

FEB 12 1986

APPLICATION FOR AUTHORIZATION TO INJECT

1. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ Yes ☒ NoII. Operator: CHAUEROO OPERATING CO. INC.
Address: 4800 San Felipe, Suite 620, Houston, Texas 77056
Contact party: William Graham Phone: 713-627-2875

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: W. THOMAS KELLAHIN Title: _____Signature: [Signature] Date: 2/12/86

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 submission.

This application, once filed, shall remain the property of the State of New Mexico and shall not be loaned or otherwise disposed of without the written consent of the Director of the Oil Conservation Division.

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISIONChaueroo EXHIBIT NO. 1CASE NO. 8843

FEB 12 1966

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 frontage 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 2086, 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.

[illegible]

CASE NO. 8843

PROPOSED INJECTION WELL

TUCKER #5

SWD

SECT 24 T7S 32E

310 FSL

1310 FWL

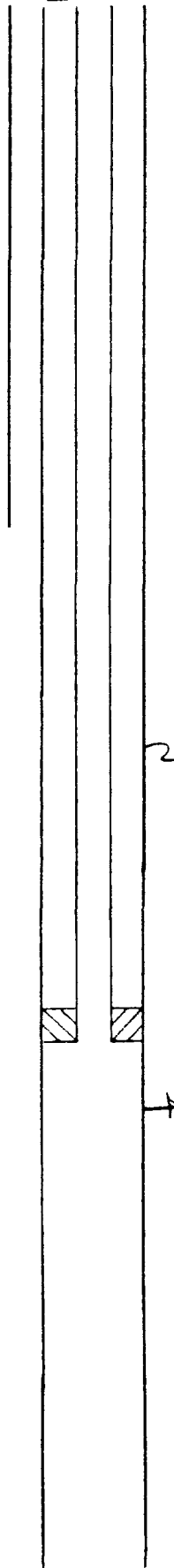
VII →

- ① MAXIMUM DAILY RATE 400 BBLs
- ② CLOSED SYSTEM
- ③ MAX INJECTION PRESSURE 850 PSI

41370

2

62741



8 5/8 SET @ 1754
CMT W/660 SXs
CMT CIRCULATED

→ CMT TOP @ 2000'
(Bond Loc)

→ PACKER SET @ 4000'

→ PERFORATIONS
4137 - 4464

4 1/2 SET @ 4530
CMT 300 SXs 50/50 FGMIX

BEFORE EXAMINER STOGNER OIL CONSERVATION DIVISION	
Chavez	EXHIBIT NO. 3
CASE NO.	8843

OPERATOR & ADDRESS	PERFORATING	Well Name TD	LEGAL	CASING	DEPTH SET	Cont & Tol
CHAUVERON OPERATING 4800 SAN FELIPE HOUSTON	4194-4421 1	TUCKER #1 4500	1880 FSL 660 FNL 24, T75, R32E	8 5/8 4 1/2	363.61 4495 ✓	250 CIRC 300 (294)
SHELL OIL CO P.O. Box 1509 MIDLAND, TX 79701	NOT PERF. 2	SHELL BRUENFELD FEDERAL #1 4677	1980 FNL 660 FEL 23, T75, R32E	8 5/8 4 1/2	368.55 4677 ✓	300 CIRC 675 CIRC
CHAUVERON OPERATING 1800 SAN FELIPE HOUSTON	4146-4450 3	ATLANTIC TUCKER #3 4473	1980 FSL 660 FEL 23, T75, R32E	8 5/8 5 1/2	347 4465 ✓	225 CIRC (700 CIRC CALCULAT)
CHAUVERON OPERATING 2300 SAN FELIPE HOUSTON	4196-4440 4	TUCKER #2 4500	660 FSL 690 FEL 23, T75, R32E	8 5/8 4 1/2	361 4463 ✓	250 CIRC 300 (289 CAL)
CHAUVERON OPERATING 1800 SAN FELIPE HOUSTON	4083-4477 5	HUMBLE FEDERAL #6 4500	660 FNL 1980 FNL 25, T75, R32E	8 5/8 5 1/2	330 4499 ✓	225 CIRC (650 CIRC CAL)
CHAUVERON OPERATING 1800 SAN FELIPE HOUSTON	4127-4460 6	HUMBLE FEDERAL #7 4500	660 FNL 660 FNL 25, T75, R32E	8 5/8 5 1/2	334 4497 ✓	225 CIRC (650 CIRC CAL)
CHAUVERON OPERATING 4800 SAN FELIPE HOUSTON	3986-4443 7	TUCKER HALL #4 4500	660 FNL 1980 FEL 25, T75, R32E	8 5/8 5 1/2	334 4499 ✓	225 CIRC (300 2387 CAL)
HOMER J. KYLE P.O. Box 387 LOVINGTON, NM 88260	4122-4354 8	FEDERAL "A" #1 4430	660 FSL 1980 FEL 24, T75, R32E	8 5/8 4 1/2	362 4430 ✓	250 CIRC (150 3653 CAL)
HOMER J. KYLE P.O. Box 387 LOVINGTON, NM 88260	4160-4378 9	FEDERAL "A" #3 4430	1980 FSL 1980 FEL 24, T75, R32E	8 5/8 4 1/2	366 4422 ✓	250 CIRC 150 in (3645 CAL)

