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AMERADA HESS CORPORATION

P. O. BOX 840 SEMINOLE, TEXAS 79360 915-758-6700

October 24, 2001

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Attn: Lori Wrotenbery State of New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division 1220 S. St. Francis Dr. Santa Fe, New Mexico 87504

Re: Application for Amended Injection Permit North Monument Grayburg San Andres Unit Order No. R-9596

UL ON 28 PH 1.03

Dear Ms. Wrotenbery,

Amerada Hess Corporation respectfully request administrative amendment to Exhibit "A" of Division Order No. R-9596 on North Monument Grayburg San Andres Unit adding Well Nos. 1510 and 2104 to the order.

Enclosed is Form C-108 and supporting documents for your review.

If additional information is needed, please contact me at the above address or phone (915) 758-6707 at your earliest convenience.

Thank you for your consideration in this matter.

Sincerely,

Chad McGehee Petroleum Engineer

Xc: Mr. Chris Williams - NMOCD, Hobbs Office

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, New Mexico 87504

APPLICATION FOR AUTHORIZATION TO INJECT

I.	PURPOSE: X Secondary Recovery Pressure Maintenance Disposal Storage Application qualifies for administrative approval? X Yes No
II.	OPERATOR: Amerada Hess Corporation
	ADDRESS: P. O. Box 840, Seminole, Texas 79360
	CONTACT PARTY:PHONE:P
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? X Yes No If yes, give the Division order number authorizing the project: R-9596
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:
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and, 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 geologic data on the injection zone including appropriate lithologic detail, geologic 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 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 sources 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>Chad McGehee</u> TITLE: <u>Petroleum Engineer</u>
	SIGNATURE: Charl M'Sl DATE: October 24, 2001

* 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 circumstances of the earlier submittal: <u>August 2, 1991, original C-108 submitted and subsequent</u> <u>amendments filed by Amerada Hess Corporation on North Monument Grayburg San Andres Unit.</u> DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

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 the 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, 2040 South Pacheco, Santa Fe, New Mexico 87505, 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.

INDEX

C-108 ATTACHMENTS

Section III - Well Data, Wellbore Schematic	PAGE
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North Monument Grayburg San Andres Unit Well Nos. 1510 & 2104 Area of Review Map.	8
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Section XIII & XIV - Proof of Notice	
Section XIII & XIV - Proof of Notice Surface Owner Listing & Leasehold Operator Listing	12
	12 13

Item No. X - Logs & test data have previously been submitted.

WELL NAME & NUMBER: <u>North Monument Grayburg San Andres Unit, Blk. 15, Well No. 10, API No. 30-025-31506</u>	<u>Andres Unit, Blk. 15, Well N</u>	<u>o. 10, API No. 30-0</u>	<u>25-31506</u>	
WELL LOCATION: 1915' FSI, & 1980' FEI,	_	31	19S 37E	E*
	UNIT LETTER	SECTION	AIHS	RANGE
WELLBORE SCHEMATIC		<u>WELL CONSTRU</u> Surface Casing	WELL CONSTRUCTION DATA Surface Casing	
	Hole Size:	17-1/2"	Casing Size: 13-3/8" 48# @ 460'	# @ 460'
	Cemented with:	500 sx.	or	ft3
	Top of Cement:	Surface	Method Determined: C	Calculated
		Intermediate Casing	te Casing	
Dage	Hole Size:	12-1/4"	Casing Size: 9-5/8" 36	<u>9-5/8'' 36# @ 3574</u> '
1	Cemented with:	1500 sx.	or	ft ³
	Top of Cement:	Surface	Method Determined: 0	Calculated
		Production Casing	ı Casing	
	Hole Size:	8-3/4"	Casing Size: 7" 20 & 26# @ 4351'	@ 4351'
	Cemented with:	275 sx.	or	ff ³
	Top of Cement:	2522'	Method Determined: 0	<u>Calculated</u>
	Total Depth:	4351'		
		Injection Interval	Interval	
	Perfs. f	Perfs. fr. 3738' (Est.) feet	to <u>3886</u>	

