12-14-93

CHECKLIST for ADMINISTRATIVE INJECTION APPLICATIONS

Operator: Lac. T. Rasmussen Oper's Well: Eaver "A" #2

Contact: Tyson Dunn Title: Eng. Phone: 915-687-1664

DATE IN 12-1-93 RELEASE DATE 12-14-93 DATE OUT _____

Proposed Injection Application is for: ___ WATERFLOOD ___ Expansion ___ Initial

Original Order: R- _____ ___ Secondary Recovery ___ Pressure Maintenance

SENSITIVE AREAS Y SALT WATER DISPOSAL

___WIPP ___ Capitan Reef ___ Commercial Operation

Data is complete for proposed well(s)? ___ Additional Data _____

AREA of REVIEW WELLS

13 Total # of AOR 4 # of Plugged Wells

Yes Tabulation Complete Yes Schematics of P & A's

Yes Cement Tops Adequate ___ AOR Repair Required

INJECTION INFORMATION

Injection Formation(s) Seven Rivers

Source of Water Yates / Seven Rivers Compatible Yes

PROOF OF NOTICE

Yes Copy of Legal Notice Yes Information Printed Correctly

Yes Correct Operators Yes Copies of Certified Mail Receipts

___ Objection Received ___ Set to Hearing _____ Date

NOTES: _____

APPLICATION QUALIFIES FOR ADMINISTRATIVE APPROVAL Yes

COMMUNICATION WITH CONTACT PERSON:

1st Contact: ___ Telephoned ___ Letter _____ Date Nature of Discussion _____

2nd Contact: ___ Telephoned ___ Letter _____ Date Nature of Discussion _____

3rd Contact: ___ Telephoned ___ Letter _____ Date Nature of Discussion _____

Release 12-14-93 SWD

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

Form C-108
Revised 7-1-81

NOV 16

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: Hal J. Rasmussen Operating

Address: 310 W. Wall; Suite 906; Midland, Texas 79701

Contact party: Tyson Dunn Phone: (915) 687-1664

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: Tyson L. Dunn Title Production Engineer

Signature: Tyson L. Dunn Date: 11/16/93

* 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. R-6026 in 1970 and/or Admin Order SWD #199 (1977)

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.

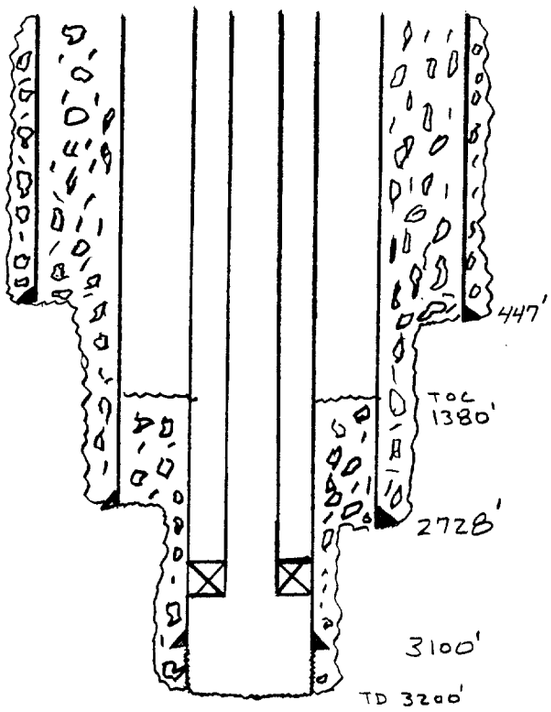
NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

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.

INJECTION WELL DATA SHEET

Hal J. Rasmussen Operating, Inc.	Eaves A			
OPERATOR	LEASE			
2	660' FSL & 660' FWL	19	T26S	R37E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



Tabular Data

Surface Casing

Size 13 " Cemented with 300 sx.

TOC Surface feet determined by Circulation

Hole size 17½

Intermediate Casing

Size 9 5/8 " Cemented with 800 sx.

TOC Surface feet determined by Circulation

Hole size 12"

Long string

Size 7 " Cemented with 200 sx.

