

MESSAGE / REPLY

190 APR 30 AM 8 50

TO Mr. David Catanach
State of New Mexico
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87504-2088

FROM

KAISER FRANCIS OIL CO.
P. O. BOX 21468
TULSA, OKLAHOMA 74121-1468
PHONE: (918) 494-0000

SUBJECT Water analysis' for State 8 #7 Application

Date 4 / 26 / 90

MESSAGE Per your telephone conversation with Mr. Milt Griffin, I am enclosing the
copies of the water analysis' you requested.

Charlotte Van Valkenburg, Tech. Coordinator

Signed

C. Van Valkenburg

REPLY

Signed

Date / /

WHITE — REPLY

CANARY — RECEIVER FILE COPY

PINK — ORIGINATOR FILE COPY



A Baker Hughes company

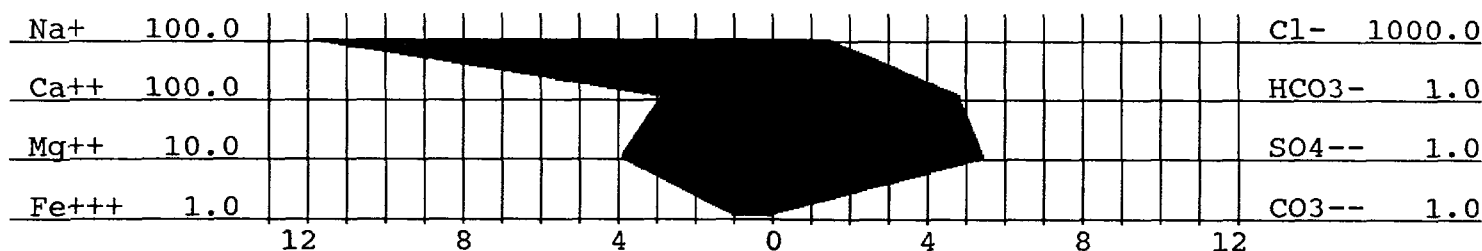
WATER ANALYSIS
for
KAISER-FRANCES

Date of Analysis: AUGUST 15, 1989
Company: KAISER-FRANCES
State:
Lease: STATE 8
Oil (bbl/day): N/D
Type of Water: PRODUCED
Sample Source: WELLHEAD
Representative: JOE LEWIS

Analysis #: 4297
Company Address:
Field:
Well #: # 8
Water (bbl/day): N/D
Temp., C: 20
Date of Sampling: AUGUST 14, 1989
Analysis By: S. BOXLEY

WATER ANALYSIS PATTERN

(number beside ion symbol indicates me/l scale unit)



DISSOLVED SOLIDS

CATIONS	me/l	mg/l
Total Hardness	: 340.00	
Calcium, (Ca++)	: 300.00	6014.43
Magnesium, (Mg++)	: 40.00	486.06
Iron, (Fe+++)	: 1.08	20.00
Barium, (Ba++)	: N/D	N/D
Sodium, Na+(calc.)	: 1218.84	28033.40
Manganese, (Mn++)	: 0.00	0.00

ANIONS	me/l	mg/l
Chloride, Cl-	: 1549.30	54998.22
Sulfate, SO4--	: 5.62	270.00
Carbonate, CO3--	: 0.00	0.00
Bicarbonate, HCO3--	: 5.00	305.06
Hydroxyl, OH-	: 0.00	0.00
Sulfide, S--	: 0.00	0.00
TOTAL SOLIDS (quant.)	: 90010.07	

DISSOLVED GASES

Hydrogen sulfide:	0.00	mg/l
Carbon dioxide	: 277.20	mg/l
Oxygen	: 0.80	mg/l

PHYSICAL PROPERTIES

pH	: 6.65
Spec Grav.	: 1.065
TDS (calc.)	: 90132.18

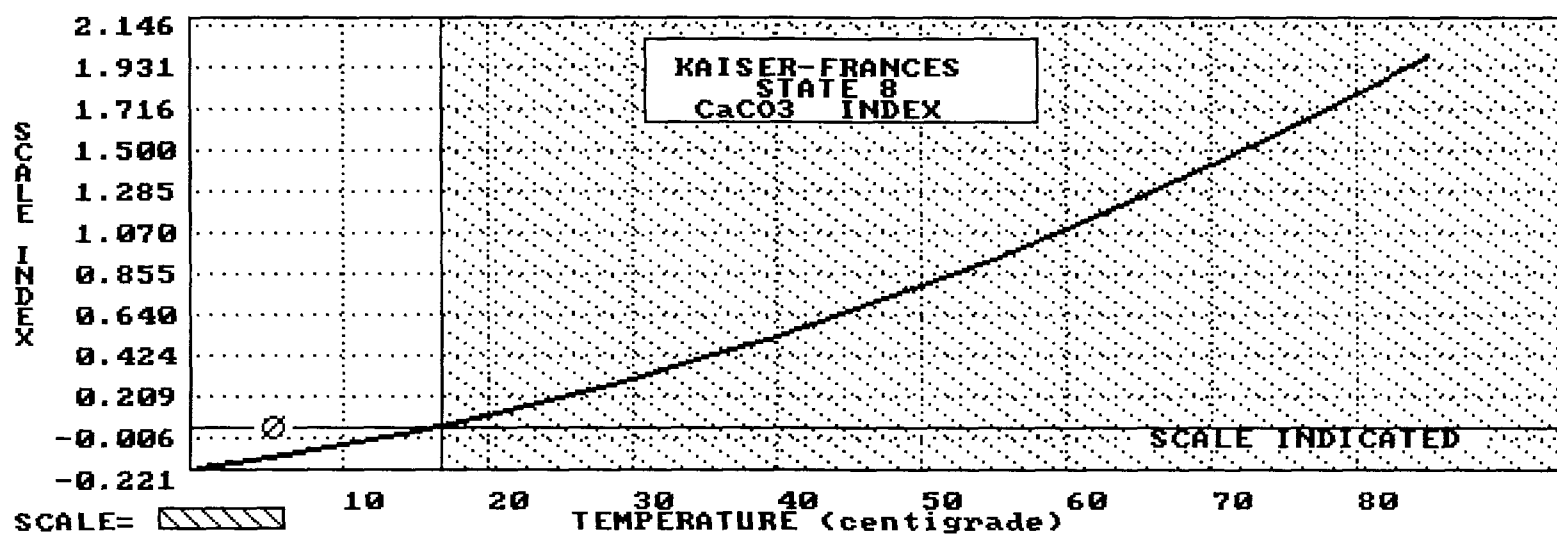
SCALE STABILITIES

Temp., C	CaCO3	CaSO4	BaSO4
10.0	-0.10	2112	1
20.0	0.05	2248	1
30.0	0.24	2362	1
Max entity, (calc.)	393		0

