

Re: E.W. Walden #12



May 19, 1999

David Catanach
New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87504-2088

Re: Surface Commingling
E.W. Walden Lease
Lea County, New Mexico

Dear Mr. Catanach:

Anadarko (OGRID 000817) requests administrative approval for an exception to Rule 303-A to permit downhole commingling of the Grayburg and San Andres oil-oil zones in the wellbore of E.W. Walden #12. The well is located in Section 15 – T22S- R37E in Lea County, New Mexico. Exhibit 1 is a map of the EW Walden lease. This lease currently has 8 active producers in the Grayburg formation.

The EW Walden #12 is currently producing in the Grayburg at a rate of 1 BOPD, 2 BWPD and 23 MCFPD. This well is currently at its economic limit and if the commingling is approved, additional reserves could be recovered from the Grayburg formation. The San Andres was perforated and tested briefly in 1982 at a rate of about 25 BOPD. If this application is approved both zones will be turned together and placed on sucker rod pump.

In the wellbore, the Grayburg zone is perforated from 3640-3843' and the San Andres zone is perforated from 3899-3976'. The current producing BHP is 120 psi for the Grayburg interval (based on fluid level analysis) and the BHP for the San Andres is 880 psi (based on Lou Wortham C#2 offset analogy). The pressure difference should not be a problem as we will attempt to keep both zones in the "pumped off" condition in the wellbore. In the event that crossflow should occur, the waters are compatible (attached water analysis) and combining the fluids should not result in the formation of formation damaging precipitates.

Based on the latest test in the Grayburg (4/99) and the last test in the San Andres (8/82) in this well, the well should initially produce 25-30 BOPD, 350 MCFPD and 250 BWPD. This combined rate was developed by using the allocation of 96.5% for the San Andres and 3.5 % for the Grayburg. These allocation factors were developed based on current and past production. A current production plot is included for the Grayburg interval as well as the brief production history for the San Andres interval.

At present the well is not involved in a secondary recovery project. If a future secondary recovery project were to be considered we foresee no problems with this commingling prospect jeopardizing the efficiency of a secondary project.

If commingling is approved, Anadarko Petroleum Corporation, will the operator of the said well located 2250' FNL & 1350' FWL, Sec 15, T22S, R37E, Lea County, New Mexico, Penrose Skelly Grayburg and Southwest Eunice San Andres. All working, overriding, and royalty interests are the same in the two commingled zones.

Surface Commingling
E.W. Walden Lease
May 19, 1999
Page 2 of 2

All offset operators have been notified of the proposed commingling by a copy of this letter. If you have any questions regarding this proposed action, please feel free to contact me at (915) 683-0559.

Sincerely,



Richard Lauderdale
Production Engineer

Attachments

cc: NMOC - District I (Hobbs)
REL/Harold/Well File
Offset Operators (see attached list)

ANADARKO PETROLEUM CORPORATION
Offset Operators List
E.W. Walden Lease
Lea County, New Mexico

Collins & Ware, Inc.
Empire Plz.
508 W. Wall, Ste. 1200
Midland, Texas 79701-5076

Chevron U.S.A. Production Company
Box 1635
1301 McKinney
Houston, Texas 77251

Conoco, Inc.
10 Desta Dr., Ste. 100W
Midland, Texas 79705-4500

John H. hendrix
Box 3040
110 N. Marienfeld, Ste. 400
Midland, Texas 79701

ICA Energy, Inc.
Box 233
Odessa, Texas 79760-0233

Oryx Energy Co.
13155 Noel Rd.
Dallas, Texas 75221-2880

Wagner & Brown, LTD.
Box 1714
300 N. Marienfeld, Ste. 1100
Midland, Texas 79702

Form C-107-A
Revised March 17, 1999
DISTRICT II
811 South First St., Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
2040 S. Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
2040 S. Pacheco
Santa Fe, New Mexico 87505-6429
APPLICATION FOR DOWNHOLE COMMINGLING

APPROVAL PROCESS:
 Administrative Hearing
EXISTING WELLBORE
 YES NO

ANADARKO PETROLEUM CORPORATION P O BOX 2497 MIDLAND TX 79702
Operator Address
E.W. WALDEN 12 F - SEC 15-T225-R37E LEA
Lease Well No. Unit Ltr. - Sec - Twp - Rge County
Spacing Unit Lease Types: (check 1 or more)
OGRID NO. 000817 Property Code 001414 API No. 30-025-27756 Federal State (and/or) Fee X

