

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no
- II. Operator: WJC Inc.
Address: P. O. Box 3857 Midland, Texas 79702
Contact party: M.L. Pierce (Peak Consulting Services) Phone: 505-392-1915
- 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 progra
- * X. Attach appropriate logging and test data with the Division they need not be resub
- * XI. Attach a chemical analysis of fresh water available and producing) within one mile location of wells and dates samples were
- XII. Applicants for disposal wells must make examined available geologic and engineer or any other hydrologic connection betwe 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 L. Pierce Title Consultant
Signature: [Signature] Date: 10/23/92
- * 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.

BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION
<u>WJC Inc.</u> EXHIBIT NO. <u>1</u>
CASE NO. <u>10614</u>

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.

FORM C - 108 cont.

Part III. A

- 1.) D. F. Willhoit No. 2
660' FSL and 660' FWL
Sec. 18 - T17S - R39E
Unit M
Lea County, New Mexico
- 2.) See attached wellbore schematic.
- 3.) Propose to re-enter the above captioned well, and inject produced water in the lower Devonian and Ellenberger formations. We will run 2 7/8" plastic coated tubing, and set within 100' of open hole interval.
- 4.) Propose to run a Baker Locset Packer as a seal, and load the backside with packer fluid.

Part III. B

- 1.) The injection interval is the Devonian and Ellenberger formations and the well is located in the South Knowles Devonian Field.
- 2.) The injection interval is open hole at 12,337' to 14,209'.
- 3.) This well was originally drilled as an oil well.
- 4.) See wellbore schematic
- 5.) The Devonian produces in this field, and there is no shallower producing zone in the immediate vicinity. The Ellenberger is not productive in the area.

Part VII.

- 1.) The proposed daily injection will be 2000 bbls. per day. The maximum will be 5,000 bbls. per day.
- 2.) The system will be closed.
- 3.) The average injection pressure will be 0(Vacuum). The maximum will not exceed the limits set forth by the OCD.
- 4.) The source of the injection water will be Devonian water from WJC operated wells.

5.) The injection interval is productive with in 1 mile of the proposed well.

Part VIII

The injection interval is the Devonian and Ellenberger formations in the Knowles Devonian Field, and is composed of alternating beds of porous and tight dolomite and limestone. The injection interval is open hole from 12,337' to 14,209'. This entire area is overlain by the Quaternary Alluvium and caliche. The fresh water in the area comes from the Ogallala aquifer. There are no fresh water zones below the Devonian and Ellenberger sections.

Part IX

The disposal interval will be treated with a breakdown acid job.

Part X

The logs have been previously submitted.

Part XI

The water analysis for fresh water wells within one mile of the proposed injection wells are attached.

Part XII

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

D.F. WILLHOIT
660' FSL & 660' FWL
sec. 18-T17S-R39E
Lea County, New Mexico

HALLIBURTON SERVICES
HOBBS, NEW MEXICO

To _____
WJC Inc.

Sample Number 348

*Milligrams per liter

Submitted by Mike Pierce Date Received 10-23-92

Well No. See Below Depth _____ Formation _____

County Lea Field _____ Source See Below

* Faucett #1

* Faucett #2

Resistivity.....

Specific Gr.....

pH.....

Calcium*.....

Ca

Magnesium*.....

Mg

Chlorides*..... 75 m/l

Cl

Sulfates*.....

SO₄

Bicarbonates*.....

HCO₃

Soluble Iron*.....

