

11490 WESTHEIMER ROAD, SUITE 200 HOUSTON, TEXAS 77077-6841 TELEPHONE (713) 589-8484 FAX. (713) 589-7892

Incorporated in Delaware, USA.

May 21, 1992

State of New Mexico Oil Conservation Division Energy, Minerals and Natural Resources Department Attention: Mr. David Catanach P. O. Box 2088 Santa Fe, New Mexico 87501-2088

Re: Eunice Monument Unit Area Well Numbers 21 and 28 Lea County, New Mexico

Dear Mr. Catanach:

Enclosed find the application covering the conversion of Well Numbers 21 and 28 from producing oil wells to injection wells in the Eunice Monument Area. I will forward the certified receipts whereby we notified the surface owners, mineral owner, and offset operators when I receive them. Please advise if I can provide you with additional information.

Very truly yours,

11 margar 5

Michael J. Newport Land Manager-Permian Basin

MJN:sjs 92.373

Enclosures



11490 WESTHEIMER ROAD, SUITE 200 HOUSTON, TEXAS 77077-6841 TELEPHONE (713) 589-8484 FAX (713) 589-7892

Incorporated in Delaware, U.S.A.

VIA CERTIFIED MAIL

May 21, 1992

Chevron USA Inc. P. O. Box 1150 Midland, Texas 79702

Re: Eunice Monument Unit Area Well Numbers 21 and 28 Lea County, New Mexico

Gentlemen:

Enclosed find the application covering the conversion of Well Numbers 21 and 28 from producing oil wells to injection wells. We are required by the Commission to submit a copy of the application by certified mail to the offset operators.

Very truly yours,

ichael Mund

Michael J. Newport Land Manager-Permian Basin

MJN:sjs 92.375

Enclosure



11490 WESTHEIMER ROAD, SUITE 200 HOUSTON, TEXAS 77077-6841 TELEPHONE (713) 589-8484 FAX (713) 589-7892

Incorporated in Delaware, U.S.A.

VIA CERTIFIED MAIL

May 21, 1992

Mr. Delbert Dale Cooper Mr. Jimmie Tom Cooper dba Cooper Brothers P. O. Box 6 Monument, New Mexico 88265

Re: Eunice Monument Unit Area Well Numbers 21 and 28 Lea County, New Mexico

Gentlemen:

Enclosed find the application covering the conversion of Well Numbers 21 and 28 from producing oil wells to injection wells. We are required by the Commission to submit a copy of the application by certified mail to the surface owners.

Very truly yours,

Richael Mund

Michael J. Newport Land Manager-Permian Basin

MJN:sjs 92.371

Enclosure

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

APPI TRATION	FOR	AUTHORIZATION	ТΟ	INJECT

Ι.	Purpose: XXXs Application	econdary Recovery Pressure Mainter qualifies for administrative approval?	nance [ XXXyes	Disnosal	Storage
II.	Operator:	GREENHILL PETROLEUM CORPORATION			
	Address:	11490 Westheimer, Suite 200, Housto	on, Texas	77077	
	Contact party:	Mike Newport	Phone:	(713) 589-	-8484
111.		plete the data required on the reverse posed for injection. Additional sheet			
IV.		nsion of an existing project? XXXye The Division order number authorizing th			36 ·

- 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: <u>Mic</u>	hael J. Newport	TitleLā	and Manager-Permian	<u>Basin</u>
Signature:	- Richard J. Lengort	Date:	5-20-92	

\* 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.

NTCTOTOULTION Official and and any to Sopte Ferries and the the second by

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:
  - 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 usec, 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 aoplications within 15 days from the date this application was mailed to them.



11490 WESTHEIMER ROAD, SUITE 200 HOUSTON, TEXAS 77077-6841 TELEPHONE (713) 589-8484 FAX. (713) 589-7892

Incorporated in Delaware, U.S.A.

June 4, 1992

State of New Mexico Oil Conservation Division Energy, Minerals and Natural Resources Department P. O. Box 2088 Santa Fe, New Mexico 87501-2088

Attention: Mr. David Catanach

Re: Eunice Monument Area Well Numbers 21 and 28 Lea County, New Mexico

Dear Mr. Catanach:

Enclosed please find copies of the certified receipts whereby the surface owner and the offset operator have been notified of the conversion of Eunice Monument Well Numbers 21 and 28 from producing oil wells to water injection wells.

Very truly yours,

el Mant

Michael J. Newport Land Manager-Permian Basin

MJN:sjs 92.412

Enclosures

3 and 4. Put your address in t	addressee's address. 2. 🗋 Restricted Delivery
(Extra charge) 3. Article Addressed to:	4. Article Number P 799533916
Mr. Delbert Dale Cooper Mr. Jimmie Tom Cooper dba Cooper Brothers P. O. Box 6 <u>Monument, NM 88265</u> 5. Signature - Addressee X Dictury Cooper 6. Signature - Agent X	Type of Service:         Registered         Insured         X         Certified         COD         Express Mail         XYReturn Receipt         For Merchandise         Always obtain signature of addressee         or agent and DATE DELIVERED.         8. Addressee's Address (ONLY if requested and fee poid)
5-29-92	P.O. 1989-238-815 DOMESTIC RETURN RECEIPT
5-29-92 S Form 3811, Apr. 1989 *U.S.G.F SENDER: Complete items 1 and 2 whe 3 and 4. Put your address in the URN TO'' Space of the date of delivery. For additional fees the foll wid chear bravies for additional fees the foll wid chear bravise for additional fees the foll	en additional services are desired, and complete Items on the reverse side. Failure to do thi prevent this card fee will provide you the name of the $p_x$ in delivered to and lowing services are available. Consult postmaster for fees juested. addressee's address. 2. $\Box$ Restricted Delivery
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<ul> <li>5-29-92</li> <li>S Form 3811, Apr. 1989 ★U.S.G.F</li> <li>S ENDER: Complete items 1 and 2 whee 3 and 4.</li> <li>Put your address in the 1 URN TO'' Space of from being returned to you. The return receipt fithe date of delivery. For additional service(s) required. date, and a (Extra charge)</li> <li>3. Article Addressed to:</li> <li>Chevron, USA Inc.</li> <li>P. 0. Box 1150</li> </ul>	en additional services are desired, ar d complete Itoms on the reverse side. Failure to do thi prevent this card fee will provide you the name of the p in delivered to and lowirg services are available. Consult postmaster for fees juested. addressee's address. 2. Restricted Delivery <i>(Extra charge)</i> 4. Article Number P 799 533 916 Type of Service: Registered % Insured X Certified % Con Express Mail XX Return Receipt for Merchandise Always obtain signature of addressee

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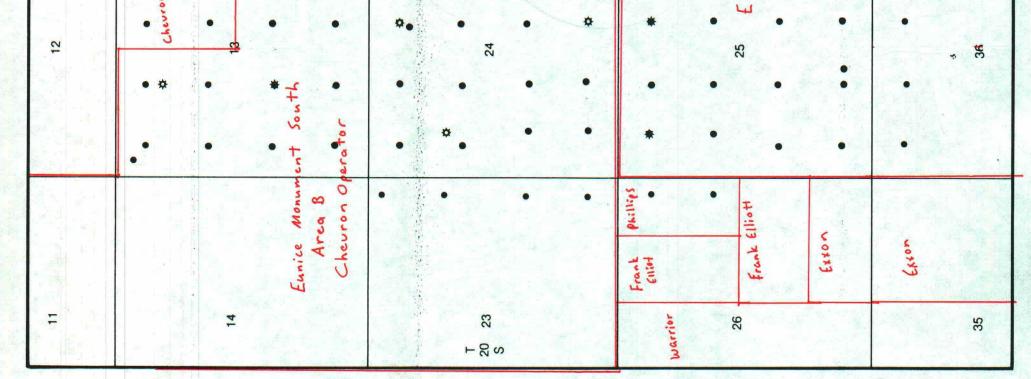
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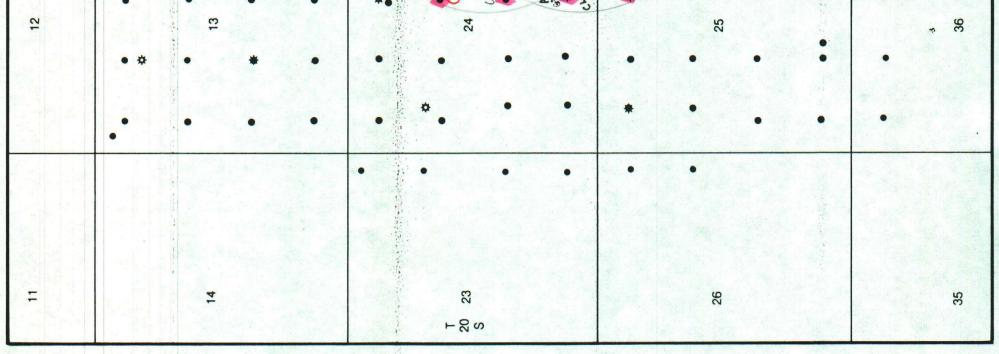
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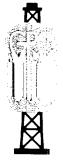
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11490 WESTHEIMER ROAD, SUITE 200 HOUSTON, TEXAS 77077-0041

. - | TELEPFIのNE (713) 589-8484 FAX (7**43)** 589-7892

Plasma

Incorporated in Delaware U.S.A.

