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20 North Broadway, Suite 1500 Oklahoma City, Oklahoma 73102-8260

Telephone:405/235-3611 FAX 405/552-4550

February 7, 1997

#### Certified Mail: P240 501 841

NM Oil Conservation Division 2040 S. Pacheco St. Santa Fe, NM 87505

Re: Application For Authorization To Inject Grayburg-Jackson Waterflood Project H.E. West "A" #35 Section 3-T17S-R31E Eddy County, NM

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Dear Sir:

Enclosed are two(2) copies of the "Application For Authorization To Inject" for the above mentioned well.

Please direct any questions regarding this matter to the undersigned at (405) 552-4528.

Sincerely, Devon Energy Corporation

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Charles H. Carleton Sr. Engineering Technician

/chc enclosures

xc: Well File

STATE OF NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT Oil Conservation Div. 2040 Pacheco St. Santa Fe, NM 87505

#### APPLICATION FOR AUTHORIZATION TO INJECT

I.	PURPOSE:       X       Secondary Recovery       Pressure Maintenance       Disposal       Storage         Application qualifies for administrative approval?       Yes       No
II.	OPERATOR: Devon Energy Corporation(Nevada)
	ADDRESS: 20 N. Broadway, Suite 1500, Oklahoma City, OK 73102-8260
	CONTACT PARTY: Mr. Randy Jackson PHONE: 405/552-4560
111.	WELL DATA: Complete the data required on the reverse side of this form for each well processed for injection. Additional sheets may be attached if necessary.
IV.	Is this an expansion of an existing project: <u>X</u> Yes <u>No</u> If yes, give the Division order number authorizing the project <u>R-2268</u>
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/1 or less) overlying the proposed injection zone as well as any such sources 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: Randy Jackson	TITLE: District Engineer
SIGNATURE: Romer Jackson	DATE: February 7, 1997
If the information manined under Sections VI VIII V and VI abo	

\* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be 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, PO Box 2088, Santa Fe, NM 87504-2088 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.

### DEVON ENERGY OPERATING CORPORATION APPLICATION FOR AUTHORITY TO INJECT GRAYBURG-JACKSON WATERFLOOD

#### III Well Data:

- A. (1) H.E. West "A" #35 1980'FNL & 860'FWL Section 3-T17S-R31E Eddy County, NM
  - (2) Surface Casing: 8 5/8" 24# J-55 ST&C @ 425'. TOC @ surface Hole Size = 12 1/4"

Production Casing: 5 1/2" 15.5# J-55 LT&C @ 4150'. TOC @ surface Hole Size = 7 7/8"

- (3) Tubing will be 2 3/8" 4.7# J-55 EUE 8rd (IPC) set at 3100'.
- (4) 5 1/2" Baker AD-1 tension packer set at 3100'.
- B. (1) The injection formation will be the Grayburg/San Andres in the Grayburg-Jackson Field.
  - (2) Water injection will be through perforations 3150'- 4050'(OA). The injection interval is 3150'- 4050'.
  - (3) This well will be drilled and completed as an injection well, injecting into the Grayburg/San Andres formation.
  - (4) Additional perforations may be added in the 3150'- 4050' interval.
  - (5) The top of the Seven Rivers formation is at approximately 2300', there are no known lower oil zones