BEFORE EXAMINER STOGNER OIL CONSERVATION DIVISION	
CHAUVERON	EXHIBIT NO. 4
CASE NO. 8843	

ATLANTIC TUCKER
#1

SECT 24 T5 R32E

ROOSEVELT CTY

TOPPED OFF W/10SKS CMT



SET 25SKS PLUC
FROM 350' →

SET 8 5/8 20# @ 344 W/225SKS
CIRCULATED CEMENT
TESTED 1000# FOR 30 MIN

SET 35 SKS @
STUB →
to 950

SHOT OFF @ 1013

→ CIRCULATED 10# MUD

SET CIBP @ 4000' W/5SKS CMT TOP

SET 5 1/2 15.5# @ 4411 W
CEMENT W/300 SKS HAL LIGHT
AND 300SKS FORMIX

10

BEFORE EXAMINER STOONER
OIL CONSERVATION DIVISION

CHAVEROO EXHIBIT NO. 5

CASE NO. 8843

ATLANTIC TUCKER
#2

SECT 25 T9S 32E

ROOSEVELT CTY

SET 35 SXS @
BTM of SURF SIDE

SET 35 SXS PUL
ON STUB

2 SET 10 SXS PUL @ SURFACE

2 SET BS/B 20# @ 335
CMT W/ 225 SXS "H" 2% C2C
CIRCULATED CMT
TESTED 1000 PSI FOR 30 MIN

SHOT CASING @ 1202'

CIRCULATE HERE 10% MUD

SET CIBP @ 4000' w/ SXS CMT TOP

2 SET 5 1/2 15.5# @ 4460
CMT W/ 300 SXS HMC LIGHT
200 SXS FOR MIX

11

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION

CHARTERED EXHIBIT NO. 6

CASE NO. 8843

TUCKER #3
SECT 24, T-7S, R32E
ROOSEVELT CTY.

SET 35SXS @ 350
TO BTM of casing

SPOTTED 35SXS
@ 1322 →

2D TOPPED w/ 10 SXS of CMT

✓
SET 8 5/8 24# @ 351.83
CMT w/ 250 SXS of "C" w/ 27.6 C
CMT CIRCULATED
TESTED 850# FOR 30 MIN

SHOT OFF @ 1322

2D CIRCULATED 10# MUD

SET CIBP @ 3508' CAPPED w/ 5SXS CMT

→ TOP PERF 4247

2D 4 1/2 10.5# SET @ 4503.
CMT w/ 300 SXS IN LOR/D. AMIX

12

300 slt
2000'

BEFORE EXAMINER STOGNER OIL CONSERVATION DIVISION	
CHAVEZ	EXHIBIT NO. 7
CASE NO.	8843

FEDERAL "24"

