BUREAL SUNDRY NO Do not use this form for propos Use "APPLICAT	UBMIT IN TRIPLICATE	MENT S ON WELLS reentry to a differe such proposals		Drawer DD Artesia, Ni Budg Fal E 5. State Oil / G 6. If Indian, Alor	FORM APPROVED get Bureau No. 1004-013 xpires: March 31, 1993 as Lease No. <u>()</u> - () <u>390660</u> ttee or Tribe Name Agreement Designatio	
2. Name of Operator			O. C. D. RTESIA, OFFICE		ND WATSON FEDEF #1, #55	łAL
2 Address and Talephone No	D, HOBBS, NM 88240		397-0431	9. API Well No.	30-015-262 30 015 26360	25 #1 #2
		nd <u>1980</u> Range _	Feet From The		ool, Exploaratory Area E SPRING, NORTH	
12. Check Appropr TYPE OF SUBMISSION	riate Box(s) To Ind	icate Nature		eport, or Oth		
Notice of Intent Subsequent Report Final Abandonment Notice			ge meth. of water o	(No Co	New Construction Non-Routine Fractur Water Shut-Off Conversion to Inject Dispose Water de: Report results of multiple con mpletion or Recompletion Report	npletion on Well and Log Form.)
<ul> <li>13. Describe Proposed or Completed Operation work. If well is directionally drilled, give s</li> <li>ALL WATER PRODUCED FROM THE KII AS INJECTANT AT THE SKELLY UNIT.</li> <li>A- PRODUCING FORMATION: NORTH</li> <li>B- AMOUNT OF WATER PRODUCED PIC- C- CURRENT WATER ANALYSIS ATTAID- WATER STORAGE: 500 BBL WELDIE</li> <li>E- WATER MOVED BY: THE WATER IS</li> <li>F- INJECTION SYSTEM TO WHICH THE</li> <li>SKELLY UNIT WATER FLOOD</li> <li>LEGAL: SEC. 22, TOWN. 17S, RANGE 3</li> <li>OWNER: TEXACO EXPLORATION AND</li> </ul>	ubsurface locations and me NCAID WATSON FEDER SHUGART BONE SPRIN ER DAY: APPROXIMATE CHED ED STEEL TANK (SHARE B HAULED BY ROWLAND E WATER IS HAULED:	AL LEASE WILL IG ELY 1 BARREL P ED BY BOTH).	ertical depths for al BE HAULED TO <sup>•</sup> ER WELL (X) TW	I markers and zon THE SKELLY UN O WELLS (=) 2 B	es pertinent to this wo	ork,)*.
14. I hereby certify that the foregoing is true and correct SIGNATURE		Engineerin	g Assistant		DATE	4/6/94
(This space for Federal or State office use)	nrell J. Carriger	PETR	OLEUM EN	IGINEER		./94

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictiti	ous or fraudulent statements or
representations as to any matter within its jurisdiction.	

CONDITIONS OF APPROVAL, IF ANY:

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See attached.

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## Unichem International

707 North Leech P.O.Box 1499

Hobbs, New Mexico 88240

Company : Texaco Inc. Date : 3-24-1994 Location: **%KinKaid** Watson - Prod.Water TK (on 3-17-1994)

	Sample 1
Specific Gravity:	1.132
Total Dissolved Solids:	184456
pH:	6.30
IONIC STRENGTH:	3.493

CATIONS:		me/liter	mg/liter
Calcium	(Ca+2)	392	7840
Magnesium	(Mg+2)	168	2040
Sodium	(Na+1)	2640	60800
Dissolved Iron	(Fe+2)	0.107	3.00
ANIONS:			
Bicarbonate	(HCO3-1)	3.40	207
Carbonate	(CO3-2)	0	0
Hydroxide	(OH-1)	0	0
Sulfate	(S04-2)	12.5	600
Chloride	(Cl-1)	3190	113000
DISSOLVED GASES			
Carbon Dioxide	(CO2)		220
Hydrogen Sulfide	(H2S)		0

	SCALING	INDEX	(positive	value indicate	
				Calcium	Calcium
Temper	ature			Carbonate	Sulfate
86[F	30[C			0.37	-17
110[F	43[C			1.1	-17
130[F	54[C			1.4	-17
140[F	60[C			1.6	-17
160[F	71[C			2.0	-17

Comments: Analysis performed by Bob Wallace - Hobbs Lab cc: Jay Brown Joe Hay

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# REFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW / CO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING: 

> CASE NO. 6103 Order No. R-4717-A

and the second second

20174 65

REBEIVED APPLICATION OF GETTY OIL COMPANY FOR A WATERFLOOD PROJECT EXPANSION AND DUAL COMPLETIONS', EDDY COUNTY, NEW MEXICO. FEB 6