#### WELL LISTING "AREA OF REVIEW" GRAYBURG-JACKSON WATERFLOOD H.E. WEST "A" #35 - PROPOSED INJECTOR

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WELL NAME	LOCATION	OPERATOR	STATUS	REMARKS
H.E. West "A" #1	3-T17S-R31E	Devon Energy Corp.	D & A	
H.E. West "A" #6	4-T17S-R31E	Devon Energy Corp.	Active WIW	
H.E. West "A" #7	4-T17S-R31E	Devon Energy Corp.	Shutin WIW	
H.E. West "A" #8	3-T17S-R31E	Devon Energy Corp.	Shutin WIW	Redrill as: West "A" #35
H.E. West "A" #9	4-T17S-R31E	Devon Energy Corp.	Active WIW	
H.E. West "A" #10	3-T17S-R31E	Devon Energy Corp.	P&A'd	
H.E. West "A" #11	3-T17S-R31E	Devon Energy Corp.	Active Oil	
H.E. West "A" #13	3-T17S-R31E	Devon Energy Corp.	Active WIW	
H.E. West "A" #16	3-T17S-R31E	Devon Energy Corp.	Active WIW	
H.E. West "A" #20	4-T17S-R31E	Devon Energy Corp.	Active Oil	
H.E. West "A" #21	3-T17S-R31E	Devon Energy Corp.	Active Oil	
H.E. West "A" #22	4-T17S-R31E	Devon Energy Corp.	Active Oil	
H.E. West "A" #24	4-T17S-R31E	Devon Energy Corp.	Active Oil	
H.E. West "A" #25	3-T17S-R31E	Devon Energy Corp.	Active Oil	
H.E. West "A" #26	3-T17S-R31E	Devon Energy Corp.	Active Oil	
H.E. West "A" #27	3-T17S-R31E	Devon Energy Corp.	Active Oil	
H.E. West "A" #29	4-T17S-R31E	Devon Energy Corp.	Active Oil	
H.E. West "A" #30	3-T17S-R31E	Devon Energy Corp.	Active Oil	
H.E. West "A" #35	3-T17S-R31E	Devon Energy Corp.	to be drilled	Proposed Injector
H.E. West "B" #16	3-T17S-R31E	Devon Energy Corp.	Active WIW	
H.E. West "B" #23	3-T17S-R31E	Devon Energy Corp.	P&A'd	
H.E. West "B" #33	3-T17S-R31E	Devon Energy Corp.	Active WIW	
H.E. West "B" #49	3-T17S-R31E	Devon Energy Corp.	Active Oil	
H.E. West "B" #55	3-T17S-R31E	Devon Energy Corp.	Active WIW	
H.E. West "B" #56	3-T17S-R31E	Devon Energy Corp.	Active Oil	
H.E. West "B" #85	3-T17S-R31E	Devon Energy Corp.	Active Oil	
		OUTSIDE OPERATED		
Johnson #10	34-T16S-R31E	Xeric Oil & Gas Corp.	Active Oil	

WELL NAME	LOCATION	SPUD DATE	COMP DATE	WELL TYPE	DEPTH/PBTD	COMPLETION RECORD
H.E. WEST "A" #1	660'FNL & 1980'FWL SEC 3-T17S-R31E EDDY COUNTY, NM	7/17/46	9/17/46	D & A	3688'/3688'	10 3/4" @ 806' W/100 SXS 8 5/8" @ 2887' (LANDED, NOT CEMENTED) 7" @ 3366' W/50 SXS
HE WEST "A" #6		1/0/55	0/7/55		0965/0965	A 5/8" @ 740' W/100 SYS
	EDDY COUNTY, NM					7" @ 3220' W/200 SXS OPEN HOLE COMPLETION: 3220- 3369'
			1/29/63		3870'/3870'	IPESO4 BOPD
			4/19/96	WATER INJECTOR	387073870	CONVERTED TO A WATER INJECTION WELL
H.E. WEST "A" #7	660'FNL & 660'FEL SEC 4-T17S-R31E EDDY COUNTY, NM	5/8/55	6/21/55	OIL PRODUCER	3386'/3386'	8 5/8" @ 760' W/100 SXS 5 1/2" @ 3234' W/200 SXS OPEN HOLE COMPLETION: 3234'- 3386'
			9/20/62 8/16/63	WATER INJECTOR	3883'/3883'	DEEPEN OPEN HOLE TO 3883' - RETURN TO INJECTION
H.E. WEST "A" #8	1980'FNL & 660'FWL SEC 3-T17S-R31E EDDY COUNTY, NM	8/5/55	9/18/55	OIL PRODUCER	3404'/3404'	8 5/8" @ 769' W/100 SXS 5 1/2" @ 3246' W/200 SXS OPEN HOLE COMPLETION: 3246'- 3404'
			9/22/62	WATER INJECTOR		IP=26 BOPD CONVERTED TO A WATER INJECTION WELL
			8/20/63 4/23/82		3901'/3901'	DEEPEN OPEN HOLE TO 3901' - RETURN TO INJECTION
			9/15/89		3901'/3845'	DRILL OUT CEMENT PLUGS & CLEAN OUT TO TD
						RUN 2 3/8" LINER @ 3022- 3901 W//300 SXS
						PERFORATE: 3360'- 3795'(OA) W/45 HOLES
						RETURN WELL TO WATER INJECTION