June 8, 1992

State of New Mexico Attention: Mr. David Catanach P. O. Box 2088 Santa Fe, New Mexico 87501-2088

Re: Eunice Monument Area Well Numbers 21 and 28 Lea County, New Mexico

Dear Mr. Catanach:

Enclosed find the proof of publication covering Well Numbers 21 and 28. Greenhill Petroleum Corporation has proposed that the wells be converted from production to injection pursuant to our letter and application dated May 21, 1992.

Very truly yours,

Michael J. Newport Land Manager-Permian Basin

MJN:sjs 92.417

Enclosure

#### 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

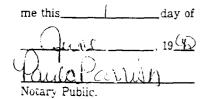
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<u>One</u> weeks. Beginning with the issue dated

May 31, 19 92 and ending with the issue dated

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General Manager Sworn and subscribed to before



My Commission expires\_\_\_\_

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 May 31, 1992 Greenhill Petroleum Corporation 11490 Westheimer, Suite 200, Houston, Texas 77077-

Phone (713) 589-8484 Con-tact: Michael J. Newport-Greenhill Petroleum Corporation plans to convert the following producing wells to injection wells within the Eunice Monument Field Area. The nonument Field Area. The purpose of the produced injection wells is to in-crease the reservoir pre-ssure in order to improve the recovery of hydrocarbons. The wells are within Section 19, T20S-R37E, Lea County, New Mexico and are Well Numbers 21 and 28. The injection intervals are approximately between the depths of 3599 feet and 3990 feet in the Grayburg and San Andres Formations. The maximum injection rates are 2000 PSI and 1500 **BWPD**. Interested parties must file objections or request for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501, within fifteen (15) days.

Chevron	Eunice	e Monument :	South		
OPERATOR		LEASE			
895 660 FNL & 660 FEL		24	205	36E	
WELL NO. FOOTAGE LOC	ATION	SEC.	TOWNSHIP	RANGE	
		Tu	bular Data		
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	Hole S	Size:	12"		
	Long S	String		·	
	Size:	7" "	Cemented	with <u>300</u>	SX
	TOC:	2346	feet d	etermined by	60% cale
		Size:			•
- · · ·	Total	Depth:	3872 '		
· · ·	Inject	tion Interv	<u>a1</u>		
			pen-hole, i	ndicate whic	
Tubing size lined with			!		set in a
	packer a	(mate at	rial)	feet.	
(brand & model) (or describe any other casing-tubir					
<u>Other_Data</u>	0,				
1. Name of the injection formation	. Eunice	e Monument (	Grayburg S.	Α.	
<ol> <li>Name of Field or Pool (If appli</li> </ol>					
3. Is this a new well drilled for If no, for what purpose was the			rilled?	Production	
4. Has the well ever be perforated intervals and give plugging det used. No					forated
5. Give the depth to and name of a (pools) in this area.	any overl	lying and/o	r underlyin	g oil or gas	zones

Chevron	Eunice Monument S	outh Unit	В		
OPERATOR		LEASE	<u></u>	<u></u>	
909	1980 FNL & 1980 FEL	24	205	36E	
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE	<del></del>

	<u>Tubular Data</u>
	Surface Casing Size: Cemented with SX TOC: feet determined by <u>circulation</u> Hole size: I7 1/4"
	Intermediate Casing Size: 9 5/8"" Cemented with 600 SX TOC: §52 feet determined by 60% calc Hole Size: 12"
	Long String Size: Cemented with SX TOC: feet determined by Composition C
	Total Depth: <u>3911'</u> <u>Injection Interval</u> <u>feet to</u> <u>feet</u> (perforated or open-hole, indicate which)
	(material) acker atfeet. seal).
<ol> <li>Name of the injection formation</li> <li>Name of Field or Pool (If applic</li> <li>Is this a new well drilled for i</li> </ol>	able) Eunice Monument GB/SA
	in any other zone(s)? List all such perforated il (sacks of cement or bridge plug(s)

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

3. Is this a new well drilled for injection? <u>No</u> If no, for what purpose was the well originally drilled? <u>production</u>	Amoco		G	illully H	Federal Gas (	lo.			
WELL NO.       FOOTAGE LOCATION       SEC.       TOWNSHIP       RANGE         Tubular Data         Surface Casing         Size: 8 5/6". Cemented with425SX         TOC:21%feet determined by66% ce         Note:12 1/4 "         Intermediate Casing         Size:?         Cemented withSX         TOC:?         Joing String         Size:?         Long String         Size:??         Long Colspan <td <="" colspan="2" th=""><th>OPERATOR</th><th></th><th></th><th>LEASE</th><th></th><th></th><th></th></td>	<th>OPERATOR</th> <th></th> <th></th> <th>LEASE</th> <th></th> <th></th> <th></th>		OPERATOR			LEASE			
Tubular_Data         Surface Casking         Size: Gemented withSX         TOC:	17	2200 FNL & 660	FEL	24	205	36E			
Surface Casing         Size:       8.5/8"       Cemented with425SX         TOC:	WELL NO.	FOOTAGE LOCA	ATION	SEC.	TOWNSHIP	RANGE	497 <u></u>		
Size:       8.5/6"       Gemented with       425       SX         TOC:       21%       feet determined by       66% cc         Nole size:       12'1/4"	<u></u>			T	ubular Data				
TOC:			<u>Surface</u>	Casing					
TOC:			Size: 8	3 5/8"	, Cemented	with425	sx		
Hole size:       12 1/4"         Intermediato Gasing         Size:       " Cemented withSX         TOC:      feet determined by         Hole Size:          Long String       Size: 5 1" " Cemented withSX         TOC:									
Size:       " Cemented withSX         TOC:      feet determined by         Hole Size:          Long String       Size:         Size:          Commented with							<u></u>		
TOC:      feet determined by			Interme	diate Ca	sing				
Hole Size:			Size:		" Cemented	with	sx		
Long String         Size: Cemented with G476 ccl         TOC: feet determined by <u></u>			TOC:	·····	feet d	etermined by	•		
Size: <u>5 +</u> " <u>Cemented with</u> <u>640</u> <u>SX</u> TOC: <u>763</u> <u>feet determined by <u>6676 cel</u> Nole Size: <u>77/8</u>" Total Depth: <u>3600'</u> <u>Injection Interval</u> <u>feet to</u> <u>feet</u> <u>(perforated or open-hole, indicate which)</u> Tubing size <u>lined with</u> <u>set in a</u> <u>(material)</u> <u>feet.</u> (brand &amp; model) (or describe any other casing-tubing seal). <u>Other Data</u> 1. Name of the injection formation <u>set in</u> 2. Name of Field or Pool (If applicable) <u>Eumont Queen</u> 3. Is this a new well drilled for injection? <u>No</u> If no, for what purpose was the well originally drilled? <u>production</u> 4. Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) <u>No</u></u>			Hole Si	ze:					
TOC:       763       feet determined by <u>(6% cet</u> )         Nole Size:       7.7/8"         Total Depth:       3600'         Injection Interval			<u>Long St</u>	ring					
Hole Size:       7.7/8"         Total Depth:       3600'         Injection Interval	<u></u>	an a	Size:	<u>5 1''</u>	" Cemented	with640	SX		
Inite Size:       ///a         Total Depth:       3600'         Injection Interval			тос:	763	feet d	etermined by	6090 cclc		
Injection Interval        feet tofeet         (perforated or open-hole, indicate which)         Tubing sizelined withset in a			Hole Si	ze:	7 7/8"		•		
feet to			Total D	epth:	3600'	<b></b>			
<pre>(perforated or open-hole, indicate which) Tubing sizelined withset in a</pre>			Injecti	on Inter	val				
Tubing size lined with packer at feet.					feet to				
			(perfor	ated or (	open-hole, i	ndicate which	)		
	Tubing size	lined with		(mat)		S	et in a		
<pre>(brand &amp; model) (or describe any other casing-tubing seal). Other Data 1. Name of the injection formation</pre>						feet.			
Other Data         1. Name of the injection formation		el)							
<ol> <li>Name of the injection formation</li></ol>	Other Data								
<ul> <li>2. Name of Field or Pool (If applicable) <u>Eumont Queen</u></li> <li>3. Is this a new well drilled for injection? <u>No</u> If no, for what purpose was the well originally drilled? <u>production</u> </li> <li>4. Ilas the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used. <u>No</u></li> </ul>		injection formation							
If no, for what purpose was the well originally drilled? <u>production</u> 4. Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used. <u>No</u>									
If no, for what purpose was the well originally drilled? <u>production</u> 4. Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used. <u>No</u>						· ·	<del></del>		
intervals and give plugging detail (sacks of cement or bridge plug(s) used. No						production			
	intervals an	d give plugging deta					orated		
	<u></u>		<u>-</u> ** <u></u> *						

