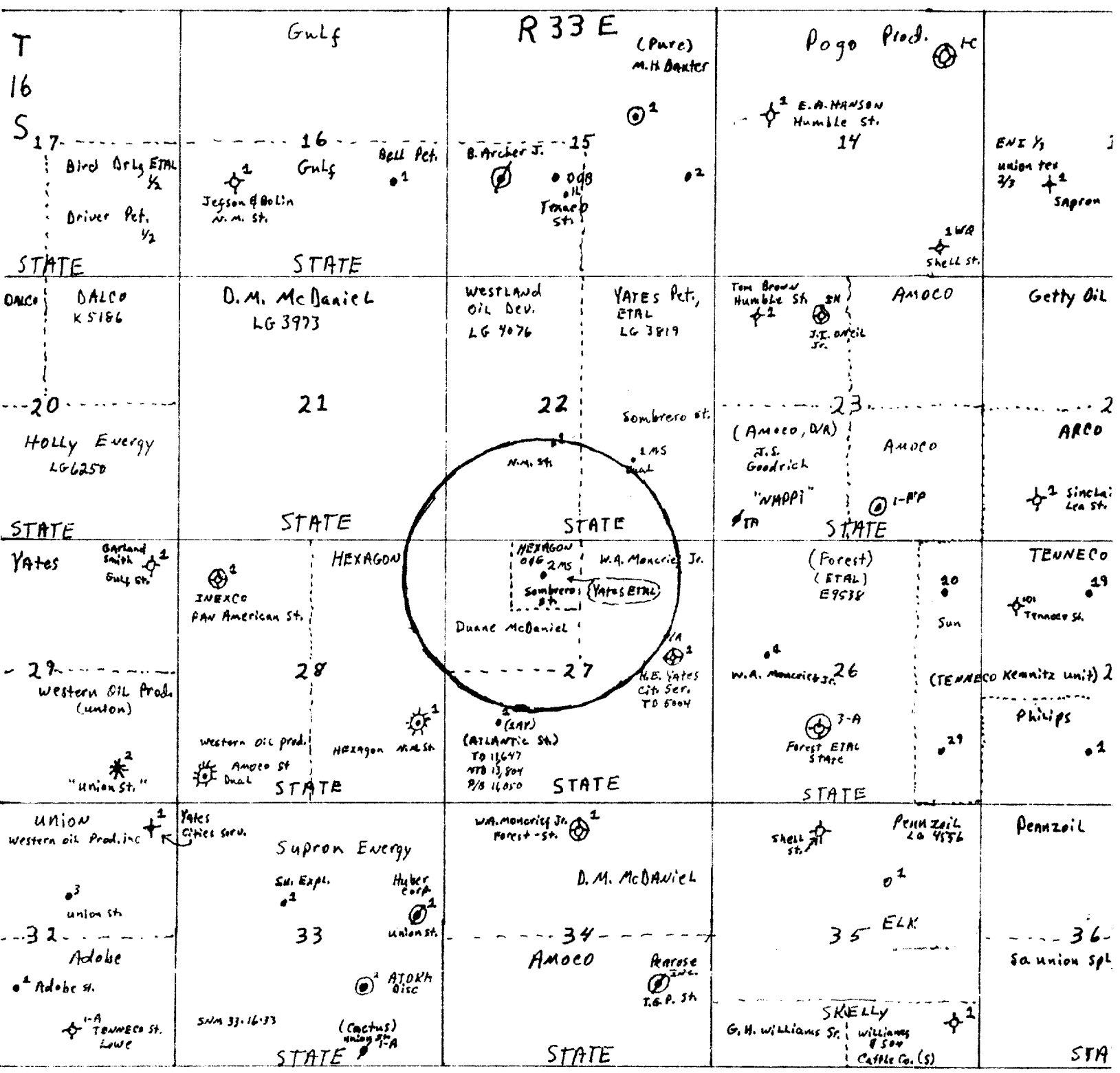
34. Disposition of Gas (Sold, used for fuel, vented, etc.)
Vented

