ARCO Oil and Gas Company Central District Post Office Box 1610 Midland. Texas 79702 Telephone 915 688 5200

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*20 COT 23 AM 9 36

October 19, 1989

Mr. William J. LeMay, Director New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87501

RE: Expansion of Seven Rivers Queen Unit Waterflood Project Administrative Approval Request Eunice, S. and Langlie Mattix Pools Lea County, New Mexico

Dear Mr. LeMay,

ARCO Oil and Gas Company respectfully requests administrative approval to expand the Seven Rivers Queen Unit Waterflood Project by converting wells #32, 38, 44, and 52 from oil production to water injection. All of these wells are considered to be "stripper" wells; well #32 produces approximately 5 BOPD and 27 MCFGPD, and #38 produces approximately 4 BOPD and 7 MCFGPD. Wells #44 and #52 are currently shut in due to uneconomical production rates.

Water injection in the #32, 38, 44, and 52 will provide waterflood support to six existing and four proposed Seven Rivers Queen Unit producers. This will enable a more complete recovery of waterflood reserves on the Seven Rivers Queen Unit by increasing the areal sweep of the waterflood.

A copy of this application has been furnished by certified mail to the surface owners and the offset operators within one-half mile of the wells which are proposed to be converted to water injection. Copies of the return receipts are attached. In addition, a notice has been published in the Hobbs Daily News Sun newspaper. The affidavit of publication is attached.

Yours Very Truly,

Undi; WEllis

Cindy W. Ellis Senior Engineer

CWE Enclosures

CC: New Mexico Oil Conservation Division, District 1 Office P.O. Box 1980 Hobbs, NM 88240

Surface Owners (List Attached)

Offset Operators (List Attached)

ARCO Oil and Gas Company Central District Post Office Box 1610 Midland, Texas 79702 Telephone 915 688 5200



October 12, 1989

OFFSET OPERATORS----

RE: Expansion of Seven Rivers Queen Unit Waterflood Project Administrative Approval Request Eunice, S. and Langlie Mattix Pools Lea County, New Mexico

Dear Sirs:

Attached is a copy of ARCO Oil and Gas Company's application for administrative approval of the expansion of the Seven Rivers Queen Unit Waterflood Project. We propose to convert 4 existing producers to water injection wells to improve waterflood recovery from the SRQU.

If you have any questions pertaining to this application, please contact Cindy W. Ellis, Sr. Engineer at (915) 688-5546 or Jack T. Lowder, Area Engineer at (915) 688-5557.

Any objections or requests for hearing must be made within 15 days from the date of this application to the New Mexico Oil Conservation Division in Santa Fe.

Very Truly Yours,

Under WElles

Cindy W. Ellis Senior Engineer

CWE Enclosures

CC: New Mexico Oil Conservation Division, District 1 Office P.O. Box 2088 Santa Fe, NM 87501

New Mexico Oil Conservation Division P.O. Box 1980 Hobbs, NM 88240

ARCO OIL & GAS COMPANY APPLICATION TO EXPAND SRQU WATERFLOOD PROJECT OFFSET OPERATORS

Meridian Oil, Inc. 21 Desta Drive Midland, TX 79705

John Hendrix Corporation 223 W. Wall Midland, TX 79701

Rasmussen Operating, Inc. 6 Desta Drive, Suite 5850 Midland, TX 79705

Chevron USA, Inc. P.O. Box 670 Hobbs, NM 88240

Texaco, Inc. P.O. Box 3109 Midland, TX 79702

Conoco Oil Company P.O. Box 460 Hobbs, NM 88240

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

ARCO OIL & GAS COMPANY APPLICATION TO EXPAND SRQU WATERFLOOD PROJECT SURFACE OWNERS

Opal M. Jones Wells #32 & #38 Styles Route Big Lake, TX 76932 John Dinwiddie (Lessee) Wells #44 & #52[°] P.O. Box 302 Jal, NM 88252

* Note: Surface owner is the State of New Mexico.

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmester for fees and check box(es) for additional service(s) requested. 1. Show to whom delivered, date, and addressee's address. (<i>Extra charge</i>)				
3. Article Addressed to:	4. Article Number			
Chevron USA, Inc.	P 477 984 507			
P. O. Box 670 Hobbs, N1 88240	Type of Service: Registered Insured X. Certified COD Express Mail Return Receipt for Merchandise			
	Always obtain signature of addressee or agent and DATE DELIVERED.			
5. Signature - Address X (10/12) Oldan	8. Addressee's Address (ONLY if requested and fee paid)			
6. Signature – Agent X				
7. Date of Delivery	The in			
PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT				
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SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested. 1. Show to whom delivered, date, and addressee's address. 2. Restricted Delivery (Extra charge)				
3. Article Addressed to:	4. Article Number			
Conoco Oil Company	P 477 984 509			
P. O. Box 460	Type of Service:			
Hobbs, NM 88240	Registered Insured CoD Certified COD Receipt for Merchandise			
	Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .			
5. Signature - Address	8. Addressee's Address (ONLY if			
× Jolene D. Jul	requested and fee paid)			
6/Signature - Agent	—			
X]			
7. Date of Delivery]			
10-13-89				
PS Form 3811, Mar. 1988 + U.S.G.P.O. 1988-212	-865 DOMESTIC RETURN RECEIPT			

PS Form 3811, Mar. 1988 + U.S.G.P.O. 1988-212-865

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SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested. 1. Show to whom delivered, date, and addressee's address. (<i>Extra charge</i>) (<i>Extra charge</i>)				
3. Article Addressed to:	4. Article Number P 046 061 749			
John Dinwiddie (Lessee) P. O. Box 302 Jal, NH 88252	Type of Service: Registered Scertified COD Express Mail Return Receipt for Merchandise			
	Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .			
5. Signature - Address	8. Addressee's Address (ONLY if requested and fee paid)			
(Signature - Agent Reg Mrs. W. D.	i pe			
7. Date of Delivery				

