# STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

#### OIL CONSERVATION DIVISION

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE. NEW MEXICO 87501

1 0 1907

FORM C-108 4/25/9/ Revised 7-1-81 PMX:187

Ι.	Purpose: Secondary Recovery Pressure Maintenance Disposal Storage Application qualifies for administrative approval? X yes no
II.	Operator: SOUTHWEST ROYALTIES, INC.
	Address:PO_BOX_11390
	Contact party: James Blount Phone: 915 686-9927 or 1-800-433-794
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 <u>SWD 547</u> .  If yes, give the Division order number authorizing the project
٧.	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:
	<ol> <li>Proposed average and maximum daily rate and volume of fluids to be injected;</li> <li>Whether the system is open or closed;</li> <li>Proposed average and maximum injection pressure;</li> <li>Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and</li> <li>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</li> </ol>
VIII. —	literature, studies, mearby wells, etc.).
	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.
х.	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: James Blount Title Area Supervisor
	Signature: James Storm Date: 3-13-97

#### 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 parker 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.

- 8. 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 the injurious che date this application was mailed to them.

# ENGL SAN EAUS A 10 - 5000 R. 3487 INJECTION WELL DATA SHEET

PMX 146

SOUTH	WEST ROYALTIES, INC.		EÀVES	•	30-025-12079
OPERATOR		LEASE		, A	00 020 120/9
12	660 ' FNL & 1980' F	WL 30		26S	37E
WELL NO.	FOOTAGE LOCATION	SECTION		TOWNSHIP	RANGE
Schemi	atic	Surface Casing Size 13 TOC 120			100 sx.
	95%"		ing " feet		<u>* 425</u> sx.
	7588 Tole 3028	TOC 1150  Hole size 8-3	feet 3/4"		425 sx.
	30651 10 10 10 10 10 10 10 10 10 10 10 10 10	Injection interv  3219 (perforated or o  Line  Size 5	al feet to pen-hole, i	ndicate which)	
OH	3219-3245		5-1/8" er_3219'	ent <u>25</u> 	sx
Baker Mo	4-1/2" lined del AD-l (Tensnion dand model) any other casing-tubing	n) pad	lastic C (material) cker at	oated 3000 	set in a feet
Other Data					
1. Name of t	he injection formation	Seven Ri	vers		
2. Name of F	ield or Pool (if applic	able) Scarboro	ugh Yate	s Seven Rive	ers
3. Is this a	new well drilled for i	njection? /_7 Ye	es <u>/X</u> / i	No	
If no, fo	r what purpose was the	well originally di	rilled?	Oil	
and give	ell ever been perforate plugging detail (sacks other perforations	of cement or bride	ne(s)? Lis ge plug(s)	t all such perf used)	orated intervals
Pro	duced through OH	intervals betw	een 3219	9-3245'	
5. Give the	depth to and name of ar	ny overlying and/or	r underlyim	g oil or gas zo	nes (pools) in

Next Higher Formation: Yates 2910'-3207'

No known underlying oil & gas zones

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

Eaves A-1

Section 19 T26S R37E

Location: 330' FSL & 2310' FEL

8 5/8"

Date Drilled: 7/28

Type: Oil

Original Completion: 7/28

Total Depth 2940'

Casing Record:

Depth Size 20" 183' 16" 535' 10 3/4" 1591'

Sacks Cement Mudded Mudded Mudded 40

Completion:

7/28

OH @ 2840' - 2940' TA w/ CIBP @ 2820'

2840'

11/86

Eaves A-2

Section 19 T26S R37E

Location: 660' FSL & 660' FWL Type: Oil

Original Completion: 7/1/36

Date Drilled: 6/36 Total Depth 3200'

Casing Record:

Size Depth 13" 434' 9 5/8" 2734' 3111'

Sacks Cement 200 400 400

Completion:

7/36

OH 3111' - 3200'

8/93

Converted to SWD

Eaves A-5

Location: 1980' FSL & 1980' FWL

Type: Disposal

Original Completion: 2/27/49

Section 19 T26S R37E Date Drilled: 2/19/49 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 Section 19 T26S R37E

Location: 990' FSL & 2310' FWL Date Drilled: 2/53
Type: Oil Total Depth 3228'

Original Completion: 2/15/53

Casing Record:

 Size
 Depth
 Sacks Cement

 7 5/8"
 1190'
 440

 5 1/2"
 3223'
 598

Completion:

5/53 Perfs @ 3204'-217'

6/60 Perfd @ 2768'-96', 2810'-32', 2848'-64', 2878'-90'

Frac w/ 12000 gal crude & 12000# sand

10/85 Squeeze perfs @ 2768'-2890', 3204'-217'

Perf @ 3092'-180'

11/85 Perf @ 3092'-180'

2/86 Squeeze perfs @ 3020'-3061'

Perf @ 2992'-3010'

11/93 Proposed to install submersible pump.