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

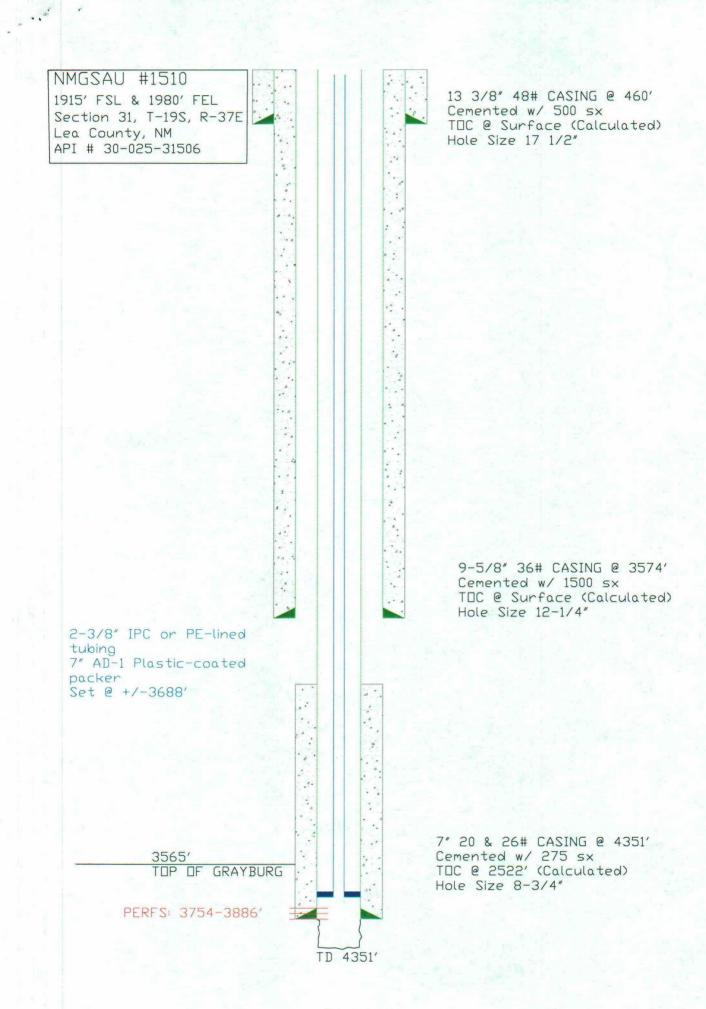
OPERATOR: Amerada Hess Corporation

No.
Well
15,
Blk.
NMGSAU

Side 2

INJECTION WELL DATA SHEET

Type of Packer: Plastic Coated AD-1 Packer Setting Depth:				
cker Setting Depth: -/ 3688' ther Type of Tubing/Casing Seal (if applicable): Additional Data Is this a new well drilled for injection? If no, for what purpose was the well originally drilled? Name of the Injection Formation: Name of Field or Pool (if applicable): Has the well ever been perforated in any other zone(s)? List all intervals and give plugging detail, i.e. sacks of cement or plug(s injection zone in this area: Higher Gas Zone:	ype of Packer:	Plastic Coated AD-1		
ther Type of Tubing/Casing Seal (if applicable): Additional Data Is this a new well drilled for injection? If no, for what purpose was the well originally drilled? Name of the Injection Formation: Name of Field or Pool (if applicable): Has the well ever been perforated in any other zone(s)? List all intervals and give plugging detail, i.e. sacks of cement or plug(s injection zone in this area: Higher Gas Zone: Eumont at +/- 3642*	acker Setting Depth			
Additional Data Is this a new well drilled for injection? Yes If no, for what purpose was the well originally drilled? Yes Name of the Injection Formation: Eunice M Name of Field or Pool (if applicable): Eunice M Has the well ever been perforated in any other zone(s)? List all intervals and give plugging detail, i.e. sacks of cement or plug(s Give the name and depths of any oil or gas zones underlying or injection zone in this area: Higher Gas Zone: Eunont at +/- 3642'	Ither Type of Tubing	g/Casing Seal (if applicable)	:(
Is this a new well drilled for injection?Yes If no, for what purpose was the well originally drilled? Name of the Injection Formation: Eunice M Name of Field or Pool (if applicable): Eunice M Has the well ever been perforated in any other zone(s)? List all intervals and give plugging detail, i.e. sacks of cement or plug(s Give the name and depths of any oil or gas zones underlying or injection zone in this area: Higher Gas Zone: Eumont at +/- 3642'		Addit	ional Data	
If no, for what purpose was the well originally drilled?	. Is this a new wel	I drilled for injection?	Yes	No
Name of the Injection Formation:	If no, for what p	urpose was the well origina		Grayburg San Andres Producer
Name of Field or Pool (if applicable):	Name	ction Formation:	Grayb	urg San Andres
		r Pool (if applicable):	Eunice Monumo	<u>ent Grayburg San Andre</u>
		r been perforated in any oth e plugging detail, i.e. sacks	ter zone(s)? List all such policies of cement or plug(s) used.	erforated <u>No</u>
Higher Gas Zone: Eumont at +/- 3642'		nd depths of any oil or gas z this area:	sones underlying or overlyi	ng the proposed
		Higher Gas Zone: Eu	<u>imont at +/- 3642'</u>	
Lower Oil Zone: Paddock at +/- 5050'			<u>ddock at +/- 5050'</u>	