Test Witnessed By
W. A. Ryan

35. List of Attachments
Dual Lateralog-Micro-SFI (1); Compensated Neutron Formation Density Log (1)

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

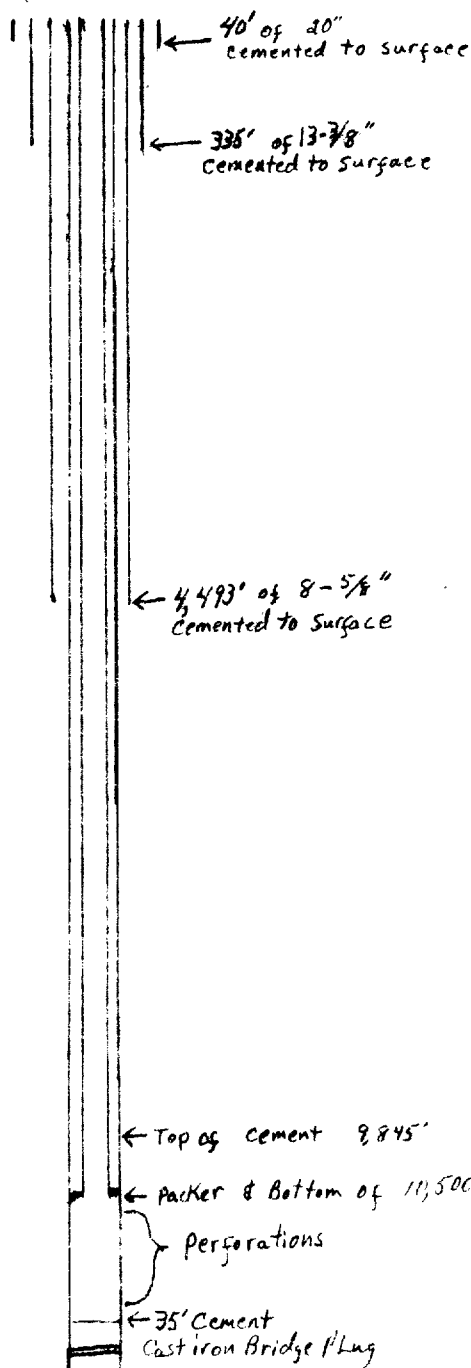
SIGNED W. A. Ryan TITLE **Production Superintendent** DATE **11/22/77**



INJECTION WELL DATA SHEET

OPERATOR		LEASE		
I&W Transportation Inc.		Sombrero "MS" State		
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
2	550 FNL, 1980 FWL	27	16S	33E

Schematic



Tabular Data

Surface Casing

Size 13-3/8 " Cemented with 350 sx.TOC Surface feet determined by CirculationHole size 17-1/2"

Intermediate Casing

Size 8-5/8 " Cemented with 2400 sx.TOC Surface feet determined by CirculationHole size 12-1/4"

Long string

Size 4-1/2 " Cemented with 600 sx.TOC 9845 feet determined by Cement Bond LogHole size 7-7/8"Total depth 11,687' PBTD 11,450'

Injection interval

10,694 feet to 11,348 feet
(perforated or open-hole, indicate which)

Perforated: 10,694'-10,857' ;
10,894'-10,936' ;
10,992'-11,030' ;
11,188'-11,200' ;
11,308'-11,310' ;
11,340'-11,348' ;

Tubing size 2-3/8 " lined with Plastic set in a
 Baker Model "R" (brand and model) packer at 10,500 feet

(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation Wolfcamp
- Name of field or Pool (if applicable) Kemnitz-Lower Wolfcamp
- Is this a new well drilled for injection? ☐ Yes ☒ No
 If no, for what purpose was the well originally drilled? Oil & Gas Production
- Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) This well was perforated at 11,495'-11,543', then PBTD 11,450' With CIBP set at 11,450' with 35' cement dumped on top.
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. T. Yates-2785' ; T. San Andres-4440' ; T. Glorietta-5955' ; T. Tubbs-7210' ; T. Abo-7980' ; T. Wolfcamp-9250'.