WELL NAME	LOCATION	SPUD DATE	COMP DATE	WELL TYPE	DEPTH/PBTD	COMPLETION RECORD
H.E. WEST "A" #9	1980'FSL & 660'FEL SEC 4-T17S-R31E	10/19/55	12/2/55	OIL PRODUCER	3375'/3375'	8 5/8" @ 719' W/100 SXS 7" @ 3198' W/200 SXS
	EDDY COUNTY, NM					OPEN HOLE COMPLETION: 3198'- 3375' IP≃141 BOPD
			9/21/62	WATER INJECTOR		CONVERTED TO A WATER INJECTION WELL
			8/13/63		3868'/3868'	DEEPEN OPEN HOLE TO 3868' - RETURN TO INJECTION
			4/26/82			PLUGGED & ABANDONED
			9/28/89			DRILL OUT CEMENT PLUGS & CLEAN OUT TO TD
						RUN 4 1/2" LINER @ 2967'- 3862' W/175 SXS
						PERFORATE: 3296- 3854'(OA) W/61 HOLES
			הספות		'Ugge/'Ugge	REPORT WELL TO WATER INJECTION
						PERFORATE: 3209'- 3504'(OA) - RETURN TO INJECTION
H.E. WEST "A" #10	660'FNL & 660'FWL	3/9/56	5/6/56		3673'/3673'	8 5/8" @ 788' W/100 SXS
	SEC 3-T17S-R31E					5 1/2" @ 3261' W/200 SXS
	EDDY COUNTY, NM					OPEN HOLE COMPLETION: 3261'- 3673' IIP≈159 BOPD
			2/19/70			TUBING PARTED, UNABLE TO RETRIEVE FISH - TEMPORARILY ABANDONED
			2/3/81			PLUGGED & ABANDONED
H.E. WEST "A" #11	1980'FNL & 1980'FEL	2/29/59	11/27/59	OIL PRODUCER	3500'/3488'	8 5/8" @ 817' W/100 SXS
	SEC 3-T17S-R31E					5 1/2" @ 3500' W/100 SXS
						ID-61 BODD
			8/19/81		3650'/3650'	PERFORATE & SQUEEZE @ 2650' W/1550 SXS. CEMENT TO SURFACE.
						SQUEEZE PERFORATIONS 3445'- 3452' W/300 SXS
						DEEPEN WELLBORE TO 3650' - RETURN TO PRODUCTION
			8/8/89		3986'/3986'	DEEPEN OPEN HOLE TO 3986'
						SET 4 1/2" LINER @ 3246- 3986' W/75 SXS
						PERFORATE: 3439'- 3973'(OA) W/104 HOLES - RETURN TO PRODUCTION

WELL NAME	LOCATION	<u>SPUD DATE</u>	COMP DATE	WELL TYPE	DEPTH/PBTD	COMPLETION RECORD
H.E. WEST "A" #13	900'FNL & 2310'FWL SEC 3-T17S-R31E EDDY COUNTY, NM	10/11/64	10/31/64	WATER INJECTOR	3700/3695	8 5/8" @ 555' W/220 SXS. CEMENT TO SURFACE. 4 1/2" @ 3700' W/320 SXS. TOC @ 1800'(CBL) PERFORATE: 3419'- 3686'(OA) W/80 HOLES
			5/23/82			COMPLETED AS A WATER INJECTION WELL SQUEEZE OFF PERFORATIONS 3419- 3428' W/850 SXS
			9/29/89		3950'/3950'	DEEPEN WELLBORE TO 3950' - RETURN TO INJECTION
H.E. WEST "A" #16	1980'FNL & 1980'FWL SEC 3-T17S-R31E	12/4/88	1/12/89	OIL PRODUCER	4076'/4023'	8 5/8" @ 644' W/400 SXS. CEMENT TO SURFACE.  5 1/2" @ 4076' W/1250 SXS. CEMENT TO SURFACE.   PERFORMTE: 3415', 3053'/0A/ W/156 HOLES
			5/10/96	WATER INJECTOR		IP=189 BOPD PERFORATE: 3312'- 4009'(OA) W/7 HOLES CONVERT TO A WATER INJECTION WELL
H.E. WEST "A" #20	2525'FSL & 1305'FEL SEC 4-T17S-R31E EDDY COUNTY, NM	11/14/94	1/25/95	OIL PRODUCER	4325//4282	8 5/8" @ 606' W/365 SXS. CEMENT TO SURFACE. 5 1/2" @ 4324' W/1100 SXS. CEMENT TO SURFACE. PERFORATE: 3276'- 4246'(OA) W/57 HOLES IP=113 BOPD
H.E. WEST "A" #21	1335'FNL & 1255'FWL SEC 3-T17S-R31E EDDY COUNTY, NM	8/6/94	11/15/94	OIL PRODUCER	4420/4035	8 5/8" @ 667' W/365 SXS. CEMENT TO SURFACE. 5 1/2" @ 4380' W/1050 SXS. CEMENT TO SURFACE. PERFORATE: 3600'- 4275'(OA) IP=69 BOPD
H.E. WEST "A" #22	1345'FSL & 35'FEL SEC 4-T17S-R31E EDDY COUNTY, NM	2/3/93	3/31/93	OIL PRODUCER	5022/5003'	13 3/8" @ 604 W/350 SXS. CEMENT TO SURFACE. 8 5/8" @ 1815 W/750 SXS. CEMENT TO SURFACE. 5 1/2" @ 5022 W/1225 SXS. CEMENT TO SURFACE. PERFORATE: 3278'- 4992'(OA) W/183 HOLES IP=49 BOPD
H.E. WEST "A" #24	2625'FNL & 15'FEL SEC 4-T17S-R31E EDDY COUNTY, NM	8/27/94	12/16/94	OIL PRODUCER	4380'/4345'	8 5/8" @ 615' W/365 SXS. CEMENT TO SURFACE. 5 1/2" @ 4379' W/1465 SXS. CEMENT TO SURFACE. PERFORATE: 3314'- 4222'(OA) W/60 HOLES 1P=69 BOPD