RESIDUAL HYDROCARBONS: N/D

N/D = not determined

REMARKS: @ 20' C SLIGHTLY CORROSIVE, AND ALSO SLIGHT CARBONATE SCALING
@ 20' C CALCIUM SULFATE SCALING IS UNLIKELY

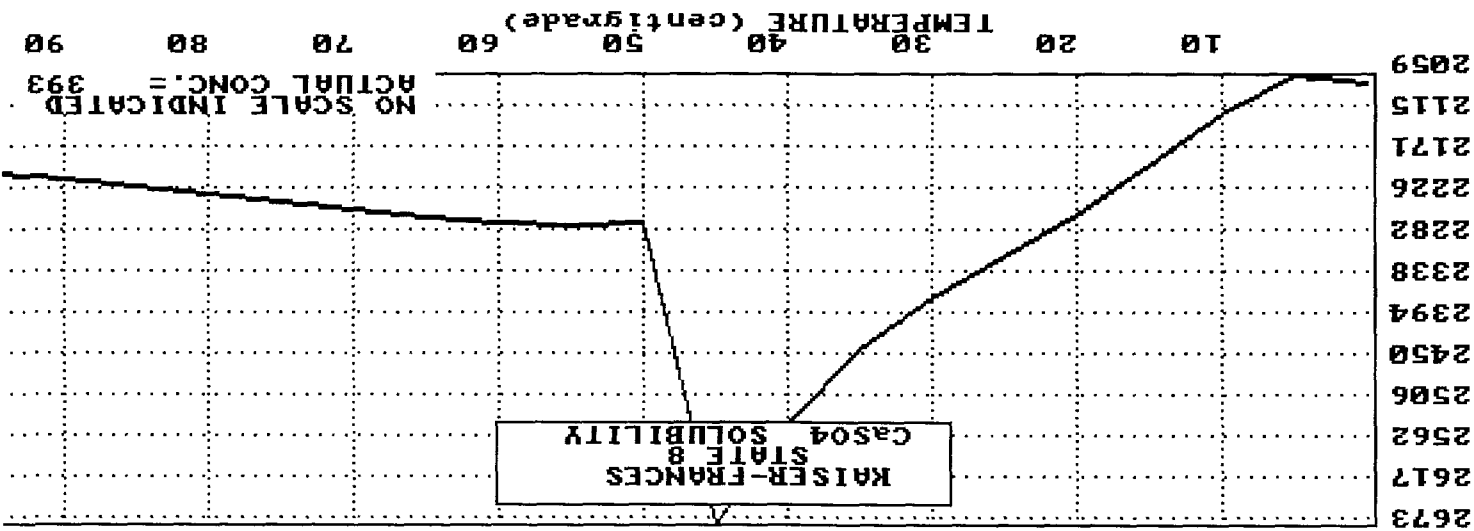


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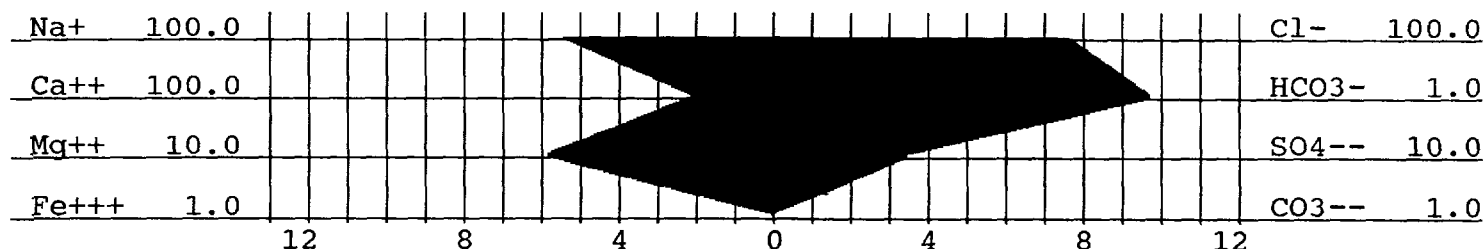
WATER ANALYSIS
for
PENNZOIL +

Date of Analysis: AUGUST 15, 1989
Company: PENNZOIL +
State: NEW MEXICO
Lease: WESTERN STATE
Oil (bbl/day): SAN ANDRES
Type of Water: SAN ANDRES
Sample Source: WELLHEAD
Representative: JOE LEWIS

Analysis #: 4294
Company Address: N/D
Field: N/D
Well #: # 9
Water (bbl/day): N/D
Temp., C: 20
Date of Sampling: AUGUST 14, 1989
Analysis By: S. BOXLEY

WATER ANALYSIS PATTERN

(number beside ion symbol indicates me/l scale unit)



DISSOLVED SOLIDS

CATIONS	me/l	mg/l
Total Hardness	: 280.00	
Calcium, (Ca++)	: 220.00	4410.59
Magnesium, (Mg++)	: 60.00	729.08
Iron, (Fe+++)	: 0.05	1.00
Barium, (Ba++)	: N/D	N/D
Sodium, Na+(calc):	556.76	12805.51
Manganese, (Mn++)	: 0.00	0.00