24 HOUR SERVICE — TANK TRUCKS — VACUUM TRUCKS — SALT WATER DISPOSAL

Post Office Box 939 — Telephone (505) 396-3331

Lovington, New Mexico 88260

June 21, 1984

The Sombrero "MS" State well # 2, when approved as a disposal well, will be an open system.

The proposed average and maximum fluid injection rates are 1000 BW/day respectively. The proposed average and maximum injection pressures will be less than 1000 FSI and less than 1500 FSI respectively, if the well doesn't take water on a vacuum as anticipated.

The Ogallala reservoir is the only known source of fresh water in the area and it extends between more than 60' but less than 400' from surface level.

The predominance of water hauled to this well should be Wolfcamp production water and should be compatible with the formation being injected.

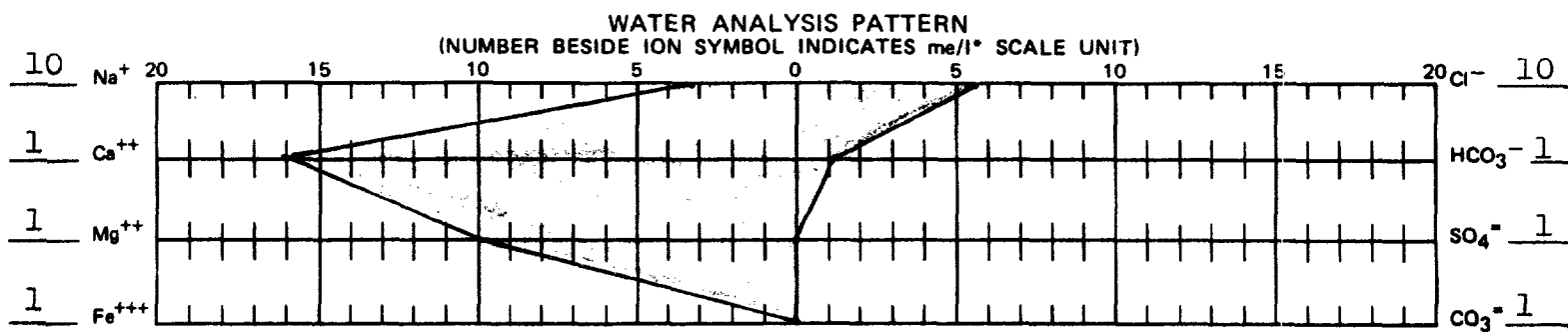
Michael D. Caudill

Manager, I & W Transportation, Inc.



WATER ANALYSIS REPORT

COMPANY I & W				ANALYSIS NUMBER 0261			
COMPANY ADDRESS P.O. Box 939 Lovington, N. Mex. 88260				DATE 5-4-84			
FIELD Kemnitz				COUNTY OR PARISH Lea		STATE N. Mex.	
LEASE OR UNIT Sombrero St.		WELL(S) NAME OR NO.		WATER SOURCE (FORMATION) Ogallala - Williams Windmill			
DEPTH, FT.	BHT, °F	SAMPLE SOURCE Fresh Water	TEMP, °F	WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF/DAY	
DATE SAMPLED		TYPE OF WATER <input type="checkbox"/> PRODUCED <input checked="" type="checkbox"/> SUPPLY <input type="checkbox"/> WATERFLOOD <input type="checkbox"/> SALT WATER DISPOSAL					



DISSOLVED SOLIDS

CATIONS	me/l*	mg/l*
Total Hardness	26	
Calcium, Ca ⁺⁺	16	320
Magnesium, Mg ⁺⁺	10	122
Iron (Total) Fe ⁺⁺⁺	-0-	-0-
Barium, Ba ⁺⁺	--	--
Sodium, Na ⁺ (calc.)	31.44	723.12

ANIONS	me/l	mg/l
Chloride, Cl ⁻	56.34	2000
Sulfate, SO ₄ ⁼	-0-	-0-
Carbonate, CO ₃ ⁼	-0-	-0-
Bicarbonate, HCO ₃ ⁻	1.10	67.1
Hydroxyl, OH ⁻	-0-	-0-
Sulfide, S ⁼	--	--