#1

TCT24 T7S R32E

1980' FNL 5660 FNL

ROOSEVELT CTY

SPOTTED 50 SKS
@ 1850

SPOTTED
50 SKS @ STOP

SHOT OFF CASING @ 3100

SPOTTED 50 SKS OF "H" TOP @ 4000
4 1/2" TOP PERF

SET 4 1/2 10.5" @ 4700
CMT W/ 325 SKS IN CORE

SET 7" 23" @ 1780
CMT W/ 300 SKS B'66 EL
& 150 SKS 2% CACI
CIRCULATED CMT TESTED 1000 PSI
FOR 30 MIN

TOPPED OFF W/ 10 SKS CMT

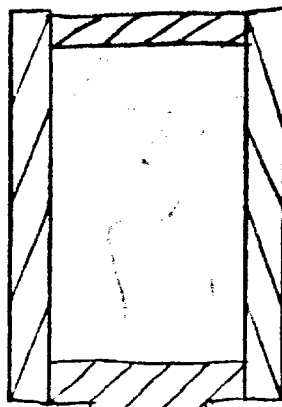
13

BEFORE EXAMINER STOGNER OIL CONSERVATION DIVISION	
CHAVEROO	EXHIBIT NO. 8
CASE NO.	8843

FEDERAL "24"
#1

SECT 24, T-7-S, R-32E
1980FNL & 1980FEL
ROOSEVELT CTY

SPOTTED
50SX5 PLUG @
1800



TOPPED OFF W/10SX5 CMT

SET 7" 23* @ 1824
W/250SX5"H" 870 GEL & 150SX5"H" 27
WOC 24 HRS TESTED 1000 PSI 30W

SPOTTED 50SX5 @ STUB

2 CUT OFF CASING @ 3300

~4000 TOP of 50SX5 PLUG

~4162 TOP PERF

SET 4 1/2 10.5* @ 4700'
CMT W/150SX5 INCORE 27 GEL 5* SALT

24

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION

CHAVARRA EXHIBIT NO 9

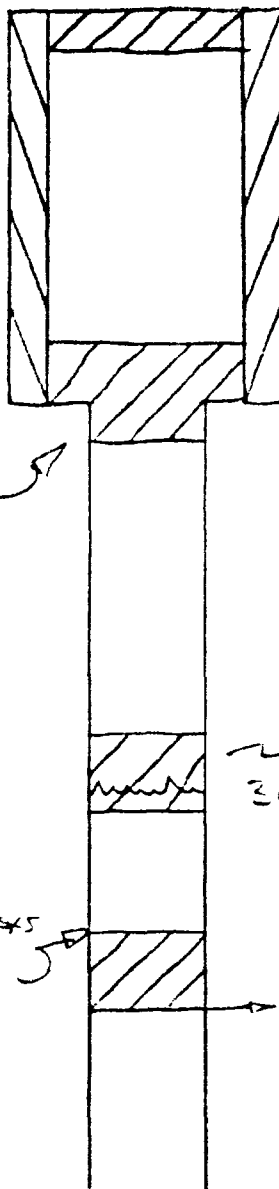
CASE NO. 8843

FEDERAL "24"

#2

SELT24-T-7-S, R32E

ROOSEVELT CTY



2" 105XS ON SURFACE

SPOTTED 50XS @
1880 ACROSS
SURF. SHOE

SET 7" @ 1817'
CEMENTED W/ 250XS "H" 2% C/C
CIRCULATED WOC 24HRS
TESTED 1000 PSI FOR 30 MIN

SPOTTED 50XS ACROSS STUB
3640 SHOT OFF CASING

SPOTTED 50XS
PLUG TO 4000'

PERF 4160 - 4376

SET 4 1/2 10.5# @ 4700'
CMT W/ 150XS

25

BEEBE & EXAMINER STOGNER
OIL CONSERVATION DIVISION

CHAMBERLAIN EXHIBIT NO. 10

CASE NO. 8843

HUMBLE FEDERAL #6

26-7-32

ROOSEVELT CTY

SPOTTED 10 SKS @ SURF.

SPOTTED 35 SKS
@ SURF CASING
SHOC

SPOTTED 35 SKS @
CUT

8 5/8 SET @ 338

CMT W/ 225 SKS CL'H" 200 G/G
CEMENT CIRCULATED WOL 18 HRS
TESTED TO 1100# FOR 30 MIN.