## ORDER OF THE COMMISSION

O. C. C. AXEEDIA, OFFICE

1978

#### BY THE COMMISSION:

in the state of th This cause came on for hearing at 9 a.m. on December 14, 1977, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

 อาฐานออกเกิดการณ์ พัฒนุษณา ผู้สุดขณะผู้สุด NOW, on this <u>31st</u> day of January , 1978, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises, and the second state of the second state

FINDS:

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్ ప్రోశాలు, సంగారాయాలు, సంగా సంగార్థు గారా రాషులు, అల్లా, (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof. 20-12-01 D10-

(2) That Commission Order No. R-4717 entered on January 25, 1974, authorized a pilot waterflood project in the Skelly Unit Area, Fren-Seven Rivers Pool, Eddy County, New Mexico.

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That said project was designated the Skelly Unit (3) Fren-Seven Rivers Waterflood Project. and server and

(4) That the applicant, Getty Oil Company, seeks the expansion of said waterflood project by the injection of water into the Seven Rivers formation through 32 additional wells in said project as set out on Exhibit A attached to this order.

1. je (5) That 28 of said additional injection wells as identified on Exhibit A of this order are to be completed as dual completions with injection into both the Fren-Seven Rivers and Grayburg Jackson Pools, most of said wells having been authorized previously as single completion Grayburg Jackson injection wells.

and as at only that (6) That injection into each of the singly completed wells should be through internally coated tubing set in a packer to be located within approximately 100 feet of the casing shoe.

-2-Case No. 6103 Order No. R-4717-A

(7) That injection into each of the dually completed well should be through internally coated tubing with the long string of tubing set in a packer to be located as close as practicable to the lowermost injection interval and the short string of tubing set in a packer to be located within approximately 100 feet of the uppermost perforation.

(8) That the casing-tubing annulus in each injection well should be filled with an inert fluid, and that a pressure gauge or approved leak detection device should be attached to the annulus or the annulus should be left open in order to determine leakage in the casing, tubing, or packer.

(9) That the injection wells or system should be equipped with a pressure limiting switch or other acceptable device which will limit the surface injection pressure to no more than 1300 pounds unless the Secretary-Director of the Commission should administratively authorize a higher pressure.

(10) That there are 42 wells, as set out on Exhibit B to this order, which are located within or immediately adjacent to the boundaries of said Skelly Unit Area which may or may not be completed or plugged in such a manner that will assure that they will not serve as channels for injected water to migrate from the San Andres formation to other formations or to the surface.

(11) That to prevent migration of injected water from the Seven Rivers formation, formation injection pressure at wells within one half mile of any well identified on said Exhibit B should be limited to hydrostatic pressure until such time as the wells on said Exhibit B have been repaired or it shall otherwise be demonstrated to the satisfaction of the Secretary-Director of the Commission that the same will not serve as avenues for escape of such waters.

(12) That the wells within the project should be equipped to facilitate periodic testing of the annular space between strings of production and surface casing.

(13) That the operator should take all other steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, producing, or plugged and abandoned wells.

(14) That approval of the subject application should result in the recovery of additional volumes of oil from the Skelly Unit Area, thereby preventing waste.

(15) That the applicant should secure Commission approval for injection into the Grayburg Jackson Waterflood Project for any well herein authorized as a dual completion injection well which has not heretofore been approved as a Grayburg Jackson injection well. Case No. 6103 Order No. R-4717-A

(16) That the application should be approved.

IT IS THEREFORE ORDERED:

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(1) That the applicant, Getty Oil Company, is hereby authorized to expand its <u>Skelly Unit Fren-Seven Rivers Waterfloo</u> Project by the injection of water into the Seven Rivers formatio through 4 singly completed and 28 dually completed injection wells, as set out on Exhibit A to this order, Fren-Seven Rivers Pool, Eddy County, New Mexico.

(2) That injection into each of said singly completed well shall be through internally coated tubing installed in a packer set within approximately 100 feet of the casing shoe.

(3) That injection into each of said dually completed well. shall be through two strings of internally coated tubing with the long string to be installed in a packer set as close as practicable to the lowermost injection interval (Grayburg Jackson) and with the short string installed in a packer set within approximately 100 feet of the uppermost perforation.

(4) That the casing-tubing annulus in each injection well shall be filled with an inert fluid and a pressure gauge or approved leak detection device shall be attached to the annulus or the annulus allowed to remain open in order to determine leakage in the casing, tubing, or packer.

(5) That the injection wells or system shall be equipped with a pressure limiting switch or other acceptable device which will limit the surface injection pressure to no more than <u>1300</u> pounds.