ANIONS	me/l	mg/l
Chloride, Cl-	: 788.73	27998.93
Sulfate, SO4--	: 35.59	1710.00
Carbonate, CO3--	: N/D	N/D
Bicarbonate, HCO3--	: 10.00	610.13
Hydroxyl, OH-	: N/D	N/D
Sulfide, S--	: 2.50	40.12
TOTAL SOLIDS (quant.):		46751.47

DISSOLVED GASES

Hydrogen sulfide:	500.00	mg/l
Carbon dioxide	: 198.00	mg/l
Oxygen	: 1.00	mg/l

PHYSICAL PROPERTIES

pH	: 7.00
Spec Grav.	: 1.035
TDS (calc.)	: 48277.74

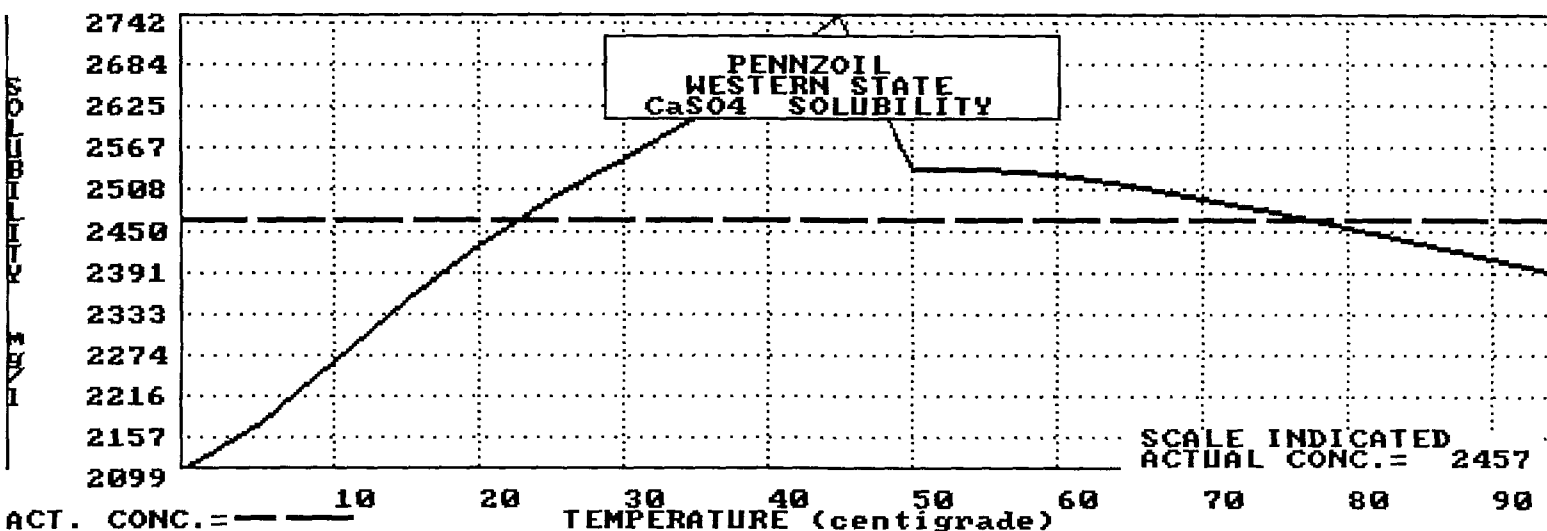
SCALE STABILITIES

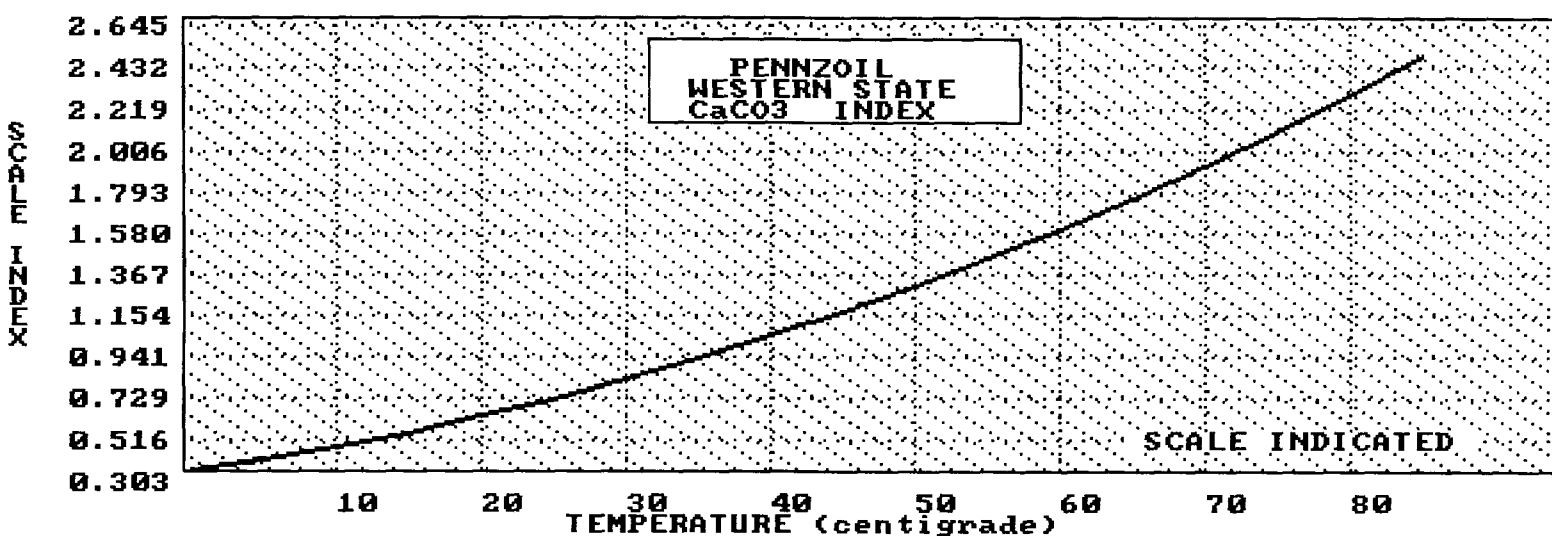
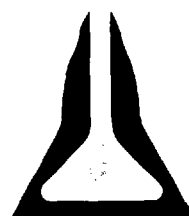
Temp., C	CaCO3	CaSO4	BaSO4
10.0	0.42	2248	0
20.0	0.58	2415	0
30.0	0.77	2537	0
Max entity, (calc.)	2457		0
RESIDUAL HYDROCARBONS:		N/D	