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

Chevron Eunice Monument South B OPERATOR LEASE 910 2310 FNL & 330 FEL 24 20S 36E WELL NO. FOOTAGE LOCATION SEC. TOWNSHIP RANGE Tubular Data Surface Casing Size: 13" Cemented with 225. SX TOC: <u>Surface</u> feet determined by <u>circ</u>. Hole size:  $17\frac{1}{4}$ Intermediate Casing Size: 9 5/8W Cemented with 600 SX TOC: <u>846</u> feet determined by <u>60% calc</u>. Hole Size:  $12^{"}$ Long String Size: 7" " Cemented with 300 SX TOC: 2332 feet determined by 60% calc. Hole Size: \_\_\_\_\_8 3/4" Total Depth: \_\_\_\_\_3865' Injection Interval feet to feet (perforated or open-hole, indicate which) Tubing size \_\_\_\_\_ lined with \_\_\_\_\_ \_\_\_\_\_ set in a (material) ----\_\_\_\_\_ packer at \_\_\_\_\_ \_\_\_\_feet. (brand & model) (or describe any other casing-tubing seal). Other Data Name of the injection formation \_\_\_\_\_ 1. Name of Field or Pool (If applicable) Eunice Monument GB/SA 2. Is this a new well drilled for injection? No 3. If no, for what purpose was the well originally drilled? production 4. Has the well ever be perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used. No

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

#### INJECTION WELL DATA SHEET

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Chevron		Eunice 1	lonument	South Unit I	В	
OPERATOR	······	<u></u>	LEASE	<u></u>	- <u></u>	
911	1980 FSL &	1980FEL	24	20S	36E	
WELL NO.	FOOTAGE LOCA	TION	SEC.	TOWNSHIP	RANGE	
		*****	Tu	bular Data	· <u>·····</u>	
		Surface	Casing			
		Size:	13"	Cemented	with2	<u>00</u> SX
		тос:	surface	feet d	etermined b	y <u>circulati</u>
	· ·	Hole si	ze:	Unknown		
	·. <b>*</b>	Interme	<u>diate Cas</u>	ing		
- Arran	49 24	Size:	9 5/8"	Cemented	with600	SX
		TOC:	,	feet d	letermined by	у
		Hole Si	ze: <u>Unk</u>	nown		
		Long St	<u>ring</u>			
		Size:	7	Cemented	with	SX
	· .	TOC:		feet d	letermined b	y
		Hole Si	UU	nknown		٠
		Total D	epth: <u>3</u>	950'		
		Injecti	<u>on Interv</u>	<u>al</u>		
				_ feet to	ndicate whi	feet
Tubing size	lined with		(mate	rial)		set in a
	q	acker at		·	feet.	
(brand & model) (or describe any oth		, seal).				
ther Data						
Name of the inje	ction formation				······	
. Name of Field or	Pool (If applic	able) _	Eunice M	onument GB/	SA	
. Is this a new we If no, for what				rilled?	production	
. Has the well eve intervals and gi used. No						rforated
Give the depth t	o and name of an	v overly	ing and/o	runderlyin	r oil or re	5 70785

·····

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

ODEDATOD	<u></u>		LEASE	ice Monument		
OPERATOR						
20	2310 FSL & 990			205		
WELL NO.	FOOTAGE LOCAT	10N	SEC.	TOWNSHIP	RANGE	
		<u></u>	T	<u>ubular Data</u>		//////////////////////////////////////
		<u>Surface C</u>	asing			
		<b>Size:</b> 13	} "	Cemented w	ith	<u>200 sx</u>
The well is		тос. (	ur fase	feet de	termined	by elect
currently				17 <sup>1</sup> / <sub>4</sub> "		
shut-in.		Intermedi				
		Size: 9	5/8	Cemented w	ith	<u>400</u> 52
	TOC:	56	feet de	termined	by 60% c	
	1 , · ·			12 "		-
		<u>Long Stri</u>				•
	4			Cemented w		
	1, 1.			feet de	termined	by <u>6090</u>
		Hole Size	:	8 3/4		
		Total Dep	th:	3856'		
		Injection	Interv	val		
		 (perforat		feet to		feet ich)
ubing size	lined with			i.		set in a
	lined with					
(brand & mode)	L)	_			1660	•
r describe any o	other casing-tubing	seal).				
<u>her Data</u>						
Name of the in	njection formation _			ана со селото на село При селото на селото н		
Name of Field	or Pool (If applica	ble)	Eur	nice Monument	Grayburg	San Andres
Is this a new If no, for wha	well drilled for in at purpose was the w	ijection? ell origi	No nally d	irilled?	production	1
	ever be perforated i give plugging detai					erforated

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

 $\cdot$ ,

Amoco		Gillully	Federal	Gas Company		
OPERATOR			LEASE		·····	······
7	660 FSL	& 1980 FEL	24	20S	36E	
WELL NO.	FOOTAGE LOCA	TION	SEC.	TOWNSHIP	RANGE	
				1 5	~	
			Tur	<u>pular Data</u>		
		<u>Surface</u> C	asing			
		Size: $1$	3" "	Cemented w	rith200	sx
		TOC:	surface	feet de	stermined by	circ.
	$\mathcal{D}^{\ell_{i+1}}$	Hole size				<u></u>
		<u>Intermedi</u>	ate Casi	lng		
45/×				_	<b>ith</b> 600	sx
	.•			1	etermined by _	
Per	rforated at 2683'					
and	d squeeze 200	Hole Size		12"		
	-	<u>Long Stri</u>	ng			
e K	cks to bring		7" "	Cemented w	<b>ith</b> 500	SX
cer	ment up to 1500'.	TOC:	500'	feet de	etermined by	
	·	Hole Size	8 3	/4"		•
		Total Dep	th: 385	8'		
TO SER		Injection	Interva	al		
				_ feet to		feet
		(perforat	ed or or	pen-hole, in	dicate which)	
Tubing size	lined with				se	t in a
	р	acker at	(mate)	(1al)	feet.	
(brand & model) (or describe any oth	er casing-tubing	seal).				
<u>Other_Data</u>	· .					
	ation formation					
1. Name of the inje						······································
2. Name of Field or	Pool (If applic	able) Lumoi	nt Queen			
<ol> <li>Is this a new we If no, for what</li> </ol>		-		cilled?	production	····
4. Has the well eve intervals and gi used. No	r be perforated ve plugging deta					cated
					· · ·	