1. Pool Name and Pool Code	2. Top and Bottom of Pay Section (Perforations)	3. Type of production (Oil or Gas)	4. Method of Production (Flowing or Artificial Lift)	5. Bottomhole Pressure Oil Zones - Artificial Lift: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	6. Oil Gravity (EAPI) or Gas BTU Content	7. Producing or Shut-In?	8. Fixed Percentage Allocation Formula -% for each zone (total of %'s to equal 100%)
PENROSE SKELLY GRAYBURG 50350	3640-3843	OIL	ARTIFICIAL LIFT	a. (Current) 120 BHP b. (Original)	35.0° API	PRODUCING	Oil: 3.5 % Gas: 6.5 %
EUNICE; SAN ANDRES, SOUTHWEST 24180	3899-3976	OIL	ARTIFICIAL LIFT	a. b. FROM LOU WORTHAM: C#2 ANALOGY (ATTACHED) 880 PSI	37.1° API	S1	Oil: 96.5 % Gas: 93.5 %
Production Marginal? (yes or no)	YES		YES, IN OFFSETTING LSES	Date: 08/82 Rates: 27 BOPD, 245 BWP 330 MCFPD			
* If Shut-In, give date and oil/gas/water rates of last production	Date: 4/20/99 Rates: 1 BOPD, 23 MCFPD, 2 BWP			Date: Rates:			
Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data							
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)							

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.
10. Are all working, overriding, and royalty interests identical in all commingled zones? Yes No
If not, have all working, overriding, and royalty interests been notified by certified mail? Yes No
Have all offset operators been given written notice of the proposed downhole commingling? Yes No
11. Will cross-flow occur? Yes No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. Yes No (If No, attach explanation)
12. Are all produced fluids from all commingled zones compatible with each other? Yes No
13. Will the value of production be decreased by commingling? Yes No (If Yes, attach explanation)
14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. Yes No
15. NMOC Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). _____
16. ATTACHMENTS:
* C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
* Production curve for each zone for at least one year. (If not available, attach explanation.)
* For zones with no production history, estimated production rates and supporting data.
* Data to support allocation method or formula.
* Notification list of all offset operators.
* Notification list of working, overriding, and royalty interests for uncommon interest cases.
* Any additional statements, data, or documents required to support commingling.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.
SIGNATURE Richard Lauderdale TITLE Production Engineer DATE 5/19/99
TYPE OR PRINT NAME RICHARD LAUDERDALE TELEPHONE NO. (915)683-0559

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-63

All distances must be from the outer boundaries of the Section

Operator ANADARKO PRODUCTION CO.		Lease E. W. WALDEN		Well No. 12
--	--	------------------------------	--	-----------------------

Tract Letter F	Section 15	Township 22 SOUTH	Range 37 EAST	County LEA
--------------------------	----------------------	-----------------------------	-------------------------	----------------------