Eaves A-11

Location: 660' FSL & 660' FEL

Type: Oil

Original Completion: 10/16/36

Section 30 T26S R37E

Date Drilled: 9/36 Total Depth 3232'

Casing Record:

 Size
 Depth
 Sacks Cement

 13"
 529'
 350

 9 5/8"
 1489'
 425

 7"
 3085'
 400

Completion:

10/36

OH @ 3085'-3232'

9/93

Set CIBP @ 3040' w/25' cmt.

Perf 2874'-2972'

Frac w/55,000 gals, 133,500# sand

Place on rod pump

Eaves A-13

Section 30 T26S R37E

Location: 660' FNL & 1980' FEL

Date Drilled: 4/51

Type: Oil

Total Depth 3243'

Original Completion: 4/26/51

Casing Record:

 Size
 Depth
 Sacks Cement

 8 5/8"
 1199'
 350

 5 1/2"
 3242'
 815

Completion:

4/1 Perf 3214'- 42'

10/63 Perf 3152'-75', Set CIBP @ 3183'

5/72 Squeeze 3152'-75'

Perf 3080'-3143'

2/86 Perf 2947'-2970'

Squeeze 2947'-2970'

8/93 Drill out CIBP @ 3183'

Install Submersible pump

Eaves A-14

Location: 660' FNL & 660' FWL

Type: Oil

Original Completion: 10/20/60

Section 30 T26S R37E

Date Drilled: 9/60 Total Depth 3250'

Casing Record:

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

Completion:

Perfs @ 3186'-88', 3193'-202' 10/60 8/69 Add perfs @ 3146'-75'

12/90 Set CIBP @ 3125'. PBTD @ 3100'

Perf @ 2924'-3031'

Eaves A-15

Location: 660' FSL & 2450' FEL

Type: Oil Original Completion: 12/71 Section 19 T26S R37E

Date Drilled: 12/71 Total Depth: 3307' PBTD: 3304'

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' Set RBP @ 3000'. Perf @ 2883'-2942' 11/87

11/93 Proposed recompletion

#### **Eaves B-1 #1**

Location: 1980' FNL & 1980' FEL Section 30 T26S R37E Date Drilled: 12/36 Total Depth: 3250' Type: Oil Original Completion: 12/13/36

# Casing Record:

Size	Depth	Sacks Cement
13"	554′	350
9-5/8"	2704′	900
7"	3096′	400
4-1/2"	2900-3250′	100

# Completion:

12/36	OH 3096-3213'
04/60	Perf @ 3146-54', 3158-62', 3168-76', 3180-88'.
07/61	Deepen to 3250' & set 4-1/2" liner from 2900-
	3250', perf 3215-3221'.
03/96	SI

**Eaves B-1 #3** 

Location: 1980' FNL & 1980' FWL

Type: Oil

Original Completion: 1/9/62

Section 30 T26S R37E

Date Drilled: 1/62

Total Depth 3250'

Casing Record:

Size 7 5/8 "

4 1/2"

Depth 351' 3250'

Sacks Cement 200

575

Completion:

1/62

Perf 3236'-3242'

2/66

Set CIBP @ 3225'. Perf 3146'-3213'. Squeeze 3146'-3213'.

Perf 3009'-3055'. Frac w/ 20,000 gals, 30,000# sand.

4/88

Plug and Abandon

Set CIBP @ 2950' w/ 23 sacks cement

Spto 23 sacks cement @ 1500'

Perf @ 410' and squeeze w/165 sacks cement

Eaves B-1 #13

Location: 1980' FSL & 1980' FWL

Section 30 T26S R37E

Plugging data on Eaves B #13 submitted previously for R-4026

Eaves B-1 #15

Location: 1980' FNL & 660' FWL

Type: Oil

Original Completion: 1/26/70

Section 30 T26S R37E

Date Drilled: 1/70

Total Depth 3230'

Casing Record:

Size 8 5/8 " 5 1/2"

Depth 532'

3230'

Sacks Cement

240 190

Completion:

1/70

Perf @ 3121'-220'

11/79

Perf @ 3092'-3220'. PBTD @ 3225'.