H.E. WEST "A" #27 H.E. WEST "B" #16 H.E. WEST "A" #30 H.E. WEST "A" #29 H.E. WEST "A" #26 H.E. WEST "A" #25 WELL NAME EDDY COUNTY, NN EDDY COUNTY, NM SEC 3-T17S-R31E 660'FSL & 660'FWL SEC 3-T17S-R31E EDDY COUNTY, NM SEC 4-T17S-R31E EDDY COUNTY, NM SEC 3-T17S-R31E EDDY COUNTY, NM SEC 3-T17S-R31E EDDY COUNTY, NM SEC 3-T17S-R31E 1560'FNL & 2580'FWI 1345'FNL & 1194'FEI 650'FNL & 870'FWL 2625'FNL & 1335'FWL 1359'FNL & 50'FWL LOCATION SPUD DATE 11/21/95 7/8/58 10/1/94 11/8/95 12/3/95 12/4/95 COMP DATE 1/24/95 11/14/65 1/14/96 11/12/94 7/25/89 12/23/95 9/4/58 1/25/96 12/23/95 WATER INJECTOR OIL PRODUCER OIL PRODUCER OIL PRODUCER OIL PRODUCER OIL PRODUCER OIL PRODUCER WELL TYPE DEPTH/PBTD 3673'/3673' 4455'/4408' 3978'/3978' 4475'/4430' 4215'/4168' 4380'/4333' 4430'/4383' 5 1/2" @ 4429' W/940 SXS. CEMENT TO SURFACE. 8 5/8" @ 600' W/480 SXS. CEMENT TO SURFACE. 8 5/8" @ 644' W/380 SXS. CEMENT TO SURFACE 5 1/2" @ 4214' W/1025 SXS. CEMENT TO SURFACE 8 5/8" @ 648' W/380 SXS. CEMENT TO SURFACE. 5 1/2" @ 4379' W/1125 SXS. CEMENT TO SURFACE 8 5/8" @ 623' W/365 SXS. CEMENT TO SURFACE 5 1/2" @ 3673' W/100 SXS. TOC @ 2653'(TEMP SURVEY) 5 1/2" @ 4474' W/1250 SXS. CEMENT TO SURFACE PERFORATE: 3370'- 3578'(OA) W/88 HOLES 8 5/8" @ 636' W/400 SXS. CEMENT TO SURFACE. PERFORATE: 3325'- 4197'(OA) W/67 HOLES PERFORATE: 3286'- 4055'(OA) W/47 HOLES 5 1/2" @ 4454' W/1110 SXS. CEMENT TO SURFACE PERFORATE: 3316'- 4042'(OA) W/46 HOLES CONVERT TO A WATER INJECTION WELL PERFORATE: 3260'- 3368'(OA) W/50 HOLES DEEPEN WELLBORE TO 3978' 10 3/4" @ 765' W/100 SXS PERFORATE: 3389'- 4059'(OA) W/46 HOLES PERFORATE: 3333'- 3961'(OA) W/94 HOLES - RETURN TO PRODUCTION RUN 4" LINER @ 3264'- 3978' W/75 SXS PERFORATE: 3333'- 3520'(OA) W/32 HOLES - RETURN TO PRODUCTION IP=120 BOPD IP≃94 BOPD IP=100 BOPD IP=200 BOPD IP=100 BOPD PERFORATE: 3329'- 4075'(OA) W/46 HOLES IP=67 BOPD COMPLETION RECORD