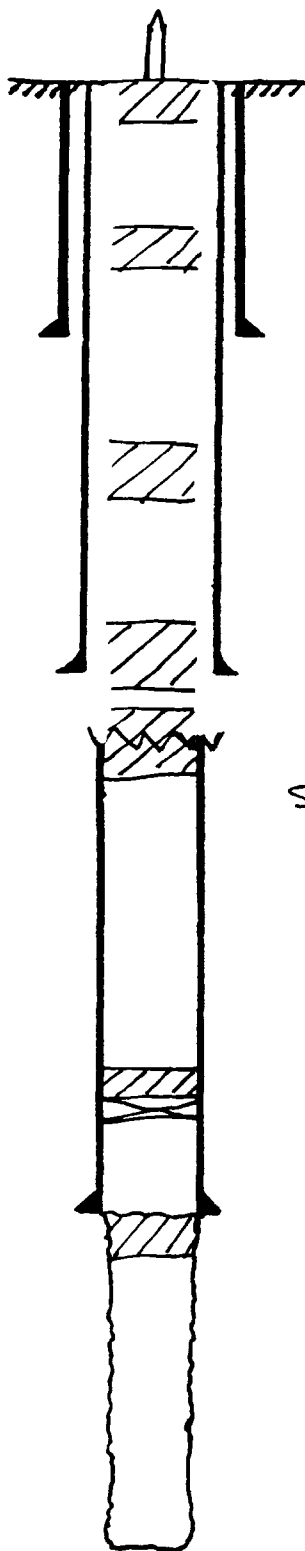
Fe

* Out side Ranch House

OPERATOR JAKE HAMON		DATE 10-19-92	
LEASE D.F. Willhoit	WELL NO. Z	LOCATION Sec. 18-T173-239E Unit M	

660' FSL + 660' FWL

P+A 9-1-78



10 sx plug @ surface

40 sx plug @ 500' - 600'

$13\frac{3}{4}$ " casing set at 326' with 340 sx of _____ cement
Total Depth _____' Hole size $17\frac{1}{2}$ " cement circ

40 sx plug @ 2400' - 2500'

70 sx plug @ 4920 - 5100'

$9\frac{5}{8}$ " casing set at 5000' with 2800 sx of _____ cement
Hole size $12\frac{1}{4}$ " cement circ

$5\frac{1}{2}$ " csg cut + pulled @ 5382'

35 sx plug @ 5317 - 5377

35 sx plug @ 5377 - 5432

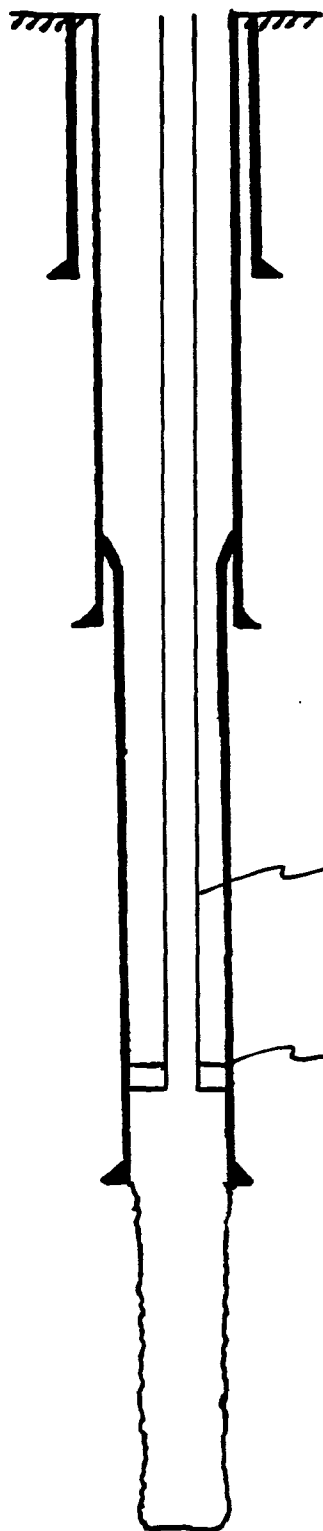
C16P @ 11950' + 35' cement

$5\frac{1}{2}$ " casing set at 12337' with 580 sx of _____ cement
Total Depth 14209' Hole size $8\frac{3}{4}$ " TOC by BMO log @ 10030'

OPERATOR <u>JAKE HAMON</u>		DATE <u>10-19-92</u>	
LEASE <u>D.F. Willhoit</u>	WELL NO. <u>2</u>	LOCATION <u>Sec. 18-T173-239E</u>	UNIT <u>M</u>