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(as) for additional service(s) requested. 1. Show to whom delivered, date, and addressee's address. (<i>Extra charge</i>)			
3. Article Addressed to:	4. Article Number		
John Hendrix Corporation	P 477 984 506		
223 W. Wall	Type of Service:		
Midland, Texas 79701			
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	Always obtain signature of eddressee or agent and <u>DATE DELIVERED</u> .		
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-	Type of Service:			
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Big Lake, Texas 76932	🔀 Centilied 🗌 COD			
	Express Mail Return Receipt for Merchandise			
	Always obtain signature of addressee or agent and DATE OF VERT			
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× Chalm. James	requester fee paid)			
6. Signature - Agent				
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PS Form 3811, Mar. 1988 + U.S.G.P.O. 1988-212-	-865 DOMESTIC RETURN RECEIPT			

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3. Article Addressed to:	4. Article Number			
Marathon Oil Company P. O. Box 552 Midland, Texas 79702	P 046 661 747 Type of Service: Registered Insured COD Express Mall Grow Merchandise Always obtain signature of addressee or agent end DATE DELIVERED.			
5. Signature – Address	8. Addressee's Address (ONLY if			
X requested and fee paid)				
6. Signature - Agent				
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2 Date of Delivery 10-13-89				

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested. 1. Show to whom delivered, date, and addressee's address. (Extra charge)				
3. Article Addressed to:	4. Article Number			
Meridian Oil, Inc.	<u>P 477 984 505</u>			
21 Desta Drive	Type of Service:			
Midland, Texas 79705	Registered Insured Image: State of the			
	Always obtain signature of addressee or agent and DATE DELIVERED.			
5. Signature - Address X	8. Addressee's Address (ONLY if requested and fee paid)			
6. Signature – Agent,				
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 SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional service(s) requested. 1. Show to whom delivered, date, and addressee's address. 2. Restricted Delivery (<i>Extra charge</i>) 3. Article Addressed to: 				
	P 046 661 750			
Rasmussen Operating, Inc.	Type of Service:			
6 Desta Drive, Suite 5850 Midland, Texas 79705	Registered Insured Certified* COD Express Mail for Merchandise			
	Always obtain signature of addressee or agent and DATE DELIVERED.			
5. Signature – Address X	8. Addresser's Address (ONLY if requested and fee paid)			
6. Signature - Agent X Jona Huptin,				
7. Date of Delivery				
SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional services in requested.				
1. Show to whom delivered, date, and addressee's add (<i>Extra charge</i>)	(Extra charge)			
3. Article Addressed to: Texaco Inc.	4. Article Number P 477 984 508			
P. O. Box 3109 Midland, Texas 79702	Type of Service: Registered Insured Certified COD Express Mail for Merchandise			
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6. Signature – Agent X Z X				
7. Date of Delivery				

PS Form 3811, Mar. 1988 * U.S.G.P.O. 1988-212-865

DOMESTIC RETURN RECEIPT

AFFIDAVIT OF PUBLICATION

State of New Mexico, County of Lea.

I George W. Moore

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

of_

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

October 8, 19.89 and ending with the issue dated

____, 19<u>89</u> October 8 les Thm Publisher.

Sworn and subscribed to before

dav of me this

Notary Public.

My Commission expires____

July	12	<u>, 19</u> 93
(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 ζ! October 8, 1989 Notice is hereby given that ARCO Oil and Gas Company has filed an application to inject water with the New Mexico Oil Conservation Division. The application is for expansion of the Seven **Rivers Queen Unit** Waterflood Project, and will involve the conversion of wells #32, 38, 44, and 52 to water injection. The purpose of injection is to develop waterflood reserves. Injection will be in the Lower Seven Rivers and Queen formations within the Eunice, S. and langlie Mattix Oil Pools at an approximate depth of 3652 ft to 3810 ft. The approximate injection rate and maximum pressure are estimated to be 400 BWPD at 730 psig. The well locations are as follows: #32: 2310'FEL, & 2310' FEL, Sec 34 T22S, R36E; #38: 660'FSL & 990'FEL, Sec 34, T22S, R36E; #44: 660'FNL & 660'FWL, Sec 2 T23S, R36E; #52: 1980'FNL & 660'FEL Sec 2 T23S, R36E; #52: 1980'FNL & 660'FEL, Sec 3, T23S, R36E, ALL IN LEA COUNTY, NEW MEXICO. Refer questions to Cindy Ellis, ARCO Oil and Gas Company, P.O. Box 1610, Midland, TX 79702, PHONE (915) 688-5546 or Jack Lowder 688-5557. Any objections to this application must be presented to the New Mexico Oil Con-Servation Division, P.O. Box 2088, Santa Fe, New Mexico, 87501, within 15 days of this notice.

	STATE	OF NE	W	MEXICO
ENERGY	AND 11	INERAL	S	DEPARTMENT

DIL CONSERVATION DIVISION POST OFFICE BOX 2068 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501

APPLICATION.	FOR	AUTHORIZATION	тп	IN IFCT
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Ι.	Purpose: Applicat	Secondary Recovery ion qualifies for admi	Pressure Maintenance nistrative approval? 🕅	Dipport1 yesno	Storage
ΙΙ.	Operator: _	ARCO Oil & Gas Comp	pany		

P.O. Box 1610, Midland, TX 79702 Address:

Phone: (915) 688-5546 Contact party: <u>Cindy Ellis, Sr. Engineer</u>

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.

- X yes IV. Is this an expansion of an existing project? 1 00 If yes, give the Division order number authorizing the project <u>R-4589</u>
- ۷. 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. Previously submitted. Data on new wells is attached.
- VII. Attach data on the proposed operation, including:
 - 1. Proposed average and maximum daily rate and volume of fluids to be injected;

 - Whether the system is open or closed;
 Proposed average and maximum initial 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. Previously submitted. No change.
 - IX. Describe the proposed stimulation program, if any. Attached
- Attach appropriate logging and test data on the well. (If well logs have been filed Χ. with the Division they need not be resubmitted.) Attached.
- 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. Previously submitted-No changes.
- Applicants for disposal wells must make an affirmative statement that they have XII. examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection tetween 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

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I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

	Name: <u>Cin</u>	dv Ellis	Title	Senior Engineer	
÷	Signature:	Conde Willis	Date:	10-13 59	

* 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. Initial application to inject in 1973. Case # 5016.

Subsequent applications for SRQU # 64: April 1984 & SRQU #65: November 1984.