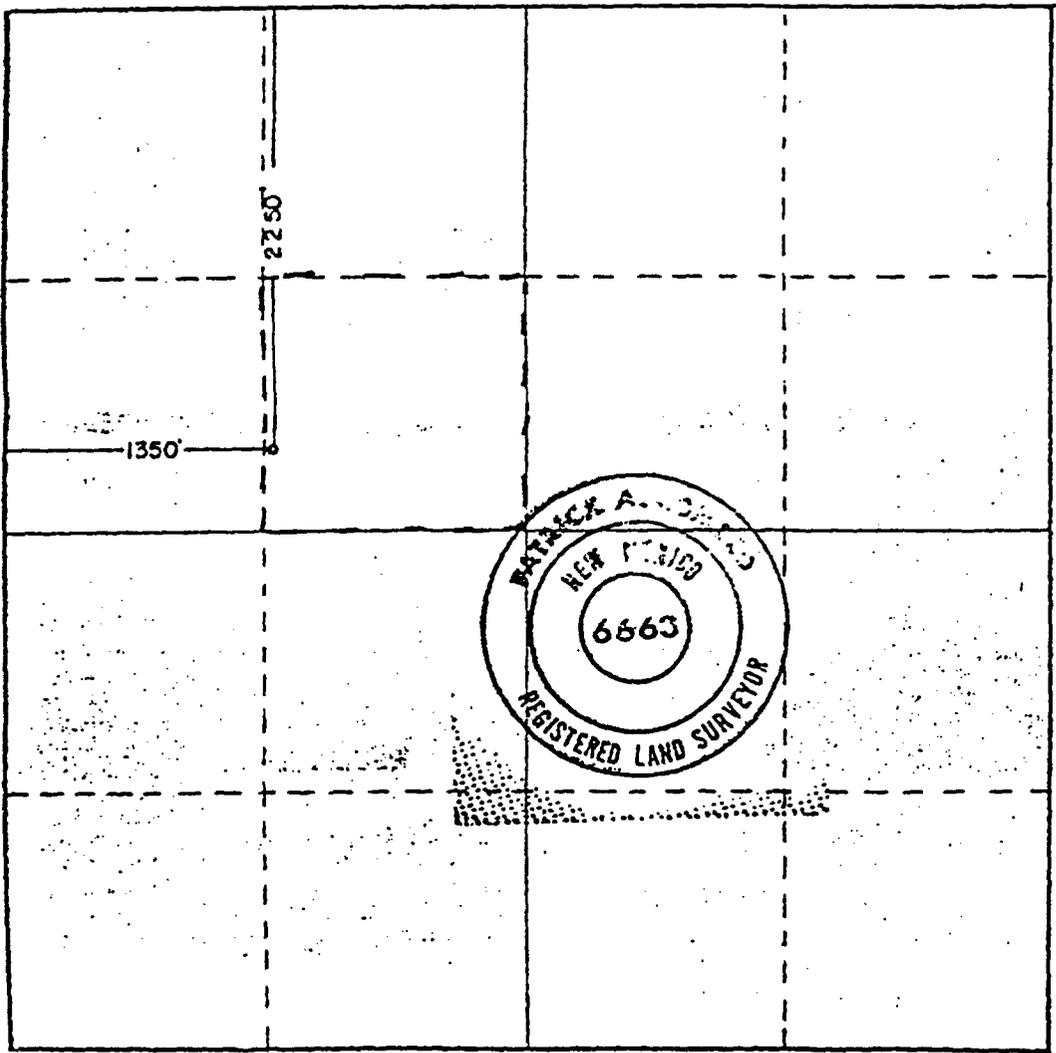
Actual Footage Location of Wells				
2250	feet from the	NORTH	line and	1350
				feet from the
				WEST
				line
Ground Level Elev. 3402.6	Producing Formation Grayburg SA	Pool Penrose Skelly	(Pool Code) 50350	Dedicated Acreage: 40
				Acres

- Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



REL 5/19/89 CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

John C. English
Name
John English
Position
Area Supervisor
Company
Anadarko Production Company
Date
February 17, 1982

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
2-11-82

Registered Professional Engineer and or Land Surveyor
Patrick A. Romero

Certificate No. **JOHN W. WEST 878**
PATRICK A. ROMERO 6863
Ronald J. Eidson 3239

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised October 18, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-27756		² Pool Code 24180		³ Pool Name UNDESINATED - EUNICE; SAN ANDRES, SOUTHWEST	
⁴ Property Code 001414		⁵ Property Name E.W. WALDEN			⁶ Well Number
⁷ OGRID No. 000817		⁸ Operator Name Anadarko Petroleum Corp.			⁹ Elevation 3402.6' GR

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
F	15	22S	37E		2250	NORTH	1350	WEST	LEA

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
-------------------------------	-------------------------------	----------------------------------	-------------------------

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p>1350'</p>	<p>2250'</p>	<p>¹⁷ OPERATOR CERTIFICATION</p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i></p> <p><i>Richard Lauderdale</i></p> <p>Signature RICHARD LAUDERDALE</p> <p>Printed Name PRODUCTION ENGINEER</p> <p>Title 05/19/1999</p> <p>Date</p>	
		<p>¹⁸ SURVEYOR CERTIFICATION</p> <p><i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i></p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyer:</p> <p>Certificate Number</p>	

7

District I
 PO Box 1980, Hobbs, NM 88241-1980
 District II
 PO Drawer DD, Artesia, NM 88211-0719
 District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV
 2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
 Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
 2040 South Pacheco
 Santa Fe, NM 87505

Form C-104
 Revised October 18, 1994
 Instructions on back
 Submit to Appropriate District Office
 5 Copies

AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address Anadarko Petroleum Corp. P.O. Box 2497 Midland, TX 79702		² OGRID Number 000817
		³ Reason for Filing Code COMMINGLE DOWNHOLE
⁴ API Number 30-0 25-27756	⁵ Pool Name UNDESINATED - EUNICE; SAN ANDRES, SOUTHWEST	⁶ Pool Code 24180
⁷ Property Code 001414	⁸ Property Name E.W. WALDEN	⁹ Well Number 12

II. ¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
F	15	22S	37E		2250	NORTH	1350	WEST	LEA

¹¹ Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
F	15	22S	37E		2250	NORTH	1350	WEST	LEA

¹² Lse Code P	¹³ Producing Method Code P	¹⁴ Gas Connection Date	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date
-----------------------------	--	-----------------------------------	-----------------------------------	------------------------------------	-------------------------------------

