



JIM BACA  
COMMISSIONER

State of New Mexico

OFFICE OF THE

Commissioner of Public Lands

Santa Fe

OIL CONSERVATION DIVISION

ST. 113

NOV 2 1992

P.O. BOX 1148  
SANTA FE, NEW MEXICO 87504-1148

November 2, 1992

Michael L. Pierce  
Peak Consulting Services  
P. O. Box 636  
Hobbs, New Mexico 88240

*Case 10613*

Re: WJC, Inc.  
SWD Application  
Sec. 13-T17S,R38E - Unit C  
Sec. 18-T17S,R39E - Unit M  
Lea County, New Mexico

Dear Mr. Pierce:

Upon receiving your letter dated October 23, 1992, regarding application for a salt water disposal easement, please be advised that we have checked our tract books and find that the above referred to descriptions are not State Trust Lands.

If we may help you in the future, do not hesitate to contact us.

Sincerely,

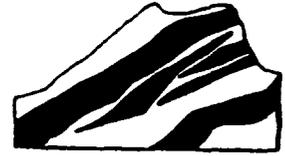
Johnny A. Taylor  
Assistant Commissioner

JAT/d1

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

**PEAK**  
**CONSULTING SERVICES**  
ENVIRONMENTAL,  
GEOLOGICAL & REGULATORY  
SPECIALISTS

P.O. BOX 636  
HOBBS, NEW MEXICO 88240  
OFFICE (505) 392-1915



**PCS**

October 23, 1992

Re: WJC INC.  
SWD Application  
sec. 13-T17S-R38E unit C  
sec. 18-T17S-R39E unit M  
Lea County, New Mexico

Dear Sir:

Peak Consulting Services is acting as agent for WJC INC.  
concerning the above referenced SWD application's.

Please find enclosed your copy of the application for  
disposal of produced water at the referenced locations. Should  
you have any questions about these applications, please direct  
them to me at the address above. Thank you for your time and  
consideration.

Sincerely,



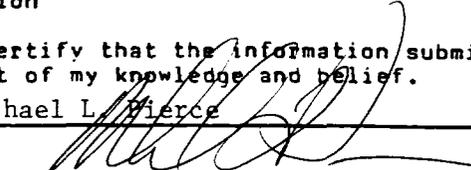
Michael L. Pierce  
Peak Consulting Services

*Case 10613*

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 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 L. Pierce Title Consultant  
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.

## 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 2788, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNLESS 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.) J. G. Cox No. 1  
660' FNL and 1980' FWL  
Sec. 13 - T17S - R38E  
Unit C  
Lea County, New Mexico
- 2.) See attached wellbore schematic.
- 3.) Propose to 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 San Andres and Bone Spring, and the well is located in the South Knowles Devonian Field.
- 2.) The injection interval is open hole at 5000 to 8360'.
- 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.

Part VII.

- 1.) The proposed daily injection will be 2000 bbls. per day. The maximum will be 5000 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 not productive within 1 mile of the proposed well.

Part VIII

The injection interval is the San Andres and Bone Spring formations in the Knowles Devonian Field, and is composed of alternating beds of porous and tight dolomite in the San Andres section. The Bone Spring section is composed of permeable, fine to medium grained sands with alternating beds of limestone and porous dolomites. The injection interval is from 5000' to approximately 8360'. 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 San Andres section.

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.



<p>TXO 2-4-91 Amerada 7-6-91 Gladys Graham J.D. Gregory</p>	<p>TXO 2-11-91 Amerada 12-30-90 Mettie Garrett Cecil's Head Inc.</p>	<p>TXO 5-11-91 Amerada 5-27-91 C.S. Alves et al. M.I. W. H. Fingado et al. Ray C. Eaves</p>	<p>TXO 5-11-91 Apt. - Fingado 1/4 5-21-84 Rose Eaves, M.I. Valetta Fingado E. Ray C. Eaves, (3)</p>	<p>TXO 10-2-90 3-7-91 P. Carter, Sr. &amp; Jr., et al, MI G.H. Hooper et al Valetta Fingado (S)</p>	<p>TXO 10-2-90 3-7-91 Yates Pet. et al 81290 14.22 U.S.M.I.</p>
<p>TXO 8-5-91 J.L. Reed, MI P.H.B.W. Carter</p>	<p>TXO 4-18-91 4-11-91 7-28-91 Mettie Garrett Emma S. Strouler et al</p>	<p>TXO 5-7-86 Amerada C.S. Alves et al W.V. Lawrence (S)</p>	<p>TXO 7-10-93 Anschutz 10-28-93 Ratin Mx. et al Charlotte Anton Est.</p>	<p>TXO 9-5-89 Chevron W.V. Lawrence E. Ray C. Eaves</p>	<p>TXO 4-1-94 81290 14.22 Seth Alstair et al 8 MI</p>
<p>TXO 3-8-92 5-5-91 J.M. Keeth (S) E.C. Wilson et al MI A.L. Swang</p>	<p>TXO 12-22-93 12-22-93 12-22-93 Morrison Clark</p>	<p>TXO 5-7-86 Amerada C.S. Alves et al W. Norman Jr.</p>	<p>TXO 1-25-94 10-23-93 5-15-93 Anschutz Katherine Coyll et al Emma Lawrence</p>	<p>TXO 10-24-92 Anschutz 11-9-94 4-12-94 W.V. Lawrence E. Ray C. Eaves</p>	<p>TXO 4-1-94 81290 14.22 U.S.M.I. W.V. Lawrence E. Ray C. Eaves</p>
<p>TXO 10-28-91 Marathon 10-28-91 O.G. Hardin M.L. W.V. Lawrence, S</p>	<p>TXO 9-12-91 Marathon 10-22-91 10-12-91 Amoco W.V. Lawrence, S</p>	<p>TXO 5-7-86 Amerada A.R.C. M.I. Janine McQuin</p>	<p>TXO 5-7-86 Amerada C.S. Alves et al W. Norman Jr.</p>	<p>TXO 9-2-94 Anschutz 9-2-94 9-11-94 10-10-91 Caroline Sixer, MI</p>	<p>TXO 4-1-94 81290 14.22 U.S.M.I. Caroline Sixer, MI</p>
<p>TXO 12-21-90 4-18-91 Republic Natl. Bank Dallas, Tr. M.I. W.V. Lawrence, S</p>	<p>TXO 5-10-90 5-8-90 H.E. Yates Emma Lawrence</p>	<p>TXO 5-16-93 R.G. Barton, Jr. W.C. Disc. (P33)</p>	<p>TXO 5-3-93 11-6-92 10-19-91 Anschutz R.F. Fort et al Jones Robinson Co. et al L.L. Parker (S)</p>	<p>TXO 5-3-93 10-28-91 5-9-94 Anschutz ARC.M.I. L.M. Hill E. Claudia Brennan et al, MI</p>	<p>TXO 5-3-94 9-9-94 J.K. Mathews (S) Gen. H. Echols U.S.M.I.</p>
<p>TXO 1-23-90 M. J. Cities Service Co. et al W.V. Lawrence, S</p>	<p>TXO 5-16-93 5-12-93 5-6-93 R.G. Barton, Jr. H.C. Doss M.I. NE L. N2 SE</p>	<p>TXO 8-8-93 5-24-93 5-16-93 R.G. Barton, Jr. 5-16-93</p>	<p>TXO 11-5-91 Bi. State Loans ARCQ Middland 25</p>	<p>TXO 11-5-91 Bi. State Loans ARCQ Middland 30</p>	<p>TXO 9-9-94 J.M. Cox et al B.J. Beardon (S)</p>
<p>TXO 5-16-93 5-12-93 5-6-93 R.G. Barton, Jr. H.C. Doss M.I. NE L. N2 SE</p>	<p>TXO 5-16-93 5-12-93 5-6-93 R.G. Barton, Jr. H.C. Doss M.I. NE L. N2 SE</p>	<p>TXO 5-16-93 5-12-93 5-6-93 R.G. Barton, Jr. H.C. Doss M.I. NE L. N2 SE</p>	<p>TXO 5-16-93 5-12-93 5-6-93 R.G. Barton, Jr. H.C. Doss M.I. NE L. N2 SE</p>	<p>TXO 5-16-93 5-12-93 5-6-93 R.G. Barton, Jr. H.C. Doss M.I. NE L. N2 SE</p>	<p>TXO 5-16-93 5-12-93 5-6-93 R.G. Barton, Jr. H.C. Doss M.I. NE L. N2 SE</p>