Page 3

Amerada Hess Corporation OPERATOR: _

Side 1

INJECTION WELL DATA SHEET

WELL NAME & NUMBER: North Monument Grayburg San Andres Unit, Blk. 21, Well No. 4, API No. 30-025-05910

MELL LOCATION: 660' FNL & 660' FWL	D	S	20S 37E	
FOOTAGE LOCATION	UNIT LETTER	SECTION	VSHIP	RANGE
WELLBORE SCHEMATIC		<u>WELL CONSTRU</u> Surface Casing	<u>WELL CONSTRUCTION DATA</u> Surface Casing	
	Hole Size:	17-1/2"	Casing Size: 12-1/2" 40# @ 148'	# @ 148'
	Cemented with:	150 sx.	or	ft_3
	Top of Cement:Su	Surface	Method Determined: C	Circulated
Ρ		Intermediate Casing	e Casing	
age	Holc Size:	11"	Casing Size: <u>9-5/8" 36</u>	<u>9-5/8'' 36# @ 1155'</u>
4	Cemented with:	500 sx.	or	
	Top of Cement:	Surface	Method Determined:	Circulated
		Production Casing	Casing	
	Hole Size:	8-3/4"	Casing Size: 7" 24# @ 3783'	83,
	Cemented with:	400 sx.	or	ft ³
	Top of Cement:	1122'	Method Determined:	Calculated
	Total Depth:	3898'		
		Injection Interval	nterval	
	Perfs. & Open Hole fr. 3720'(Est.) feet	r. 3720'(Est.) feet	to <u>3898</u>	

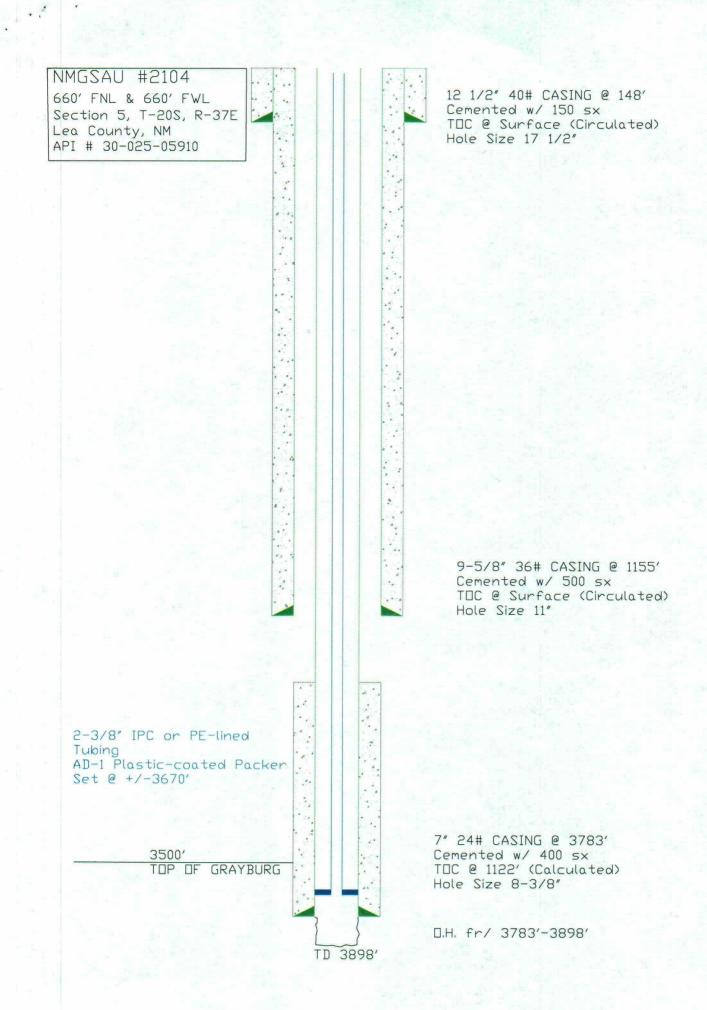
(Perforated or Open Hole; indicate which)