660' FSL + 660' FWL

Proposed Completion



13 3/8" casing set at 326' with 340 sx of _____ ceme
Total Depth _____' Hole size 17 1/2" cement circ

Liner Top @ \approx 4800'

9 5/8" casing set at 5000' with 2800 sx of _____ cemen
Hole size 12 1/4" cement circ

Propose to tie back into 5 1/2" casing @ 5382'

2 3/8" Plastic coated tubing set @ \approx 12200'

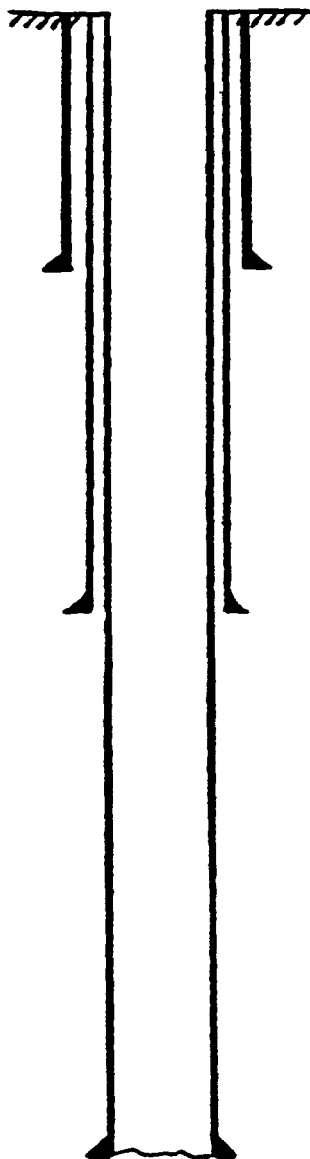
Backer Locset Packer set @ \approx 12200'

5 1/2" casing set at 12337' with 500 sx of _____ cem.
Total Depth 14209' Hole size 8 3/4" TOC by Bmo Co
@ 10030'

Injection Interval 12337 - 14209
OPEN Hole

OPERATOR	WJC Inc		DATE	10-20-92
LEASE	C.E. Brooks (Brooks C.E.)	WELL No.	100 1B-7175-139E Unit L	

1980' FSL AND 660' FWL
Producing from Devonian



13 3/8" casing set at 400' with 450 sx of _____ cemen
Total Depth _____' Hole size 17 1/2" Circulated

9 5/8" casing set at 5016' with 2085 sx of _____ cemen
Hole size 12 1/4" Circulated

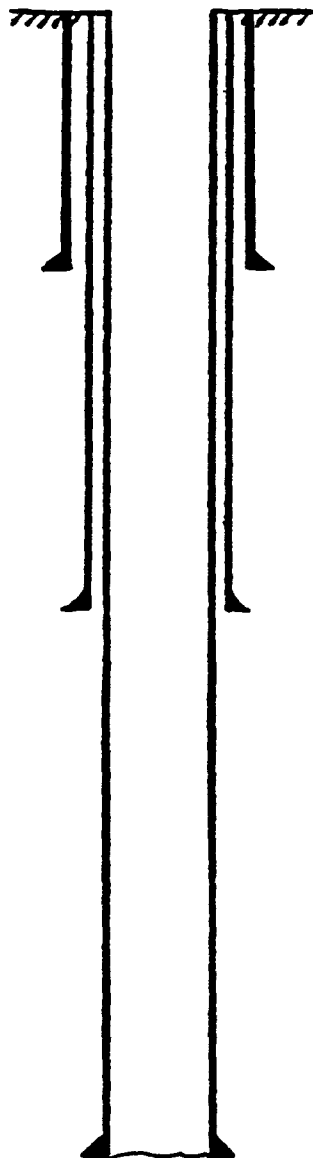
perf 12037-12051

5 1/2" casing set at 12142' with 1050 sx of _____ cemen
Total Depth 12142' Hole size 8 1/2" TOC 7000'