N/D = not determined

REMARKS: @ 20'C MODERATE CARBONATE SCALING

@ 20'C MODERATE CARBONATE SCALING







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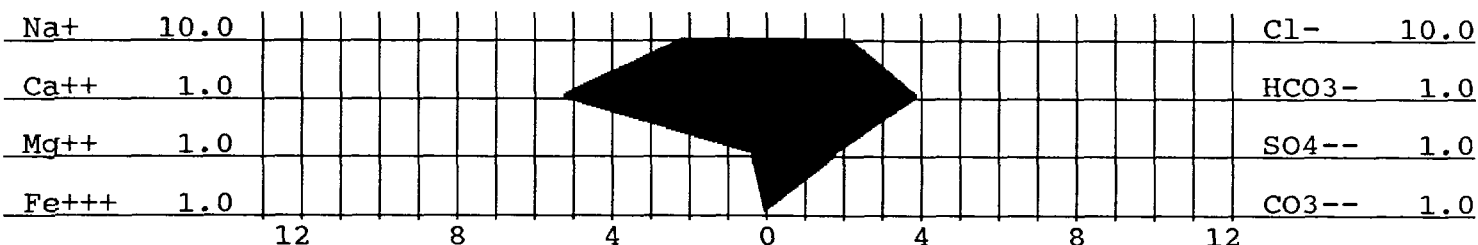
WATER ANALYSIS
for
KAISER-FRANCES

Date of Analysis: AUGUST 15, 1989
Company: KAISER-FRANCES
State:
Lease: N/D
Oil (bbl/day): N/D
Type of Water: FRESH WATER
Sample Source: 1/4 MI N. OF ST. 8
Representative: JOE LEWIS

Analysis #: 4295
Company Address:
Field:
Well #: N/D
Water (bbl/day): N/D
Temp., C: 20
Date of Sampling: AUGUST 14, 1989
Analysis By: S. BOXLEY

WATER ANALYSIS PATTERN

(number beside ion symbol indicates me/l scale unit)



DISSOLVED SOLIDS

CATIONS	me/l	mg/l
Total Hardness :	5.80	
Calcium, (Ca++) :	5.40	108.26
Magnesium, (Mg++) :	0.40	4.86
Iron, (Fe+++)	0.05	1.00
Barium, (Ba++) :	N/D	N/D
Sodium, Na+(calc) :	22.56	518.86
Manganese, (Mn++) :	0.00	0.00

ANIONS	me/l	mg/l
Chloride, Cl- :	22.54	800.14
Sulfate, SO4-- :	1.87	90.00
Carbonate, CO3-- :	0.00	0.00
Bicarbonate, HCO3-- :	4.00	244.05
Hydroxyl, OH- :	0.00	0.00
Sulfide, S-- :	0.00	0.00
TOTAL SOLIDS (quant.) :		1679.98

DISSOLVED GASES

Hydrogen sulfide:	0.00	mg/l
Carbon dioxide :	39.60	mg/l
Oxygen :	4.00	mg/l

PHYSICAL PROPERTIES

pH :	7.90
Spec Grav. :	1.010
TDS (calc.) :	1771.17

SCALE STABILITIES

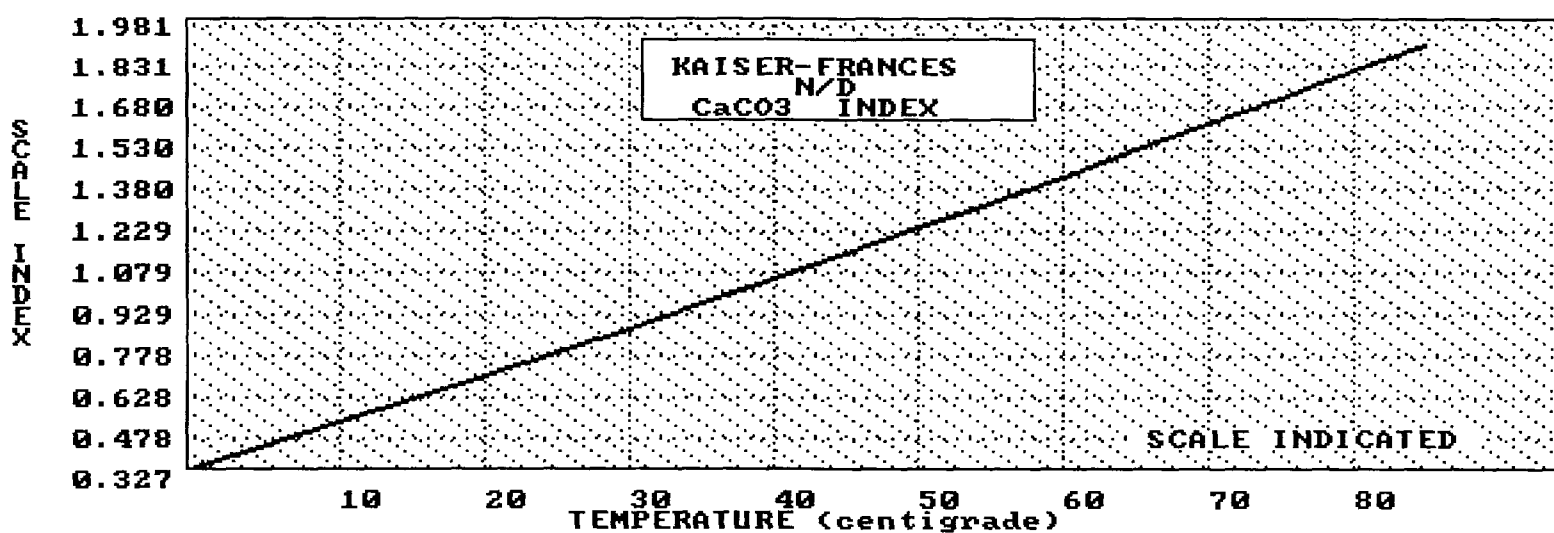
Temp., C	CaCO3	CaSO4	BaSO4
10.0	0.49	1521	0
20.0	0.66	1592	0
30.0	0.84	1624	0
Max entity, (calc.)	127		0