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

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III. WELL DATA

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- In the following well data must be submitted for each injection well covered by this application. The cata 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 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 pridge 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. PRODE 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) € 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 cays.

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.

			OIL CON	NEW M. SERVAT			SION		
		147.						Form	C-128
			ll Locatio	on and/o	r Gas	Prorati		<u>1-2</u>	9-57
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Located	2310	Feet Fro	m <u>Sout</u>	<u>h</u> f.;	ne,	2310	Feet Fr	om <u>E</u>	<u>ast</u> Line,
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Position Representin	g				Rep	istered	Profession	nal En	gineer and/or
Address	·····					d Surve			

Form C-128 Revised 5/1/57

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N_.. MEXICO OIL CONSERVATION COMMISSION

Well Location and Acreage Dedication Plat

Section A.

Date 7-12-57

Well No. 2 Unit Letter P Section 34 Township 22 South Rane 36 East Nervi Located And Sect From South Line, 990 Pret From East Line County Lea C. L. Elevation 3494.2 Dedicated Acreage Acress Nervi Line County Lea C. L. Elevation 3494.2 Dedicated Acreage Acress Nervi Line County Lea C. L. Elevation 3494.2 Dedicated Acreage Acress Nervi Line County Lea C. L. Elevation 3494.2 Dedicated Acreage Acress Nervi Line County Lea C. L. Elevation 3494.2 Dedicated Acress Acress Acress Nervi Line County Lea C. L. Elevation 3494.2 Dedicated Acress	Operator D	a1port	Vil Corp.	Le	ase Otis L. J	ones "C"
County Ina C. L. Elevation 3494.2 Dedicated Acreage Acreage Acress Acres Acress Acress Acress Acress Acres	Well No. 2	Uni	t Letter <u>P</u>	Section 34	rownship	
1. Is the Guerator the only comer* in the dedicated acreage outlined on the plat below? Yes	Located <u>66</u>	٥	_Feet From Sc	<u>uth</u> Line,	<u>990</u> Fee	t From East Line
1. Is the Guerator the only comer* in the dedicated acreage outlined on the plat below? Yes	County_Lea		G. L.	21 evention 349	24_2Dedicate	Acres Acres
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2. If the answer to question one is "no," have the interests of all the conners been consolidated by communitization agreement or otherwise? Yes - No If answer is "yes," Type of Consolidation <u>Contaction</u> <u>Contactor</u> "yes," Type of Consolidation <u>Contactor</u> "yes," Type of Consolidation <u>Contactor</u> "yes," Type of Consolidation <u>Contactor</u> <u>Concer</u> <u>Land Description</u> <u>Mathematical Consolidation Agreentiation in Section A</u> <u>Contactor</u> <u>Section. B</u> <u>Section. B</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Concer</u> <u>Conce</u>		•		ici in the de	diodetta deredye ot	critico on the prot belows
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ARCO OIL AND GAS COMPANY SEVEN RIVERS QUEEN UNIT #32 APPLICATION TO INJECT WATER October, 1989

III. WELL DATA

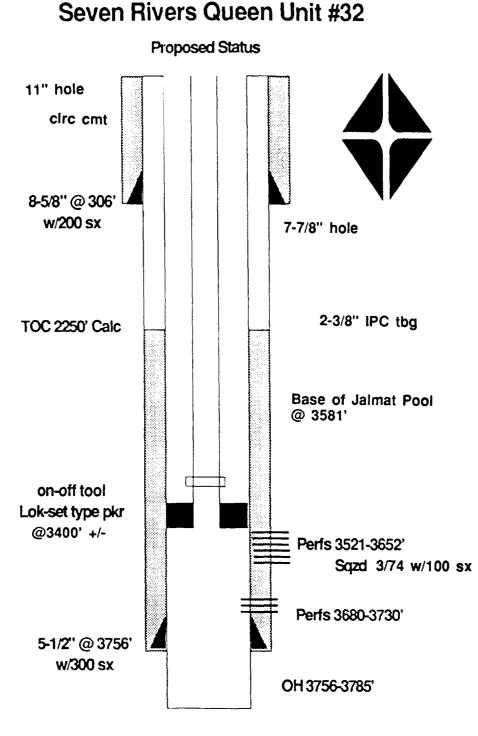
- A.1) Location: 2310'FSL & 2310'FEL, Section 34, T22S, R36E Lea County, New Mexico
- 2) Casing: 8-5/8" @306' w/200 sx cement in 11" hole. TOC @ surface: circulated. 5-1/2" @3756' w/300 sx cement in 7-7/8" hole. TOC @2250': calculated top.
- Proposed Tubing:
 2-3/8" internally plastic coated @ approximately 3400'.
- 4) Proposed Packer: Lok-set type (Baker Tool Co.) with on-off tool @ approximately 3400'.
- B.1) Injection formations: Lower Seven Rivers and Queen Pool Name: Eunice, So. (Seven Rivers/Queen)
- 2) Injection interval: Perfs 3680-3730', Open Hole 3756-3785'.
- 3) Well was drilled 2/57 as a Eunice, So. oil producer.
- 4) Perfs from 3521'-3652' were squeezed in 3/74 w/100 sx cement.
- 5) Next higher productive pool: Jalmat. Base of the Jalmat occurs at 3581'.

VII. PROPOSED_OPERATION

- 1) Average daily rate of fluid to be injected: 400 BWPD.
- 2) The system is closed.
- Average injection pressure: 736 psi. Maximum injection pressure: 736 psi (0.2 psi/ft).
- 4) Source of injection fluid: Texaco Jal Water System. Analysis attached.

IX. PROPOSED STIMULATION

Acidize perfs 3680-3730 & open hole 3756-3785' w/5000 gals 15% NEFE HCl w/5% micellar solvent @ 2-3 bpm @ 2000 psi in 2 stages using graded rock salt as a diverting agent between stages.



3785' TD

ARCO OIL & GAS COMPANY APPLICATION TO EXPAND SRQU WATERFLOOD PROJECT WELL #32: EUNICE, SO.(SR/QN) POOL LOC: 2310'FSL & 2310'FEL SEC 34, T22S, R36E, LEA CO. COMPLETED 2/57 AS AN OIL PRODUCER.