OPERATOR WJC Inc		DATE 10-20-92	
LEASE Brooks C.E.	WELL No. 2	LOCATION Sec 18-T17S-R39E Unit E	

1980' FNL MD 660' FNL

producing from Navium



$13\frac{3}{8}$ " casing set at 417' with 450 sx of _____ ceme
Total Depth _____' Hole size $17\frac{1}{2}$ "

$9\frac{5}{8}$ " casing set at 4998' with 2100 sx of _____ cement
Hole size $12\frac{1}{4}$ "

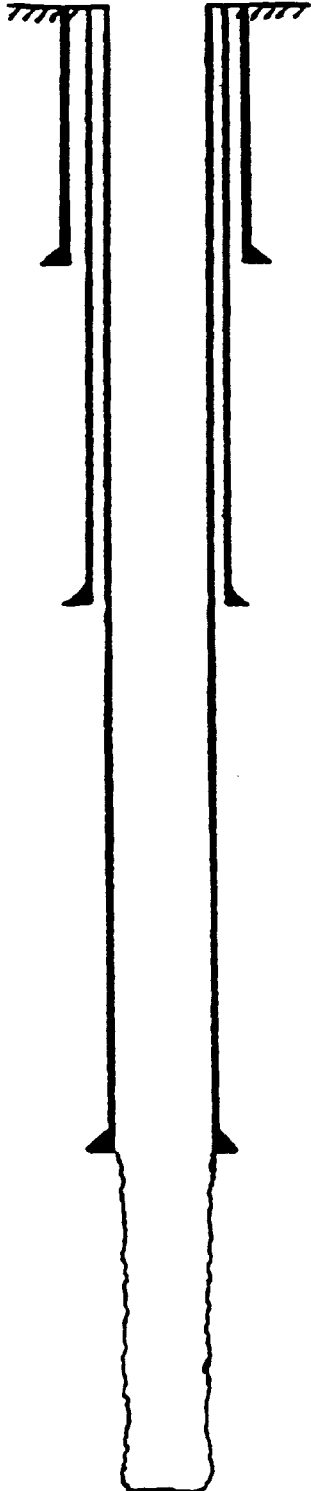
perf 12064 - 12078

$5\frac{1}{2}$ " casing set at 12144' with 1200 sx of _____ cemen
Total Depth 12144' Hole size $7\frac{7}{8}$ "

OPERATOR <i>THE ANSCHUTZ CORPORATION</i>		DATE <i>10-20-92</i>	
LEASE <i>ARCO</i>	WELL NO. <i>1</i>	LOCATION <i>Sec 18-T17S-R39E unit K</i>	

1980' FSL MO 1980' FWL

Producing from Devonian



13 3/8" casing set at 490' with 500 sx of _____ cement.
Total Depth _____' Hole size *17 1/2"* *Circulated*

8 5/8" casing set at 4903' with 1950 sx of _____ cement
Hole size *12 1/4"* *Circulated Cement*

perf 12062 - 12080 } Devonian
perf 12130 - 12170 }

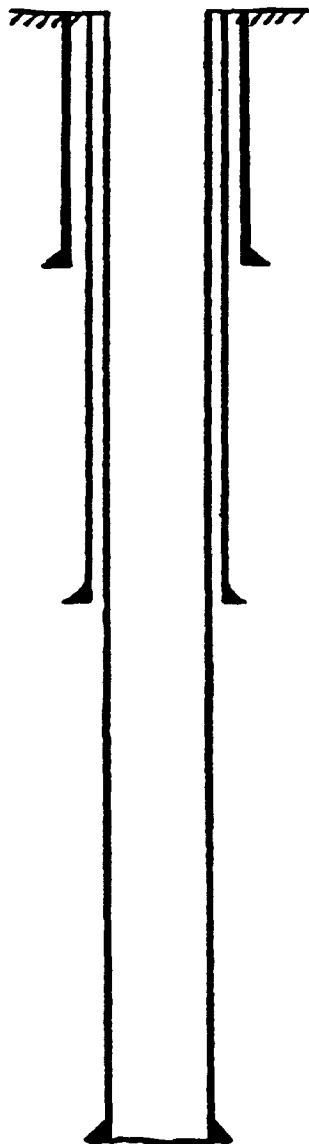
5 1/2" casing set at 12183' with 700 sx of _____ cement.
Total Depth *12210'* Hole size *7 7/8"*