DISSOLVED GASES

Hydrogen Sulfide, H ₂ S	-0- mg/l*
Carbon Dioxide, CO ₂	7.92 mg/l*
Oxygen, O ₂	-- mg/l*

PHYSICAL PROPERTIES

pH	6.05
Specific Gravity	1.010
Total Dissolved Solids (calc.)	3232.22 mg/l*
Stability Index @ 30 °C	-1.11
CaSO ₄ Solubility @ 30 °C	24.00 me/l*
Max. CaSO ₄ Possible (calc.)	-0- me/l*
Max. CaSO ₄ Possible (calc.)	-- me/l*

Residual Hydrocarbons _____ ppm(Vol/Vol)

TOTAL SOLIDS (QUANTITATIVE)

3232.22

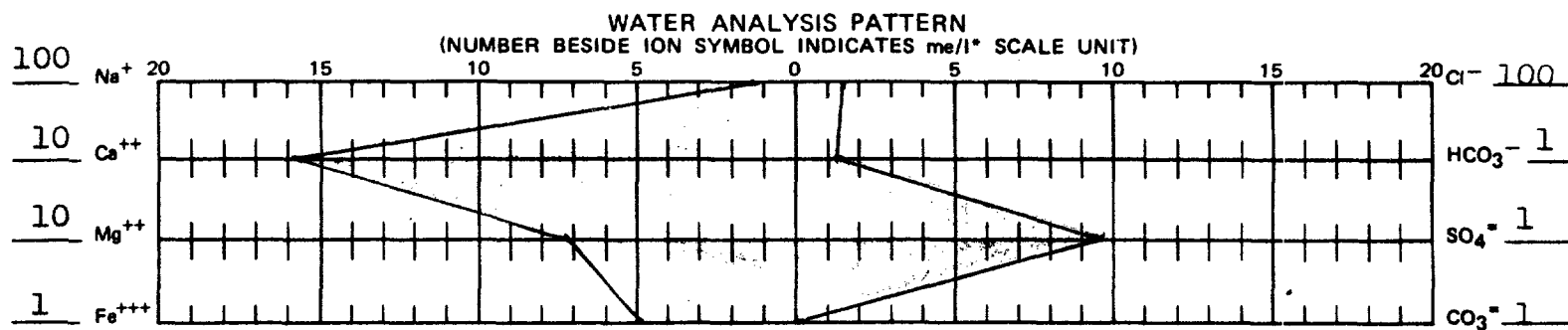
REMARKS AND RECOMMENDATIONS:

@30 C severe corrosive tendency is indicated.
@30 C calcium sulfate scaling is unlikely.

*NOTE: me/l and mg/l are commonly used interchangeably for epn and ppm respectively. Where epn and ppm are used, corrections should be made for specific gravity.

BAKER OIL TREATING REPRESENTATIVE Joe Lewis	ADDRESS	TELEPHONE OFF:	RES:
ANALYZED BY: J. Lewis	DATE 5/2/84	DISTRIBUTION	

COMPANY I & W				ANALYSIS NUMBER 0262			
COMPANY ADDRESS P.O. Box 939, Lovington, N. Mex. 88260				DATE 5-4-84			
FIELD Kennitz				COUNTY OR PARISH Lea		STATE N. Mex.	
LEASE OR UNIT Sombrero State		WELL(S) NAME OR NO.		WATER SOURCE (FORMATION) Wolfcamp			
DEPTH, FT.	BHT, °F	SAMPLE SOURCE Tenneco Kennitz Btry	TEMP, °F	WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF/DAY	
DATE SAMPLED		TYPE OF WATER <input checked="" type="checkbox"/> PRODUCED <input type="checkbox"/> SUPPLY <input type="checkbox"/> WATERFLOOD <input type="checkbox"/> SALT WATER DISPOSAL					


DISSOLVED SOLIDS

CATIONS	me/l*	mg/l*
Total Hardness	230	
Calcium, Ca ++	158	3160
Magnesium, Mg++	72	878.4
Iron (Total) Fe+++	4.98	92.71
Barium, Ba++	--	--
Sodium, Na+(calc.)	1212.52	27887.96