- 4 1
No
Well
21,
Blk.
SAU
NMG

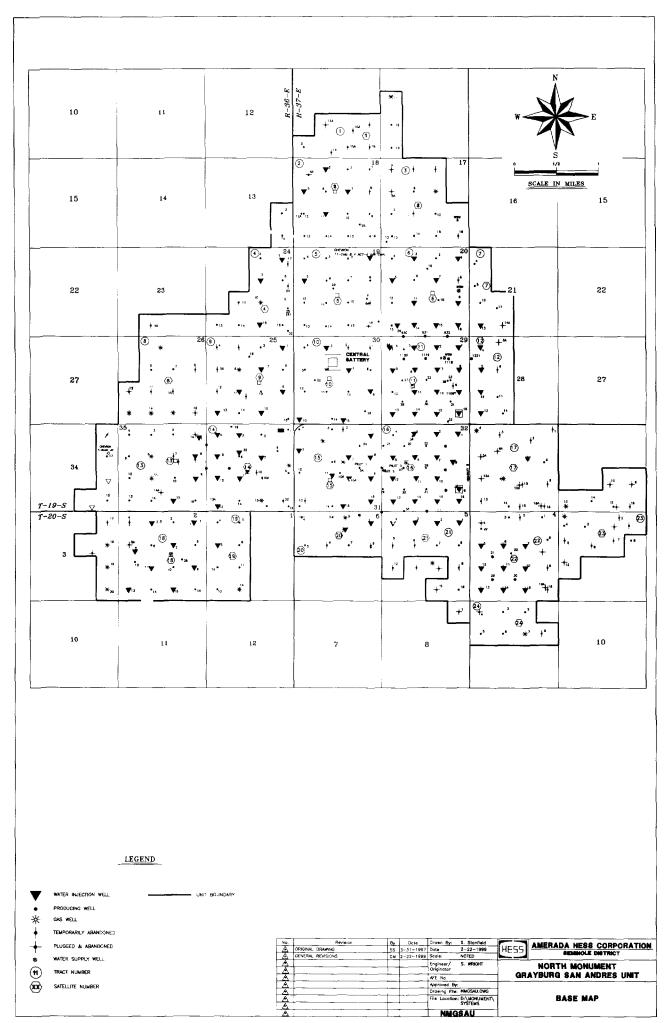
Side 2

SHEET	
DATA	
VELL	
NOI.	
NJECI	

{				
T)	Type of Packer:	Plastic Coated AD-1	<u>AD-1</u>	
Pa	Packer Setting Depth:_	pth: <u>+/- 3670'</u>		
Ō	her Type of Tub	Other Type of Tubing/Casing Seal (if applicable):	icable):	
			Additional Data	
Ι.	Is this a new v If no, for what	Is this a new well drilled for injection? If no, for what purpose was the well originally drilled?	? originally drilled?	Yes X No Grayburg San Andres Producer
5		Name of the Injection Formation:		Gravburg San Andres
З.	Name of Field	Name of Field or Pool (if applicable):		<u>Eunice Monument Grayburg San Andres</u>
4		Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used.	ny other zone(s)? Lis sacks of cement or p	st all such perforated lug(s) used. <u>No</u>
5.	Give th injectio	e and depths of any oil o in this area:	or gas zones underlyin	e name and depths of any oil or gas zones underlying or overlying the proposed in zone in this area:
		Higher Gas Zon	Higher Gas Zone: Eumont at +/- 3642'	<u>542'</u>
		Lower Oil Zone:	: Paddock at +/- 5050'	050'



Page 6





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VI. TABULATION OF WELLS PENETRATING PROPOSED INJECTION ZONE Wells not included in original C-108, within area of review