TOC 1380' feet determined by Calculation

Hole size 8 3/4"

Total depth 3200'

Injection interval

3100' feet to 3200' feet OH
(perforated or open-hole, indicate which)

Tubing size 5½ lined with Plastic Coated (material) set in a

Baker Model AD-1 (Tension) (brand and model) packer at 3044' feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Seven Rivers

2. Name of Field or Pool (if applicable) Scarborough Yates Seven Rivers

3. Is this a new well drilled for injection? / / Yes /X/ No

   If no, for what purpose was the well originally drilled? oil well

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

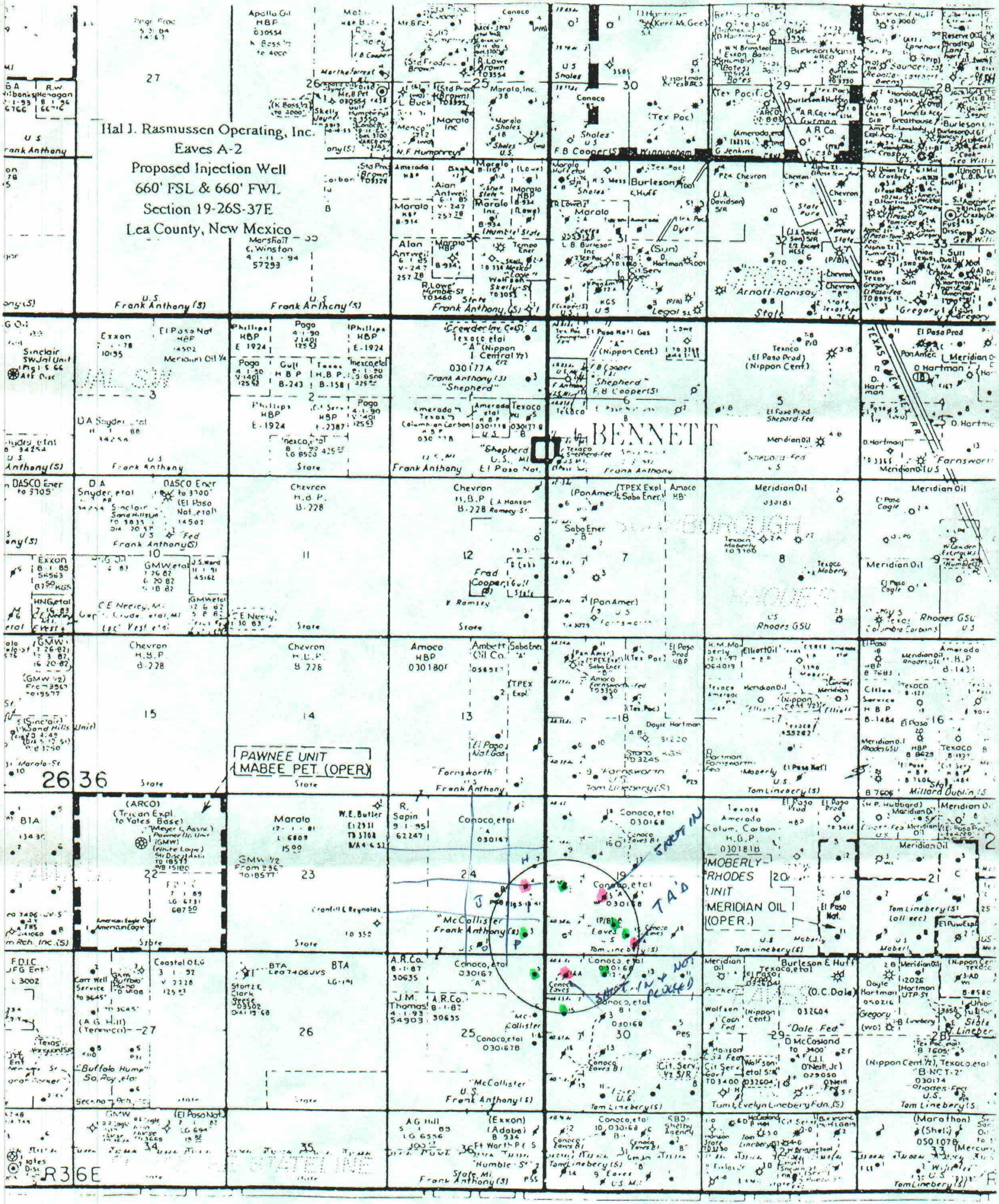
   No other perforations

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

   Next higher formation: Yates 2898'-3096'

   No known underlying oil & gas zones.