WELL NAME	LOCATION	SPUD DATE	COMP DATE	WELL TYPE	DEPTH/PBTD	COMPLETION RECORD
H.E. WEST "B" #23	1980'FSL & 1980'FWL	7/26/59	9/10/59	OIL PRODUCER	3456'/3454'	85/8" @ 797' W/100 SXS
	EDDY COUNTY, NM					15" @ 3456 VV/100 SAS. 1 OC @ 2450(1 EMP SURVEY) PERFORATE: 3413'- 3435'(OA) W/56 HOLES IIP=168 BOPD
			3/27/64	WATER INJECTOR	3557'/3557'	DEEPEN WELLBORE TO 3557' PERFORATE: 3374'- 3384'(OA) W/20 HOLES
						CONVERTED TO A WATER INJECTION WELL
			4/20/81		3557'/2978'	SET CIBP @ 3451' AND CAP WITH 15' CEMENT
			4/27/82			PLUGGED & ABANDONED
H.E. WEST "B" #33	1980'FSL & 660'FWL	8/2/88	8/20/88	OIL PRODUCER	4057'/4011'	8 5/8" @ 625' W/300 SXS. CEMENT TO SURFACE.
	EDDY COUNTY, NM					5 1/2" @ 4057' W/1000 SXS. CEMENT TO SURFACE. PERFORATE: 3457- 3994'(OA) W/66 HOLES
			1/27/95	WATER INJECTOR		IP=326 BOPD CONVERTED TO A WATER INJECTION WELL
H.E. WEST "B" #49	1305'FSL & 1305'FWL SEC 3-T17S-R31E	4/5/93	8/29/93	OIL PRODUCER	4350'/4276'	8 5/8" @ 618' W/300 SXS. CEMENT TO SURFACE. 15 1/2" @ 4350' W/1300 SXS. CEMENT TO SURFACE.
	EDDY COUNTY, NM		8/23/95			PERFORATE: 3314'- 3532'(OA) W50 HOLES IP=10 BOPD PERFORATE: 3661'- 4043'(OA) W/49 HOLES - RETURN TO PRODUCTION
H.E. WEST "B" #55	1972'FSL & 2078'FWL	2/21/93	5/6/93	OIL PRODUCER	4300'/4265'	13 3/8" @ 575 W/300 SXS. CEMENT TO SURFACE.
	EDDY COUNTY, NM					8 5/8" @ 1768' W/750 SXS. CEMENT TO SURFACE. 5 1/2" @ 4266' W/1070 SXS. CEMENT TO SURFACE. PERFORATE: 4142'- 4206'(OA) W92 HOLES IP=15 BOPD
			7/21/93 8/23/93 10/25/93	WATER INJECTOR		PERFORATE: 3825'- 4101'(OA) W/178 HOLES - RETURN TO PRODUCTION PERFORATE: 3314'- 3552'(OA) W/28 HOLES - RETURN TO PRODUCTION CONVERTED TO A WATER INJECTION WELL
			11/3/94		4300'/4115'	SET CIBP @ 4130' AND CAP WITH 15' CEMENT - RETURN TO INJECTION







## DEVON ENERGY OPERATING CORPORATION APPLICATION FOR AUTHORITY TO INJECT GRAYBURG-JACKSON WATERFLOOD

### VII Proposed Operation Data:

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- (1) Average daily injection rates 500 BWPD Maximum daily injection rates - 600 BWPD
- (2) Type of injection system closed system
- (3) Average injection pressure 2000 psig Maximum injection pressures - 2500 psig
- (4) Injection water will be reinjected produced water, plus makeup water from the Keel West fresh water system.
- (5) N/A

### VIII Geological Data:

The proposed injection zone is in the Grayburg/San Andres formation from 3150'- 4050'. The Grayburg formation consists primarily of quartz sand with cementation. The San Andres formation consists primarily of dolomite with intermingled stringers of quartz sand with dolomite cementation.