					LOCA	OCATION				DATE		COMPLETION INTERVAL	NINTERVAL
LEASE	MELL	OPERATOR	API	UNIT	SEC	H	œ	TYPE	FIELD	DRILLED	P	TOP	BOTTOM
PHILLIPS J R	15	TEXACO E & P INC	3002535119	υ	g	20	37	oIL	MONUMENT	8/25/2000	7750	7058	7750
NMGSAU BLK 15	10	AMERADA HESS CORP	3002531506	2	31	19	37	OIL	EUNICE MONUMENT	8/20/1992	4352	3779	3802
BARBER BERTHA	9	MARATHON OIL COMPANY	3002505911	-	۵	20	37	GAS	EUMONT	11/1/1983	3890	3133	3349
BARBER BERTHA	8	MARATHON OIL COMPANY	3002505913	ш	ъ	20	37	GAS	EUMONT	6/30/1998	3900	2430	2734
BARBER BERTHA	13	MARATHON OIL COMPANY	3002532384	z	32	19	37	GAS	EUMONT	2/3/1994	3727	3390	3494
BARBER BERTHA	14	MARATHON OIL COMPANY	3002532385	Σ	32	19	37	GAS	EUMONT	8/12/1994	3650	2980	3471
BARBER BERTHA	15	MARATHON OIL COMPANY	3002532532	υ	5	20	37	GAS	EUMONT	11/11/1994	3760	3207	3436
BARBER BERTHA	17	MARATHON OIL COMPANY	3002534204	ц	5	20	20 37 GAS	GAS	EUMONT	12/28/1997 7800	7800	6443	6453

2001 conversion new wells2.xis

VI. TABULATION OF WELLS PENETRATING PROPOSED INJECTION ZONE Wells not included in original C-108, within area of review Casing, Cement, and Estimated Tops

		Т	-	5	Т	-	т		r	Т	-	Г		
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C-108 ATTACHMENT

A. Section VII - Data on Proposed Operation

1. Proposed Average & Maximum Daily Rate and Volume of Fluids to be Injected:

Average Daily Rate:	400 B.W./D.
Maximum Daily Rate:	2500 B.W./D.

2. Open or Close System:

Injection system is a closed system.

3. Proposed Average & Maximum* Injection Pressures:

Average injection pressure: 710 PSI

WELL NAME	TOP PERF	MAX P
1510	3738'	748
2104	3720'	744

*Until a fracture gradient is determined, maximum injection pressure will be based on a .2 PSI/foot gradient to depth of top of completion.

4. Sources of Appropriate Analysis of Injection Fluid:

The source of injection water will be from San Andres water supply wells and produced water from existing North Monument Grayburg San Andres Unit producers. The San Andres formation is compatible with the produced water from the unit wells.

B. Section IX. Proposed Stimulation Program:

1. NMGSAU Well Nos. 1510 & 2104.

Acidize each well w/2000 - 4000 gal. 15% NEFE acid.

C-108 ATTACHMENT

A. Sections VIII & XIV – Proof of Notice.

- 1. Surface Owners Application mailed by Certified Mail to following:
 - Jimmie B. Cooper
 P. O. Box 36
 Monument, New Mexico 88265
 - J. Dell Barber Estate Barbara Darnall
 726 Davis Drive Abilene, Texas 79605
- 2. Leasehold Operators within ¹/₂ mile of proposed injection wells application mailed by Certified Mail to following:
 - ARCO Permian
 200 Westlake Park Blvd. Rm. 266
 Houston, Texas 77079
 - Chevron U.S.A. Inc. P. O. Box 1150 Midland, Texas 79702
 - Marathon Oil Company P. O. Box 552 Midland, Texas 79702
 - Texaco Exploration & Production Inc.
 P. O. Box 3109
 Midland, Texas 79702
- 3. Publication (Attached)

AFFIDAVIT OF PUBLICATION

State of New Mexico, County of Lea.

I, KATHI BEARDEN

Publisher

of the Hobbs News-Sun, a 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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of

_____weeks.

_ 2001

Beginning with the issue dated

October 7 2001 and ending with the issue dated

October 7 ____ 2001

Publisher Sworn and subscribed to before

8th me this_ _____day of

October

Notary Public.

My Commission expires October 18, 2004 (Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE October 7, 2001

Amerada Hess Corporation, operator of record for the North Monument Grayburg Andres Unit. San (NMGSAU), hereby notifies of their desire to inject water into the following two wells: NMGSAU Well No. 1510 lo-cated in Unit J, Sec. 31, T19S, R37E, and NMSGAU Well No. 2104 located in Unit D, Sec. 5, T20S, R37E, Lea County, N.M. The NMSGAU "Authorization to Inject" is covered under State of New Mexico, Energy, Minerals and Natural Resources Department, Oil Conservation Division Case No. 10252, Division Order No. R-9596. Amerada Hess Corporation hereby gives notice that application has been made for administrative regulatory amendment of Exhibit "A" of said division order to include the aforementioned wells to inject water into Grayburg San An-dres formation, Eunice Monument Grayburg San Andres pool through the gross perforated and/or open hole interval from approximately 3700 feet to 4000 feet with an initial maximum injection pressure of 0.2 PSI/FT. to top of completion. Contact Mr. Chad McGehee, Amerada Hess Corporation, P. O. Box 840, Seminole, Texas 79360, Phone 915-758-6707 concerning questions regarding application. Objections or requests for hearing concerning this application should be filed with the State of New Mexico, Energy, Minerals and Natural Resources Department, Oil Conservation Division, 1220 S. St. Francis Dr., Santa Fe, New Mexico 87504 within 15 days of this publication. #18468