III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ POD	²¹ O/G	²² POD ULSTR Location and Description
024650	DYNEGY MIDSTREAM SERVICES 6 DESTA DR., STE. 3300 MIDLAND, TX 79705	0454230	G	
020667	EQUILON PIPELINE CO., LLC HCR 1, BOX 89 DENVER CITY, TX 79323	0454210	O	
009171	GPM GAS CORPORATION PO BOX 50020 MIDLAND, TX 79710-0020	0454230	G	

IV. Produced Water

²³ POD	²⁴ POD ULSTR Location and Description
-------------------	--

V. Well Completion Data

²⁵ Spud Date 05/31/82	²⁶ Ready Date 07/04/82	²⁷ TD 4031	²⁸ PBTB 3890	²⁹ Perforations 3899-3976	³⁰ DHC, DC, MC
³¹ Hole Size 12-1/4"	³² Casing & Tubing Size 8-5/8" CSG	³³ Depth Set 1166'	³⁴ Sacks Cement 575 SX		
	7-7/8"	5-1/2" CSG	4031'	680 SX	
	2-3/8 TBG		3890'	TEMP SVY - TOC @ 968'	

VI. Well Test Data

³⁵ Date New Oil	³⁶ Gas Delivery Date	³⁷ Test Date	³⁸ Test Length	³⁹ Tbg. Pressure	⁴⁰ Csg. Pressure
⁴¹ Choke Size	⁴² Oil	⁴³ Water	⁴⁴ Gas	⁴⁵ AOF	⁴⁶ Test Method

⁴⁷ I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Richard Lauderdale*

Printed name:
RICHARD LAUDERDALE

Title:
PRODUCTION ENGINEER

Date: 05/19/1999

Phone: 915/683-0559

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

⁴⁸ If this is a change of operator fill in the OGRID number and name of the previous operator

Previous Operator Signature	Printed Name	Title	Date

District I
 PO Box 1980, Hobbs, NM 88241-1980
 District II
 PO Drawer DD, Artesia, NM 88211-0719
 District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV
 2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
 Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
 2040 South Pacheco
 Santa Fe, NM 87505

Form C-104
 Revised October 18, 1994
 Instructions on back
 Submit to Appropriate District Office
 5 Copies

AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address Anadarko Petroleum Corp. P.O. Box 2497 Midland, TX 79702		² OGRID Number 000817
⁴ API Number 30-0 25-27756		³ Reason for Filing Code COMMINGLE DOWNHOLE
⁵ Pool Name PENROSE SKELLY GRAYBURG		⁶ Pool Code 50350
⁷ Property Code 001414	⁸ Property Name E.W. WALDEN	⁹ Well Number 12

II. ¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
F	15	22S	37E		2250	NORTH	1350	WEST	LEA

¹¹ Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	County
F	15	22S	37E		2250	NORTH	1350	WEST	LEA

¹² Lsa Code P	¹³ Producing Method Code P	¹⁴ Gas Connection Date	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date
-----------------------------	--	-----------------------------------	-----------------------------------	------------------------------------	-------------------------------------

III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ POD	²¹ O/G	²² POD ULSTR Location and Description
024650	DYNEGY MIDSTREAM SERVICES 6 DESTA DR., STE. 3300 MIDLAND, TX 79705	0454230	G	
020667	EQUILON PIPELINE CO., LLC HCR 1, BOX 89 DENVER CITY, TX 79323	0454210	O	
009171	GPM GAS CORPORATION PO BOX 50020 MIDLAND, TX 79710-0020	0454230	G	

IV. Produced Water

²³ POD	²⁴ POD ULSTR Location and Description
-------------------	--

V. Well Completion Data

²⁵ Spud Date 05/31/82	²⁶ Ready Date 07/04/82	²⁷ TD 4031	²⁸ PBTD 3890	²⁹ Perforations 3640-3843	³⁰ DHC, DC, MC
³¹ Hole Size 12-1/4"	³² Casing & Tubing Size 8-5/8" CSG	³³ Depth Set 1166'	³⁴ Sacks Cement 575 SX		
	7-7/8"	5-1/2" CSG	4031'	680 SX	
			2-3/8 T80	3890'	
TEMP SVY - TOC @ 968'					

VI. Well Test Data

³⁵ Date New Oil	³⁶ Gas Delivery Date	³⁷ Test Date	³⁸ Test Length	³⁹ Tbg. Pressure	⁴⁰ Csg. Pressure
⁴¹ Choke Size	⁴² Oil	⁴³ Water	⁴⁴ Gas	⁴⁵ AOF	⁴⁶ Test Method