ARCO OIL AND GAS COMPANY SEVEN RIVERS QUEEN UNIT #38 APPLICATION TO INJECT WATER October, 1989

III. WELL DATA

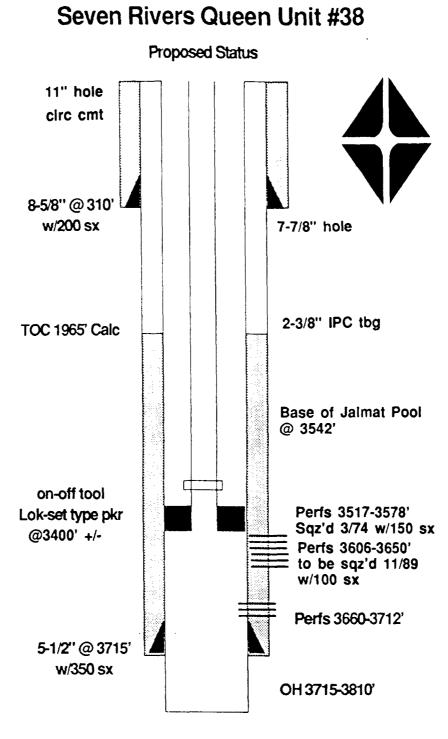
- A.1) Location: 660'FSL & 990'FEL, Section 34, T22S, R36E Lea County, New Mexico
- 2) Casing: 8-5/8" @310' w/200 sx cement in 11" hole. TOC @ surface: circulated. 5-1/2" @3715' w/350 sx cement in 7-7/8" hole. TOC @1965': calculated top.
- Proposed Tubing:
 2-3/8" internally plastic coated @ approximately 3400'.
- 4) Proposed Packer: Lok-set type (Baker Tool Co.) with on-off tool @ approximately 3400'.
- B.1) Injection formations: Lower Seven Rivers and Queen Pool Name: Eunice, So. (Seven Rivers/Queen)
- 2) Injection interval: Perfs 3660-3712', Open Hole 3715-3810'.
- 3) Well was drilled 8/57 as a Eunice, So. oil producer.
- 4) Perfs from 3517'-3578' were squeezed in 3/74 w/150 sx cement. Perfs from 3606'-3650' to be squeezed upon conversion to injection w/approximately 100 sx.
- 5) Next higher productive pool: Jalmat. Base of the Jalmat occurs at 3542'.

VII. PROPOSED OPERATION

- 1) Average daily rate of fluid to be injected: 400 BWPD.
- 2) The system is closed.
- Average injection pressure: 732 psi. Maximum injection pressure: 732 psi (0.2 psi/ft).
- 4) Source of injection fluid: Texaco Jal Water System.

IX. PROPOSED STIMULATION

Acidize perfs 3660-3712 & open hole 3715-3810' w/6000 gals 15% NEFE HCl w/5% micellar solvent @ 2-3 bpm @ 2000 psi in 3 stages using graded rock salt as a diverting agent between stages.



3810' TD

ARCO OIL & GAS COMPANY APPLICATION TO EXPAND SRQU WATERFLOOD PROJECT WELL #38: EUNICE, SO.(SR/QN) POOL LOC: 660'FSL & 990'FEL, SEC 34, T22S, R36E, LEA CO. COMPLETED 8/57 AS AN OIL PRODUCER.

ARCO OIL AND GAS COMPANY SEVEN RIVERS QUEEN UNIT #44 APPLICATION TO INJECT WATER October, 1989

III. WELL DATA

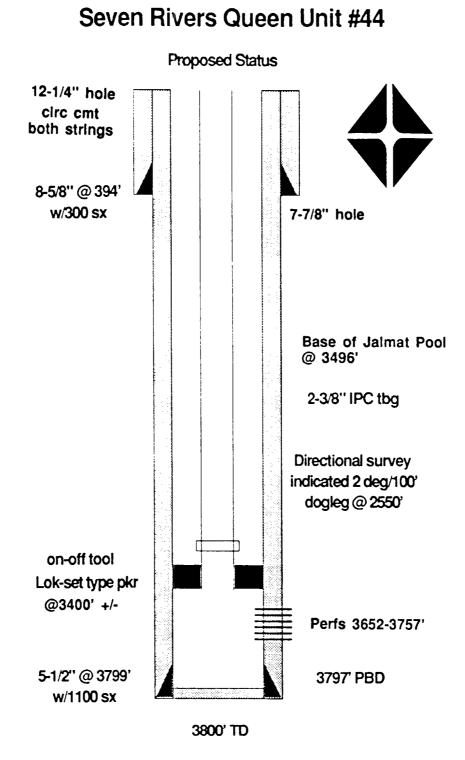
- A.1) Location: 660'FNL & 660'FWL, Section 2, T23S, R36E Lea County, New Mexico
- 2) Casing: 8-5/8" @394' w/300 sx cement in 12-1/4" hole. TOC @ surface: circulated. 5-1/2" @3799' w/1100 sx cement in 7-7/8" hole. TOC @ surface: circulated.
- Proposed Tubing:
 2-3/8" internally plastic coated @ approximately 3400'.
- 4) Proposed Packer: Lok-set type (Baker Tool Co.) with on-off tool @ approximately 3400'.
- B.1) Injection formations: Lower Seven Rivers and Queen Pool Name: Langlie Mattix (Seven Rivers/Queen)
- 2) Injection interval: Perfs 3652-3757'.
- 3) Well was drilled 5/58 as a Langlie Mattix oil producer.
- 4) There are no abandoned perforations.
- 5) Next higher productive pool: Jalmat. Base of the Jalmat occurs at 3496'.

VII. PROPOSED OPERATION

- 1) Average daily rate of fluid to be injected: 400 BWPD.
- 2) The system is closed.
- Average injection pressure: 730 psi. Maximum injection pressure: 730 psi (0.2 psi/ft).
- 4) Source of injection fluid: Texaco Jal Water System. Analysis attached.

IX. PROPOSED STIMULATION

Acidize perfs 3652-3757 w/5000 gals 15% NEFE HCl w/5% micellar solvent @ 2-3 bpm @ 3000 psi in 2 stages using graded rock salt as a diverting agent between stages.