RESIDUAL HYDROCARBONS: N/D

N/D = not determined

REMARKS: @ 20' C MODERATE CARBONATE SCALING

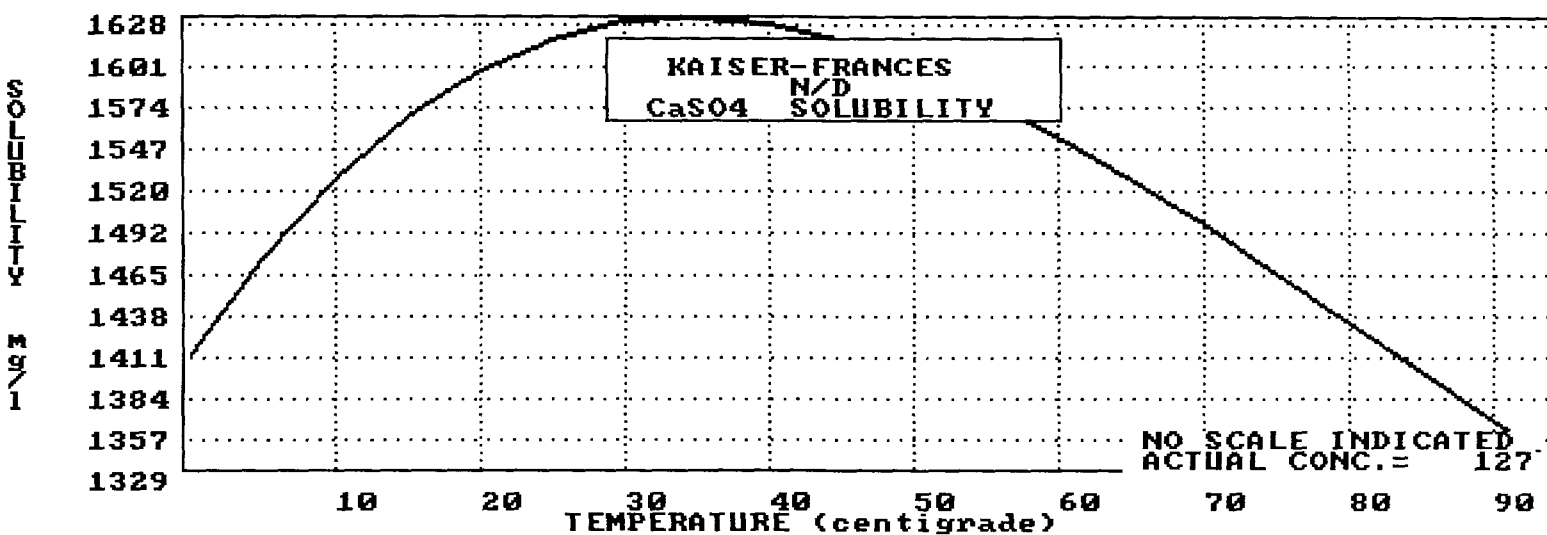
@ 20' C CALCIUM SULFATE SCALING IS UNLIKELY



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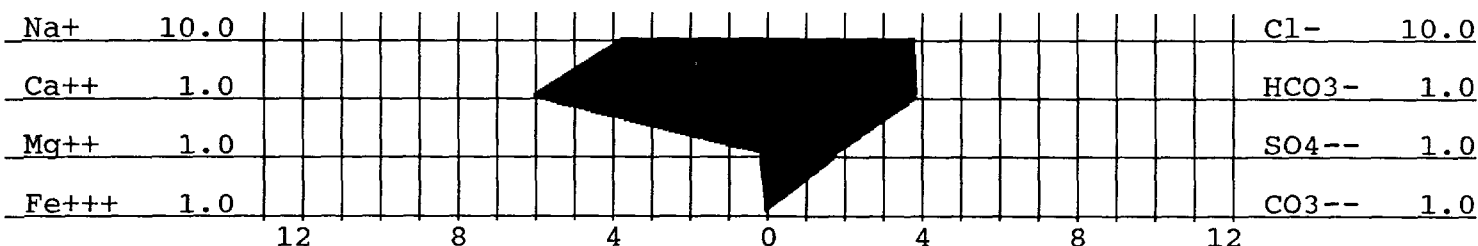
WATER ANALYSIS
for
KAISER-FRANCES

Date of Analysis: AUGUST 15, 1989
Company: KAISER-FRANCES
State:
Lease: N/D
Oil (bbl/day): N/D
Type of Water: FRESH WATER
Sample Source: 1/2 MI N. OF ST. 8
Representative: JOE LEWIS

Analysis #: 4296
Company Address:
Field:
Well #: N/D
Water (bbl/day): N/D
Temp., C: 20
Date of Sampling: AUGUST 14, 1989
Analysis By: S. BOXLEY

WATER ANALYSIS PATTERN

(number beside ion symbol indicates me/l scale unit)



DISSOLVED SOLIDS

CATIONS	me/l	mg/l
Total Hardness :	6.40	
Calcium, (Ca++) :	6.20	124.30
Magnesium, (Mg++) :	0.20	2.43
Iron, (Fe+++)	0.05	1.00
Barium, (Ba++) :	N/D	N/D
Sodium, Na+(calc) :	38.86	893.76
Manganese, (Mn++) :	0.00	0.00

ANIONS	me/l	mg/l
Chloride, Cl- :	39.44	1400.07
Sulfate, SO4-- :	1.87	90.00
Carbonate, CO3-- :	0.00	0.00
Bicarbonate, HCO3- :	4.00	244.05
Hydroxyl, OH- :	0.00	0.00
Sulfide, S-- :	0.00	0.00
TOTAL SOLIDS (quant.) :		2668.72