Hal J. Rasmussen Operating, Inc.
Eaves A-2
Proposed Injection Well
660' FSL & 660' FWL
Section 19-26S-37E
Lea County, New Mexico



Wells in Area of Review
Application for Authorization to Inject
Hal J. Rasmussen Operating, Inc.

Eaves A-1
Location: 330' FSL & 2310' FEL — Section 19 T26S R37E
Type: Oil — Date Drilled: 7/28
Original Completion: 7/28 — Total Depth: 2940'

Casing Record:

Size	Depth	Sacks Cement
20"	183'	Mudded
16"	535'	Mudded
10 3/4"	1591'	Mudded
8 5/8"	2840'	40

Completion:
7/28 OH @ 2840'-2940'
11/86 TA w/CIBP @ 2800'

Eaves A #3
Location: 2310' FSL & 660' FWL — Section 19 T26S R37E
Type: Oil — Date Drilled: 2/37
Original Completion: 2/14/37 — Total Depth: 3192'

Casing Record:

Size	Depth	Sacks Cement
13"	263'	175
9-5/8"	1563'	450
7"	3087'	400

Completion:
2/14/37 3087'-3192' (OH)

Eaves A #5
Location: 1980' FSL & 1980' FWL — Section 19 T26S R37E
Type: Disposal — Date Drilled: 2-19-49
Original Completion: 2/27/49 — Total Depth 3220'

Casing Record:

Size	Depth	Sacks Cement
7-5/8"	1228'	500
5-1/2"	3219'	600

Pay: 3198-3204'; 3207-3213

Completion:

12/65	Placed well on pumping unit
8/71	Perf @ 3112', 17', 25', 37', 42', 52', 65', 77'
1/74	Put Submersible pump
2/5/87	Perf @ 3042'-3104'
2/9/87	Perf @ 2975'-3035'
2/11/87	Perf @ 2937'-68'
6/87	Convert to SWD
11/93	Proposed to sqz perfs & put back on production

Eaves A #8
Location: 990' FSL & 2310' FWL — Section 19 T26S R37E
Type: Oil — Date Drilled: 2/53
Original Completion: 2/15/53 — Total Depth 3228'

Casing Record:

Size	Depth	Sacks Cement
7-5/8"	1190'	440
5-1/2"	3223'	598

Completion:

5/53	Perfs @ 3204'-217'
6/60	Perfs @ 2768'-96', 2810'-32', 2848'-64', 2878'-90'
	Frac w/12000 gal crude & 12000 # Sand
10/85	Sqz perfs @ 2768'-2890', 3204'-217'
	Perf @ 3092'-180'
11/85	Perf @ 3092'-180'
2/86	Sqz perfs @ 3020'-61'
	Perf @ 2992'-3010'
11/93	Proposed to install submersible pump.

Eaves A #12
Location: 660' FNL & 1980' FWL — Section: 30 T26S R37E
Type: Oil — Date Drilled: 5/37
Original Completion: 6/3/37 — Total Depth 3220'

Casing Record:

Size	Depth	Sacks Cement
13"	261'	100
9-5/8"	1588'	425
7"	3065'	425

Completion:

6/37	Completed OH @ 3065'-3220'
11/59	Deepened to 3245'
	Set 5" liner 175' to 3219' w/25 sx
8/87	TA well
11/90	Acidize & put on pumping unit.