ARCO OIL & GAS COMPANY APPLICATION TO EXPAND SRQU WATERFLOOD PROJECT WELL #44: LANGLIE MATTIX (SR/QN) POOL LOC: 660'FNL & 660'FWL, SEC 2, T23S, R36E, LEA CO. COMPLETED 5/58 AS AN OIL PRODUCER.

ARCO OIL AND GAS COMPANY SEVEN RIVERS QUEEN UNIT #52 APPLICATION TO INJECT WATER October, 1989

III. WELL DATA

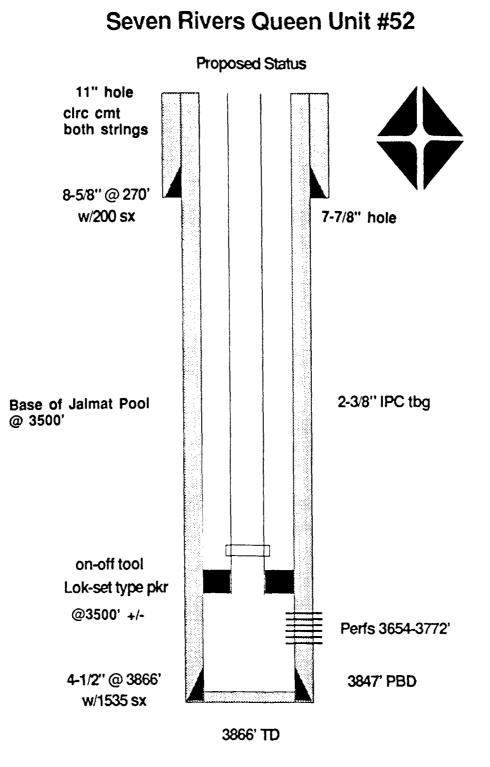
- A.1) Location: 1980'FNL & 660'FEL, Section 3, T23S, R36E Lea County, New Mexico
- 2) Casing: 8-5/8" @270' w/200 sx cement in 11" hole. TOC @ surface: circulated. 4-1/2" @3866' w/1535 sx cement in 7-7/8" hole. TOC @ surface: circulated.
- Proposed Tubing:
 2-3/8" internally plastic coated @ approximately 3500'.
- 4) Proposed Packer: Lok-set type (Baker Tool Co.) with on-off tool @ approximately 3500'.
- B.1) Injection formations: Lower Seven Rivers and Queen Pool Name: Langlie Mattix (Seven Rivers/Queen)
- 2) Injection interval: Perfs 3654-3772'.
- 3) Well was drilled 9/60 as a Langlie Mattix oil producer.
- 4) There are no abandoned perforations.
- 5) Next higher productive pool: Jalmat. Base of the Jalmat occurs at 3500'.

VII. PROPOSED OPERATION

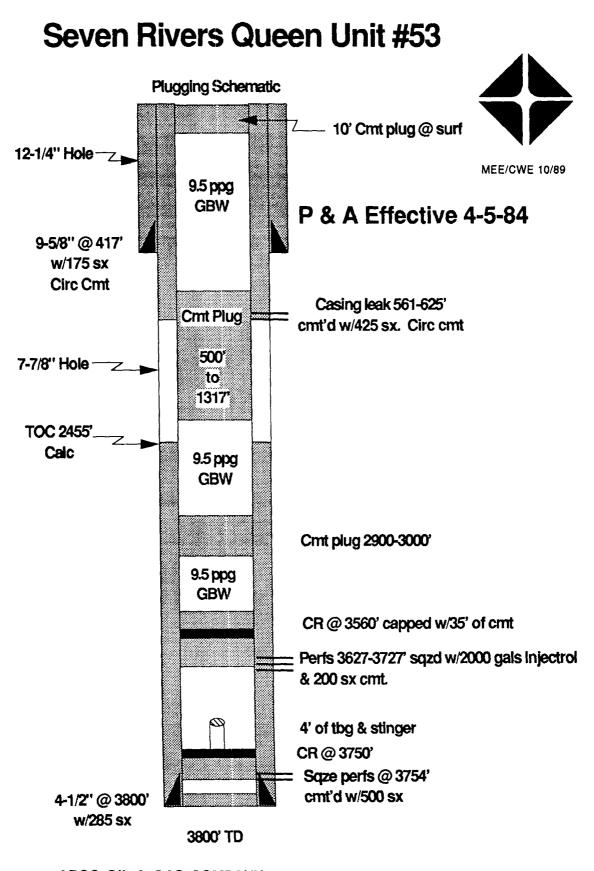
- 1) Average daily rate of fluid to be injected: 400 BWPD.
- 2) The system is closed.
- Average injection pressure: 731 psi. Maximum injection pressure: 731 psi (0.2 psi/ft).
- 4) Source of injection fluid: Texaco Jal Water System. Analysis attached.

IX. PROPOSED STIMULATION

Acidize perfs $3654-3772 \text{ w}/5000 \text{ gals } 15\% \text{ NEFE HCl w}/5\% \text{ micellar solvent @ 2-3 bpm @ 3000 psi in 2 stages using graded rock salt as a diverting agent between stages.$



ARCO OIL & GAS COMPANY APPLICATION TO EXPAND SRQU WATERFLOOD PROJECT WELL #52: LANGLIE MATTIX (SR/QN) POOL LOC: 1980'FNL & 660'FEL, SEC 3, T23S, R36E, LEA CO. COMPLETED 9/60 AS AN OIL PRODUCER.



ARCO OIL & GAS COMPANY APPLICATION TO EXPAND SRQU WATERFLOOD PROJECT WELL #53: LANGLIE MATTIX (SR/QN) POOL LOC: 1980'FNL & 660'FWL, SEC 2, T23S, R36E, LEA CO. COMPLETED 2/61 AS AN OIL PRODUCER.