⁴⁷ I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Richard Lauderdale*

Printed name:
RICHARD LAUDERDALE

Title:
PRODUCTION ENGINEER

Date: 05/19/1999

Phone: 915/683-0559

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

⁴⁸ If this is a change of operator fill in the OGRID number and name of the previous operator

Previous Operator Signature	Printed Name	Title	Date
-----------------------------	--------------	-------	------

9

E.W. Walden #12

Penrose Skelly (Grayburg) Oil Well

2250' FNL & 1350' FWL, Sec. 15, T22S, R37E, Lea County, New Mexico

Spudded 5/30/82



27 jts 8-5/8" 24# J-55 @ 1166'
 Cement with 375 sx Howco lite + 200 sx Class C (circulated 150 sx to surface)
 12-1/4" hole to 1166'

TOC @ 968'

Grayburg History

1/91 CO to 3865' (frac sand & scale). Acidize w/ 4100 gallons 15% NEFE acid in 3 stages AIR 4.3-4.5 BPM with no pressure

Prod Equipment

123 jts 2 3/8" tbg w/ sn @ 3797'
 1.5" pump
 TAC @ 3547'

Grayburg (Penrose Skelly) Perforations and Initial Completion

8/19/82 Perf 3640-50, 3655-67, 3672-80, 3686-3700, 3719-35, 3762-68, 3784-90, 3808-12, 3837-43' 2 spf
 Acidize w/ 6000 gallons 15% acid AIR 5 BPM @ 2100 psi
 Frac'd w/ 60,000 gals gelled 2% KCL + 62,800 # 20/40 snd + 28,500 10/20 snd in 3 stages, AIR 30 BPM @ 2033 psi

Set CIBP @ 3890' on 8/18/82 to isolate existing San Andres perfs

7/30/82 Perf SA (3899-3917') 2 SPF. Acidize w/ 3000 gallons 15% NE acid + 75 BS. AIR 3.5 BPM @ 2000 psi

6/22/82 Perf SA (3968 - 3976') 2 SPF. Acidize w/ 4000 gallons 15% NE acid + 69 BS. AIR 3 BPM @ 1280 psi.

Ran 96 jts 5 1/2" 15.5 J-55 csg
 Cemented w/ 280 sx lite + 400 sx class C
 TOC @ 968' (temp survey)

TD @ 4,031'
 PBSD @ 3880'

10

RESULT OF WATER ANALYSES

REL 5/19/99

TO: Mr. Mike Bridges LABORATORY NO. 1185451
P.O. Box 2497, Midland, Texas SAMPLE RECEIVED As listed
 RESULTS REPORTED 12-5-85

COMPANY Anadarko Production Company LEASE As listed
 FIELD OR POOL 1. Penrose Skelly 2. Eunice, South
 SECTION BLOCK SURVEY COUNTY Lea STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:
 NO. 1 Grayburg water - taken from E. W. Walden #12, 9-19-85
 NO. 2 San Andres water - taken from Hugh #13, 11-26-85
 NO. 3
 NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0163	1.0114		
pH When Sampled				
pH When Received	7.59	7.02		
Bicarbonate as HCO ₃	2,367	2,245		
Supersaturation as CaCO ₃				
Undersaturation as CaCO ₃				
Total Hardness as CaCO ₃	780	1,475		
Calcium as Ca	92	296		
Magnesium as Mg	134	179		
Sodium and/or Potassium	5,706	3,989		
Sulfate as SO ₄	30	236		
Chloride as Cl	7,952	5,717		
Iron as Fe	2.8	0.04		
Barium as Ba	0	0		
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	16,281	12,661		
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	350	1,250		
Resistivity, ohms/m at 77° F.	0.510	0.540		
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