DISSOLVED GASES

Hydrogen Sulfide, H2S	-0- mg/l*
Carbon Dioxide, CO2	91.1 mg/l*
Oxygen, O2	-- mg/l*

PHYSICAL PROPERTIES

pH	6.15
Specific Gravity	1.065
Total Dissolved Solids (calc.)	83553.4 mg/l*
Stability Index @ 30 °C	-1.17
CaSO4 Solubility @ 30 °C	49.19 me/l*
Max. CaSO4 Possible (calc.)	9.58 me/l*
Max. CaSO4 Possible (calc.)	-- me/l*

ANIONS	me/l*	mg/l*
Chloride, Cl-	1436.62	51000
Sulfate, SO4 =	9.58	460
Carbonate, CO3 =	-0-	-0-
Bicarbonate, HCO3-	1.3	79.3
Hydroxyl, OH-	-0-	-0-
Sulfide, S=	--	--

Residual Hydrocarbons _____ ppm(Vol/Vol)

TOTAL SOLIDS (QUANTITATIVE) 83558.37
REMARKS AND RECOMMENDATIONS:

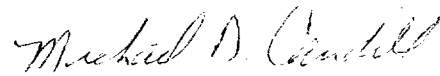
@30 C severe corrosive tendency is indicated.
 @30 C calcium sulfate scaling is unlikely.

*NOTE: me/l and mg/l are commonly used interchangeably for epn and ppm respectively. Where epn and ppm are used, corrections should be made for specific gravity.

BAKER OIL TREATING REPRESENTATIVE Joe Lewis		ADDRESS		TELEPHONE	
ANALYZED BY: <i>Joe Lewis</i>		DATE <i>5/4/84</i>		RES:	

I & W Transportation Inc.
P.O. Box 939
Lovington, N. Mex. 88260
March 31, 1984

We have examined all available geologic data and all available engineering data and find no evidence of open faults or any other hydraulic connection between the disposal zone and any underground source of drinking water.


Michael D. Caudill
Manager

Affidavit of Publication

STATE OF NEW MEXICO)
) ss.
COUNTY OF LEA)

Joyce Clemens being first duly sworn on oath deposes and says that he is Adv. Director of THE LOVINGTON DAILY LEADER, a daily newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled

Legal Notice

and numbered in the

 Court of Lea County, New Mexico, was published in a regular and entire issue of THE LOVINGTON DAILY LEADER and not in any supplement thereof, once each week on the same day of the week, for Three Times

consecutive weeks, beginning with the issue of

April 6 , 19 84

and ending with the issue of

April 20 , 19 84

And that the cost of publishing said notice is the sum of \$ 21.35

which sum has been (Paid) (Assessed) as Court Costs

Subscribed and sworn to before me this 27th

day of April , 1984

Notary Public, Lea County, New Mexico

My Commission Expires Sept 28 , 1986

LEGAL NOTICE NOTICE OF APPLICATION FOR FLUID INJECTION WELL PERMIT

I&W Transportation Inc.,
P.O. Box 939, Lovington, New
Mexico 88260 (505) 396-
3331, Michael D. Caudill (Ma-
nager) has applied to the Oil
Conservation Division for a
permit to convert the
Sombbrero "MS" State Well No.
2 into a salt water disposal
well. The well is located 550'
FNL, 1980' FWL, Sec. 27,
T16S, R33E, Lea County, New
Mexico (16 miles west of Lov-
ington). Well No. 2 is in the
Kemnitz Field with proposed
injection formation, depth,
rates and pressures as follows:
Wolfcamp 10,694'-11,348';
1000BW/day and 1000 PSI.
Interested parties must file ob-
jections or requests for hearing
with the Oil Conservation Divi-
sion, P.O. Box 2088, Santa Fe,
New Mexico 87501 within 15
days.

Published in the Lovington
Daily Leader April 6, 13, and
20, 1984.

- **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).