709 W. INDIANA MIDLAND, TEXAS 79701 PHONE 683-4521

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RESULT OF WATER ANALYSES

TO: <u>Mr. Steve Smith</u> P.O. Box 1710, Hobbs, NM	LABORATORY NO. 108927 SAMPLE RECEIVED 10-3-89 RESULTS REPORTED 10-9-89
	SESeven Rivers Queen Unit
SECTION BLOCK SURVEY COUNTY	LeaSTATENM
SOURCE OF SAMPLE AND DATE TAKEN: NO. 1 Produced water - taken from Seven Rivers	s Queen Unit. 10-2-89

NO. 2 Supply water - taken @ Texaco. 10-2-89

Resistivity, ohms/m at 77° F. 0.230 Suspended Oil	NO.1 me/l NO.2 1.0302 1.0125 7.41 6.73	me/1
Specific Gravity at 60° F. 1.0302 pH When Received 7.41 Carbonate as CO3 0 0.0 Bicarbonate as HCO3 1,507 24.7 Supersaturation as CaCO3 130 1 Undersaturation as CaCO3 7 Crail Hardness as CaCO3 7 Calcium as Ca 690 34.5 Magnesium as Mg 759 62.5 Sodium and/or Potassium 11,527 501.2 Suffate as SO4 1,813 37.7 Chirode as Ci 18,998 535.7 Iron as Fe 1.1 0.0 Barium as Ba Total Solids, Calculated 35,294 Temperature *F. Carbon Dioxide, Calculated	1.0302 1.0125 7.41 6.75	me/i
pH When Received 7.41 Carbonate as CO3 0 0.0 Bicarbonate as HCO3 1,507 24.7 Supersaturation as CaCO3 130 10 Undersaturation as CaCO3 100 Toral Hardness as CaCO3 4,850 690 34.5 Magnesium as Ca 690 34.5 62.5 Sodium and/or Potassium 11,527 501.2 501.2 Sulfate as SO4 1,813 37.7 501.2 Sulfate as SO4 18,998 535.7 100 Barium as Ba 11.1 0.0 00 Barium as Ba 11.1 0.0 00 Color as Pt 759 Total Solids. Calculated 35,294 Temperature °F.	7.41 6.73	
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Bicarbonate as HCO3 1,507 24.7 Supersaturation as CaCO3 130 Undersaturation as CaCO3 Toral Hardness as CaCO3 4,850 Calcium as Ca 690 34.5 Magnesium as Mg 759 62.5 Sodium and/or Potassium 11,527 501.2 Sulfate as SO4 1,813 37.7 Chioride as Ci 18,998 535.7 Iron as Fe 1.1 0.0 Barium as Ba Total Solids, Calculated 35,294 Temperature °F. Carbon Dioxide, Calculated 35,294 Temperature °F. Carbon Dioxide, Calculated 155 Resistivity, ohms/m at 77 F. 0.230 Suspended Oil Results Reported As Milligrams Per Liter Additional Determinations And Remarks A Comparison of the above results r any incompatibility between these waters in any proportion.		
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Sulfate as SO4 1,813 37.7 Chloride as Ci 18,998 535.7 Iron as Fe 1.1 0.0 Barium as Ba 1.1 0.0 Turbidity, Electric 1.1 0.0 Color as Pt 1 1.1 0.0 Total Solids, Calculated 35,294 1 Temperature °F. 1 1 1 Carbon Dioxide, Calculated 155 1 1 Dissolved Oxygen, Winkler 1 155 1 XXXXXXX, Sulfide - Total 155 1 1 Resistivity, ohms/m at 77°F. 0.230 0.230 1 Results Reported As Milligrams Per Liter Additional Determinations And Remarks A Comparison of the above results r any incompatibility between these waters in any proportion.		17.2
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Barium as Ba 0.0 Turbidity, Electric 0.0 Color as Pt 0.0 Total Solids, Calculated 35,294 Temperature °F. 0.0 Carbon Dioxide, Calculated 0.0 Dissolved Oxygen, Winkler 0.230 XXXXXXXX, Sulfide - Total 155 Resistivity, ohms/m at 77°F. 0.230 Suspended Oil 0.230 Results Reported As Milligrams Per Liter Additional Determinations And Remarks A Comparison of the above results rearry incompatibility between these waters in any proportion.		103.1
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Color as Pt 35,294 Total Solids. Calculated 35,294 Temperature °F. 2000 Carbon Dioxide. Calculated 2000 Dissolved Oxygen, Winkler 2000 XXXXXXXXSulfide - Total Resistivity. ohms/m at 77° F. 0.230 Suspended Oil 2000 Results Reported As Milligrams Per Liter Additional Determinations And Remarks A Comparison of the above results rearry incompatibility between these waters in any proportion.		
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Temperature °F. Carbon Dioxide, Calculated Dissolved Oxygen, Winkler XXXXXXXXX Sulfide - Total Resistivity, ohms/m at 77° F. 0.230 Suspended Oil Results Reported As Milligrams Per Liter Additional Determinations And Remarks A Comparison of the above results rearry incompatibility between these waters in any proportion.	25 20/	
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XXXXXXXSulfide — Total 155 Resistivity. ohms/m at 77° F. 0.230 Suspended Oil — Results Reported As Milligrams Per Liter Additional Determinations And Remarks A comparison of the above results rearry incompatibility between these waters in any proportion.		
Resistivity, ohms/m at 77° F. 0.230 Suspended Oil Results Reported As Milligrams Per Liter Additional Determinations And Remarks A Comparison of the above results rearily incompatibility between these waters in any proportion.	155	
Suspended Oil Results Reported As Milligrams Per Liter		<u></u>
Results Reported As Milligrams Per Liter Additional Determinations And Remarks A Comparison of the above results ri any incompatibility between these waters in any proportion.	0.230 0.70	<u> </u>
Additional Determinations And Remarks A comparison of the above results really incompatibility between these waters in any proportion.		
Additional Determinations And Remarks A comparison of the above results really incompatibility between these waters in any proportion.		
Additional Determinations And Remarks A comparison of the above results rearry incompatibility between these waters in any proportion.		
Additional Determinations And Remarks A comparison of the above results reary incompatibility between these waters in any proportion.		
Additional Determinations And Remarks A comparison of the above results riary incompatibility between these waters in any proportion.		
Additional Determinations And Remarks A comparison of the above results reany incompatibility between these waters in any proportion.		
any incompatibility between these waters in any proportion.		
indicate that the mixing of these waters should result in no		
• • • •	or these waters should result in no precipitat	cion or scal-
ing potential.		