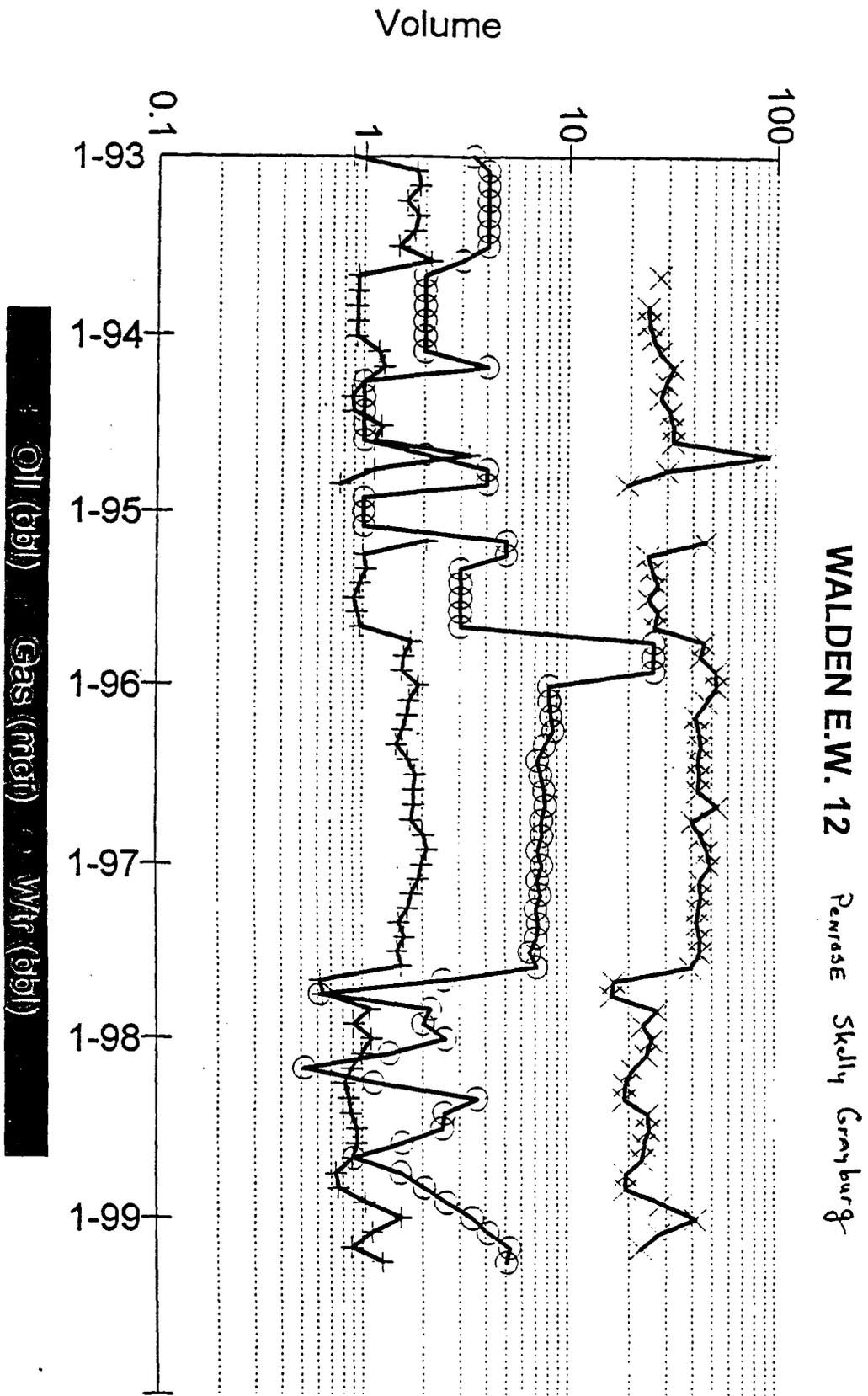
Results Reported As Milligrams Per Liter

Additional Determinations And Remarks A careful comparison of the above results clearly reveals no evidence of any incompatibility between these two waters.

By _____

cc: Mr. Dan Kernaghan, Midland

Waylan C. Martin, M. A.



WALDEN E.W. 12 Penrose Skully Grayburg

Oil
Gas
Water
Wells

Field: PENROSE SKELLY
 Lease: E W WALDEN | Well #12
 Operator: ANADARKO PETROLEUM CORPORATION
 Production Rate vs Time
 For the Period 01/1982 to 12/1998 | API: 30025277560000