OH 12183-12210

OPERATOR	F & M Oil and Gas Company		DATE	10-20-92
LEASE	DAVIS Federal	WELL No.	2	
		LOCATION	Sec. 13 - T17-S-R38E Unit P	

660' FSL MO 660' FEL

Producing from Devonian



13³/₈" casing set at 313 ' with 250 sx of _____ ceme:
Total Depth _____ ' Hole size 17¹/₂ " *Circulated*

9⁵/₈ " casing set at 4983 ' with 2840 sx of _____ cement
Hole size 12¹/₄ " *Cement Circulated*

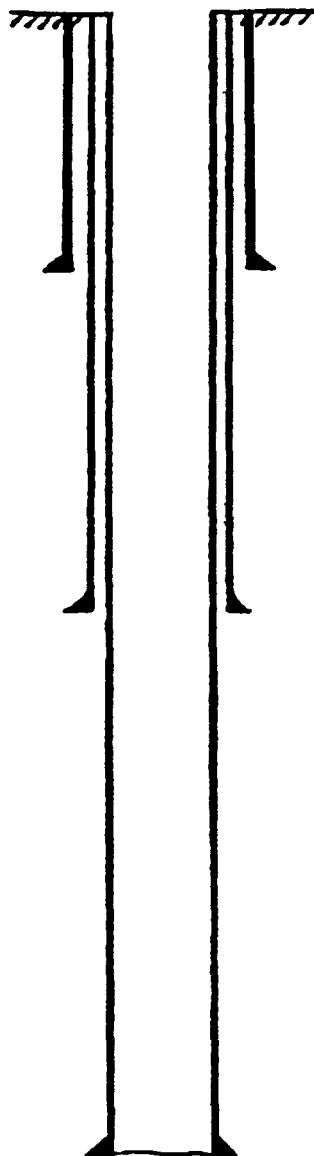
perf Devonian @ 12186' - 12216'

5¹/₂ " casing set at 12287 ' with 500 sx of _____ cemen:
Total Depth 12288 ' Hole size 8³/₄ "

OPERATOR	F&M Oil AND GAS COMPANY		DATE	10-20-92
LEASE	DAVIS Federal	WELL No.	3	
		LOCATION	SEC 13-7175-K38E Unit I	

2130' FSL AND 660' FEL

Producing from Ansonia



13 3/8" casing set at 306' with 315 sx of _____ ceme.
Total Depth _____' Hole size 17 1/2" Circulated

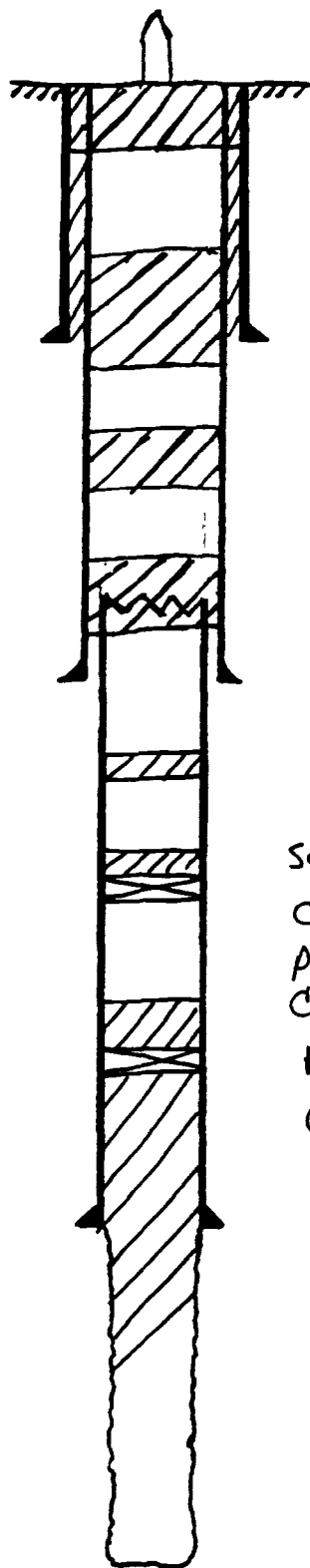
8 5/8" casing set at 4998' with 2525 sx of _____ cement
Hole size 8 5/8" CMAT Circulated