01100986000 02550774 AMERADA HESS CORPORATION PO BOX 840 SEMINOLE, TX 79360

P. O. BOX 840 SEMINOLE, TEXAS 79360 915-758-6700

October 24, 2001

J. Dell Barber Estate Barbara Darnall 726 Davis Drive Abilene, Texas 79605

Re: Application for Amended Injection Permit North Monument Grayburg San Andres Unit Lea County, New Mexico

Dear Sir,

Enclosed, for your information is a copy of Form C-108 and supporting documents filed with State of New Mexico Oil Conservation Division requesting administrative approval to add North Monument Grayburg San Andres Unit Well Nos. 1510 and 2104 as water injection wells to unit.

If additional information is needed, please let us know at your earliest convenience at above address or phone (915) 758-6707.

Chad McGehee

Petroleum Engineer

P. O. BOX 840 SEMINOLE, TEXAS 79360 915-758-6700

October 24, 2001

Jimmie B. Cooper P. O. Box 36 Monument, New Mexico 88265

Re: Application for Amended Injection Permit North Monument Grayburg San Andres Unit Lea County, New Mexico

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Chad McGehee Petroleum Engineer

P. O. BOX 840 SEMINOLE, TEXAS 79360 915-758-6700

October 24, 2001

ARCO Permian 200 Westlake Park Blvd. Rm. 266 Houston, Texas 77079

Re: Application for Amended Injection Permit North Monument Grayburg San Andres Unit Lea County, New Mexico

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Chad McGehee Petroleum Engineer

P. O. BOX 840 SEMINOLE, TEXAS 79360 915-758-6700

October 24, 2001

Chevron U.S.A. Inc. P. O. Box 1150 Midland, Texas 79702

Re: Application for Amended Injection Permit North Monument Grayburg San Andres Unit Lea County, New Mexico

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Chad McGehee Petroleum Engineer

P. O. BOX 840 SEMINOLE, TEXAS 79360 915-758-6700

October 24, 2001

Marathon Oil Company P. O. Box 552 Midland, Texas 79702

Re: Application for Amended Injection Permit North Monument Grayburg San Andres Unit Lea County, New Mexico

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Chad McGehee Petroleum Engineer

P. O. BOX 840 SEMINOLE, TEXAS 79360 915-758-6700

October 24, 2001

Texaco Exploration & Production Inc. P. O. Box 3109 Midland, Texas 79702

Re: Application for Amended Injection Permit North Monument Grayburg San Andres Unit Lea County, New Mexico

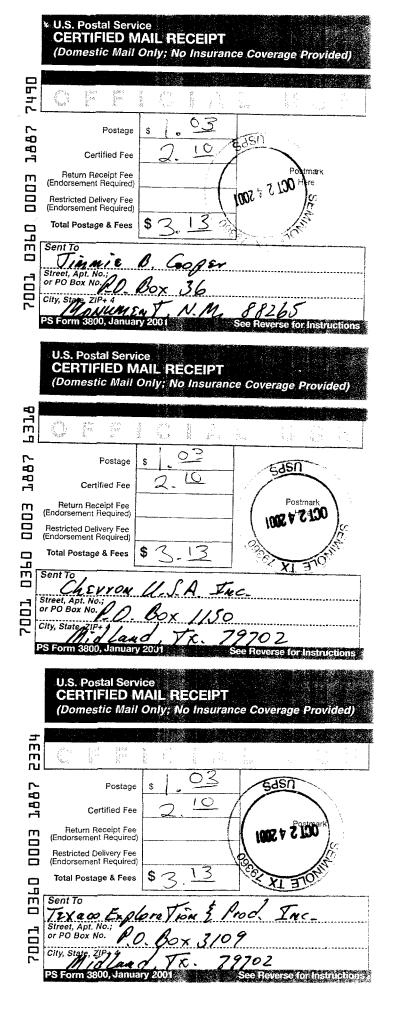
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Chad McGehee Petroleum Engineer



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