McCallister A #5

Location: 660' FNL & 330' FEL

Type: Disposal

Original Completion: 7/69

Section 25 T26S R36E Date Drilled: 7/1/69

Total Depth 3268'

Casing Record:

Size 8 5/8 " 5 1/2"

Depth 514' 3268'

Sacks Cement

175 166

Completion:

11/69 1/84

Perf @ 3127'-3243' Perf @ 3074'-3243'

McCallister A #6

Location: 1980' FNL & 330' FEL

Type: Oil

Original Completion: 7/1/70

Section 25 T26S R36E

Date Drilled: 6/70 Total Depth 3292'

Casing Record:

Size 8 5/8 "

5 1/2"

Depth 500'

3291'

Sacks Cement 550 125

Completion:

7/70

8/83 11/89 Perf 3218'-3264' Perf 3157'-3204' Plug and Abandoned

Set CIBP @ 3100' w/ 5 sacks of cement Cut and pull 2492' of 5 1/2" casing.

Pump 35 sacks cement @ 2540'

Tag plug @ 2410'

Pump 35 sacks cement @ 1200' Pump 35 sacks cement @ 550'

Tag plug @ 450'

Set 10 sack surface plug

#### VII Proposed Operation

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

Proposed average injection rate & pressure: 6000 BWPD @ Vacuum. Proposed maximum injection rate & pressure: 10000 BWPD @ 400 psi.

#### VIII Geological DATA

This produced water will be injected into the Seven Rivers formation which is located from 3220' to 3340'. 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  $\pm 196'$ ).

#### IX Proposed Stimulation

We will clean out the wellbore and drill out to 3340'. Set Baker Model AD-1 packer at 3000' and acidize with 3000 gallons acid if necessary.

XII I have examined available geologic & engineering data and find no evidence of open faults or any other hydrologic connection between the injection zone and any underground source of drinking water.

#### AFFIDAVIT OF PUBLICATION

State of New Mexico, County of Lea.

#### I, KATHI BEARDEN

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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.

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	_weeks.
Beginning with the issue d	ated
March 19	_, 1997
and ending with the issue of	•
March 19	_, 1997
Lahi Beara	la
Publisher Sworn and subscribed to	
me this 24th	day of
March	_, 1997
godi Genson	<u> </u>
Notary Public.	

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.

My Commission expires October 18, 2000

(Seal)

# LEGAL NOTICE March 19, 1997 APPLICATION TO AMEND AUTHORIZATION TO INJECT

Southwest Royalties, Inc., PO Box 11390, Midland, TX. 79702, (915) 686-9927, is seeking approval from the New Mexico Oil Conservation Division to inject in the Eaves A #12, salt water well for pressure maintenance located at 660 FNL & 1980 FWL Sec. 30, T26S, R37E, Lea County, New Mexico. The proposed injection zone is the Seven Rivers formation of the Scarborough-Yates Seven River Pool in an open hole interval 3219 to 3340'. Southwest Royalties, Inc., intends to inject a maximum of 10,000 BWPD at 400 psi.

Interested parties must file objections or requests for hearing with the Oil Conservation Division: PO Box 2088, Santa Fe, New Mexico, 87501 within 15 days. #15098

01101469000 01506473 Southwest Royalties, Inc. P.O. Box 11390 a/c 476043 Midland, TX 79702

### Mailing List

### Surface Owner

Mr. D. K. Boyd PO Box 11351 Midland, Texas 79702

# Offset Operators

No offset operators within  $1/2\ \text{mile}$  radius of the well.

#### 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: Z50 FSL : Z500 FWL Sec. 19 Tz65 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:	(203)	0	
	Hydroxide:	(OH-)	0	
	Sulfate:	(\$04)	295	
	Chloride:	(Cl-)	73	
=======================================	======================================			*=======
CASES				

GASES:

 Carbon Dioxide:
 (CO2)
 \*\*\*\*\*\*

 Oxygen:
 (O2)
 \*\*\*\*\*\*

 Hydrogen Sulfide:
 (H2S)
 \*\*\*\*\*\*

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

Temperature		CaCO3 \$1	CaSO4 \$1
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	80.00	1.49	-19.07

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

Sincerely,

Jeane m. momuney

Laboratory Technician

cc:

bc:

Charlie Vaden