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

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INJECTION WELL DATA SHEET

Chevron       Example Monument South Unit B         OPERATOR       LEASE         924       602 FSL 2090 FEL       24       205         WELL NO.       FOOTAGE LOCATION       SEC.       TOWNSHIP RANGE         Tubular Data         Surface Casing         Size: $8 5/8" ~ Cemented with         Size: 8 5/8" ~ Cemented with         Tubular Data         Surface Casing         Size: 12 t "         Intermediate Casing         Size: _12 t "         Iong String         Size: 51" ~ ~ Cemented with$	Chevron		·	Eurico	Manumant Ca	ush Hudt D	
WELL NO.       FOOTAGE LOCATION       SEC.       TOWNSHIP       RANGE         Tubular Data         Surface Casing         Size: <u>8 5/8"</u> " Cemented with <u>800</u> SX         TOC: <u>surface</u> feet determined by <u>circulation</u> Hole size: <u>12 ±</u> "         Intermediate Casing         Size: feet determined by         Hole Size: feet determined by         Hole Size: feet determined by         Hole Size: feet determined by <u>circ.</u> Hole Size: Total Depth: <u>4160'</u> Injection Interval         feet to feet.	والمتشارية والمحمد والمشاري والمشارك والمستعد والمستعد والمتحد والمحمد والمحمد والمحمد والمحمد والمحمد والمحمد		<u></u>		<u>Monument So</u>	uth Unit B	
WELL NO.       FOOTAGE LOCATION       SEC.       TOWNSHIP       RANGE         Tubular Data         Surface Casing         Size: <u>8 5/8"</u> " Cemented with <u>800</u> SX         TOC: <u>surface</u> feet determined by <u>circulation</u> Hole size: <u>12 ±</u> "         Intermediate Casing         Size: feet determined by         Hole Size: feet determined by         Hole Size: feet determined by         Hole Size: feet determined by <u>circ.</u> Hole Size: Total Depth: <u>4160'</u> Injection Interval         feet to feet.	024			97	200		
Surface Casing         Size:       8 5/8" " Cemented withSX         TOC:      feet determined by circulation         Hole size:          Intermediate Casing         Size:       Cemented withSX         TOC:       Cemented withSX         TOC:       Cemented withSX         TOC:       feet determined by         Hole Size:          Long String          Size:       5½" Cemented withSX         TOC:       surface feet determined by circ.         Hole Size:							
Surface Casing         Size:       8 5/8" " Cemented withSX         TOC:      feet determined by circulation         Hole size:          Intermediate Casing         Size:       Cemented withSX         TOC:       Cemented withSX         TOC:       Cemented withSX         TOC:       feet determined by         Hole Size:          Long String          Size:       5½" Cemented withSX         TOC:       surface feet determined by circ.         Hole Size:							
Size:       8 5/8" " Cemented with				Tui	bular Data		£",, <b></b>
TOC:       surface       feet determined by circulation         Hole size:       12 ½ "         Intermediate Casing         Size:       " Cemented withSX         TOC:       feet determined by         Hole Size:          Long String       Size:         Size:       5½"         Cemented with       805         Size:       5½"         Cemented with       805         Size:       5½"         Cemented with       805         Size:       5½"         Cemented with       SSX         TOC:       surface			<u>Surface</u>	Casing	•		
TOC:       surface       feet determined by circulation         Hole size:       12 ½ "         Intermediate Casing         Size:       " Cemented withSX         TOC:       feet determined by         Hole Size:          Long String       Size:         Size:       5½"         Cemented with       805         Size:       5½"         Cemented with       805         Size:       5½"         Cemented with       805         Size:       5½"         Cemented with       SSX         TOC:       surface			Size:	8 5/8" #	Cemented w	<b>ith</b> 800	) sx
Hole size:       12 ½ "         Intermediate Casing         Size:       " Cemented withSX         TOC:       feet determined by         Hole Size:          Long String:       Size: 51" " Cemented withSX         TOC:       surface         Feet determined by circ.       Hole Size:         Hole Size:				surface	feet de	termined by	circulatio
Intermediate Casing         Size: Cemented withSX         TOC:feet determined by         Hole Size:         Long String         Size: Cemented withSSX         TOC: Cemented withSSX         TOC: Cemented withSSX         TOC: Cemented withSSX         TOC: Feet determined by circ.         Hole Size: 7 7/8"         Total Depth: feet to feet         Injection Interval         feet to feet         (perforated or open-hole, indicate which)         Tubing size lined with set in a						.cozminica by	
Size:       " Cemented withSX         TOC:       feet determined by         Hole Size:          Long String       Size: 5½" " Cemented with805SX         TOC:       surfacefeet determined by circ.         Hole Size:       7 7/8"         Hole Size:       7 7/8"         Injection Interval      feet tofeet (perforated or open-hole, indicate which)         Tubing size      set in a			Hole si:	ze:	- 4		
TOC:      feet determined by         Hole Size:          Long String       Size: 5½" Cemented withSSX         Size:       5½" Cemented withSSX         TOC:       feet determined by circ.         Hole Size:       feet determined by circ.         Hole Size:       77/8"         Total Depth:       feet to feet (perforated or open-hole, indicate which)         Tubing size       set in a (material)         packer at (		1	Interme	<u>diate Cas</u>	ing		
Hole Size:		$\frac{1}{\sqrt{2}}$ . A set of the set	Size:		Cemented w	rith	SX
Long String         Size: 51" " Cemented with 805 SX         TOC: surface feet determined by circ.         Hole Size: 7 7/8"         Hole Size: 7 7/8"         Total Depth: 4160'         Injection Interval			тос:		feet de	termined by	
Long String         Size: 51" " Cemented with 805 SX         TOC: surface feet determined by circ.         Hole Size: 7 7/8"         Hole Size: 7 7/8"         Total Depth: 4160'         Injection Interval			Hole Si	ze:			
Size: <u>51</u> " Cemented with <u>805</u> SX TOC: <u>surface</u> feet determined by <u>circ.</u> Hole Size: <u>7 7/8"</u> Total Depth: <u>4160'</u> <u>Injection Interval</u> <u></u>					1	· · · · · · · · · · · · · · · · · · ·	
TOC:       surface       feet determined by circ.         Hole Size:       7 7/8"         Total Depth:       4160'         Injection Interval		~ )			1 - 1	0.05 <sup>°</sup>	
Hole Size: 7 7/8" Total Depth: 4160' <u>Injection Interval</u> <u>feet to</u> feet (perforated or open-hole, indicate which) Tubing size lined with set in a (material) packer at feet.			<u></u>				
Total Depth: <u>4160'</u> <u>Injection Interval</u> <u></u>	,		TOC:	surface	feet de	stermined by	· circ.
Injection Interval		•	Hole Si	ze:7	7/8"	·	•
Injection Interval			Total D	epth: 4	160'		
Tubing size lined with feet at set in a							
(perforated or open-hole, indicate which) Tubing size lined with set in a (material) packer at feet.			Injecti	on_incerv	<u>ai</u>		
Iubing size lined with set in a (material)         packer at feet.			(perfor	ated or o		the second se	Concerned in the second s
(material) packer at feet.	n 1 t		-		1		
packer at feet.	lubing size	lined with		(mate	rial)		set in a
		•	packer at			feet.	
	-		0				
ther Data	. Name of the f	Injection formation	۱ <u></u>				
ther Data	. Name of Field	i or Pool (If appli	lcable) _	Eunice	Monument GB,	/SA	
ther Data . Name of the injection formation						produc	tion
ther Data . Name of the injection formation		i give plugging det					forated
<ul> <li>Is this a new well drilled for injection?</li></ul>		No					
ther_Data         Name of the injection formation				· · ·			