Eaves A #14
Location: 660' FNL & 660' FWL — Section 30 T26S R37E
Type: Oil — Date Drilled: 9/60
Original Completion:10/20/60 — Total Depth 3250'

Casing Record:

Size	Depth	Sacks Cement
7-5/8"	361'	200
4-1/2"	3312'	650

Completion:

10/60	Perfs @ 3186'-88', 3193'-202'
8/69	Add perfs @ 3146'-75'
12-90	Set CIBP @ 3125'. PBTD @ 3100'
	Perf @ 2924'-3031'

Eaves A #15
Location: 660' FSL & 2450' FEL — Section 19 T26S R37E
Type: Oil — Date Drilled: 12/71
Total Depth 3307' — PB Depth: 3304'
Original Completion: 12/71

Casing Record:

Size	Depth	Sacks Cement
8-5/8"	517'	300
5-1/2"	3307'	200

Completion:

12/71	Perf @ 3213'-3265'
2/72	Perf @ 3132'-191'
1/84	Set RBP @ 3204'. Perf @ 3132'-191', 3082'-3176'
8/86	Set RBP @ 3078'. Perf @ 3019'-70'
11/87	Set RBP @ 3000'. Perf @ 2883'-2942'
11/93	Proposed recompletion

Eaves B-1 #15
Location: 1980' FNL & 660' FWL — Section 30 T26S R37E
Type: Oil — Date Drilled: 1/70
Original Completion: 1/26/70 — Total Depth: 3230'

Casing Record:

Size	Depth	Sacks Cement
8-5/8"	532'	240
5-1/2"	3230'	190

Completion:

1/70	Perf @ 3121'-220'
11/79	Perf @ 3092'-3220'. PBTD @ 3225'

McCallister A #3
Location: 660' FSL & 660' FEL — Section 24 T26S R37E
Type: Oil — Date Drilled: 8/36
Original Completion: 9/1/36 — Total Depth: 3245'

Casing Record:

Size	Depth	Sacks Cement
13"	462'	200
9-5/8"	2802'	900
7"	3143'	400

Completion:
9/36 OH @ 3143'-3245'
12/65 Sqz OH w/100 sx
Perf @ 3039'-3100'. Frac well
3/87 TA well

McCallister A #4
Location: 2310' FSL & 660' FEL — Section 24 T26S R36E

Plugging data on McCallister A #4 submitted previously for R-4026.

McCallister A #5
Location: 660' FNL & 330' FEL — Section 25 T26S R37E
Type: Disposal — Date Drilled: 7-1-69
Original Completion: 7/69 — Total Depth: 3268

Casing Record:

Size	Depth	Sacks Cement
8-5/8"	514'	175
5-1/2"	3268'	166

Completion:
11/69 Perf @ 3127'-3243'
1/84 perf @ 3074'-3243'

McCallister A #7
Location: 2310' FNL & 330' FEL — Section 24 T26S R37E
Type: Oil — Date Drilled: 12-70
Original Completion: 12/70 — Total Depth: 3236

Casing Record:

Size	Depth	Sacks Cement
8-5/8"	503'	350
5-1/2"	3236'	100

Completion:

12-70	Perf 2966'-3223'. Frac well Set RBP @ 3100'.
9/73	POOH W/RBP
2/85	TA well

McCallister A #8
Location: 1980' FSL & 1650' FEL — Section 24 T26S R37E
Type: Disposal — Date Drilled: 9-74
Original Completion: 9/74 — Total Depth: 3340

Casing Record:

Size	Depth	Sacks Cement
8-5/8"	600'	550
5-1/2"	3340'	250

Completion:

9-74	Perf 3261'-3281'
1-75	Perf @ 3060'-131'. Frac well
4/82	Reperf @ 3060'-3281'
3/91	Converted to injection well.

VII Proposed Operation

This well will be used to inject produced water from other wells on the Eaves lease via a closed disposal system.

Proposed average injection rate & pressure: 5000 BWPD @ Vacuum.
Proposed maximum injection rate & pressure: 7000 BWPD @ 100 psi.