WJC INCORPORATED

Location of fresh water samples

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 mpl 75 mpl

Cl

Sulfates\*..... \_\_\_\_\_

SO<sub>4</sub>

Bicarbonates\*.... \_\_\_\_\_

HCO<sub>3</sub>

Soluble Iron\*.... \_\_\_\_\_

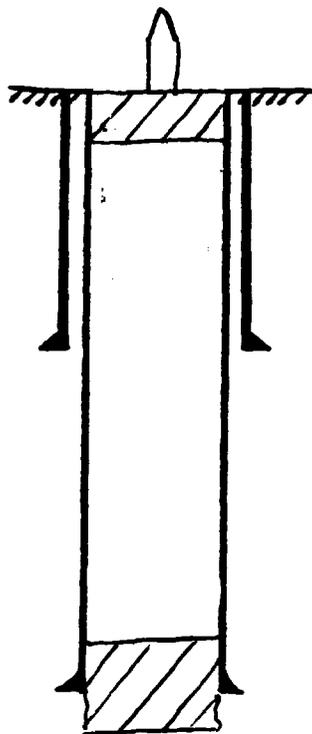
Fe

\* Out side Ranch House

OPERATOR	JAKE HUMAN	DATE	10-20-92
LEASE	J. G. Cox	WELL No.	1
		LOCATION	SEC 13-7175-1238E Unit C

660' FNL and 1980' FWL

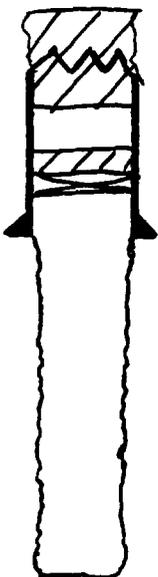
A+A 4-10-70



10 SX plug @ surface

$13\frac{3}{8}$ " casing set at 303' with 350 sx of \_\_\_\_\_ cemen  
 Total Depth \_\_\_\_\_' Hole size  $17\frac{1}{4}$ " Circulated

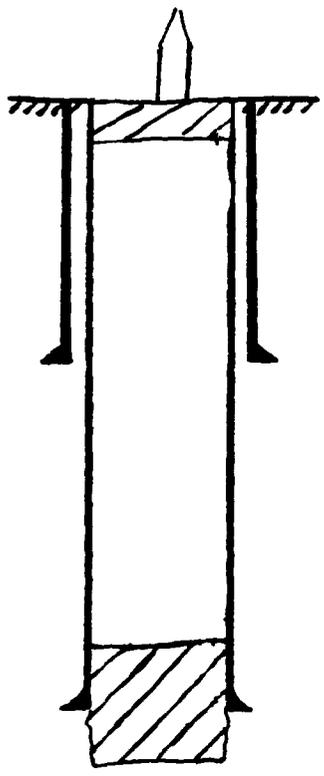
$9\frac{5}{8}$ " casing set at 5000' with 2600' sx of \_\_\_\_\_ cemen  
 Hole size  $12\frac{1}{4}$ " Cement Circulated



25 SX plug @ 5000  
 25 SX plug @ 8360  
 25 SX plug @ 10100  
 SAOT + pulled  $5\frac{1}{2}$ " CSB @ 10131  
 CIBP @ 12000' + 15' CMT  
 $5\frac{1}{2}$ " casing set at 12203' with 500 sx of \_\_\_\_\_ cemen  
 Total Depth 12243' Hole size  $8\frac{3}{4}$ " TOC by TS  
 @ 10275'  
 OH 12203-12243

OPERATOR	JAKE HAMON	DATE	10-20-92
LEASE	L. Cooper "A"	WELL No.	1
		LOCATION	Sec 12 T12S-R38E Unit N

A + A 660' FSL AND 1980' FWL  
6-10-1960



Set 10 sx plug @ surface

13 3/8" casing set at 304' with 300 sx of \_\_\_\_\_ cemen.  
Total Depth \_\_\_\_\_' Hole size 17 1/4" Circulated

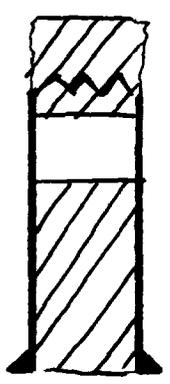
9 5/8" casing set at 5000' with 2400 sx of \_\_\_\_\_ cemen.  
Hole size 12 1/4" Cement Circulated

set 50 sx plug @ 5045 - 4914  
set 25 sx plug @ 9990 - 9748'  
Shot + pulled 5 1/2" csg @ 9880'

Set 50 sx plug 12244 - 11802

Perf 12215 - 12240  
12240 - 12250

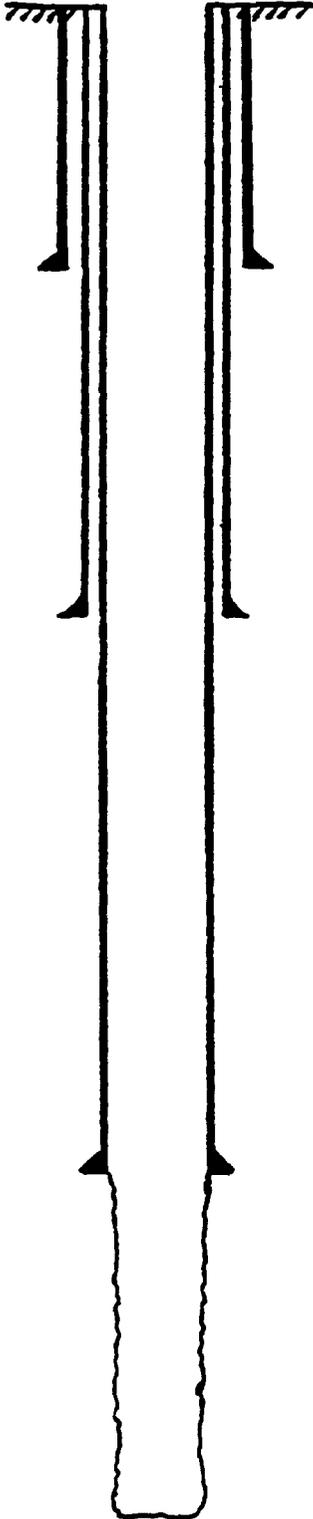
5 1/2" casing set at 12263' with 500 sx of \_\_\_\_\_ cemen.  
Total Depth 12263' Hole size 8 3/4"



OPERATOR	F + M Oil AND GAS COMPANY		DATE	10-20-92
LEASE	W. F. CME	WELL NO.	2	LOCATION
		SEC 12-7175-R38E UNIT 0		

660' FSL + 1980' Fel

SI (Devonian)



13<sup>3</sup>/<sub>8</sub> " casing set at 365 ' with 425 sx of \_\_\_\_\_ cemen  
 Total Depth \_\_\_\_\_ ' Hole size 17<sup>1</sup>/<sub>2</sub> " Circulated

9<sup>5</sup>/<sub>8</sub> " casing set at 4799 ' with 4550 sx of \_\_\_\_\_ cemen  
 Hole size 12<sup>1</sup>/<sub>4</sub> " Cement Circulated

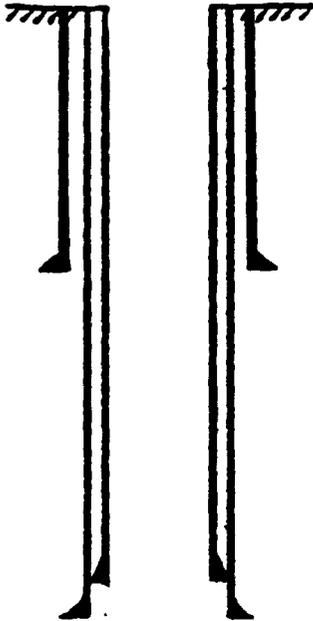
502 CASING LEAK @ 6904 - 6967 w/ 450 SX

7 " casing set at 12155 ' with 450 sx of \_\_\_\_\_ cemen  
 Total Depth 12261 ' Hole size 8<sup>3</sup>/<sub>4</sub> "  
 OH 12155 - 12261

OPERATOR	F + M Oil and Gas Company		DATE	10-20-92
LEASE	F.M. Holloway	WELL No.	1	
		LOCATION	Sec 13-T175-R38E Unit 6	

660' FNL and 1980' FEL

SWD well R-51



13<sup>3</sup>/<sub>8</sub> " casing set at 293 ' with 350 sx of \_\_\_\_\_ cemen  
 Total Depth \_\_\_\_\_ ' Hole size 17<sup>1</sup>/<sub>2</sub> " Cmt circulated

7" CS9 set @ 4906 w/ 1500 sx cmt

9<sup>5</sup>/<sub>8</sub> " casing set at 4999 ' with 2700 sx of \_\_\_\_\_ cemen  
 Hole size 12<sup>1</sup>/<sub>4</sub> " Cement circulated

OH Injection 4999' - 9000'



