



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

7-2-92

BRUCE KING
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

DHC - 850

RE: Proposed:

MC _____
DHC X _____
NSL _____
NSP _____
SWD _____
WFX _____
PMX _____

Gentlemen:

I have examined the application for the:

Oxy USA Inc. Owen #1-P 35-21-37
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton
Jerry Sexton
Supervisor, District 1

/ed



OXY USA INC.
Box 50250, Midland, TX 79710

June 24, 1992

State of New Mexico Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504

Attn: Mr. David R. Catanach

Re: Owen A #1
Unit P, Sec 35, T-21-S, R-37-E, Lea County, NM
Commingled Wantz-Abo and Wantz-Granite Wash

Mr. Catanach:

OXY USA respectfully requests an exception to Rule 303-A to permit downhole commingling of the production from the Wantz-Abo and the Wantz-Granite Wash in the above-referenced well. The well is currently producing from the Wantz-Abo pool.

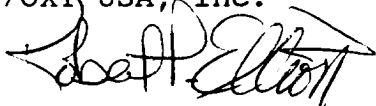
In June of 1991 a retrievable bridge plug was placed above the Granite Wash perforations while the Wantz-Abo was tested. The Wantz-Abo was expected to produce approximately 5 BOPD. The commingled production from the Wantz-Abo and Wantz-Granite Wash would have improved lease economics. However, the production from the Wantz-Abo was much higher than anticipated, and it was not possible to apply for a downhole commingling permit. The well has produced on a steep decline and is rapidly becoming marginally economic. The latest production figures show the Owen A #1 to be producing at a rate of approximately 9 BOPD and 19 MCFPD. Based on its decline, the Owen A #1 will be approaching its economic limit very soon.

By downhole commingling the production in the Owen A #1, OXY USA will be able to produce from the Wantz-Abo longer than if it were produced individually. As indicated in the attached application, it is possible that OXY USA can recover nearly 4600 BO and 9650 MCF of additional reserves from the Wantz-Abo that would not be economic to recover without commingling.

The attached application shows that the Owen A #1 meets the criteria set for downhole commingling of oil zones, and that waste will not occur as a result of the proposed commingling, and that correlative rights will not be violated. It also shows that similar requests have been made by offset operators in the past, and that permission has been granted to downhole commingle the Wantz-Abo and the Wantz-Granite Wash in these cases.

If you require additional information, please contact this office at (915) 685-5821. Thank you for your consideration in this matter.

Sincerely,
OXY USA, Inc.

A handwritten signature in black ink, appearing to read "Robert P. Elliott", written over the printed name.

Robert P. Elliott
Operations Engineer

Attachments

CC: Offset Operators
Mr. Jerry Sexton, NMOCD Hobbs, NM
CWP/FAV
R. Foppiano
RPE
Well file

Attachment 1
Offset Operators
OXY USA's Owen A Lease

AMOCO Production Co.
P.O. Box 3092
Houston, Texas 77253

ARCO Oil and Gas Co.
P.O. Box 1610
Midland, Texas 79702

CONOCO Inc.
10 Desta Dr.
Midland, Texas 79705

Exxon Company, USA
P.O. Box 1600
Midland, Texas 79702-1600

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

Attachment 2
Owen A #1
Required Data

In order to obtain approval to commingle production from the Wantz - Abo and the Wantz - Granite Wash in OXY USA's Owen A #1, the following responses to Rule 303 (D) 1 through 10 are made:

1. Name and address of the operator:

OXY USA, Inc.
P.O. Box 50250
Midland, Texas 79710

2. Lease name, well number, well location, name of pools to be commingled:

Owen "A" No. 1
Unit P: 660' FSL and 660' FEL of Sec 35, T-21-S, R-37-E, Lea County, New Mexico.
Pools to be commingled: Wantz - Abo and Wantz - Granite Wash.

3. A plat of the area showing the acreage dedicated to the well and all offset operators:

Attached.