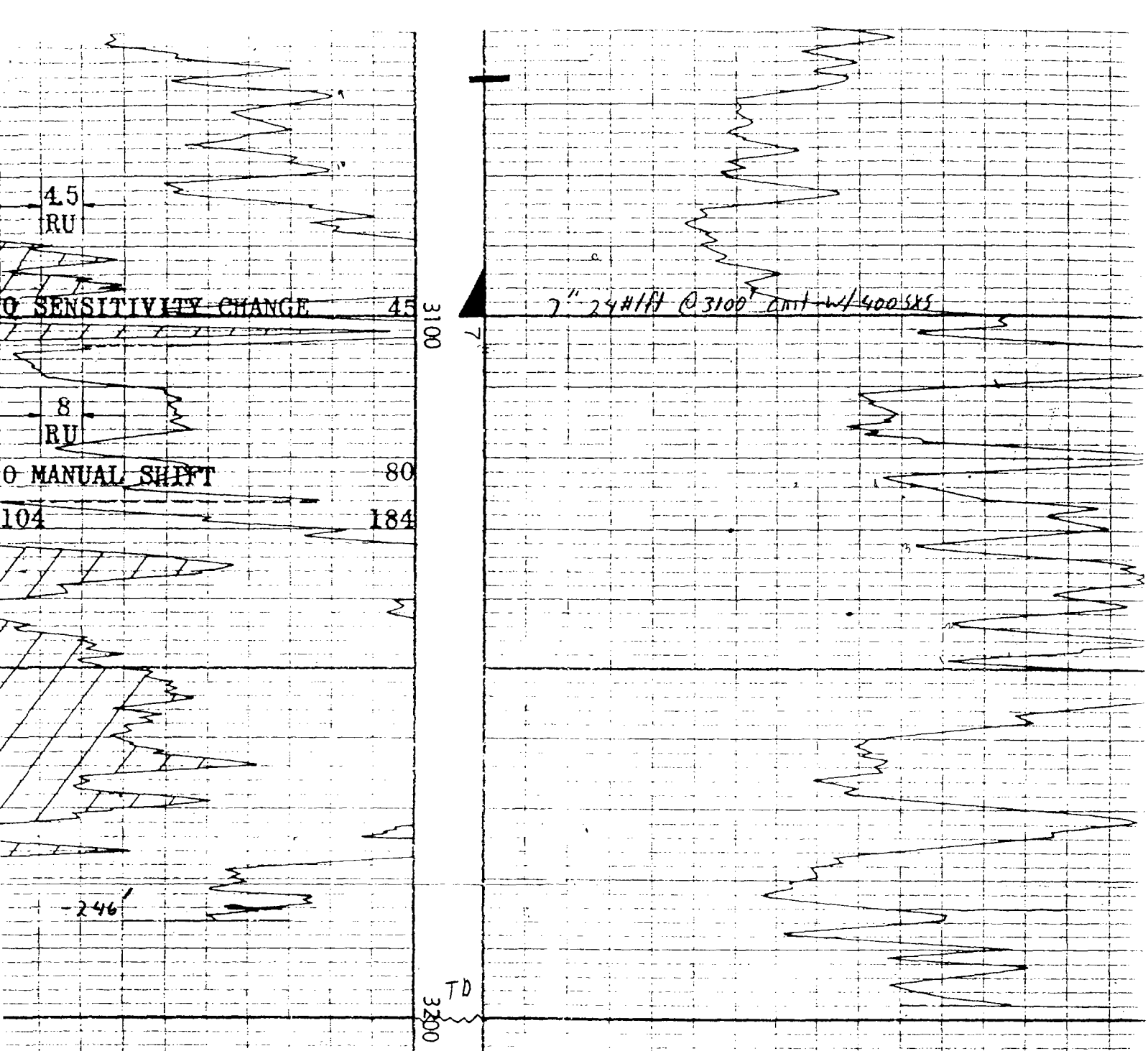
VIII Geological DATA

This produced water will be injected into the Seven Rivers formation which is located from 3096' to 3200'. The Seven Rivers formation consists mostly of sand and lime.

The source of underground drinking water in the area is the Ogallala formation (base at +_ 196').

IX Proposed Stimulation

We will clean out the wellbore, set a Baker Model AD-1 at 3044', and acidize with 5000 gallons acid if necessary.