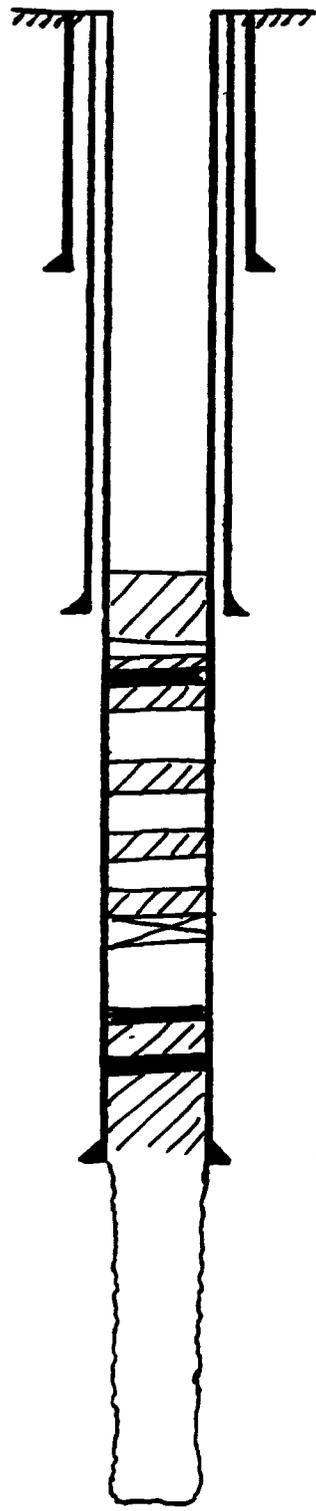
Set 50 sx plug @ 9228 - 9000  
 Cut and pull 5<sup>1</sup>/<sub>2</sub>" CS9 @ 9105'

5<sup>1</sup>/<sub>2</sub> " casing set at 12147 ' with 500 sx of \_\_\_\_\_ cemen  
 Total Depth 12212 ' Hole size 8<sup>3</sup>/<sub>4</sub> "

OH 12212 - 12147

OPERATOR	F + M Oil AND GAS COMPANY		DATE	10-20-92	
LEASE	F. M. HOLLOWAY	WELL No.	3	LOCATION	SEC 13-T17S-R38E Unit 6

1980' FNL AND 1980' FEL  
Well is SI



13 3/8" casing set at 320' with 325 sx of \_\_\_\_\_ ceme  
Total Depth \_\_\_\_\_' Hole size 17 1/2" Circulated

Set 25 sx plug 4850 - 5050  
Set cmt Ret @ 5331 + sgz w/ 40 sx + 50' on top of  
9 5/8" casing set at 4998' with 2150 sx of \_\_\_\_\_ cement

Hole size 12 1/4" Cement Circulated  
Perf 5362 - 5420  
Cmt plug @ 6950 - 6750  
Cmt Plug @ 9360 - 9160  
Set CIBP @ 9625 + 35' cmt  
Set cmt Ret @ 9730 sgz w/ 1550 sx  
Set cmt Ret @ 9767 sgz w/ 400 sx

CSG collapsed @ ± 11120'

5 1/2" casing set at 12055' with 250 sx of \_\_\_\_\_ cemen

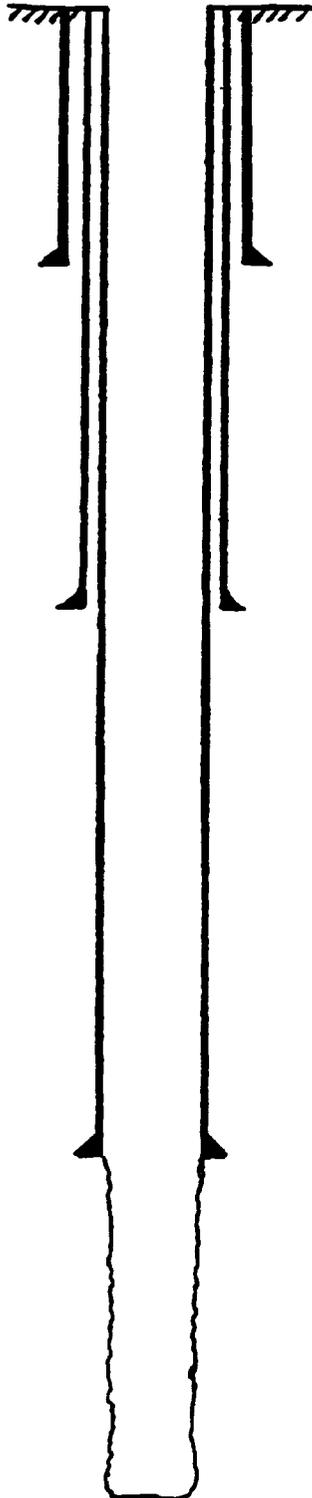
Total Depth 12080' Hole size 8 3/4"

DH 12055 - 12080

OPERATOR	AEN Energy Inc		DATE	10-20-92
LEASE	V.F. COX	WELL No.	1	LOCATION
		SEC 13 T17S-R38E unit F		

1980' FNL + 1980' FWL

producing from Anomima



12 3/4" casing set at 365' with 450 sx of \_\_\_\_\_ ceme  
 Total Depth \_\_\_\_\_' Hole size 15" Circulated

8 5/8" casing set at 5017' with 1500 sx of \_\_\_\_\_ cement  
 Hole size 11 1/4" Cement Circulated

perf 12120 - 12134

5 1/2" casing set at 12147' with 250 sx of \_\_\_\_\_ cemen  
 Total Depth 12168' Hole size 7 7/8"

OH 12147 - 12168

**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

Paula Parrish  
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 385Z, Midland, Texas 79702, proposes to convert the following well to injection for the purpose of disposing produced water. The well is the J.G. Cox No. 1, located at 660' FNL and 1980' FWL in section 13-T17S-R38E, Lea County, New Mexico. The injection

interval is the San Andres and Bone Spring formations at a depth of approximately 5000 to 8360. 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 Mexico 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.

**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, 19 92  
and ending with the issue dated

Oct. 27, 19 92

Kathi Bearden  
General Manager

Sworn and subscribed to before

me this 29 day of

Oct, 19 92

Paula Parrish  
Notary Public.

My Commission expires \_\_\_\_\_

Aug. 5, 19 95  
(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 J.G. Cox No. 1, located at 660' FNL and 1980' FWL in section 13-T17S-R38E, Lea County, New Mexico. The injection

interval is the San Andres and Bone Spring formations at a depth of approximately 5000 to 8360. 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.

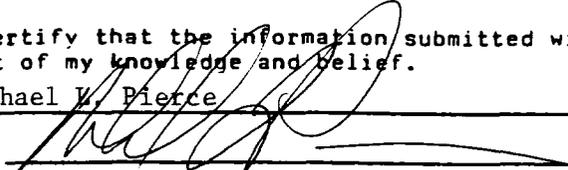
Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87504-2088, within 15 days.

Inquiries regarding this application should be directed to Peak Consulting Services, P.O. Box 636 Hobbs, New Mexico 88240, (505)392-1915.

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 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 V. Pierce Title Consultant  
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.

## 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 - 10B cont.

Part III. A

- 1.) J. G. Cox No. 1  
660' FNL and 1980' FWL  
Sec. 13 - T17S - R38E  
Unit C  
Lea County, New Mexico
- 2.) See attached wellbore schematic.
- 3.) Propose to 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 San Andres and Bone Spring, and the well is located in the South Knowles Devonian Field.
- 2.) The injection interval is open hole at 5000 to 8360'.
- 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.

Part VII.

- 1.) The proposed daily injection will be 2000 bbls. per day. The maximum will be 5000 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 not productive within 1 mile of the proposed well.

Part VIII

The injection interval is the San Andres and Bone Spring formations in the Knowles Devonian Field, and is composed of alternating beds of porous and tight dolomite in the San Andres section. The Bone Spring section is composed of permeable, fine to medium grained sands with alternating beds of limestone and porous dolomites. The injection interval is from 5000' to approximately 8360'. 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 San Andres section.

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.