SHOT CASING @ 1068

SPOTTED 25 SKS FROM 3000' - 2900'

SET 55 SKS CMT ON PLUG

PCIB @ 4000'

4080 TOP PERFORATION

SET 5 1/2 14# & 15.5# @ 4499
CMT W/ 350 SKS FB MIX
& 300 SKS NEAT

$$\text{Displ } 7 \frac{7}{8} \text{ HXS } \frac{1}{2} \text{ L} \rightarrow .1733 \frac{\text{ft}^3}{\text{ft}}$$

$$\text{VETRO FORMIX} \rightarrow 1.22 \frac{\text{ft}^3}{\text{SKS}}$$

$$350 \frac{\text{SKS}}{\text{ft}} \times 1.22 \frac{\text{ft}^3}{\text{SKS}} = 427 \text{ ft}^3 \times \frac{\text{ft}}{.1733 \text{ ft}} = 2463.9 \text{ ft}$$

$$\text{NEAT NEAT CMT} = 1.18 \frac{\text{ft}^3}{\text{SKS}}$$

$$\frac{318}{12062} \rightarrow 5 \frac{1}{2} \text{ IN } 8 \frac{5}{8} \frac{\text{ft}^3}{\text{ft}} = 20.6$$

$$300 \frac{\text{SKS}}{\text{ft}} \times 1.18 \frac{\text{ft}^3}{\text{SKS}} = 354 \text{ ft}^3 \times \frac{\text{ft}}{.1733 \text{ ft}} = 2042.7$$

CEMENT SHOULD HAVE CIRCULATED 4500.6

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BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION

CHAVEZ EXHIBIT NO. 11

CASE NO. 8843



INJECTION
WATER

REPORT OF WATER ANALYSIS

Company CHAVEROO OPERATING

Date 2-6-86

Analysis No.

Sampling Date

Date Sample Rec'd.

Sample Marked HUMBLE FEDERAL

DISSOLVED SOLIDS

Cations

	mg/l	meq/l
Sodium, Na (Calc.)	89,155	3,876
Calcium, Ca	7,160	358
Magnesium, Mg	1,032	85
Barium, Ba		
Cations Total	97,348	4,319

RESULTS AS COMPOUNDS

mg/l

as NaCl
as CaCO₃
as CaCO₃
as BaSO₄

Anions

Chloride, Cl	148,715	4,193
Sulfate, SO ₄	3,920	81
Carbonate, CO ₃		
Bicarbonate, HCO ₃	2,684	44
Anions Total	155,319	4,319

as NaCl
as Na₂SO₄
as CaCO₃
as CaCO₃

Total Dissolved Solids (Calc.)

Total Iron, Fe	252,668
Acidity to Phenolphthalein, CO ₂	42.2

as Fe
as CaCO₃

OTHER PROPERTIES

pH	6.90
Specific Gravity	
Turbidity (JTU)	

CaCO₃ STABILITY INDEX

@ 70° F.

@ 120° F.

@ 160° F.

Method of Stiff & Davis

Remarks: All Fluid From
SAN ANTONIO INTERNAL

NALCO CHEMICAL COMPANY
VISCO CHEMICALS

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BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION

CHAVEROO EXHIBIT NO. 12

CASE NO. 8843



FRESH
WATER
WELL

REPORT OF WATER ANALYSIS

Company CHAVEROO OPERATING

Date 2-6-86

Analysis No.

Sampling Date 2-5-86

Date Sample Rec'd.

Sample Marked TUCKER POND

DISSOLVED SOLIDS

Cations

	mg/l	meq/l
Sodium, Na (Calc.)	130.76	5.69
Calcium, Ca	1000.00	50.00
Magnesium, Mg	24.30	2.0
Barium, Ba		

RESULTS AS COMPOUNDS

	mg/l
as NaCl	
as CaCO ₃	
as CaCO ₃	
as BaSO ₄	

Cations Total 1,155.06 57.69

Anions

Chloride, Cl	1,244.35	35.09
Sulfate, SO ₄	1,047.80	21.79
Carbonate, CO ₃		
Bicarbonate, HCO ₃	48.80	0.80

as NaCl	
as Na ₂ SO ₄	
as CaCO ₃	
as CaCO ₃	

Anions Total 2,340.95 57.69

Total Dissolved Solids (Calc.) 3,496.01

Total Iron, Fe

Acidity to Phenolphthalein, CO₂

as Fe	
as CaCO ₃	

OTHER PROPERTIES

pH	7.30
Specific Gravity	
Turbidity (JTU)	

CaCO₃ STABILITY INDEX

@ 70° F.	
@ 120° F.	
@ 160° F.	
Method of Stiff & Davis	

Remarks:

Producing Interval
125-135 ft

NALCO CHEMICAL COMPANY
VISCO CHEMICALS

P. O. BOX 87 • SUGAR LAND, TEXAS 77478

trademarks of Nalco Chemical Company.