Form No. 2 CC: M

Mr. Dave Newell, Midland Mr. Jim Nicholson, Midland Mr. S.M. Bucaram, Plano Mr. Mark Wilson, Dallas Central File System, Midland

07 A Waylan C. Martin, M.A. Ву.

2

ARCO OIL & GAS COMPANY SEVEN RIVERS QUEEN UNIT #32 APPLICATION TO INJECT WATER TABULATION OF WELL DATA FOR AREA OF REVIEW October 1989

#32 INJECTION INTERVAL: 3680-3730 Perfs + 3756-3785' Open Hole. All wells which have not been previously reported (in original application) and which penetrate the injection interval are shown.

0	1	14/- "	144-14		D-1	T. 1-1	0	0!	Cement	
Operator	Lease Name	well #	Well Type	Location	Date Drilled	Total Depth	Casing Size	Casing Depth	Sacks/ Top	Completion Interval
ARCO	Seven Rivers Queen Unit (SRQU)			2605'FSL 1280'FWL 34-22S-36E	4/83		8-5/8 5-1/2	305	200/circ 950/850	3689-3828
		61	AC	2440'FNL 2435'FWL 34-22S-36E	3/83	3925	8-5/8 5-1/2		200/circ 950/226	3676-3817
		62	AC	1555'FSL 2480'FWL 34-22S-36E	6/84	3903	8-5/8 5-1/2		200/circ 825/circ	3650-3784
		63	AC	1330'FSL 1310'FWL 34-22S-36E	7/84	3911	8-5/8 5-1/2		200/circ 800/circ	3685-3775
		69	AC	1170'FNL 1140'FEL 34-22S-36E	10/86	3900	8-5/8 5-1/2		300/circ 850/160	3683-3826
		72	AC	1160'FNL 2630'FWL 34-22S-36E	11/86	3900	8-5/8 5-1/2		300/circ 900/circ	3668-3816
		73	AC	1450'FNL 1250'FWL 34-22S-36E	12/87	3880	8-5/8 5-1/2		200/circ 900/circ	3676-3850
		75	AC	180'FSL 2620'FEL 34-22S-36E	12/87	3886	8-5/8 5-1/2		175/circ 825/circ	3692-3826
PROP	OSED WE	=IIS	w			F RF\				
ARCO	SRQU Proposed Producer	76		2475'FNL 1485'FEL 34-22S-36E	11/89		8-5/8 4-1/2	300	300/circ 1100/circ	3655-3805
ARCO	SRQU Proposed Producer	77		1570'FSL 1650'FEL 34-22S-36E	11/89 =	3850	8-5/8 4-1/2		300/circ 1100/circ	3655-3805
ARCO	SRQU Proposed	78		10'FSL 165'FEL	11/89	3850	8-5/8 4-1/2		300/circ 1100/circ	3655-3805

Wells within area of review which data was previously submitted:

Producer

34-22S-36E

ARCO SRQU #20, 21, 23, 24, 25, 26, 31, 33, 34, 36, 37, 38, 46,

ARCO OIL & GAS COMPANY SEVEN RIVERS QUEEN UNIT #38 APPLICATION TO INJECT WATER TABULATION OF WELL DATA FOR AREA OF REVIEW October 1989

#38 INJECTION INTERVAL: 3606-3712 Perfs + 3715-3785' Open Hole. All wells which have not been previously reported (in original application) and which penetrate the injection interval are shown.

Operator				Location	Dete	Total	Casina	Casin-	Cement	Completion
Operator	Lease Name	Well #	Well Type	Location	Date Drilled	Total Depth	Size	Depth	Sacks/ Top	Completion Interval
ARCO	Seven Rivers Queen Unit (SRQU)	57	AC	1500'FSL 10'FEL 34-22S-36E	1/82	3900	8-5/8" 5-1/2"		750/circ 1300/circ	3674-3740 C
		62	AC	1555'FSL 2480'FWL 34-22S-36E	6/84	3903	8-5/8 5-1/2		200/circ 825/circ	3650-3784
		67	AC	1250'FNL 1415'FEL 3-23S-36E	6/85	3872	8-5/8 5-1/2		200/circ 1525/circ	3661-3754 C
		68	AC	160'FNL 1310'FWL 2-23S-36E	9/86	3865	8-5/8 5-1/2		285/circ 1100/ciro	3654-3797 C
		74	AC	1210'FNL 2390'FEL 3-23S-36E	1/88	3880	8-5/8 5-1/2		175/circ 835/circ	3686-3821
		75	AC	180'FSL 2620'FEL 34-22S-36E	12/87	3886	8-5/8 5-1/2		175/circ 825/circ	3692-3826
Meridian	Otis Jones	2	AC	1650'FSL 1750'FEL 34-22S-36E	1/82	3670	9-5/8 7	423 3670		3223-3561 0
PROP	OSED WEL	LS	WITH	IIN AREA	OF F	REVIE	W:			
ARCO	SRQU Proposed Producer	76		2475'FNL 1485'FEL 34-22S-36E	11/89	3850	8-5/8 4-1/2		300/circ 1100/cir	3655-3805 c
ARCO	SRQU Proposed Producer	77		1570'FSL 1650'FEL 34-22S-36E	11/89	3850	8-5/8 4-1/2		300/circ 1100/cir	3655-3805 c
ARCO	SRQU Proposed Producer	78		10'FSL 165'FEL 34-22S-36E	11/89	3850	8-5/8 4-1/2		300/circ 1100/cir	3655-3805 c
ARCO	SRQU Proposed Producer	79		1400'FNL 10'FWL 2-23S-36E	11/89	3850	8-5/8 4-1/2		300/circ 1100/cir	3645-3795 c

Wells within area of review which data was previously submitted:

ARCO SRQU # 26, 30, 31, 32, 33, 36, 37, 39, 44, 45, 46, 47, 52.

ARCO OIL & GAS COMPANY SEVEN RIVERS QUEEN UNIT #44 APPLICATION TO INJECT WATER TABULATION OF WELL DATA FOR AREA OF REVIEW October 1989

#44 INJECTION INTERVAL: 3652-3757 Perfs.