CONTINENTAL OIL COMPANY
EAVES A-19 #2
JALMAT FIELD
LEA, NEW MEXICO

T.D. LOGGED 3198
T.D. DRILLER 3200
T.D. REACHED 3199

3183

STATISTICAL CHECK AT 2810'

G/R ZERO

UNICHEM INTERNATIONAL
P.O. BOX 61427 4312 County Road 1298 S.
Midland, Texas 79711

Hal J. Rasmussen

Report Date: September 23, 1993
Lab In Date: September 22, 1993
Sample Date: September 17, 1993

WINDMILL LOCATION: 250' FSL & 2500' FWL
Sec. 19 T26S R37E

Listed below please find our water analysis report from Windmill

Specific Gravity:	1.001
Total Dissolved Solids:	1018
PH:	7.81
Ionic Strength:	.020

CATIONS:		mg/liter
Calcium:	(Ca++)	44
Magnesium:	(Mg++)	44
Sodium:	(Na+)	194
Iron (Total)	(Fe++)	3.10
Barium	(Ba++)	0.00
Manganese:	(Mn++)	.18
Resistivity:		
ANIONS:		
Bicarbonate:	(HCO3-)	368
Carbonate:	(CO3--)	0
Hydroxide:	(OH-)	0
Sulfate:	(SO4--)	295
Chloride:	(Cl-)	73

GASES:		
Carbon Dioxide:	(CO2)	******
Oxygen:	(O2)	*******
Hydrogen Sulfide:	(H2S)	******

SCALE INDEX (Positive Value Indicates Scale Tendency) * indicates tests were not run.

Temperature		CaCO3 SI	CaSO4 SI
86F	30.0C	.55	-21.21
104F	40.0C	.84	-21.37
122F	50.0C	.98	-21.37
140F	60.0C	1.14	-21.21
168F	70.0C	1.31	-20.25
176F	80.0C	1.49	-19.07

If you have any questions or require further information, please contact us.

Sincerely,

Jeanne M. McMurray

Laboratory Technician

cc:

bc:
Charlie Vaden

Hal J. Rasmussen Operating, Inc.
Eaves A #2
Application For Authorization to Inject

Oil Conservation Division
Post Office Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

November 16, 1993

Gentlemen:

I 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.

Sincerely,

Tyson L. Dunn
Hal J. Rasmussen Operating, Inc.

Mailing List

Surface Owner

Tom Linebery
P.O. Box 1536
Midland, Texas 79702

Offset Operators

No offset operators within 1/2 mile radius of the well.

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, Kathi Bearden

General Manager

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

November 22, 1993

and ending with the issue dated

November 22, 1993

Kathi Bearden
General Manager

Sworn and subscribed to before

me this 23 day of

November, 1993

Charlene Perrin
Notary Public.

My Commission expires
March 15, 1997
(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
November 22, 1993

Application for Authorization to Inject Hal J. Rasmussen Operating, Inc., 310 W. Wall; Suite 906, Midland, Texas 79701. (915) 687-1664 Tyson Dunn Salt water injection well for ~~pressure maintenance~~ disposal located at 660' FSL & 660' FWL of Section 19-T26S-R37E. The water will be injected through an open hole completion into the Seven Rivers formation at 3100'-3200'. The expected maximum injection rates & pressures are 7000 BWPD & 100 psi, respectively.

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.

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.

Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

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

3. Article Addressed to: Kelly Brown P.O. Box 1536 Midland, Texas 79702	4. Article Number P 080 275 163 Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☒ Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature – Address X	8. Addressee's Address *(ONLY if requested and fee paid)*
6. Signature – Agent X Robbie Jackson	
7. Date of Delivery NOV 19 1993	

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

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

HOBBS DISTRICT OFFICE

RECEIVED

'93 DEC 6 AM 10 21

12-1-93

BRUCE KING
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RE: Proposed:
MC _____
DHC _____
NSL _____
NSP _____
SWD X
WFX _____
PMX _____

Gentlemen:

I have examined the application for the:

Hal J Rasmussen Operating Eaves #1 2-M 11-24-37
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton
Supervisor, District 1

/ed