perft 12058 - 12067
12080 - 12090

5/2" casing set at 12143' with 1530 sx of _____ cemen
Total Depth 12143' Hole size 7 7/8"

OPERATOR	HAMON Operating Company		DATE	10-20-92
LEASE	W.V. Lawrence	WELL NO.	1	LOCATION
		Sec 19-T17S-R39E Unit 11		

660' FNL +MO 660' FNL



P+A 3-1-87

Set 10 sx plug @ surface

set 40 sx plug @ 250' - 350'

$1\frac{3}{8}$ " casing set at 293' with 350 sx of _____ cmt.

Total Depth _____' Hole size $1\frac{7}{2}$ " Circ

Set 40 sx plug @ 2400 - 2500

Set 25 sx plug @ 3983

Cut + pull $5\frac{1}{2}$ csg @ 3983'

perf 4900 sqz w/ 50 sxs

$9\frac{5}{8}$ " casing set at 4953' with 2600 sx of _____ ceme.

Hole size $12\frac{1}{4}$ " Cmnt Circulated

Set 15 sx plug @ 6300'

CIBP @ 9300' + 35' sxs cmt

perf WC 9336' - 9345'

CIBP @ 9500' + 35' cmt.

Perf 10010 - 30, 9992 - 10010, 9955 - 9969

CIBP @ 10311, sqz Below Ret w/ 225 sxs cmt
Leave 1.5 bbl cmt on top of Ret Top @ 10200'

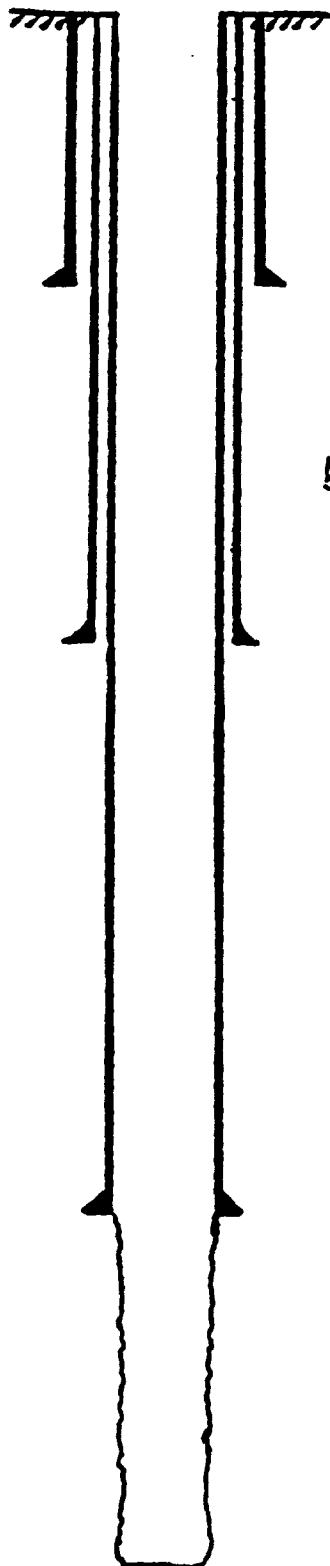
$5\frac{1}{2}$ " casing set at 12131' with 500 sx of _____ ceme

Total Depth 12184' Hole size $8\frac{3}{4}$ "

OH 12131 - 12184

OPERATOR	F & M Oil & Gas Co		DATE	10-23-92
LEASE	F. M. Holloway	WELL NO.	LOC. 13-TTS-1230E Unit O	
		Z	660' FSL + 1980' FEL	

SI Devonian Well



13⁷/₈ " casing set at 292 ' with 490 sx of _____
Total Depth _____' Hole size 17¹/₂ " Cement Circ.