<p>TXO 4-17-91 Amerada 2-16-91 GG Bar 1-11-91 7-6-91 Gladya Graham J.D. Gregory</p>	<p>TXO 6-10-91 Amerada 6-17-91 12-30-90 J.L. Sands Chief &amp; Head Inc.</p>	<p>TXO 5-11-91 Amerada 5-27-91 Cooper Daniel Nelson</p>	<p>TXO 5-11-91 Amerada 5-27-91 C.S. Alves et al. M.I. Rose Eaves Amerada et al.</p>	<p>TXO 5-11-91 Amerada 5-27-91 Rose Eaves, M.I. Valetta Fingado Ray C. Eaves</p>	<p>Tex/Con 10-2-90 3-7-91 P. Carter, S. &amp; Jr., et al, MI</p>	<p>Tex/Con 10-2-90 3-7-91 G.H. Hooper et al Valetta Fingado (S)</p>	<p>Yates Pet. et al 4-1-94 81290 1428 U.S.M.I.</p>
<p>TXO 8-5-91 J.L. Reed, MI J.N.B.W. Carter</p>	<p>TXO 4-18-91 4-11-91 7-28-91 Mattie Garrett Lawell Shaw, et al</p>	<p>TXO 5-7-86 Amerada 5-7-86 C.S. Alves, et al W.V. Lawrence (S)</p>	<p>TXO 7-10-93 Anschutz 7-10-93 Anschutz 2-20-94 3-15-93</p>	<p>TXO 9-5-89 Chevron 9-5-89 W.V. Lawrence &amp; Ray C. Eaves</p>	<p>TXO 12-20-93 Anschutz 1-9-94 4-12-94 W.V. Lawrence &amp; Ray C. Eaves</p>	<p>TXO 4-1-94 Yates Pet. et al 81290 1428 U.S. M.I. W.V. Lawrence &amp; Ray C. Eaves</p>	<p>TXO 12-20-93 Anschutz 1-9-94 4-12-94 W.V. Lawrence &amp; Ray C. Eaves</p>
<p>TXO 3-8-92 5-5-91 J.M. Keeth (S) E.C. Wilson, et al A.L. Strong</p>	<p>TXO 12-15-91 Sub. Div. A.L. Strong Mattie Garrett Lawell Shaw, et al</p>	<p>TXO 5-7-86 Amerada 5-7-86 C.S. Alves, et al W.V. Lawrence (S)</p>	<p>TXO 1-25-94 10-23-93 5-15-93 Anschutz 1-25-94 10-23-93 5-15-93</p>	<p>TXO 12-20-93 Anschutz 1-9-94 4-12-94 W.V. Lawrence &amp; Ray C. Eaves</p>	<p>TXO 10-24-92 Anschutz 10-24-92 W.V. Lawrence &amp; Ray C. Eaves</p>	<p>TXO 4-1-94 Yates Pet. et al 81290 1428 U.S. M.I. W.V. Lawrence &amp; Ray C. Eaves</p>	<p>TXO 12-20-93 Anschutz 1-9-94 4-12-94 W.V. Lawrence &amp; Ray C. Eaves</p>
<p>Marathon 10-28-91 KNOWLES 38</p>	<p>TXO 9-14-91 Chevron HBP M.V. Black, MI Emma Lawrence</p>	<p>TXO 5-7-86 Amerada 5-7-86 C.S. Alves, et al W.V. Lawrence (S)</p>	<p>TXO 9-14-91 Chevron HBP M.V. Black, MI Emma Lawrence</p>				
<p>TXO 12-21-90 4-18-91 Republic Nat. Bank Dallas, Tr. &amp; S Houston, et al W.V. Lawrence, S</p>	<p>TXO 12-21-90 4-18-91 Republic Nat. Bank Dallas, Tr. &amp; S Houston, et al W.V. Lawrence, S</p>	<p>TXO 12-21-90 4-18-91 Republic Nat. Bank Dallas, Tr. &amp; S Houston, et al W.V. Lawrence, S</p>	<p>TXO 12-21-90 4-18-91 Republic Nat. Bank Dallas, Tr. &amp; S Houston, et al W.V. Lawrence, S</p>	<p>TXO 12-21-90 4-18-91 Republic Nat. Bank Dallas, Tr. &amp; S Houston, et al W.V. Lawrence, S</p>	<p>TXO 12-21-90 4-18-91 Republic Nat. Bank Dallas, Tr. &amp; S Houston, et al W.V. Lawrence, S</p>	<p>TXO 12-21-90 4-18-91 Republic Nat. Bank Dallas, Tr. &amp; S Houston, et al W.V. Lawrence, S</p>	<p>TXO 12-21-90 4-18-91 Republic Nat. Bank Dallas, Tr. &amp; S Houston, et al W.V. Lawrence, S</p>
<p>TXO 5-10-90 5-8-90 H.E. Yates 5-10-90 5-8-90</p>							
<p>TXO 8-8-93 5-24-93 5-18-93 R.G. Barton, Jr. R.G. Barton, Jr.</p>							
<p>TXO 8-8-93 5-24-93 5-18-93 R.G. Barton, Jr. R.G. Barton, Jr.</p>							
<p>TXO 8-8-93 5-24-93 5-18-93 R.G. Barton, Jr. R.G. Barton, Jr.</p>							

WJC INCORPORATED

Location of fresh water samples

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 mgl 75 mgl

Cl

Sulfates\*..... \_\_\_\_\_

SO<sub>4</sub>

Bicarbonates\*..... \_\_\_\_\_

HCO<sub>3</sub>

Soluble Iron\*..... \_\_\_\_\_

Fe

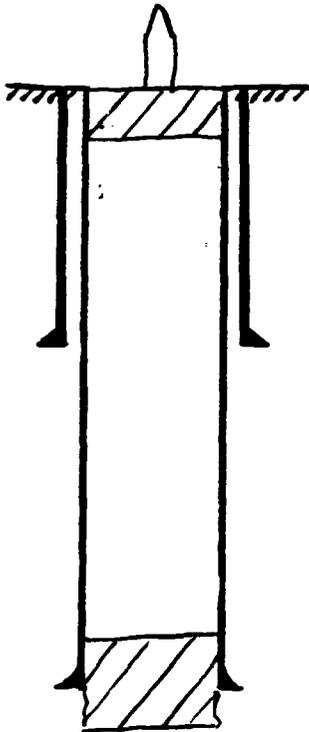
\* Out side Ranch House

OPERATOR	JAKE HUMAN	DATE	10-20-92
LEASE	J. G. Cox	WELL No.	1
		LOCATION	SEC 13-7175-N38E Unit C

660' FNL and 1980' FWL

A+A 4-10-70

10 SX plug @ surface



$13\frac{3}{8}$ " casing set at 303' with 350 sx of \_\_\_\_\_ cemen  
 Total Depth \_\_\_\_\_' Hole size  $17\frac{1}{4}$ " Circulated

$9\frac{5}{8}$ " casing set at 5000' with 2600' sx of \_\_\_\_\_ cemen  
 Hole size  $12\frac{1}{4}$ " Cement Circulated



25 SX plug @ 5000

25 SX plug @ 8360

25 SX plug @ 10100

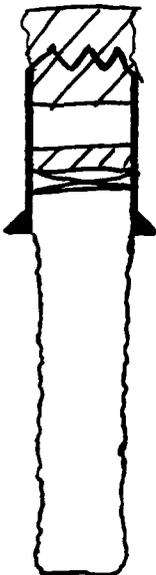
SHOT + pulled  $5\frac{1}{2}$ " CSB @ 10131

CIBP @ 12000' + 15' CMT

$5\frac{1}{2}$ " casing set at 12203' with 500 sx of \_\_\_\_\_ cemen

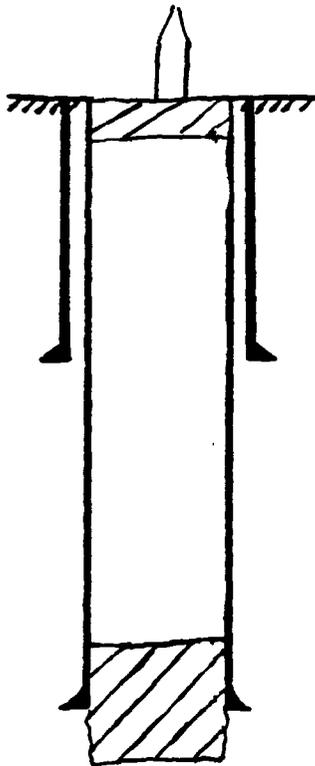
Total Depth 12243' Hole size  $8\frac{3}{4}$ " TBC by TS

OH 12203-12243 @ 10275'



OPERATOR	JAKE HAMON		DATE	10-20-92
LEASE	C. COOPER "A"	WELL NO.	1	LOCATION
		SEC 12 T12S-R38E UNIT N		

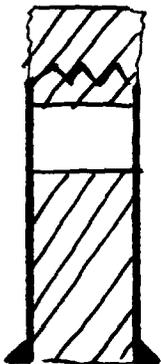
A + A 660' FSL AND 1980' FWL  
6-10-1960



Set 10 sx plug @ surface

13 3/8" casing set at 304' with 300 sx of \_\_\_\_\_ cem.  
Total Depth \_\_\_\_\_' Hole size 17 1/4" Circulated

9 5/8" casing set at 5000' with 2400 sx of \_\_\_\_\_ cem.  
Hole size 12 1/4" Cement Circulated