Surface formation is Cretaceous and has no known source of drinking water. Additionally, there are no known underground sources of drinking water overlying or underlying the proposed injection interval.

### IX Stimulation Program:

The proposed injection interval will be acidized with 15% NEFE acid prior to initial injection.

### X Well Logs:

Well logs can be submitted upon completion of well.

## DEVON ENERGY OPERATING CORPORATION APPLICATION FOR AUTHORITY TO INJECT GRAYBURG-JACKSON WATERFLOOD

#### XI Chemical Analysis of Fresh Water:

There are no known producing fresh water wells within one mile of a proposed injection well.

#### XII Affirmative Statement of Open Faults:

Upon examination of the available geologic and engineering data, no evidence of open faults or any other hydraulic connection between the disposal zone and any underground source of drinking water was found.

#### XIII "Proof of Notice" and "Proof of Publication":

The Bureau of Land Management is the surface owner. They have been notified by letter with a copy of our application.

Devon Energy Operating Corporation operates the Grayburg-Jackson Unit in Section 3 of T17S-R31E. Offset operators in the "Area of Review" are as follows:

(1) Xeric Oil & Gas Corporation P.O. Box 51311 Midland, TX 79710

Each of these operators were provided a letter by certified mail. Proof of notice is attached.

"Proof of Publication" from the Carlsbad Current-Argus is attached.

CORPORATION

20 North Broadway, Suite 1500 Oklahoma City, Oklahoma 73102-8260

Telephone:405/235-3611 FAX 405/552-4550

January 8, 1997

Certified Mail P 619 404 353

Xeric Oil & Gas Corporation P.O. Box 51311 Midland, TX 79710

**RE: Devon Energy Corporation** Grayburg-Jackson Waterflood Project H.E. West "A" #35 1980' FNL & 860' FWL of Sec 3-T17S-R31E Eddy County, NM

Gentlemen:

Please consider this letter as official notification that Devon Energy Corporation is in the process of filing an application to drill and complete a water injection well in the above referenced section. Our records indicate that you are an offset operator. As an offset operator you must be notified by Devon and you must file any objections or requests for hearings of administrative applications with the Oil Conservation Division of New Mexico within fifteen (15) days of receiving this notification.

Please direct any questions regarding this matter to the undersigned at 405/552-4560.

Sincerely, **Devon Energy Corporation** 

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Randy Jackson **District Engineer** 

/chc

xc: Well File

on the reverse side?	SENDER: Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b. Print your name and address on the reverse of this form so that we card to you. Attach this form to the front of the mailpiece, or on the back if space permit. Write <i>Return Receipt Requested</i> <sup>*</sup> on the mailpiece below the article The Return Receipt will show to whom the article was delivered and delivered.	can return this a does not a number. d the date	I also wish to receive the following services (for an extra fee): 1.
<u> </u>	3. Article Addressed to: XERIC OIL& GAS CORPORATION P.O. BOX 51311 MIDLAND, TX 79710	4a. Article N P (c) 9 4b. Service 1 Registere Express Return Red 7. Date of De	umber $404.353$ Type         ad         Mail         Insured         ceipt for Merchandise         OD         elivery $1-13-977$
Is your BETUF	5. Received By: (Print Name) 6. Signature: (Addressee or Agent) X (10	8. Addressee and fee is	paid)

using Return Receipt Service. ğ Nank you

## **Affidavit of Publication**

State of New Mexico, County of Eddy, ss.

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being first duly sworn, on oath says:

That she is Business Manager of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the state wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

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That the cost of publication is 25.11, and that payment thereof has been made and will be assessed as court costs.

Subscribed and sworn to before me this

davof

My commission expires 08/01/98 Notary Public

## Nº 17101

#### January 11, 1997

#### 'Legal Advertisement

Notice is hereby given that Devon Energy Operating Corporation is applying to the New Mexico Oil Conservation Division to drill and complete a water injection well for secondary recovery purposes in:

> Section 3 of T17S-R31E, Eddy County, NM

The intended purpose of this well is to inject produced waters into the Grayburg/San Andres Formations to enhance oil production through secondary recovery. Maximum injection rates of 600 bwpd and a maximum pressure of 2500 psig are expected.

Interested parties must file objections or requests for hearing within 15 days to the following commission:

> State of New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87501

Randy Jackson District Engineer Devon Energy Operating Corporation 20 North Broadway, Suite 1500 Oklahoma City, OK 73102 (405) 552-4560