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

Greenhill Pe	troleum Corporation	•	Funice	Monument Un	÷+	
OPERATOR		<u></u>	LEASE	Monument on	<u>10</u>	
27	330 FSL & 330	FEL	24	205	36E	
WELL NO.	FOOTAGE LOCA	TION	SEC.	TOWNSHIP	RANGE	
<u> </u>	<u></u>		Tu	bular Data		
		<u>Surface</u>	Casing			
	S.	Size:]	L3" "	Cemented w	ith	SX
	13 12	TOC:	Sur face	feet de	termined by	_ Circ.
		Hole siz	<b>:e:</b> <u>15</u>	<u>1</u> !! 2		
			iiate Cas			
		Size:	) <u>5/8"</u>	Cemented w	rith400	SX
		TOC:	235	feet de	termined by	6090 cal
	•	Hole Siz	:e:	2 <sup>1</sup> / <sub>2</sub> "		
	) }	Long Str	<u>ing</u>	L 1	·	
		Size:	7" "	Cemented w	<b>ith</b> <u>300</u>	SX
	,	TOC:	2246	feet de	termined by	16 40 calc
4 5				8 3/4"		•
		Total De	epth:	3861'		
			on Interv			
				feet to		feet
		-	icea or o	pen-hole, ir		
Tubing size	lined with		(mate	rial)	S	set in a
(brand & mode		acker at	<b></b>		feet.	
•	other casing-tubing	seal).				
<u>Other Data</u>						
1. Name of the	Injection formation	·				
2. Name of Field	i or Pool (If applic	able) <u>E</u>	unice Mor	nument Graybı	irg San Andre	28
3. Is this a new If no, for wh	w well drilled for i nat purpose was the	njectionî well orig	ginally d	lrilled?	production	
	ever be perforated i give plugging deta No					Eorated
5 Cive the desi	th to and name of an	w overly	ing and/o	r underluine		70204

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

Cl	nevron USA		Eunic	ce Monum	ent South		
	OPERATOR			LEASE			
	102	660 FNL & 660 1	FEL	25	20S	36E	
	WELL NO.	FOOTAGE LOCA	ATION	SEC.	TOWNSHIP	RANGE	
		<u> </u>		Tub	ular Data		
			<u>Surface Ca</u>	х 1			
	{				Cemented w	ith 35	, sx
					feet de		
			Hole size:				6 <u></u>
			<u>Intermedia</u>				
			Size: 7 5/	/8" "	Cemented w	ith225	SX
			TOC:	ırface	feet de	termined by	circ.
					9 7/8″ .		
		an a	Long Strin	ng			
		) ·	Size: $5\frac{1}{2}$	11 <i>w</i>	Cemented w	<b>ith</b> 150	sx
		•	<b>TOC:</b> 175	5C'	feet de	termined by	C-101
			Hole Size		6 3/4 "		•
			Total Dep	th:	3998'		
			<u>Injection</u>	Interva	1		
					feet to		feet
			(perforate	ed or op	en-hole, in	dicate whic	h)
Tubi	ng size	lined with	·····				set in a
<del></del>			packer at		ial)	feet.	
	brand & model escribe any o	) other casing-tubing	g seal).				
<u>Other</u>	Data						
1. N	ame of the in	jection formation			· · · · · · · · · · · · · · · · · · ·		
2. N	ame of Field	or Pool (If applic	cable)	Eunice Mo	onument Gray	vburg SA	
3. I	s this a new	well drilled for : it purpose was the	injection? <sup>N</sup>	10	, 	roduction	· · · · · · · · · · · · · · · · · · ·
i		ever be perforated give plugging deta					forated
-	No						

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

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INJECTION WELL DATA SHEET

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Chevron			Eunice	Monument Gr	ayburg San An	dres
OPERATOR			LEASE			
103	660 FNL & 1980 FEL		25	20S	36E	
WELL NO.	FOOTAGE LOCA	TION	SEC.	TOWNSHIP	RANGE	
						. <u></u>
			Tu	<u>bular Data</u>		
		<u>Surface</u>	Casing			
		Size:	<u>13"                                    </u>	Cemented v	vith2	<u>50 </u> sx
		тос:	surface	feet de	etermined by	<u>Circulation</u>
	• •	Hole siz	:e:	17 1/2"		
		Intermed	liate Cas	ing		
		Size: 9	5/8" "	Cemented	with50	<u>)0    </u> SX
		TOC:	1155	feet de	etermined by .	<u>6090 call</u>
		Hole Si:	ze:	12"		
		Long Sti	cing		·	
	$2 \leq \epsilon \leq 2$	Size:	7"″	Cemented	with250	SX
		тос:	2568	feet d	etermined by	60% Calc
	$\epsilon_{\rm pl}$	Hole Si:	ze:8_	3/4"		•
Į.	2000	Total De	epth: <u>40</u>	05'		
	general second	Injectio	on Interv	al		
	, , , , , , , , , , , , , , , , , , ,		and the second se			
				-	ndicate which	)
Tubing size	lined with		 (mate	 rial)	S	et in a
		acker at			feet.	
(brand & mo (or describe an	del) w other casing-tubing	g seal).				
<u>Other Data</u>	· .					
	injection formation					
2. Name of Fie	ild or Pool (If applied	cable) Eu	nice Mon	ument Graybu	rg San Andres	, , ,
	new well drilled for a what purpose was the			rilled?		
	l ever be perforated and give plugging deta					orated
					· ···	
5. Give the de (pools) in	pth to and name of an this area.	y overly:	ing and/o	r underlyin	g oil or gas :	zones

	OPERATOR			LEASE			
	109	1980 FNL & 6	60 FEL	2.5	205	36E	
	WELL NO.	FOOTAGE LOCA	TION	SEC.	TOWNSHIP	RANGE	
				T	ubular Data		
	11 \$		Surface	Casing			
		1	Size:	10 3/4"	Cemented	with175	SX
			TOC:	surface	feet d	etermined b	y <u>circulati</u> o
			Hole si:				
			Intermed	liate Ca	sing		
		5161	Size:	7 5/8"	Cemented	with250	) <b>sx</b>
			тос:	surface	feet d	etermined b	y <u>circulation</u>
		TCC	Hole Si:	ze:	9 7/8"		
		er en	Long St	cing			
			Size:	5 1/2"	Cemented	with140	)SX
	TD 3486		TOC:	1886	feet d	etermined b	y calc
			Hole Si	ze:	6 3/4"		•
			Total De	epth: _	3986'	<u> </u>	
			Injectio	on Inter	val		
			•			······································	and the second
					open-hole, i	ndicate whi	ch)
Tu	bing size	lined with		(mat	 erial)		set in a
	(brand & model)	P	acker at			feet.	
(or		ner casing-tubing	seal).				
<u>0th</u>	<u>er Data</u>						
1.	Name of the inje	ection formation					
2.	Name of Field or	c Pool (If applic	able) _	Eunice M	onument Gray	burg San An	lres
3.	Is this a new we If no, for what	all drilled for i purpose was the	njection well ori	y <sup>No</sup> ginally	drilled?		
4.		er be perforated lve plugging deta					rforated

Chevron

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

OPERATOR		LEASE		
7	990 FNL & 660 FEL	25	205	36E
WELL NO.	FOOTAGE LOCATION	SEC.	TOWNSHIP	RANGE

		Surface Casing
		Size: 8 5/8" Cemented with 300 SX
		TOC: feet determined by
		Hole size:12 1/4"
		Intermediate Casing
		Size: Cemented withSX
		TOC: feet determined by
		Hole Size:
	U 3955 100	Long String
		Size: 5 1/2" Cemented with 1200 SX
		TOC: feet determined by
		Hole Size:7 7/8"
		Total Depth: 3750'
		Injection Interval
		feet to feet (perforated or open-hole, indicate which)
Tub	oing size lined with	set in a (material)
	g	(material) acker atfeet.
(or	(brand & model) describe any other casing-tubing	
	er_Data	
	Name of the injection formation	· ·
	-	
2.	Name of Field or Pool (If applic	able) <u>Eumont Gas</u>
3.	Is this a new well drilled for i If no, for what purpose was the	
	intervals and give plugging deta used.	in any other zone(s)? List all such perforated il (sacks of cement or bridge plug(s)
	No	

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

Greenhill Petroleum Corporation	Eunice Monument Unit
OPERATOR	LEASE
29 660 FSL & 1980 FWL	19 20 S 37 E
WELL NO. FOOTAGE LOCAT	
	<u>Tubular Data</u>
	Surface Casing
	Size: 13" Cemented with 125 SX
₹ 13"	TOC: <u>Surface</u> feet determined by <u>Circ.</u>
13"	Hole size:16"
	Intermediate Casing
75%	Size: 9 5/8" Cemented with 600 SX
	TOC:face feet determined by
	Hole Size: <u>12 1/4"</u>
1 2:40	Long_String
$4\frac{1}{2}$ " liner set at 3731	Size: 7" Cemented with 250 SX
surface.	TOC: $2792$ feet determined by $6090$ can
-	Hole Size: 8 5/8"
TE 38001	Total Depth: <u>3870'</u>
	Injection Interval
	feet to feet (perforated or open-hole, indicate which)
Tubing size lined with	(material) set in a
	acker atfeet.
(brand & model) (or describe any other casing-tubing	seal).
<u>Other Data</u>	
1. Name of the injection formation	
	able) Eunice Monument Grayburg San Andres
3. Is this a new well drilled for in If no, for what purpose was the w	
	In any other zone(s)? List all such perforated Il (sacks of cement or bridge plug(s)
INO	