BBl/Day or Mcf/Day

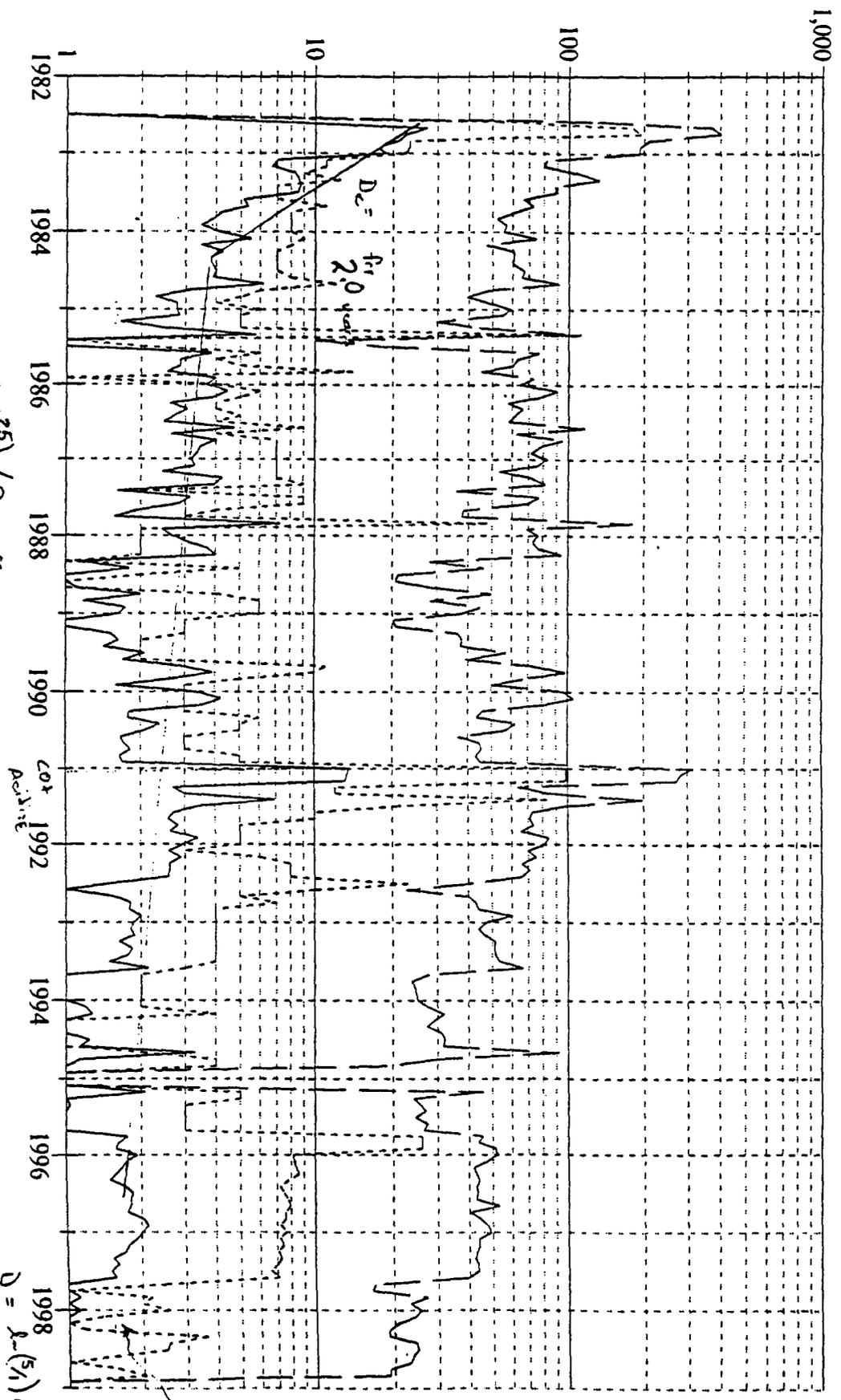


Exhibit 5

Reported Oil Production = 17,477 Bbls
 Reported Gas Production = 351,508 Mcf
 Reported Water Production = 58,748 Bbls

$D = \ln\left(\frac{25}{5}\right) / 2 \text{ years}$
 $D \cdot d \cdot t = 80\%$

Time

$D = \ln\left(\frac{5}{1}\right) / 15 \text{ years}$
 $D = 11\% / \text{year}$
 $D = 10\% / \text{year}$
 Plot Displays Daily Averages