DISSOLVED GASES

Hydrogen sulfide:	0.00	mg/l
Carbon dioxide :	39.60	mg/l
Oxygen :	6.00	mg/l

PHYSICAL PROPERTIES

pH :	7.50
Spec Grav. :	1.010
TDS (calc.) :	2759.61

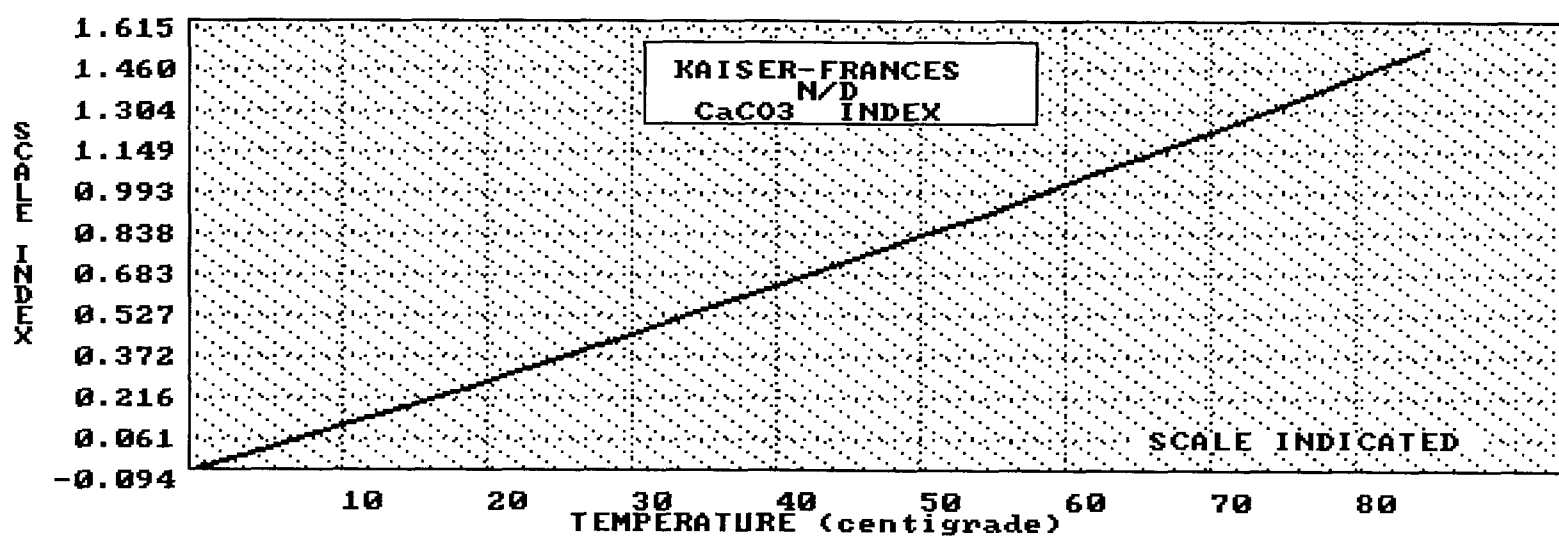
SCALE STABILITIES

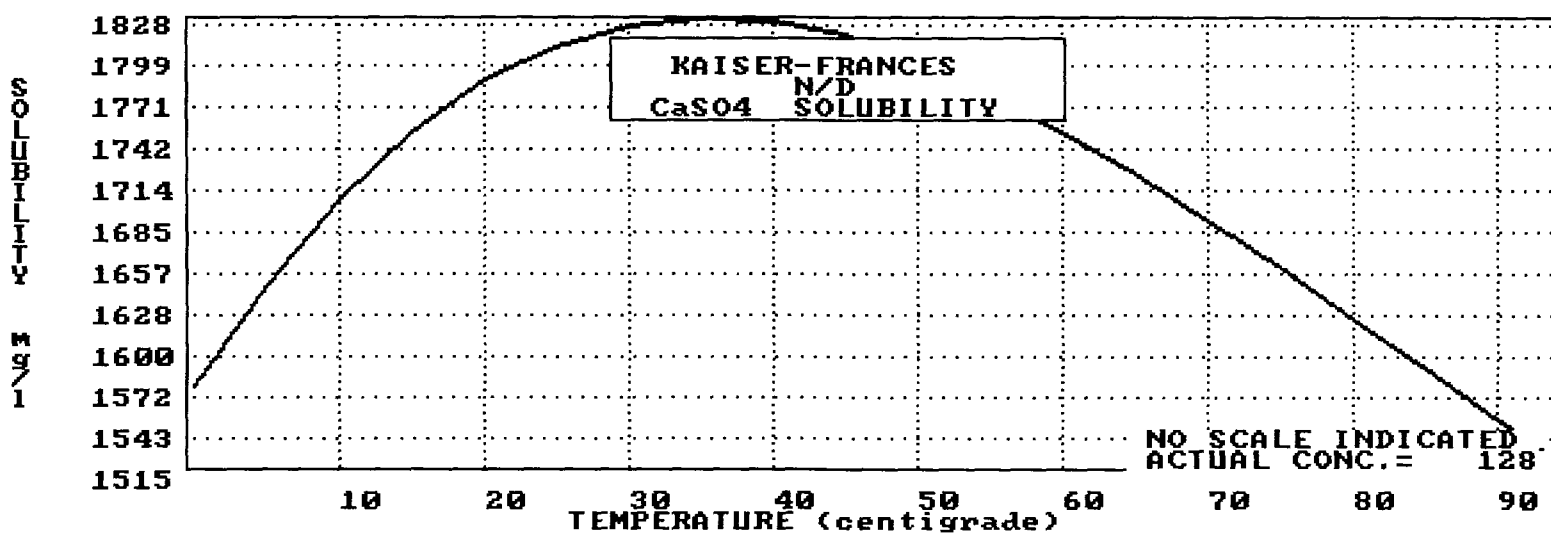
Temp., C	CaCO3	CaSO4	BaSO4
10.0	0.07	1700	0
20.0	0.24	1783	0
30.0	0.42	1821	0
Max entity, (calc.)	128		0
RESIDUAL HYDROCARBONS:		N/D	