☒ Show to whom and date delivered \$
☐ Show to whom, date, and address of delivery .. \$

- 2.
- ☐
- RESTRICTED DELIVERY**
- \$
-
- (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL \$

3. **ARTICLE ADDRESSED TO:**
 Yates Pet. Corp.
 207 S. 4th St.
 Artesia, N. Mex. 88210

4. **TYPE OF SERVICE:** ☐ REGISTERED ☐ INSURED
☒ **CERTIFIED** ☐ COD
☐ **EXPRESS MAIL**

ARTICLE NUMBER

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☒ Authorized agent5. *Suzanne R. Pearson*

DATE OF DELIVERY POSTMARK (may be on reverse side)

6. ADDRESSEE'S ADDRESS (Only if requested)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

* GPO: 1982-379-583

RETURN RECEIPT

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
☒ Show to whom and date delivered \$
☐ Show to whom, date, and address of delivery .. \$

2. ☐ **RESTRICTED DELIVERY** \$
 (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL \$

3. **ARTICLE ADDRESSED TO:**
 St. of N. Mex. Land office
 310 070 Santa Fe Trail
 Santa Fe, N. Mex. 87501

4. **TYPE OF SERVICE:** ☐ REGISTERED ☐ INSURED
☒ **CERTIFIED** ☐ COD
☐ **EXPRESS MAIL**

ARTICLE NUMBER

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☒ Authorized agent

5. DATE OF DELIVERY POSTMARK (may be on reverse side)

6. ADDRESSEE'S ADDRESS (Only if requested)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

RETURN BECAUSE:

7b. EMPLOYEE'S INITIALS

PS Form 3811, July 1982

PS Form 3811, July 1982

RETURN BECAUSE:

RETURN RECEIPT

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
☒ Show to whom and date delivered \$
☐ Show to whom, date, and address of delivery .. \$

2. ☐ **RESTRICTED DELIVERY** \$
 (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL \$

3. **ARTICLE ADDRESSED TO:**
 Westland Oil Development Corp.
 331 Mid-America Bldg.
 Box 3726 Midland, TX. 79701

4. **TYPE OF SERVICE:** ☐ REGISTERED ☐ INSURED
☒ **CERTIFIED** ☐ COD
☐ **EXPRESS MAIL**

ARTICLE NUMBER

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☒ Authorized agent

5. DATE OF DELIVERY POSTMARK (may be on reverse side)

6. ADDRESSEE'S ADDRESS (Only if requested)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

* GPO: 1982-379-583

311, July 1982

RETURN RECEIPT

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
☒ Show to whom and date delivered \$
☐ Show to whom, date, and address of delivery .. \$

2. ☐ **RESTRICTED DELIVERY** \$
 (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL \$

3. **ARTICLE ADDRESSED TO:**
 W.A. Mancini, Jr.
 400 metric Bldg.
 Midland, TX. 79701

4. **TYPE OF SERVICE:** ☐ REGISTERED ☐ INSURED
☒ **CERTIFIED** ☐ COD
☐ **EXPRESS MAIL**

ARTICLE NUMBER

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☒ Authorized agent

5. DATE OF DELIVERY POSTMARK (may be on reverse side)

6. ADDRESSEE'S ADDRESS (Only if requested)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

* GPO: 1982-379-583

11, July 1982

PS Form 3811, July 1982

- **SENDER:** Complete items 1, 2, 3, and 4.
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(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).

☒ Show to whom and date delivered \$
☐ Show to whom, date, and address of delivery .. \$

- 2.
- ☐
- RESTRICTED DELIVERY**
- \$
-
- (The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL \$

3. **ARTICLE ADDRESSED TO:**
 Hexagon Oil & Gas
 405 Neil R. Anderson Bldg.
 Ft. Worth, TX. 761024. **TYPE OF SERVICE:** ☐ REGISTERED ☐ INSURED
☒ **CERTIFIED** ☐ COD
☐ **EXPRESS MAIL**

ARTICLE NUMBER

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☒ Authorized agent

5. DATE OF DELIVERY POSTMARK (may be on reverse side)

6. ADDRESSEE'S ADDRESS (Only if requested)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

7b. EMPLOYEE'S INITIALS

PS Form 3811, July 1982