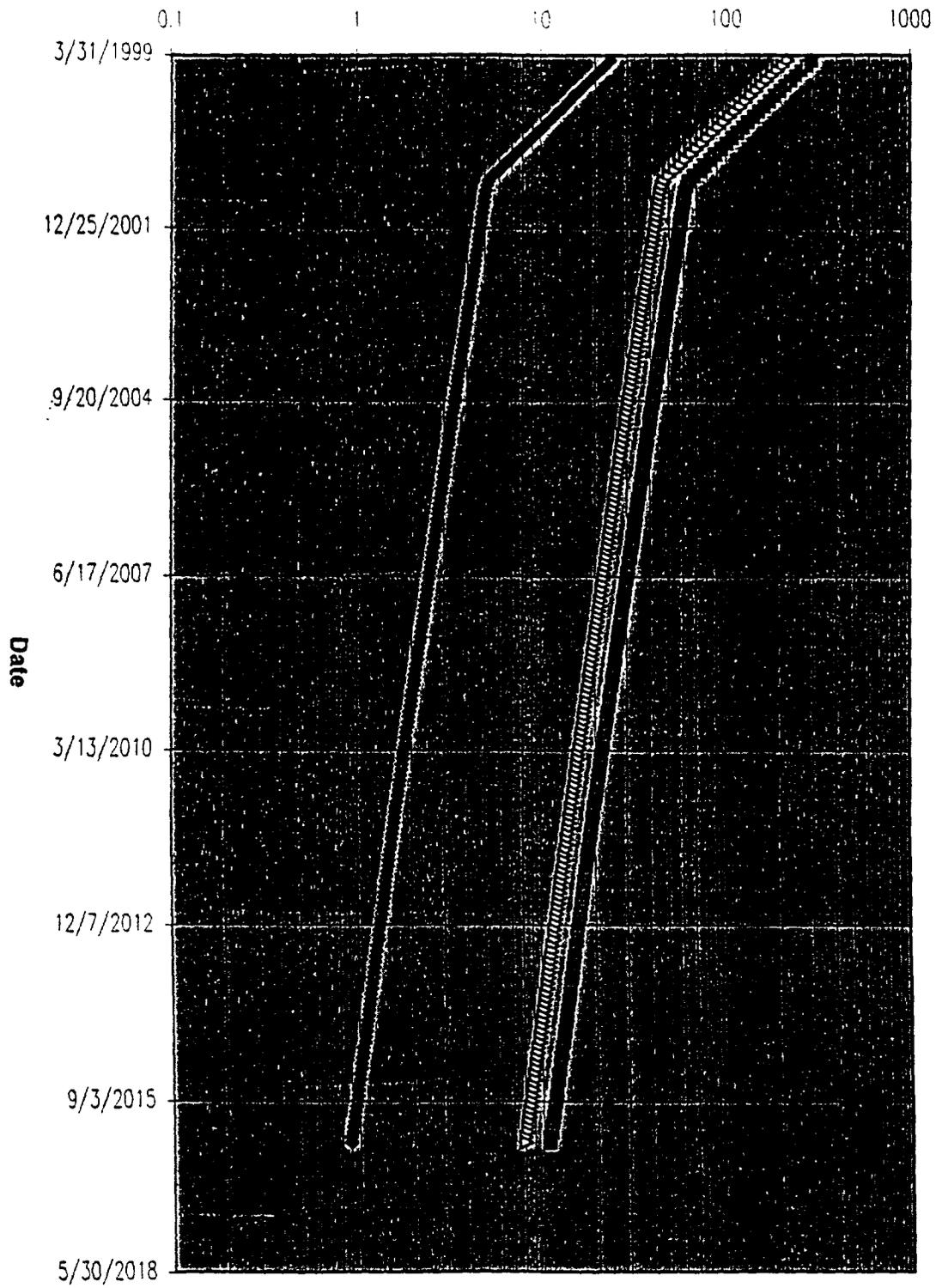
5

San Andres History in EW Walden #12

perfs	3968-76	Oil Rate	Water Rate	Gas Rate
7/8/1982	0	190	11	
7/9/1982	0	192	19	
7/10/1982	0	197	23	
7/11/1982	2	190	25	
7/12/1982	0	190	18	
7/13/1982	NO Test			
7/14/1982	NO Test			
7/15/1982	NO Test			
7/16/1982	27	154	44	
7/17/1982	47	217	NA	
7/18/1982	17	86	NA	
7/19/1982	13	220	NA	
7/20/1982	64	80	NA	
7/21/1982	NO Test		NA	
7/22/1982	25	260	NA	
7/23/1982	34	208	NA	
7/24/1982	22	178	NA	
7/25/1982	19	169	NA	
7/26/1982	17	164	NA	
7/27/1982	15	161	NA	
7/28/1982	14	162	NA	
7/30/1982	Set RBP @ 3960' to test Upper SA			

perfs	3899-3917	Oil Rate	Water Rate	Gas Rate
8/7/1982	5	205	NA	
8/8/1982	5	220	NA	
8/9/1982	9	135	NA	
8/10/1982	10	163	NA	
8/11/1982	NO Test		NA	
8/12/1982	3	141	NA	
8/13/1982	15	141	NA	
8/14/1982	10	50	NA	
8/15/1982	10	50	NA	
8/16/1982	NO Test		NA	
8/17/1982	9	131	NA	
8/18/1982	10	140	NA	

8/18/1982 Set CIBP above San Andres perforations and this well has been Grayburg producer since that time.



◆ Oil Rate, BOPD
 ■ Gas Rate, MCFPD
 ▲ Water Rate, BWPD

Exhibit 7