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

 INJECTION WELL DATA SHEET

 Texaco
 New Mexico H State NCT 4

 OPERATOR
 LEASE

# 1653 FSL & 969 FWL1920S37EFOOTAGE LOCATIONSEC.TOWNSHIPRANGE

Tubular Data

		Surface Casing
	i 4	Size: <u>8 5/8"</u> Cemented with <u>700</u> SX
		TOC: <u>Surface</u> feet determined by <u>calc</u>
		Hole size: <u>11"</u>
		Intermediate Casing
	1089'	Size: Cemented withSX
	$\leq 12^{-3}$	TOC: feet determined by
		Hole Size:
		Long String
		Size: 5 1/2" Cemented with750_SX
,		TOC: <u>67</u> feet determined by <u>60%.calc</u>
		Hole Size: <u>7 7/8"</u>
		Total Depth:3550'
		Injection Interval
		feet to feet (perforated or open-hole, indicate which)
Tubi	ing size lined with	set in a (material)
		packer atfeet.
	(brand & model) lescribe any other casing-tubing	g seal).
<u>Other</u>	<u>. Data</u>	
1. N	Name of the injection formation	
2. N	lame of Field or Pool (If applie	cable) Eumont Yates 7 Rivers QN (Pro Gas)
3. 1	is this a new well drilled for : If no, for what purpose was the	injection? no
i	Intervals and give plugging detaised.	in any other zone(s)? List all such perforated ail (sacks of cement or bridge plug(s) No
- 5. G		ny overlying and/or underlying oil or gas zones

(pools) in this area.

27

WELL NO.

Greenhill Petroleum Corporation	
OPERATOR	LEASE
	1980 FWL 19 20S 37E
WELL NO. FOOTAGE LOCA	ATION SEC. TOWNSHIP RANGE
••••••••••••••••••••••••••••••••••••••	<u>Tubular Data</u>
	Surface Casing
	Size: 13" Cemented with 140 SX
	TOC: feet determined by <u>circ</u> .
13	Hole size:16"
	Intermediate Casing
35/8	Size: 8 5/8" Cemented with 200 SX
026	TOC: feet determined by cal
	Hole Size: 10"
542 ···	Long String
\$	Size: 5 1/2" Cemented with 150 SX
	TOC: feet determined by
	Hole Size:6_3/4"
	Total Depth: <u>3860'</u>
	Injection Interval
	<u>3668</u> feet to <u>3800</u> feet (perforated or open-hole, indicate which)
<b>7 3 1 1 1</b>	
Tubing size lined with _	(material) set in a
AD 1 [	packer at3585feet.
(or describe any other casing-tubing	g seal).
<u>Other Data</u>	
1. Name of the injection formation	
2. Name of Field or Pool (If applic	cable)Eunice Monument Grayburg San Andres
3. Is this a new well drilled for i If no, for what purpose was the	well originally drilled? production
	in any other zone(s)? List all such perforated ail (sacks of cement or bridge plug(s)
5. Give the depth to and name of an (pools) in this area.	ny overlying and/or underlying oil or gas zones
The second se	

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Greenhill Petro OPERATOR		<del></del>	LEASE	ice Monument		
12	1980 FNL & 19	۲. ۲. ۲. ח. פו	19	200	0.7.7	
WELL NO.	FOOTAGE LOCA		SEC.	20S TOWNSHIP	37E RANGE	····
	•		-			
			Tu	bular Data		
		<u>Surface</u>	Casing	•		
		Size: 10	3/4"	Cemented	with <u>125</u>	SX
		TOC: <u>s</u>	urface	feet d	etermined by _	circ.
		Hole siz	e:	12 1/4"		
		Intermed	<u>iate Cas</u>	ing		
	10 <sup>-2</sup> /-	Size:	7 5/8"	Cemented	with225	sx
		TOC:	186	feet d	stermined by	6090 C
		Hole Siz	e:	9 5/8"		
	<u>}</u> ≤ - תו8 ′	<u>Long Str</u>	ing			
	11.1.8	Size:	1/2"	Cemented a	vith160_	sx
		TOC:	2122	feet de	etermined by	6090 Ca
Ę	5/2	Hole Siz	e:	6 3/4"		
<u> </u>		Total De	pth:	3865'		
	- 2 - 255	Injectio	<u>n Interv</u>	<u>al</u>		
	2 C C C			feet to	dicate which)	feet
					dicate which)	
ubing size	lined with		(mate	rial)	\$8	t in a
	P	acker at	<b>.</b>		feet.	
(brand & model describe any o	) ther casing-tubing	; seal).				
<u>ier_Data</u>	•					
Name of the in	jection formation			_		
Name of Field	or Pool (If applic	able) <u>E</u>	unice Mo	nument Grayb	urg San Andres	
	well drilled for i t purpose was the	-	the second design of the secon	rilled? _P	roduction	
	ver be perforated give plugging deta					rated
usea.	No					

#### Greenhill Petroleum Corporation Eunice Monument Unit OPERATOR LEASE 11 2310 FNL & 330 FWL 19 20S 37E WELL NO. FOOTAGE LOCATION SEC. TOWNSHIP RANGE Tubular Data Surface Casing Size: 13" Cemented with 125 SX TOC: <u>Surface</u> feet determined by <u>circulation</u> \_\_\_\_\_\_16" Hole size: 151 Intermediate Casing Size: 9 5/8" Cemented with 300 SX TOC: <u>442</u> feet determined by <u>60% calc</u>. 25/2 Hole Size: 12 1/4" 10.92 Long String Size: 7" Cemented with \_\_\_\_\_\_SX TOC: 1997 feet determined by 60% calc. Hole Size: 8 5/8 " Total Depth: <u>3865</u> 282 TU Injection Interval \_\_\_\_\_ feet to \_\_\_\_\_ feet (perforated or open-hole, indicate which) Tubing size \_\_\_\_\_ lined with \_\_\_\_\_ \_\_\_\_ set in a (material) \_\_\_\_\_ packer at \_\_\_\_\_ \_\_\_\_feet, (brand & model) (or describe any other casing-tubing seal). Other Data 1. Name of the injection formation \_\_\_\_\_ 2. Name of Field or Pool (If applicable) \_\_\_\_\_ Eunice Monument Grayburg San Andres Is this a new well drilled for injection? No 3. If no, for what purpose was the well originally drilled? production Has the well ever be perforated in any other zone(s)? List all such perforated 4. intervals and give plugging detail (sacks of cement or bridge plug(s) used. No 5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area.

Greenhill Petroleum Corporation Eunice Monument OPERATOR LEASE 660 FNL & 660 FWL 1 19 20S 37E WELL NO. FOOTAGE LOCATION SEC. TOWNSHIP RANGE Tubular Data Surface Casing Cemented with <u>125</u> SX Size: 13" 130 TOC: <u>Surface</u> feet determined by <u>circulation</u> 13:1 Hole size: \_\_\_\_\_16" Intermediate Casing Size: 9 5/8" Cemented with 600 SX TOC: 312 feet determined by 60% calc 148 Hole Size: <u>12 1/4"</u> 10:13' Long String Size: 7" Cemented with \_\_\_\_\_350\_\_\_\_\_SX TOC: 1679 feet determined by <u>60% calc</u>.  $\gamma^{2}$ Hole Size: 8 5/8" 340' Total Depth: Injection Interval feet to feet (perforated or open-hole, indicate which) Tubing size \_\_\_\_\_\_ lined with \_\_\_\_\_ \_\_\_\_\_ set in a (material) \_\_\_\_\_ packer at \_\_\_\_ \_\_feet. (brand & model) (or describe any other casing-tubing seal). Other Data 1. Name of the injection formation \_\_\_\_\_

INJECTION WELL DATA SHEET

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

Name of Field or Pool (If applicable) \_\_\_\_\_ Eunice Monument Grayburg San Andres

Has the well ever be perforated in any other zone(s)? List all such perforated

If no, for what purpose was the well originally drilled? \_\_\_\_\_ production

intervals and give plugging detail (sacks of cement or bridge plug(s)

No

Is this a new well drilled for injection?