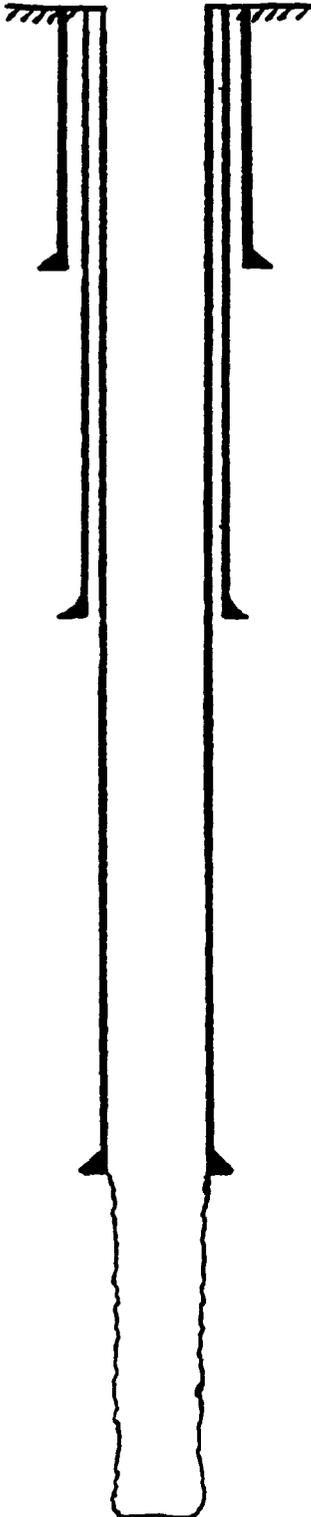
Set 50 sx plug @ 5045 - 4914  
set 25 sx plug @ 9990 - 9748'  
Shot + pulled 5 1/2" CSG @ 9880'  
Set 50 sx plug 17244 - 11802

Perf 12215 - 12240  
12240 - 12250  
5 1/2" casing set at 12263' with 500 sx of \_\_\_\_\_ cem.  
Total Depth 12263' Hole size 8 3/4"

OPERATOR	F + M Oil AND GAS Company		DATE	10-20-92
LEASE	W. F. CME	WELL NO.	2	LOCATION

660' FSL + 1980' Fel

SI (Devotion)



13<sup>3</sup>/<sub>8</sub> " casing set at 365 ' with 425 sx of \_\_\_\_\_ cement  
 Total Depth \_\_\_\_\_ ' Hole size 17<sup>1</sup>/<sub>2</sub> " Circulated

9<sup>5</sup>/<sub>8</sub> " casing set at 4799 ' with 4550 sx of \_\_\_\_\_ cement  
 Hole size 12<sup>1</sup>/<sub>4</sub> " Cement Circulated

sqz casing leak @ 6904 - 6967 w/ 450 sx

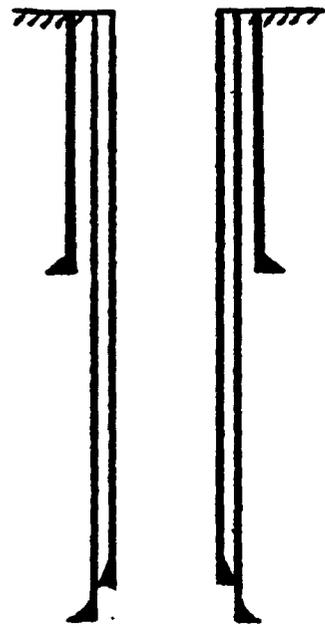
7 " casing set at 12155 ' with 450 sx of \_\_\_\_\_ cement  
 Total Depth 12261 ' Hole size 8<sup>3</sup>/<sub>4</sub> "

OH 12155 - 12261

OPERATOR	F + M Oil and Gas Company		DATE	10-20-92
LEASE	F.M. Holloway	WELL NO.	1	
		LOCATION	Sec 13-T175-R38E unit 6	

660' FNL and 1980' FEL

SWD well R-51



13 3/8" casing set at 293' with 350 sx of \_\_\_\_\_ cem  
 Total Depth \_\_\_\_\_' Hole size 17 1/2" *Cmt Circulated*

7" csq set @ 4906 w/ 1500 sx cmt

9 5/8" casing set at 4994' with 2780 sx of \_\_\_\_\_ cemen  
 Hole size 12 1/4" *Cement circulated*

OH Injection 4999' - 9000'



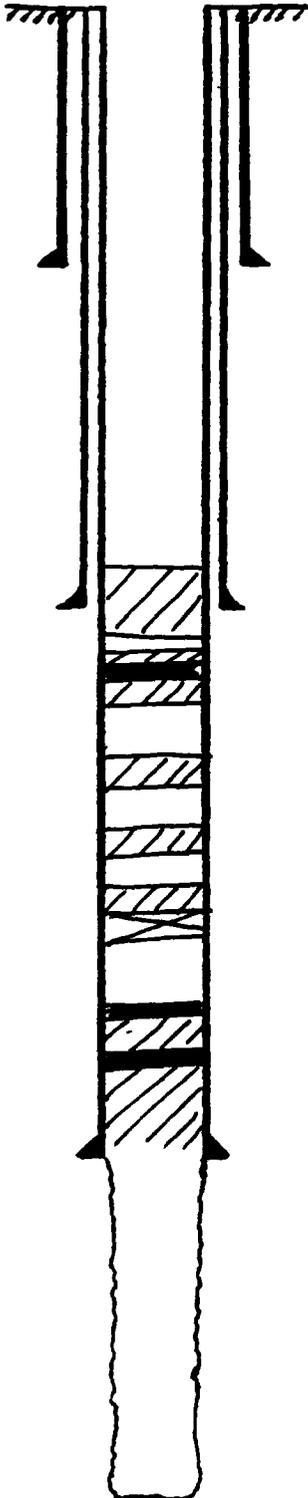
Set 50 sx plug @ 9228 - 9000  
 Cut and pull 5 1/2" csq @ 9105'

5 1/2" casing set at 12147' with 500 sx of \_\_\_\_\_ cemen  
 Total Depth 12212' Hole size 8 3/4"

OH 12212 - 12147

OPERATOR	F + M Oil AND GAS COMPANY		DATE	10-20-92	
LEASE	F. M. HOLLOWAY	WELL No.	3	LOCATION	SEC 13-T17S-R38E Unit 6

1980' FNL AND 1980' FEL  
Well is SI



13 3/8" casing set at 320' with 325 sx of \_\_\_\_\_ ceme  
Total Depth \_\_\_\_\_' Hole size 17 1/2" Circulated

Set 25 sx plug 4850 - 5050

Set cmt Ret @ 5331 + sge w/ 40 sx + 50' on top of

9 5/8" casing set at 4998' with 2150 sx of \_\_\_\_\_ cement

Hole size 12 1/4" Cement Circulated

perft 5362 - 5420

Cmt plug @ 6950 - 6750

Cmt Plug @ 9360 - 9160

Set CIBP @ 9625 + 35' cmt

Set cmt Ret @ 9730 sge w/ 1550 sx

Set cmt Ret @ 9767 sge w/ 400 sx

CSG collapsed @ ± 11120'

5 1/2" casing set at 12055' with 250 sx of \_\_\_\_\_ cemen

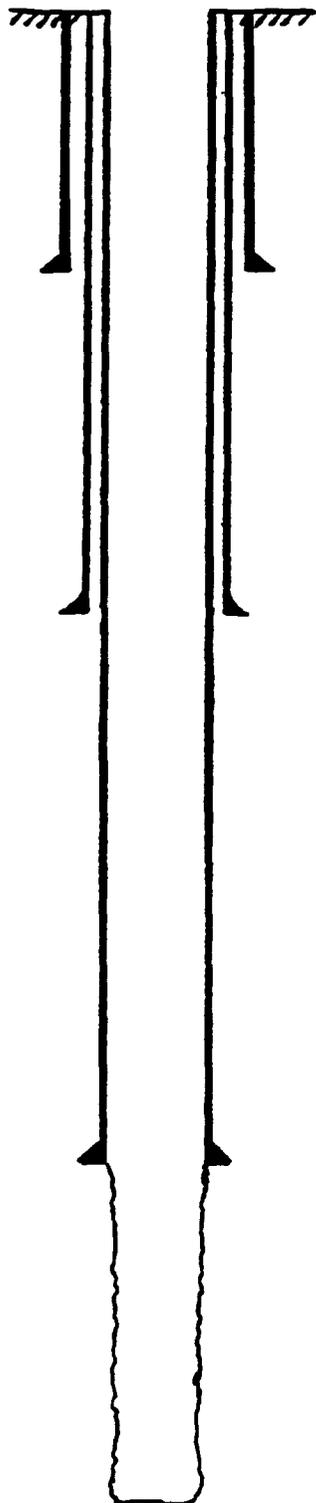
Total Depth 12080' Hole size 8 3/4"

OH 12055 - 12080

OPERATOR	AEN Energy Inc		DATE	10-20-92
LEASE	V.F. COX	WELL No.	1	
		LOCATION	SEC 13 T17S-R38E Unit F	

1980' FNL + 1980' FWL

producing from Nonmim.