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION
Chaveroo EXHIBIT NO. 13
CASE NO. 8843

CERTIFICATE OF MAILING
and
COMPLIANCE WITH ORDER R-8054

In accordance with Division Rule 1207 (Order R-8054) I hereby certify that notice of the hearing on March 5, 1986, and a copy of this application were mailed, certified mail, return receipt, on February 12, 1986, at least twenty days prior to hearing to the following operators and interested parties. Each said party is advised that they are not required to attend this hearing, but as interested parties may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date:

Mr. Ray Graham, Director
New Mexico State Land Office
P. O. Box 1148
Santa Fe, New Mexico 87504

✓ Shell Oil Company
P. O. Box 1509
Midland, Texas 79701

Homer J. Kyle
P. O. Box 387
Lovington, New Mexico 88260

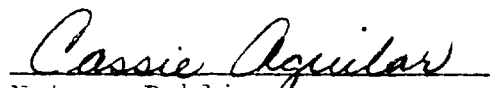
Mr. Tommy Tucker
c/o Alsup's Convenience Store
Elida, New Mexico

BEFORE EXAMINER STOGNER OIL CONSERVATION DIVISION	
CHAVEZ	EXHIBIT NO. 14
CASE NO. 8843	


W. Thomas Kellahin

STATE OF NEW MEXICO)
) ss
COUNTY OF SANTA FE)

The foregoing instrument was acknowledged before me by W. Thomas Kellahin on this 4th day of March, 1986.


Notary Public

My Commission Expires:

9-26-87

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.

1. ☒ Show to whom, date and address of delivery.
 2. ☐ Restricted Delivery.

3. Article Addressed to:

Mr. Tommy Tucker
 c/o Alsup's Convenience Store
 Elida, New Mexico

4. Type of Service:

- ☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number

P131072090

Always obtain signature of addressee or agent and
 DATE DELIVERED.

5. Signature - Addressee

X

6. Signature - Agent

X

7. Date of Delivery

3/5/86

8. Addressee's Address (ONLY if requested and fee paid)

Chaverro 3/5/86

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.

1. ☒ Show to whom, date and address of delivery.
 2. ☐ Restricted Delivery.

3. Article Addressed to:

Homer J. Kyle
 P. O. Box 387
 Lovington, New Mexico 88260

4. Type of Service:

- ☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number

P131072088

Always obtain signature of addressee or agent and
 DATE DELIVERED.

5. Signature - Addressee

X

6. Signature - Agent

X

7. Date of Delivery

3-14-86

8. Addressee's Address (ONLY if requested and fee paid)

Chaverro 3/5/86

Chaveroo 3/5/86

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. 1. ☒ Show to whom, date and address of delivery. 2. ☐ Restricted Delivery.	
3. Article Addressed to: Shell Oil Company P. O. Box 1509 Midland, Texas 79701	
4. Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail	Article Number P131072087
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee X	
6. Signature - Agent X	
7. Date of Delivery 3/5/86	
8. Addressee's Address (ONLY if requested and fee paid)	

PS Form 3811, July 1983 447-846

DOMESTIC RETURN RECEIPT

Chaveroo 3/5/86

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. 1. ☒ Show to whom, date and address of delivery. 2. ☐ Restricted Delivery.	
3. Article Addressed to: Ray, Graham, Director New Mexico State Land Office P. O. Box 1148 Santa Fe, NM 87504	
4. Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail	Article Number P131072089
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee X	
6. Signature - Agent X	
7. Date of Delivery 3/5/86	
8. Addressee's Address (ONLY if requested and fee paid)	

PS Form 3811, July 1983 447-846

DOMESTIC RETURN RECEIPT