2.

3.

4.

used.

No

Texaco		New	Mexico H	State NCT 3		
OPERATOR			LEASE			
25	992 FNL & 957		19		37E	
WELL NO.	FOOTAGE LOC	ATION	SEC.	TOWNSHIP	RANGE	
			Tul	bular Data		<u></u>
		<u>Surface</u>	Casing	•		
1.3	1	Size:	8 5/8"	Cemented w	ith800	SX
		TOC:	Sur face	feet de	termined by	circulat,
		Hole si	ze: <u>11'</u>	1		
	25/4	<u>Interme</u>	diate Cas;	ing		
v	1080	Size:		Cemented w	ith	SX
		TOC:		feet de	termined by	,
		Hole Si	ze:			
		<u>Long St</u>	ring			
	<u> </u>	Size:	5 1/2"	Cemented w	ith	<b>SX</b>
Ļ		TOC:	1396	feet de	termined by	60% calc.
4		Hole Si	ze:	7 7/8"		
	TD 3550	Total D	epth:	3550'		
		<u>Injecti</u>	<u>on Interv</u>	<u>al</u>		
				feet to		feet
		(perfor	ated or op	pen-hole, in		
ubing size	lined with	<u></u>		-1-1	······	set in a
		packer at	(шасы		feet.	
(brand & mode or describe any	1) other casing-tubin					
:her_Data	· .	-				
	njection formation					
	l or Pool (If appli					
	•				<u> </u>	<b></b>
	well drilled for at purpose was the			illed?	production	
	ever be perforated give plugging det	ail (sack	s of cemer	nt or bridge	plug(s)	forated
Give the dept	h to and name of a	ny overly:	ing and/or	underlying	oil or gas	zones

(pools) in this area. overty ng oll or g ,

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Chevron OPERATOR	Eunice Monument South LEASE					<u></u>
101 WELL NO.	660 FNL & 1980 F FOOTAGE LOCAT			20S WNSHIP	37E RANGE	
		Surface Casi	<u>Tubula</u> ng	<u>r Data</u>		
1 1 1		<b>Size:</b> <u>8 5/8</u>	<u> </u>			
NL		TOC: <u>surfa</u>	<u>ce</u>	, feet de	termined by	circ.
	85/8	Hole size:	12	2 1/4"		
N/		Intermediate	Casing			
		Size:	Ce	mented w	rith	SX
		тос:		feet de	termined by	•
		Hole Size:	<u> </u>			
		Long String				
		<b>Size: 5</b> 1	<u>/2"</u> Ce	mented w	<b>ith</b> <u>610</u>	SX
		TOC: <u>surf</u>	ace	feet de	termined by	
		Hole Size:	7 7/8'	1		
		Total Depth:	4000'			
		Injection In				
		(perforated		eet to hole, in	dicate which	feet h)
Tubing size	lined with					set in a
	ра	() cker at	material)	•	feet.	
(brand & model) (or describe any ot						
<u>Other_Data</u>						
1. Name of the inj	ection formation _					
2. Name of Field o	r Pool (If applica	ble) <u> </u>	unice Mor	ument Gi	rayburg San	Andres
	well drilled for in purpose was the w			ed? pi	roduction	
	er be perforated i ive plugging detai					Eorated
5. Give the depth	to and name of any	overlying a	nd/or und	derlying	oil or pas	zones

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

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#### INJECTION WELL DATA SHEET

Greenhill Petr	oleum Corporation		Eunice	Monument		
OPERATOR			LEASE			
34	660FWL & 660 FNL		30	205	37E	
WELL NO.	FOOTAGE LOCA	TION	SEC.	TOWNSHIP	RANGE	
			Tu	bular_Data	<u></u>	
		Surface	Casing	•		
	r	Size:		Cemented v	vith160	SX
	13"	TOC:	surface	feet de	stermined by	
	ا لمار ا	Hole si	.ze: <u>17</u>	1/2"		
	1	Interme	diate Cas	ing		
	ي کار ( کار :	Size:	9 5/8"	Cemented v	with400	SX
		тос:	150'	feet de	stermined by	<u>60% ca</u>
		Hole Si	.ze:	2 1/2"		
		<u>Long St</u>	ring			
		Size:	7"	Cemented w	ith300	SX
Ļ	a de la construcción de la constru La construcción de la construcción d	TOC:	2126	feet de	etermined by	6070 calc
	TD 32:0	Hole Si	ze:	8_3/4"	<u></u>	
		Total D	epth:	3850'		
		<u>Injecti</u>	on Interv	<u>al</u>		
		(perfor	ated or o	feet to pen-hole, in	dicate which	feet
ubing size	lined with				S	et in a
	P	acker at		rial)	feet	
(brand & mode r describe any	el) other casing-tubing					
ner Data						
Name of the	Injection formation			-		
	i or Pool (If applic				yburg San And	lres
	w well drilled for in hat purpose was the			cilled?P	roduction	
intervals and used.	ever be perforated i give plugging deta No					orated
		····				

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

Chevron		Eunice Monu	ment South Unit		
OPERATOR		LEA	ASE		
110	1980 FNL & 66	0 FWL 3	0 20 <b>S</b>	37E	
WELL NO.	FOOTAGE LOCA	TION SEC	C. TOWNSHIP	RANGE	
		ter die die der der alle ter einen einen eine der die die die	<u>Tubular Data</u>		
		<u>Surface Casi</u>	ng .		
		<b>Size:</b> 13"	Cemented	with	<u>200</u>
		TOC: surfac	e feet d	etermined	by circ.
	13"	Hole size:			•
		<u>Intermediate</u>	Casing	·	
		<b>Size: 8 5/8</b>	" Cemented	with	<u>600 </u> <b>SX</b>
	85/2	TOC: <u>surfac</u>	e feet de	etermined	by circ.
	2599	Hole Size:			
		Long String			
Ş		<b>Size:</b> 6 5/8	" Cemented	with	<u>100</u> 5X
Ş		TOC:	feet de	stermined	by <u>calc</u> .
Ž	678"	Hole Size:	7 7/8"		
	3735/	Total Depth:	3958'		
2	-n $-n$	Injection In	<u>terval</u>		
	TD 3958'		feet to		feet ich)
Tubing size	lined with	· · · · · · · · · · · · · · · · · · ·			set in a
	<b>_</b>	(D acker at	material)	feet	-
(brand & model	)				•
(or describe any o	cher casing-cubing	sear).			
<u>Other Data</u>					
1. Name of the in	jection formation				
2. Name of Field	or Pool (If applic	able)	Eunice Monument	Grayburg	San Andres
	well drilled for i t purpose was the		No ly drilled?P	roduction	
	ver be perforated give plugging deta				erforated
<u> </u>					

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

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#### Amerada Hess State W OPERATOR LEASE 5 1980 FNL & 780 FWL 30 20S 37E WELL NO. FOOTAGE LOCATION SEC. TOWNSHIP RANGE Tubular Data Surface Casing Size:\_\_\_8 5/8" Cemented with 300 SX TOC: Surface feet determined by circ. 121" Hole size: 330 Intermediate Casing 8518 Size:\_\_\_\_\_ Cemented with \_\_\_\_\_SX TOC: \_\_\_\_\_ feet determined by \_\_\_\_\_ Hole Size: Long String Size: $5\frac{1}{2}$ Cemented with 850 3330 SX 512 TOC: Surface feet determined by 60% calc. 7 7/8" Hole Size: 3520' TD Total Depth: 3520' Injection Interval feet feet to (perforated or open-hole, indicate which) Tubing size \_\_\_\_\_ lined with \_\_\_\_\_ \_\_\_\_\_ set in a (material) \_\_\_\_\_ packer at \_\_\_\_ \_\_feet. (brand & model) (or describe any other casing-tubing seal). Other Data Name of the injection formation \_\_\_\_ 1. Eumont Yates Seven Rivers Queen Name of Field or Pool (If applicable) 2. Is this a new well drilled for injection? 3. If no, for what purpose was the well originally drilled? Has the well ever be perforated in any other zone(s)? List all such perforated 4. intervals and give plugging detail (sacks of cement or bridge plug(s) used.