12 3/4" casing set at 365' with 450 sx of \_\_\_\_\_ ceme  
 Total Depth \_\_\_\_\_' Hole size 15" Circulated

8 5/8" casing set at 5017' with 1500 sx of \_\_\_\_\_ cemen  
 Hole size 11 1/4" Cement Circulated

perf 12120 - 12134

5 1/2" casing set at 12147' with 250 sx of \_\_\_\_\_ cemen  
 Total Depth 12168' Hole size 7 7/8"

OH 12147-12168

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	HOBBS TX OCT 06 1991	

PS Form 3800, June 1991

P 369 427 048



### Receipt for Certified Mail

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

Sent to	AUNA Oil Co.	
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	HOBBS TX OCT 06 1991	

P 369 427 052



### Receipt for Certified Mail

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

Sent to	THE ANSCHUTZ 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	HOBBS TX OCT 06 1991	

PS Form 3800, June 1991

P 369 427 049



### Receipt for Certified Mail

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

Sent to	Joe V. Taxbett	
Street and No.	Route 4 box 333A	
P.O. State and ZIP Code	Sanvale, TX 79760	
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	HOBBS TX OCT 06 1991	

PS Form 3800, June 1991

P 369 427 051



### Receipt for Certified Mail

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

Sent to	FJM Oil 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	HOBBS TX OCT 06 1991	

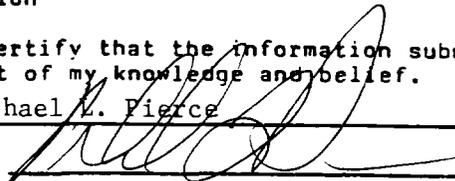
APPLICATION FOR AUTHORIZATION TO INJECT

Case 10613

- 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 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 L. Pierce Title Consultant

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.

## 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.) J. G. Cox No. 1  
660' FNL and 1980' FWL  
Sec. 13 - T17S - R38E  
Unit C  
Lea County, New Mexico
- 2.) See attached wellbore schematic.
- 3.) Propose to 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 San Andres and Bone Spring, and the well is located in the South Knowles Devonian Field.
- 2.) The injection interval is open hole at 5000 to 8360'.
- 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.

Part VII.

- 1.) The proposed daily injection will be 2000 bbls. per day. The maximum will be 5000 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 not productive within 1 mile of the proposed well.

Part VIII

The injection interval is the San Andres and Bone Spring formations in the Knowles Devonian Field, and is composed of alternating beds of porous and tight dolomite in the San Andres section. The Bone Spring section is composed of permeable, fine to medium grained sands with alternating beds of limestone and porous dolomites. The injection interval is from 5000' to approximately 8360'. This entire area is overlain by the Quaternary Alluvium and caliche. The fresh water in the area comes from the Ogalalla aquifer. There are no fresh water zones below the San Andres section.

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.

<p>TXO 11-13-91 Amarada J.D. Gregory</p>	<p>TXO 11-13-91 Amarada Mattie Garrett Katherine Coyle et al</p>	<p>TXO 11-13-91 Amarada Daniel Nelson</p>	<p>TXO 11-13-91 Amarada C.S. Alves et al M.I. Norman Jr.</p>	<p>TXO 11-13-91 Amarada Rose Eaves Valetta Fingado Ray C. Eaves</p>	<p>TXO 11-13-91 Amarada Rose Eaves, M.I. Valetta Fingado Ray C. Eaves, (S)</p>	<p>TXO 11-13-91 Amarada P. Carter, Sr. &amp; Valetta Fingado (S)</p>	<p>TXO 11-13-91 Amarada G.H. Hooper et al Valetta Fingado</p>
<p>TXO 6-10-91 Amarada J.L. Sands Crist &amp; Head Inc</p>	<p>TXO 6-10-91 Amarada Mattie Garrett Katherine Coyle et al</p>	<p>TXO 6-10-91 Amarada Daniel Nelson</p>	<p>TXO 6-10-91 Amarada C.S. Alves et al M.I. Norman Jr.</p>	<p>TXO 6-10-91 Amarada Rose Eaves Valetta Fingado Ray C. Eaves</p>	<p>TXO 6-10-91 Amarada Rose Eaves, M.I. Valetta Fingado Ray C. Eaves, (S)</p>	<p>TXO 6-10-91 Amarada P. Carter, Sr. &amp; Valetta Fingado (S)</p>	<p>TXO 6-10-91 Amarada G.H. Hooper et al Valetta Fingado</p>
<p>TXO 8-5-91 Amarada J.L. Road, M.I. P.H. &amp; B.W. Carter</p>	<p>TXO 8-5-91 Amarada Mattie Garrett Katherine Coyle et al</p>	<p>TXO 8-5-91 Amarada Daniel Nelson</p>	<p>TXO 8-5-91 Amarada C.S. Alves et al M.I. Norman Jr.</p>	<p>TXO 8-5-91 Amarada Rose Eaves Valetta Fingado Ray C. Eaves</p>	<p>TXO 8-5-91 Amarada Rose Eaves, M.I. Valetta Fingado Ray C. Eaves, (S)</p>	<p>TXO 8-5-91 Amarada P. Carter, Sr. &amp; Valetta Fingado (S)</p>	<p>TXO 8-5-91 Amarada G.H. Hooper et al Valetta Fingado</p>
<p>TXO 3-8-92 Amarada J.M. Keeth (S) E.C. Wilson et al A.L. Strong</p>	<p>TXO 3-8-92 Amarada Mattie Garrett Katherine Coyle et al</p>	<p>TXO 3-8-92 Amarada Daniel Nelson</p>	<p>TXO 3-8-92 Amarada C.S. Alves et al M.I. Norman Jr.</p>	<p>TXO 3-8-92 Amarada Rose Eaves Valetta Fingado Ray C. Eaves</p>	<p>TXO 3-8-92 Amarada Rose Eaves, M.I. Valetta Fingado Ray C. Eaves, (S)</p>	<p>TXO 3-8-92 Amarada P. Carter, Sr. &amp; Valetta Fingado (S)</p>	<p>TXO 3-8-92 Amarada G.H. Hooper et al Valetta Fingado</p>
<p>TXO 10-28-91 Marathon O.G. Hardin M.I. W.V. Lawrence, S</p>	<p>TXO 10-28-91 Marathon Mattie Garrett Katherine Coyle et al</p>	<p>TXO 10-28-91 Marathon Daniel Nelson</p>	<p>TXO 10-28-91 Marathon C.S. Alves et al M.I. Norman Jr.</p>	<p>TXO 10-28-91 Marathon Rose Eaves Valetta Fingado Ray C. Eaves</p>	<p>TXO 10-28-91 Marathon Rose Eaves, M.I. Valetta Fingado Ray C. Eaves, (S)</p>	<p>TXO 10-28-91 Marathon P. Carter, Sr. &amp; Valetta Fingado (S)</p>	<p>TXO 10-28-91 Marathon G.H. Hooper et al Valetta Fingado</p>
<p>TXO 12-21-90 Amarada Republic Nat. Bank Dallas, Tr. &amp; Co. et al M.I. W.V. Lawrence, S</p>	<p>TXO 12-21-90 Amarada Mattie Garrett Katherine Coyle et al</p>	<p>TXO 12-21-90 Amarada Daniel Nelson</p>	<p>TXO 12-21-90 Amarada C.S. Alves et al M.I. Norman Jr.</p>	<p>TXO 12-21-90 Amarada Rose Eaves Valetta Fingado Ray C. Eaves</p>	<p>TXO 12-21-90 Amarada Rose Eaves, M.I. Valetta Fingado Ray C. Eaves, (S)</p>	<p>TXO 12-21-90 Amarada P. Carter, Sr. &amp; Valetta Fingado (S)</p>	<p>TXO 12-21-90 Amarada G.H. Hooper et al Valetta Fingado</p>
<p>TXO 5-12-90 Amarada R.D. Holladay (S) H.E. Yates</p>	<p>TXO 5-12-90 Amarada Mattie Garrett Katherine Coyle et al</p>	<p>TXO 5-12-90 Amarada Daniel Nelson</p>	<p>TXO 5-12-90 Amarada C.S. Alves et al M.I. Norman Jr.</p>	<p>TXO 5-12-90 Amarada Rose Eaves Valetta Fingado Ray C. Eaves</p>	<p>TXO 5-12-90 Amarada Rose Eaves, M.I. Valetta Fingado Ray C. Eaves, (S)</p>	<p>TXO 5-12-90 Amarada P. Carter, Sr. &amp; Valetta Fingado (S)</p>	<p>TXO 5-12-90 Amarada G.H. Hooper et al Valetta Fingado</p>
<p>TXO 5-12-90 Amarada I.C. Brechan M.I. Dennis Wadley et al Terry Morris et al</p>	<p>TXO 5-12-90 Amarada Mattie Garrett Katherine Coyle et al</p>	<p>TXO 5-12-90 Amarada Daniel Nelson</p>	<p>TXO 5-12-90 Amarada C.S. Alves et al M.I. Norman Jr.</p>	<p>TXO 5-12-90 Amarada Rose Eaves Valetta Fingado Ray C. Eaves</p>	<p>TXO 5-12-90 Amarada Rose Eaves, M.I. Valetta Fingado Ray C. Eaves, (S)</p>	<p>TXO 5-12-90 Amarada P. Carter, Sr. &amp; Valetta Fingado (S)</p>	<p>TXO 5-12-90 Amarada G.H. Hooper et al Valetta Fingado</p>
<p>TXO 5-12-90 Amarada C.P. Service 225 90 322-90 31 96</p>	<p>TXO 5-12-90 Amarada Mattie Garrett Katherine Coyle et al</p>	<p>TXO 5-12-90 Amarada Daniel Nelson</p>	<p>TXO 5-12-90 Amarada C.S. Alves et al M.I. Norman Jr.</p>	<p>TXO 5-12-90 Amarada Rose Eaves Valetta Fingado Ray C. Eaves</p>	<p>TXO 5-12-90 Amarada Rose Eaves, M.I. Valetta Fingado Ray C. Eaves, (S)</p>	<p>TXO 5-12-90 Amarada P. Carter, Sr. &amp; Valetta Fingado (S)</p>	<p>TXO 5-12-90 Amarada G.H. Hooper et al Valetta Fingado</p>
<p>TXO 5-12-90 Amarada C.P. Service 225 90 322-90 31 96</p>	<p>TXO 5-12-90 Amarada Mattie Garrett Katherine Coyle et al</p>	<p>TXO 5-12-90 Amarada Daniel Nelson</p>	<p>TXO 5-12-90 Amarada C.S. Alves et al M.I. Norman Jr.</p>	<p>TXO 5-12-90 Amarada Rose Eaves Valetta Fingado Ray C. Eaves</p>	<p>TXO 5-12-90 Amarada Rose Eaves, M.I. Valetta Fingado Ray C. Eaves, (S)</p>	<p>TXO 5-12-90 Amarada P. Carter, Sr. &amp; Valetta Fingado (S)</p>	<p>TXO 5-12-90 Amarada G.H. Hooper et al Valetta Fingado</p>