ON 4-23-91 CHECKON proposed to TA well
by setting CISP @ ± 12090 + 20' cmt. File
Does NOT indicate if this work was done

9⁵/₈ " casing set at 5005 ' with 3200 sx of _____ CE
Hole size 12¹/₄ "

Repair CSG LEAK @ 5826 - 7310 - file
does NOT indicate amount of cement used to
squeeze LEAK.

Perf Devonian 12087 - 12123

5¹/₂ " casing set at 12105 ' with 580 sx of _____ CE
Total Depth 12135 ' Hole size 8³/₄ "

OH 12105 - 12135

P 369 427 047



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to State Cmo Office	
Street and No. PO Box 1149	
P.O. State and ZIP Code San Antonio TX 78204-1149	
Postage	\$1.21
Certified Fee	1.00
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$2.21
Postmark or Date	

P 369 427 048



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to Anna O. C.	
Street and No. PO Box 3193	
P.O. State and ZIP Code Midland TX 79702	
Postage	\$0.75
Certified Fee	1.00
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$1.75
Postmark or Date	

P 369 427 052



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to THE ANSHUTZ Corp	
Street and No. 1221 Lamar Ste 1100	
P.O. State and ZIP Code Houston TX 77010	
Postage	\$1.21
Certified Fee	1.00
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$2.21
Postmark or Date	

P 369 427 050



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to W.B. Lawrence	
Street and No. PO Box 2307	
P.O. State and ZIP Code Houston TX 77002	
Postage	\$0.75
Certified Fee	1.00
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$1.75
Postmark or Date	

P 369 427 051



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to F&M O & G Co	
Street and No. PO Box 891	
P.O. State and ZIP Code Midland TX 79702-0891	
Postage	\$1.21
Certified Fee	1.00
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$2.21
Postmark or Date	

PS Form 3800, June 1991

PS Form 3800, June 1991

PS Form 3800, June 1991

P 369 425 941



**Receipt for
Certified Mail**

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to <i>C.E. Brooks</i>	
Street and No. <i>State Route C</i>	
P.O., State and ZIP Code <i>Box 675 Hills N.H.</i>	
Postage	\$ <i>-.75</i>
Certified Fee	<i>1.00</i>
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	<i>1.75</i>
Postmark or Date	

1993 JUN 10

PS Form 3800, June 1991

P 369 425 964



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to C.E. Brooks	
Street and No. State Route C PO Box 675	
P.O. State and ZIP Code MO NM 88220	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$ 1.29
Postmark or Date	

PS Form 3800, June 1991

P 369 425 962



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to Amschutz	
Street and No. 1221 Lamar Ste 1100	
P.O. State and ZIP Code Houston TX 77010	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$ 1.29
Postmark or Date	

PS Form 3800, June 1991

P 369 425 961



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to Anna O. C	
Street and No. PO Box 3193	
P.O. State and ZIP Code Midland TX 79702	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$ 1.29
Postmark or Date	

P 369 425 965



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to State Law Office	
Street and No. P.O. Box 1178	
P.O. State and ZIP Code Santa Fe NM 87504-1178	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$ 1.29
Postmark or Date	

PS Form 3800, June 1991

P 369 425 963



Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to F+M O. I. + Gas Co	
Street and No. PO Box 891	
P.O. State and ZIP Code Midland TX 79702-0891	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	\$ 1.29
Postmark or Date	

PS Form 3800, June 1991

prot of mailing omitted well be schematic

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, Kathi Bearden

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 _____ weeks.
Beginning with the issue dated

Oct. 27, 1992
and ending with the issue dated

Oct. 27, 1992

Kathi Bearden
General Manager

Sworn and subscribed to before

me this 29 day of

Oct, 1992

Paulo Pantoja

Notary Public.