#### INJECTION WELL DATA SHEET

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

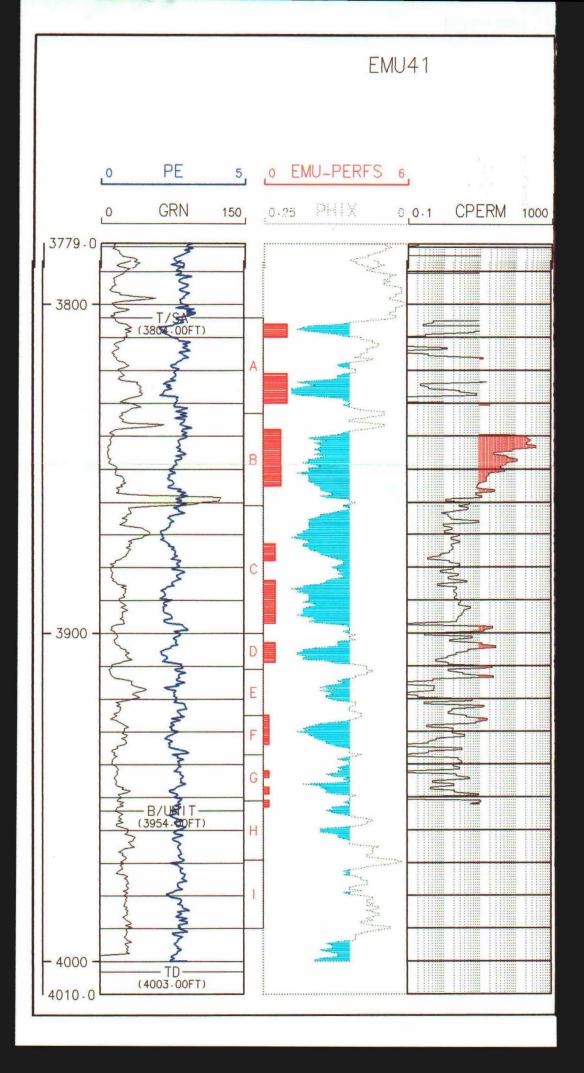
- 1. The proposed average and maximum daily rate and volume to be injected are 2000 PSI and 1500 BWPD.
- 2. The system will be a closed system.
- 4. The sources and an appropriate analysis of injection fluid and compatibility with the receiving formation, if other than reinjected produced water is attached hereto as Exhibit "A".

#### ARTICLE VIII

#### Geologic Data

The zone of interest for this application to inject is the Permian Age San Andres Formation. In the area of Greenhill Petroleum Corporation's Eunice Monument Unit, the San Andres is found at an average depth of 3800'. The San Andres is comprised of several zones composed of medium to coarse crystalline grainstones and fine to medium sandstones. Attached is a type log from the Eunice Monument Grayburg/San Andres Unit which shows the San Andres Zones that are currently being produced and those that will be injected into.

The only know underground source of fresh water in the Eunice Monument Area is the Ogalalla Formation. The approximate base of the formation is 200'.



#### PROPOSED STIMULATION PROGRAM FOR CONVERSIONS FROM PRODUCER TO INJECTION WELLS LOVINGTON PADDOCK UNIT LEA COUNTY, NEW MEXICO

- 1. MIRU PU with reverse unit. Check and report pressure on casing strings. Inspect wellhead connections for condition and pressure rating. Insure all casing valves are at least 2000 psig W. P. Pull and lay down rods and pump.
- 2. Rig up and pressure test BOP to 3000 psig for 5 minutes. Pull tubing.
- 3. PU bit, casing scraper and collars and TIH to 2000' above casing shoe. Scrape casing to 10 feet above shoe. Do not go below casing shoe with scraper. POOH and lay down scraper. TIH to 10 feet above casing shoe and circulate hole clean with clean water. Rotate, clean out, and deepen open-hole interval below casing shoe.
- 4. Spot enough 20% NEFE HCL Acid to cover the open-hole interval. Slowly pull bit above top of acid and POOH.
- 5. Rig up perforating contractor. Perforate water flood intervals with 90 gram frac jets. TIH with bit and tubing and circulate open hole interval clean to TD with water. POOH laying down workstring.
- 6. PU new 2 3/8" IPC tubing string with new water flood packer and TIH to 5' above casing shoe. Circulate inhibited fresh water into tubing-casing annulus and set packer. Pressure test annulus to 500 psig for 5 minutes. Release pressure. RD BOP and install waterflood and wellhead.
- 7. Pressure test annulus per NMOCD requirements. Release rig.
- 8. Rig up acid contractor and treat below packer with 15 tons CO2 and 3000 gallons of 20% NEFE HCL Acid using diverter in three stages. Flow well back to recover load and clean-up formation. SI well.
- 9. Install wellhead filter cartridge housing and filter. Hook up new water injection line.
- 10. Put well on injection. When rate and pressure stabilize, run water injection survey.

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#### Martin Water Laboratories, Inc.

709 W INDIANA MIDLAND, TEXAS 79701 PHONE 683-4521

RESULT OF WATER ANALYSES

	LABORATORY NO. 1188291
Mr. Roger Hostenback	SAMPLE RECEIVED 11-28-88
% Hobbs Motor Inn. Drawer "L", Hobbs, NM	

## COMPANY Paragon Engineering Service LEASE Greenhill Petroleum's Eunice Monument

SECTION \_\_\_\_ BLOCK \_\_\_\_\_ SURVEY \_\_\_\_\_ COUNTY \_\_\_\_ Lea \_\_\_\_ STATE \_\_\_\_\_NM \_\_\_\_\_\_SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Raw water - taken from water supply well #1. 11-28-88

NO. 2 Raw water - taken from water supply well #2. 11-28-88

NO. 3 Produced water - taken from heater-treater. 11-28-88

NO. 4 \_\_\_\_\_

P O BOX 1466 MONAHANS, TEXAS 79756

PH. 943-3234 OR 563-1040

CHEMICAL AND PHYSICAL PROPERTIES							
	NO. 1	• NO. 2	NO. 3	NO. 4			
Specific Gravity at 60° F.	1.0028	1.0029	1.0152				
pH When Sampled	7.2	7.1	6.7				
pH When Received	8.03	7.84	7.01				
Bicarbonate as HCO3	300	317	1,903				
Supersaturation as CaCO3	12	12					
Undersaturation as CaCO3			20				
Total Hardness as CaCO3	440	485	4,050				
Calcium as Ca	109	120	648				
Magnesium as Mg	41	45	590				
Sodium and/or Potassium	175	187	4,551	<u> </u>			
Sulfate as SO4	215	212	298				
Chloride as Cl	249	291	8,593				
Iron as Fe	0.12	0.28	2.2				
Barium as Ba	0	0	60				
Turbidity, Electric	1	1	61				
Color as Pt	4	8	22				
Total Solids, Calculated	1,088	1,172	16,643				
Temperature °F.	62	53	49				
Carbon Dioxide, Calculated	33	41	628				
Dissolved Oxygen, Winkler	5.9	1.0	0.0				
Hydrogen Sulfide	0.0	0.0	525	• • • • • • • • • • • • • • • • • • • •			
Resistivity, ohms/m at 77° F.	6.32	5.82	0,490				
Suspended Qil			685				
Filtrable Solids as mg/1	1.4	3.1	82.0				
Volume Filtered, ml	10,000	2,000	600				
Precipitated Barium Sulfate			13.9				
Testpreaced Servan Sorraco							
······································			<u> </u>				
Result	s Reported As Milligram	s Per Liter	d				
Additional Determinations And Remarks The abo			tibility betw	een these			
supply waters and the produced w							
hydrogen sulfide in the produced w	water, which w	would cause e	lemental sulf	ur precip			
tation and severely aggravate co							
is to remove oxygen from the sup							
limit incompatibility to the int							
mended. The primary concern wit							
suspended barium sulfate, sugges							
fate. This most likely would be							
(m No. 3 ing equipment. The oil connect at heater-treaters.	ntent was some	what high bu	it this is -e-v	ariable co			
nent at heater-treaters.		1. 2	The second of th	/			

Waylan C. Martin, M.A.