C - 108 PART V  
WJC INCORPORATED  
J. G COX  
660' FNL & 1980' FWL  
sec. 13-T17S-R38E  
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 mgl 75 mgl

Cl

Sulfates\*..... \_\_\_\_\_

SO<sub>4</sub>

Bicarbonates\*.... \_\_\_\_\_

HCO<sub>3</sub>

Soluble Iron\*.... \_\_\_\_\_

Fe

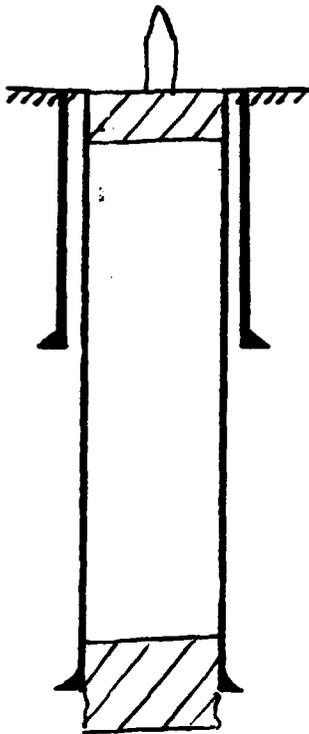
\* Out side Ranch House

OPERATOR JAKE HUMAN	DATE 10-20-92
LEASE J. G. Cox	WELL No. 1
LOCATION SEC 13-7175-N38E Unit C	

660' FNL and 1980' FWL

A+A 4-10-70

10 SX plug @ surface



13<sup>3</sup>/<sub>8</sub>" casing set at 303' with 350 sx of \_\_\_\_\_ cemen  
Total Depth \_\_\_\_\_' Hole size 17<sup>1</sup>/<sub>4</sub>" Circulated

9<sup>5</sup>/<sub>8</sub>" casing set at 5000' with 2600' sx of \_\_\_\_\_ cemen  
Hole size 12<sup>1</sup>/<sub>4</sub>" Cement Circulated



25 SX plug @ 5000

25 SX plug @ 8360

25 SX plug @ 10100

SHOT + pulled 5<sup>1</sup>/<sub>2</sub>" CSB @ 10131

CIBP @ 12000' + 15' CMT

5<sup>1</sup>/<sub>2</sub>" casing set at 12203' with 500 sx of \_\_\_\_\_ cemen

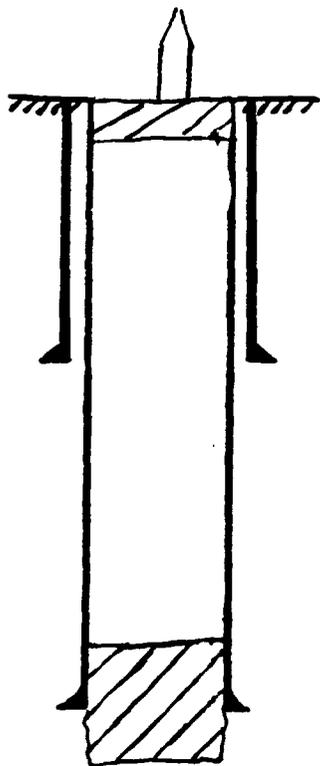
Total Depth 12243' Hole size 8<sup>3</sup>/<sub>4</sub>" TOC by TS

OH 12203-12243 @ 10275'



OPERATOR	JAKE HAMON	DATE	10-20-92
LEASE	L. Cooper "A"	WELL No.	1
		LOCATION	Sec 12 T12S-R38E Unit N

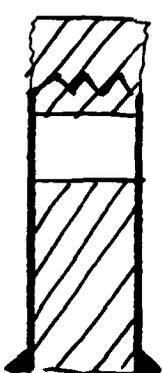
A + A 660' FSL #10 1980' FWL  
6-10-1960



Set 10 sx plug @ surface

13 3/8" casing set at 304' with 300 sx of \_\_\_\_\_ cement  
Total Depth \_\_\_\_\_' Hole size 17 1/4" Circulated

9 5/8" casing set at 5000' with 2400 sx of \_\_\_\_\_ cement  
Hole size 12 1/4" Cement Circulated



Set 50 sx plug @ 5045 - 4914  
set 25 sx plug @ 9990 - 9748'  
Shot + pulled 5 1/2" CSG @ 9880'

Set 50 sx plug 12244 - 11802

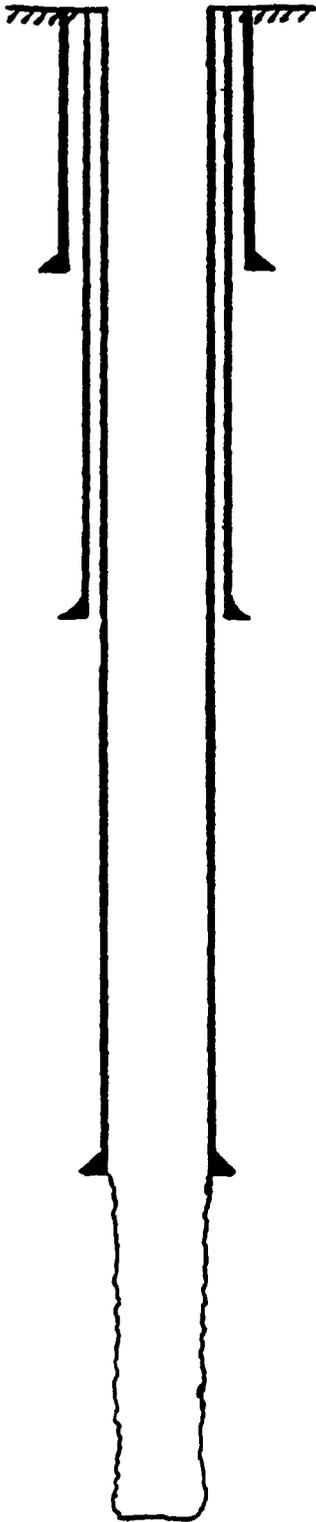
Perf 12215 - 12240  
12240 - 12250

5 1/2" casing set at 12263' with 500 sx of \_\_\_\_\_ cement  
Total Depth 12263' Hole size 8 3/4"