N/D = not determined

REMARKS: @ 20' C SLIGHTLY CORROSIVE, AND ALSO SLIGHT CARBONATE SCALING
@ 20' C CALCIUM SULFATE SCALING IS UNLIKELY

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NOV 29 1989

QCD
HOBBS OFFICE

MESSAGE / REPLY

TO Mr. David Catanach
State of New Mexico
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87504-2088

FROM

APR 30 9 13

KAISER FRANCIS OIL CO.
P. O. BOX 21468
TULSA, OKLAHOMA 74121-1468
PHONE: (918) 494-0000

SUBJECT Amended application for SWD on State 8 #7

Date 4 / 27 / 90

MESSAGE Per your telephone conversation with Mr. Milt Griffin, I am enclosing amended filings that pertain to our application for salt water disposal on the State 8 #7 well.

Charlotte Van Valkenburg, Tech. Coordinator

Signed

C. Van Valkenburg

REPLY

Signed

Date / /

WHITE — REPLY

CANARY — RECEIVER FILE COPY

PINK — ORIGINATOR FILE COPY

Submit 3 Copies
to Appropriate
District Office

State of New Mexico
Energy, Minerals and Natural Resources Department

AMENDED

Form C-103
Revised 1-1-89

DISTRICT I
P.O. Box 1980, Hobbs, NM 56240

DISTRICT II
P.O. Drawer DD, Artesi, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL API NO.

5. Indicate Type of Lease
STATE ☒ FEE ☐

6. State Oil & Gas Lease No.
E-704

7. Lease Name or Unit Agreement Name

State '8'

8. Well No.

7

9. Pool name or Wildcat
(Yates/7 Rivers/Queens)

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. Type of Well:
OIL WELL ☒ GAS WELL ☐ OTHER

2. Name of Operator
Kaiser-Francis Oil Company

3. Address of Operator
P. O. Box 21468, Tulsa, OK 74121-1468

4. Well Location
Unit Letter _____ : 1980 Feet From The _____ South _____ Line and 2310 Feet From The _____ East _____ Line

Section 8 Township 16S Range 35E NMPM Lea County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)

4036 GR

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐
OTHER: Application for SWD well ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐
CASING TEST AND CEMENT JOB ☐
OTHER: ☐

12. 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.

1. MIRU well service unit. Dig out cellar and install wellhead.
2. RU reverse circulator & power swivel. Drill & clean out cement plugs to 4650' (top of cmt plug @ base of 8 5/8" casing).
3. Run inspection log from 4650' to surface.
4. Perf Yates/7 Rivers/Queens from 3272' to 3725' o.a. interval w/126 perfs.
5. Run 2 3/8" tbg with packer. Set packer @ 3250'.
6. Pressure test casing to 500#.
7. Acidize with 4000 g. 15% HCL & 250 ball sealers.
8. Knock ball sealers off perfs. Reset packer & take injection test.
9. Pull tbg and packer. Run 2 3/8" Saltaline tbg w/packer. Set packer @ 3250'.
10. Nipple up wellhead and equip for salt water disposal.

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

SIGNATURE C. Jan Valkenburg TITLE Technical Coordinator DATE 4/27/90
TYPE OR PRINT NAME Charlotte Van Valkenburg 918-491-4314 TELEPHONE NO.

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

INJECTION WELL DATA SHEET

AMENDED

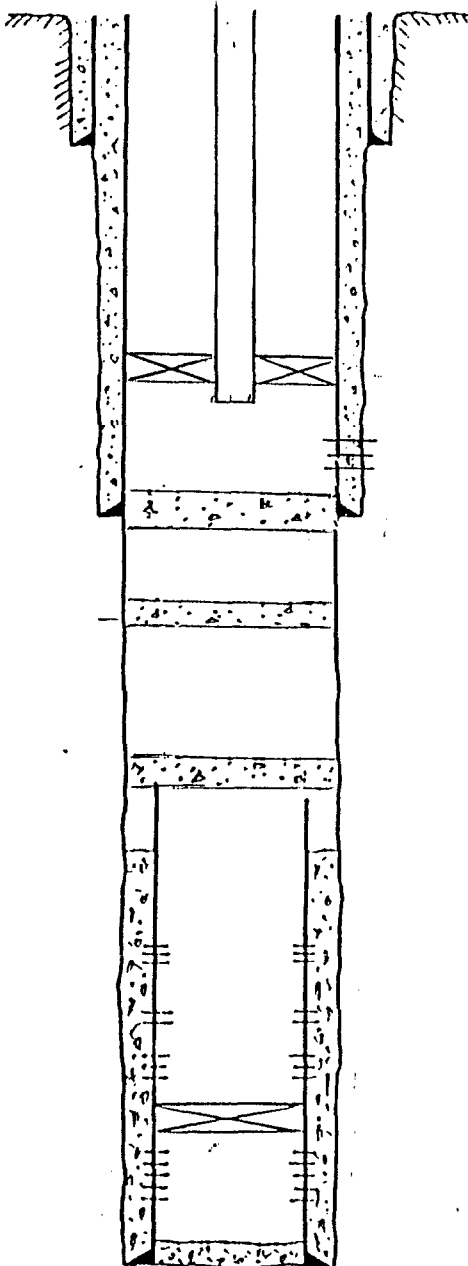
Kaiser-Francis Oil Company

State 8

OPERATOR	LEASE		
7	1980 FSL & 2310 FEL	8	16S
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP
			RANGE
Lea County			

Schematic

Tabular Data



Surface Casing

Size 13 3/8 " Cemented with 350 sx.
 TOC Surface feet determined by Circ.
 Hole size 17 1/4

Intermediate Casing

Size 8 5/8 " Cemented with 2100 sx.
 TOC Surface feet determined by Circ.
 Hole size 11

Long string

Size 5 1/2 " Cemented with 400 sx.
 TOC 8200 feet determined by Calculated
 Hole size 7 7/8
 Total depth 10518

Injection interval

3272 feet to 3725 feet
 (perforated or open-hole, indicate which)

Plug back TD will be 4650'.