All wells which have not been previously reported (in original application) and which penetrate the injection interval are shown.

									Cement	
Operator	Lease	Well	Well	Location	Date	Total	Casing	Casing	Sacks/	Completion
	Name	#	Туре		Drilled	Depth	Size	Depth	Тор	Interval
ARCO	Seven Rivers	57	AC	1500'FSL	1/82	3900	8-5/8"	1392	750/circ	3674-3740
	Queen Unit			10'FEL			5-1/2"	3900	1300/cire	0
	(SRQU)			34-22S-36E						
		64	WIW	2310'FNL	6/84	3816	8-5/8"	335	175/circ	3654-3735
				660'FWL			5-1/2"	3816	875/circ	
				2-23S-36E						
		67	AC	1250'FNL	6/85	3872	8-5/8	325	200/circ	3661-3754
				1415'FEL			5-1/2	3872	1525/cire	C
				3-23S-36E						
		68	AC	160'FNL	9/86	3865	8-5/8			3654-3797
				1310'FWL			5-1/2	3865	1100/ciro	0
				2-23S-36E						
		74			10100					
		71	AC	1310'FNL	10/86	3870	8-5/8	300		3630-3784
				2480'FEL			5-1/2	3870	1200/cire	0
				2-23S-36E						
	Plugging	52	P&A	1980'FNL	2/61	2000	9-5/8	417	175/01-0	3627-3727
	Plugging Schematic	53	ΓαΑ	660'FWL	2/01	3800	9-5/8 4-1/2	417 3800	285/245	
	Attached			2-23S-36E			4-1/2	3800	200/240	5
	Alldoneu			2-200-30E						

PROPOSED WELLS WITHIN AREA OF REVIEW:

ARCO	SRQU	78	10'FSL	11/89	3850	8-5/8	300	300/circ 3655-3805
	Proposed		165'FEL			4-1/2	3850	1100/circ
	Producer		34-22S-36E					
ARCO	SRQU	79	1400'FNL	11/89	3850	8-5/8	300	300/circ 3645-3795
	Proposed		10'FWL			4-1/2	3850	1100/circ
	Producer		2-23S-36E					

Wells within area of review which data was previously submitted: John Hend State JG #4 Section 2, Unit L, T23S, R36E. ARCO SRQU # 38, 39, 40, 42, 43, 45, 46, 52, 54

ARCO OIL & GAS COMPANY SEVEN RIVERS QUEEN UNIT #52 APPLICATION TO INJECT WATER TABULATION OF WELL DATA FOR AREA OF REVIEW October 1989

#52 INJECTION INTERVAL: 3654-3772 Perfs.

All wells which have not been previously reported (in original application) and which penetrate the injection interval are shown.

									Cement	
Operator	Lease	Well	Well	Location	Date	Total	Casing	Casing	Sacks/	Completion
	Name	#	Туре		Drilled	Depth	Size	Depth	Тор	Interval
ARCO	Seven Rivers	64	WIW	2310'FNL	6/84	3816	8-5/8"	335	175/circ	3654-3735
	Queen Unit			660'FWL			5-1/2"	3816	875/circ	
	(SRQU)			2-23S-36E						
		67	AC	1250'FNL	6/85	3872	8-5/8			3661-3754
				1415'FEL			5-1/2	3872	1525/ciro	0
				3-23S-36E						
		<u></u>	40		0/00	2005	0.5/0	207	OOE (aire	0054 0707
		00	AC	160'FNL	9/86	3865	8-5/8			3654-3797
				1310'FWL 2-23S-36E			5-1/2	3865	1100/ciro	;
				2-233-30E						
		74	AC	1210'FNL	1/88	3880	8-5/8	297	175/circ	3686-3821
		••		2390'FEL		0000	5-1/2		835/circ	0000 0021
				3-23S-36E			•=	0000	000,010	
	Plugging	53	P&A	1980'FNL	2/61	3800	9-5/8	417	175/circ	3627-3727
	Schematic			660'FWL			4-1/2	3800	285/245	5
	Attached			2-23S-36E						
Rasm. Op	. State A/AC-1	119	WIW	1295'FSL	2/84	3780	8-5/8			3637-3742
				1295'FEL			5-1/2	3780	875/surf	
				3-23S-36E					calc	

PROPOSED WELLS WITHIN AREA OF REVIEW:

ARCO	SRQU	78	10'FSL	11/89	3850	8-5/8	300	300/circ 3655-3805
	Proposed		165'FEL			4-1/2	3850	1100/circ
	Producer		34-22S-36E					
ARCO	SRQU	79	1400'FNL	11/89	3850	8-5/8	300	300/circ 3645-3795
	Proposed		10'FWL			4-1/2	3850	1100/circ
	Producer		2-23S-36E					

Wells within area of review which data was previously submitted:

Hendrix State JG #4 Section 2, Unit L, T23S, R36E.

Rasm. Op. State A/AC-1 #61, 63, 69.

ARCO SRQU # 38, 44, 45, 46, 47, 50, 51, 54.

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

19 (A3 5 / 24)	STATE OF NEW MEXICO	DIVISION
	ENERGY AND MINERALS DEPART MENT	
	OIL CONSERVATION DIVISION 89 OCT 26 AM	9 59
	HOBBS DISTRICT OFFICE	
GARREY CARRUTHERS	$1(-23\times 1)$	POSI
		HOBBS, NE

POSECTOR ROX 1989 HOBBS, NEW MEXERS 89341, 1989 (505) 393, 6164

OIL CONSERVATION DIVISION P. O. BOX 2088 SANTA FE, NEW MEXICO 87501	
RE: Proposed: MC DHC NSL NSP SWD WFX PMX	
Gentlemen: $\# 32 - 2 - 34 - 22 - 3$	6
I have examined the application for the: $73y - 434-12-3$	6
Gentlemen: I have examined the application for the: 34.22.3 34.22.3 38-6.34.22.3 7.44-5.2.23-36 7.44-5.2.23-36 Operator Lease & Well No. Unit S-T-R	5
Operator Lease & Well No. Unit S-T-R	
and my recommendations are as follows:	
OK	
Yours very truly	
Gerustert	

Jerry Sexton Supervisor, District 1

/ed