OPERATOR	F + M Oil AND GAS Company		DATE	10-20-92
LEASE	W. F. CME	WELL No	2	LOCATION

660' FSL + 1980' Fel

SI (Devonian)



13<sup>3</sup>/<sub>8</sub> " casing set at 365 ' with 425 sx of \_\_\_\_\_ cement  
 Total Depth \_\_\_\_\_ ' Hole size 17<sup>1</sup>/<sub>2</sub> " Circulated

9<sup>5</sup>/<sub>8</sub> " casing set at 4799 ' with 4550 sx of \_\_\_\_\_ cement  
 Hole size 12<sup>1</sup>/<sub>4</sub> " Cement Circulated

SO2 CASING LEAK @ 6904 - 6967 w/ 450 SX

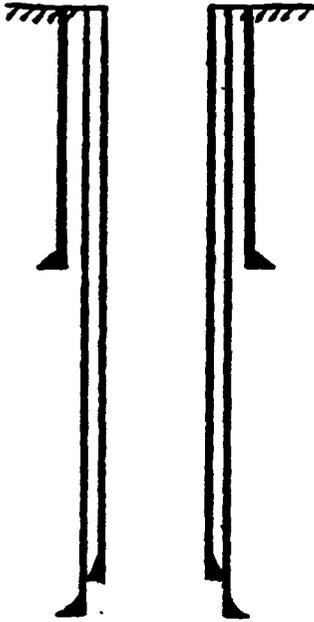
7 " casing set at 12155 ' with 450 sx of \_\_\_\_\_ cement  
 Total Depth 12261 ' Hole size 8<sup>3</sup>/<sub>4</sub> "

OH 12155 - 12261

OPERATOR	F + M Oil and Gas Company		DATE	10-20-92
LEASE	F.M. Holloway	WELL No.	1	
		LOCATION	Sec 13-T17S-R38E unit 6	

660' FNL and 1980' FEL

SWD well R-51

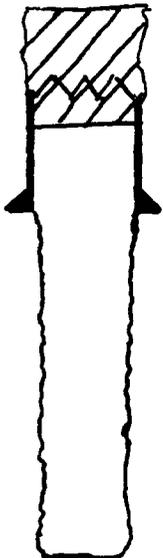


$13\frac{3}{8}$ " casing set at 293' with 350 sx of \_\_\_\_\_ cem.  
 Total Depth \_\_\_\_\_' Hole size  $17\frac{1}{2}$ " Cement Circulated

7" CS9 set @ 4906 w/ 1500 sx cement

$9\frac{5}{8}$ " casing set at 4999' with 2780 sx of \_\_\_\_\_ cement  
 Hole size  $12\frac{1}{4}$ " Cement Circulated

OH Injection 4999' - 9000'



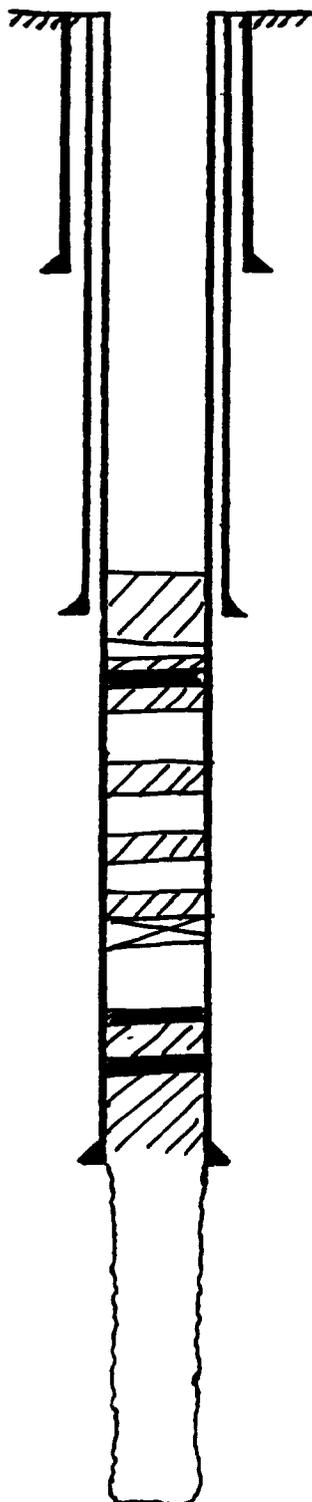
Set 50 sx plug @ 9228 - 9000  
 Cut and pull  $5\frac{1}{2}$ " CS9 @ 9105'

$5\frac{1}{2}$ " casing set at 12147' with 500 sx of \_\_\_\_\_ cement  
 Total Depth 12212' Hole size  $8\frac{3}{4}$ "

OH 12212 - 12147

OPERATOR	F & M Oil and Gas Company		DATE	10-20-92	
LEASE	F. M. Holloway	WELL No.	3	LOCATION	SEC 13-7175-R38E Unit 6

1980' FNL AND 1980' FEL  
Well is SI



$13\frac{3}{8}$ " casing set at 320 ' with 325 sx of \_\_\_\_\_ cemen  
Total Depth \_\_\_\_\_ ' Hole size  $17\frac{1}{2}$  " Circulated

Set 25 sx plug 4850 - 5050

Set cmt ret @ 5331 + sgz w/ 40 sx + 50' on top of

$9\frac{5}{8}$ " casing set at 4998 ' with 2150 sx of \_\_\_\_\_ cemen

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

Perf 5362 - 5420

Cmt plug @ 6950 - 6750

Cmt Plug @ 9360 - 9160

Set CIBP @ 9625 + 35' cmt

Set cmt ret @ 9730 sgz w/ 1550 sx

Set cmt ret @ 9767 sgz w/ 400 sx

CSG collapsed @  $\pm$  11120'

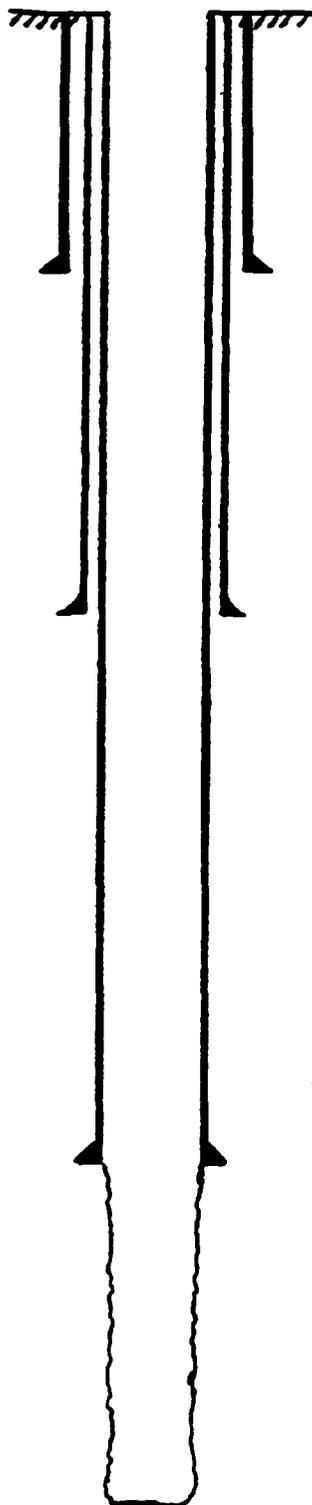
$5\frac{1}{2}$ " casing set at 12055 ' with 250 sx of \_\_\_\_\_ cemen

Total Depth 12080 ' Hole size  $8\frac{3}{4}$  "

DH 12055 - 12080

OPERATOR	AEN Energy Inc		DATE	10-20-92
LEASE	V.F. COX	WELL No.	1	
		LOCATION	SEC 13 T17S-R38E Unit F	

1980' FNL + 1980' FWL  
 producing from Anonim



12 3/4" casing set at 365' with 450 sx of \_\_\_\_\_ ceme  
 Total Depth \_\_\_\_\_' Hole size 15" Circulated

8 5/8" casing set at 5017' with 1500 sx of \_\_\_\_\_ cement  
 Hole size 11 1/4" Cement Circulated

perf 12120 - 12134

5 1/2" casing set at 12147' with 250 sx of \_\_\_\_\_ cemen  
 Total Depth 12168' Hole size 7 7/8"

OH 12147 - 12168

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	
Post Office	
PO Box 1149	
State and ZIP Code	
Smith Co ND 58504-1149	
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.1 Ci.	
Street and No.	
PO Box 3193	
P.O. State and ZIP Code	
Midland, TX 79702	
Postage	\$ .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 ANSCHUTZ Corp	
Street and No.	
1221 CAMAR 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 369 427 049



### Receipt for Certified Mail

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

Sent to	
Joe V. Tabbett	
Street and No.	
Route 4 box 333A	
P.O. State and ZIP Code	
Searsville TX 79760	
Postage	\$ .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	
FHM 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