Perfs: 3272-77; 3327-32; 3321-26; 3393-3403;
 3444-49; 3465-75; 3485-95; 3518-30;
 3544-50; 3620-28; 3658-66; 3686-90;
 3700-25

Tubing size 2 3/8 lined with plastic set in a
 (material)
Saltaline packer at 3250 feet
 (brand and model)

(or describe any other casing-tubing seal).

Other Data

- Name of the injection formation Yates/7 Rivers/Queens
- Name of Field or Pool (if applicable) n/a
- Is this a new well drilled for injection? ☐ Yes ☒ No
 If no, for what purpose was the well originally drilled? This is a P & A'd well
 originally completed as an oil well in the wolfcamp.
- 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) Perfs @ 10468-74 & 10480-90; plugged off w/CIBP @ 10460'. Perfs @ 10414-30, 10440-48 & 10452-55; plugged off w/25 sx cmt plug @ 8154' & 25 sx cmt plug @ 6200'.
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Townsend/Wolfcamp. Wolfcamp @ 10372'.

AMENDED

VII. Data on the Proposed Operation

1. Avg. daily rate - 150 bwpd.
Maximum daily rate - 500 bwpd.
Volume - 4500 bwpm.
2. System is open.
3. Avg. injection pressure - 500 psi.
Maximum injection pressure - 1250 psi.
4. Analysis is attached.
5. Analysis is attached.

VIII.

1. Geological data on injection zone:
Geological name - Yates/7 Rivers/Queens
Thickness - 2986'
Depth - 1814'-4580'
Lithology - sand and shale
2. Geological data on fresh water zone:
Geological name - Ogallala
Bottom of zone - 300'

IX. Acidize with 4000 g. 15% HCL.

XII. An examination of available geological and engineering data has been made, and no evidence of open faults or other hydrological connection between the disposal zone and any underground source of drinking water was found.

Is your RETURN ADDRESS
completed on the reverse side?

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 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 additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to: Mrs. E. L. Harrod P. O. Box 243 Lovington, NM 88260	4. Article Number P-575 293 845
Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☐ Return Receipt for Merchandise	
Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .	
5. Signature — Address X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery	

Thank you for using
Return Receipt Service.

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

P-575 293 845

RECEIPT FOR CERTIFIED MAIL
INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Sent to Mrs. E. L. Harrod	
Street and No. P. O. Box 243	
P.O. State and ZIP Code Lovington, NM 88260	
Postage	
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	

U.S.G.P.O. 153-506

PS Form 3800, June 1985

CELESTIAL

548 293 845

17/81

mail

Is your RETURN ADDRESS
completed on the reverse side?

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 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 additional service(s) requested.

1. ☐ Show to whom delivered, date, and addressee's address. (Extra charge) 2. ☐ Restricted Delivery (Extra charge)

3. Article Addressed to: Shell Oil Company Box 1523 Houston, TX 77251	4. Article Number P-575 293 844
Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☐ Return Receipt for Merchandise	
Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .	
5. Signature — Address X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery	

Thank you for using
Return Receipt Service.

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

P-575 293 844
FOR CERTIFIED MAIL
POSTAGE COVERAGE PROVIDED
BY THE U.S. POSTAL SERVICE
(See Reverse)

Sent to Shell Oil Company
Street and No. Box 1523
P.O. State and ZIP Code Houston, TX 77251
Postage \$
Certified Fee
Special Delivery Fee
Restricted Delivery Fee
Return Receipt showing to whom and Date Delivered
Return Receipt showing to whom, Date, and Address of Delivery
TOTAL Postage and Fees \$
Postmark or Date

U.S.G.P.O. 153 506

PS Form 3800, June 1985

CELESTIAL
P-575 293 844

mailed

MESSAGE / REPLY

TO Mr. David Katnach
State of New Mexico

Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87504-2088

FROM 7 AM 8 57

KAISER FRANCIS OIL CO.
P. O. BOX 21468
TULSA, OKLAHOMA 74121-1468
PHONE: (918) 494-0000

SUBJECT SWD Application on State 8 #7

Date 5/14/90

MESSAGE Please find enclosed the affidavit of publication as required for the above
referenced permit application.

Charlotte Van Valkenburg

Signed

C. Van Valkenburg

REPLY

Signed

Date / /

WHITE — REPLY

CANARY — RECEIVER FILE COPY

PINK — ORIGINATOR FILE COPY

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, **DON TEER**

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period

of _____

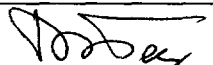
ONE DAY weeks.

Beginning with the issue dated

MAY 3, 19 **90**

and ending with the issue dated

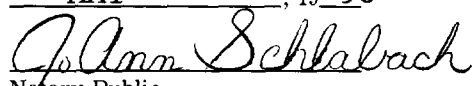
MAY 3, 19 **90**


BUSINESS MANAGER

Sworn and subscribed to before

me this **3rd** day of

MAY, 19 **90**


Notary Public.

My Commission expires _____

APRIL 10, 19 **94**

(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

35 LEGAL NOTICE
May 3, 1990
NOTICE OF
APPLICATION
FOR AUTHORIZATION
TO INJECT SW
Kaiser-Francis Oil Company, P.O. Box 21468, Tulsa, OK 74121-1468, (918) 494-0000 (Contact: Milt Griffin) is amending their application to the NMOC for authorization to inject salt water.

The application proposes to dispose of salt water into the Yates/7 Rivers/Queens formation of the State 8 #7 well. The proposed well is

located 1980' FSL & 2310' FEL of Sec. 8-16S-34E, Lea Co. The waste water will be injected into the strata in the interval of 3272' to 3725' with an expected maximum injection rate of 500 bwpd and a maximum injection pressure of 1250#.

Interested parties with an objection or request for a hearing, must file with the Oil Conservation Division, P.O. Box 2088, Santa Fe, NM 87501 within 15 days.