My Commission expires _____

Aug. 5, 1995
(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.

Legal Notice
October 27, 1992
ADVERTISEMENT
WJC INC., whose address is P.O. Box 3857, Midland, Texas 79702, proposes to convert the following well to injection for the purpose of disposing produced water. The well is the D.F. Willhoit No. 2, located at 660' FSL and 660' FWL in section 18-T17S-R39E, Lea County New Mexico. The injection interval is the Devonian and Ellenberger formations at a depth of approximately 12,337 to 14,209'. The average injection rate will be 2000 bbls/day with zero pressure. The maximum pressure will not exceed the limits as set forth by the Oil Conservation Division. Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexi-

23 Y delgado 07 03 03
cco 87504-2088, within 15
days.
Inquiries regarding this application should be directed to Peak Consulting Services, P.O. Box 636 Hobbs, New Mexico 88240, (505) 392-1915.



WATER ANALYSIS
for
ENRON OIL & GAS

Date of Analysis:	FEBRUARY 28, 1990	Analysis #:	3621
Company:	ENRON OIL & GAS	Attention:	RICK SCHATZ
City:	CARLSBAD	State:	NEW MEXICO
Lease/Well #:	C.E. BROOKS #1	Field:	KNOWLES
Type of Water:	PRODUCED	Water (bbl/day):	475
Temp., C:	20	Sample Source:	WELLHEAD
Use:	N/D	Date of Sampling:	FEBRUARY 28, 1990
Representative:	STEVE STROUD	Analysis By:	CLYDE WILHOIT

WATER ANALYSIS PATTERN

(number beside ion symbol indicates μ - 1 scale unit)

Na+	10.0	Cl-	10.0
Ca++	1.0	HCO3-	0.1
Mg++	1.0	SO4--	0.1
Fe+++	0.1	CO3--	0.1

144 96 48 0 48 96 144

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Ca++	1,920.0	96.0
Mg++	244.0	20.0
Fe+++	1.0	0.1
Ba++	0.0	0.0
Na+	23,392.5	1,017.1
Mn++	0.0	0.0
ANIONS		
Cl-	40,000.0	1,126.8
SO4--	180.0	3.8
CO3--	0.0	0.0
HCO3-	159.0	2.6
OH-	0.0	0.0
S--	0.0	0.0
TOTAL HARDNESS :		116.0

DISSOLVED GASES

	mg/l
Hydrogen Sulfide, H2S:	250.0
Carbon Dioxide, CO2 :	159.4
Oxygen, O2 :	0.8

PHYSICAL PROPERTIES

pH	:	6.6
Specific Gravity	:	1.0
TDS (calc.) p.p.m. :		65,896.5

SCALE STABILITIES

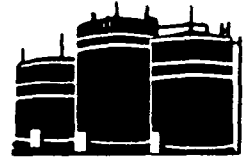
Temp.				
C.	F.	CaCO3	CaSO4	BaSO4
20	68	-0.80	3867	1
40	104	-0.38	4192	2
60	140	0.17	3910	3

TOTAL SOLIDS (quantitative): 65,896.5
RESIDUAL HYDROCARBONS : 0.0

Max entity, (calc): 260 0

REMARKS: @ 20'C...Calcium sulfate scaling is unlikely.
@ 20'C...Moderately corrosive.

AVRA OIL COMPANY



November 20, 1992

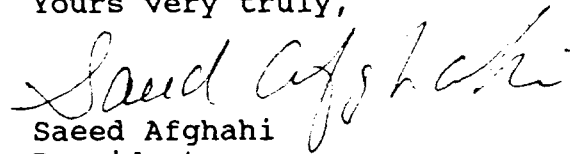
W. J. C., Inc.
Post Office Box 7
Post, Texas 79356

Re: J. G. Cox #1
Lea County, New Mexico

Gentlemen:

This letter is our notification to you that we are in no way opposed to your using the above captioned well as a salt water disposal well.

Yours very truly,


Saeed Afghahi
President

SA/ps