(6) That the Secretary-Director of the Commission may administratively authorize a pressure limitation in excess of that set out in Order No. (5) above upon a showing by the operator that such higher pressure will not result in fracturing of the confining strata.

(7) That the applicant shall not inject water into the Seven Rivers formation through any well located within one half mile of any of the 42 wells identified on Exhibit B attached hereto and by reference made a part hereof, at a pressure greater than hydrostatic until such well has been repaired or it has been shown to the satisfaction of the Secretary-Director of the Commis sion that such well will not serve as an avenue of escape for waters injection into the Seven Rivers formation and he has authorized a higher than hydrostatic pressure.

(8) That the wells within the project area shall be equipped with risers or in another acceptable manner such as to facilitate the periodic testing of the bradenhead for pressure or fluid production. GETTY OIL COMPANY SKEL UNIT Additional Authorized Injection Wells

All in Township 17 South,	Range 31 East, N	IMPM
SINGLE COMPLETIONS		
Skelly Unit Well No.	Unit	Section
4 6 8 14	B D G L	21 21 21 21 21
DUAL COMPLETIONS		
Skelly Unit Well No.	Unit	Section
3 22 E NGLE 24 26 30 32 34 36 38 40 42 44 46 48 50 52 56 58 71 73 79 83 85 87	D J L J N P B D B F H F H J N P J L N D B D	22 14 14 15 15 15 14 14 23 23 22 22 22 22 23 23 23 23 23 23 23
91 93 96 100	D F F L	28 28 27 28

# Case No. 6103 Order No. R-4717-A

From SR - Grayfung Jackson Dual Completions 1300± (Upour 30N) No dimit Tours. Zone.

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Operator	Lease	10.	Ut	. <u>Sec</u>	THE	Rgc.
Atlantic Rich. Company	Turner "B"	1 7 9 10 11 30 47 49 51 55 59 61 62 63 68 69 78	POAGHPBGIHAJIOPBJ	17 17 20 20 20 17 29 29 29 29 29 29 29 29 29 29 29 29 29	17 17 17 17 17 17 17 17 17 17 17 17 17 1	31 31 31 31 31 31 31 31 31 31 31 31 31 3
Murchison & Closuit	West "B" Foster Federal State "A" State "A" State "B"	20 1 1 2 1 2 3	O I K J O P	10 17 16 16 16 16 16	17 17 17 17 17 17 17 17	31 31 31 31 31 31 31 31
William A. & Edward R. Hudson	Puckett "A" Puckett "B"	9 10 13 14 20 27 8	F E D M F K C	24 24 13 24 24 25	17 17 17 17 17 17 17	31 31 31 31 31 31 31 31
Getty Oil Co.	State "AZ" Skelly Unit	1 23 29 31 35 45 55 72 78 106 116	M K M O O G M K M C L	16 14 15 14 22 23 23 15 22	17 17 17 17 17 17 17 17 17 17 17	31 31 31 31 31 31 31 31 31 31 31
	$C_{2} \subset N_{2} \subset C_{1} \cup C_{2}$					

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Case No. 6103 Order No. R-4717-A

Exhibit "B"

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-4-Case No. 6103 Order No. R-4717-A

(9) That the operator shall immediately notify the supervisor of the Commission district office at Artesia of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from or around any producing well, the leakage of water or oil from or around any plugged and abandoned well within the project area, or any other evidence of fluid migration from the injection zone, and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(10) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1115 of the Commission Rules and Regulations.

(11) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

> STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

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PHIL R. LUCERO, Chairman ARNOLD, Member EMERY Member & Secretary

SEAL

### BUREAU OF LAND MANAGEMENT CARLSBAD RESOURCE AREA

# Disposal of Produced Water From Federal Wells

## Conditions of Approval

Approval of the produced water disposal methodology is subject to the following conditions of approval:

- 1. This agency be notified of any change in your method or location of disposal.
- 2. Compliance with all provisions of Onshore Oil and Gas Order No. 7.
- 3. This agency shall be notified of any spill or discharge as required by NTL-3A.
- 4. This agency reserves the right to modify or rescind approval whenever it determines continued use of the approved method may adversely affect the surface or subsurface environments.
- 5. All aboveground structures on the lease shall be painted sandstone brown, Federal Std. 595-20318, or 30318, within 90 days if you have not already done so.
- 6. Any on lease open top storage tanks or pits shall be covered with a wire screen or plastic/nylon netting to prevent entry by birds and other wildlife.
- 7. This approval does not constitute right-of-way approval for any off lease activities. If water is transported via a pipeline that extends beyond the lease boundary, you need to submit within 30 days an application for right-of-way approval to the Realty Section in this office if you have not already done so.