4. A 24-hour productivity test on Division form C-116 showing the amount of oil, gas, and water produced from each zone:

Attached. The productivity test provided for the Granite Wash zone is the last test taken prior to the Abo recompletion in June of 1991. It is felt that after a small acid job to clean the perforations, the production from the Granite Wash should return to this level and follow the established decline.

5. A production decline curve for both zones showing that for a period of at least one year a steady rate of decline has been established for each zone which will permit a reasonable allocation of the commingled production to each zone for statistical purposes:

Attached.

6. Estimated bottomhole pressure for each artificially lifted zone:

The estimated bottomhole pressure for the Wantz - Abo is 800 psi. The estimated bottomhole pressure for the Wantz - Granite Wash is 600 psi. These pressures are estimated using offset data.

Owen A #1

Required Data (Continued)

7. A description of the fluid characteristics of each zone showing that the fluids will not be incompatible in the well-bore:

These zones are being commingled in offset producers without compatibility problems.

8. A computation showing that the value of the commingled production will not be less than the sum of the individual streams:

The value of the commingled stream will be the same as the individual streams since the gravities of the oil produced from each zone are the same.

9. A formula for the allocation of production to each of the commingled zones and a description of the factors or data used in determining such formula:

The Wantz Granite Wash produced an average of 10 BOPD, 2 BWPD and 5 MCFPD prior to being shut-in in June of 1991. The Wantz-Abo is producing at a rate of approximately 9 bopd, 2 BWPD and 19 MCFPD. It is proposed to allocate the oil production to each zone using a simple 50:50 ratio. If it becomes evident that this is not accurate after the recompletion, OXY USA will submit a new formula.

10. A statement that all offset operators, and in the case of a well on federal land, the United States Bureau of Land Management, have been notified in writing of the proposed commingling.

All offset operators have been notified of OXY USA's application to downhole commingle the production from the Owen A #1 by copy of this letter.

The following addresses Rule 303 (C) (1) (a) i through vii which establishes the criteria for commingling oil zones.

- i The total combined oil production before commingling from the Wantz - Abo and the Wantz - Granite Wash is less than 30 BOPD. Since the bottom perforation in the Wantz - Granite Wash is 7490', the oil production criteria is met by not exceeding 50 BOPD.
- ii Both oil zones will require artificial lift.

Owen A #1
Required Data (Continued)

- iii Neither zone produces more than 50 BWPD which is the limit of the combined oil production for a well in which the bottom perforation of the lowermost pool is between 7,000' and 7,999'.
- iv These zones are being successfully commingled in several offset wells which are operated by Exxon and Marathon. Formation damage is not anticipated through the commingling of the Wantz- Abo and the Wantz - Granite Wash in the Owen A #1.
- v Since the oil produced from these zones is nearly identical, commingling should have no effect on the value of the oil.
- vi Working interest, royalty interest and overriding royalty interest ownership in the Owen A #1 is the same for both zones.
- vii Commingling of the Wantz - Abo and the Wantz - Granite Wash in the Owen A #1 will not jeopardize the efficiency of future secondary recovery operations.

Attachment 3
Owen A #1
Additional Recovery from the Wantz - Abo

The following is an estimate of the additional reserves which can be recovered through commingling of the Wantz - Abo and the Wantz Granite Wash:

Current Wantz - Abo Rate: 9 bopd, 19 MCFPD (GCR = 2100 SCF/bbl)

The nominal decline rate projected from last 3 months production is 71.5% per year.

Additional reserves that can be recovered through commingling:

$$(9 \text{ bopd} - 0 \text{ bopd}) (365 \text{ d/yr}) / 0.715/\text{yr} = 4594 \text{ BO}$$

$$(4594 \text{ BO}) (2100 \text{ SCF/BO}) = 9647 \text{ MCF}$$

This is a minimum recovery since the decline will probably begin to flatten out.

Attachment 4
Offset Operators
Commingling Wantz-Abo and Wantz-Granite Wash

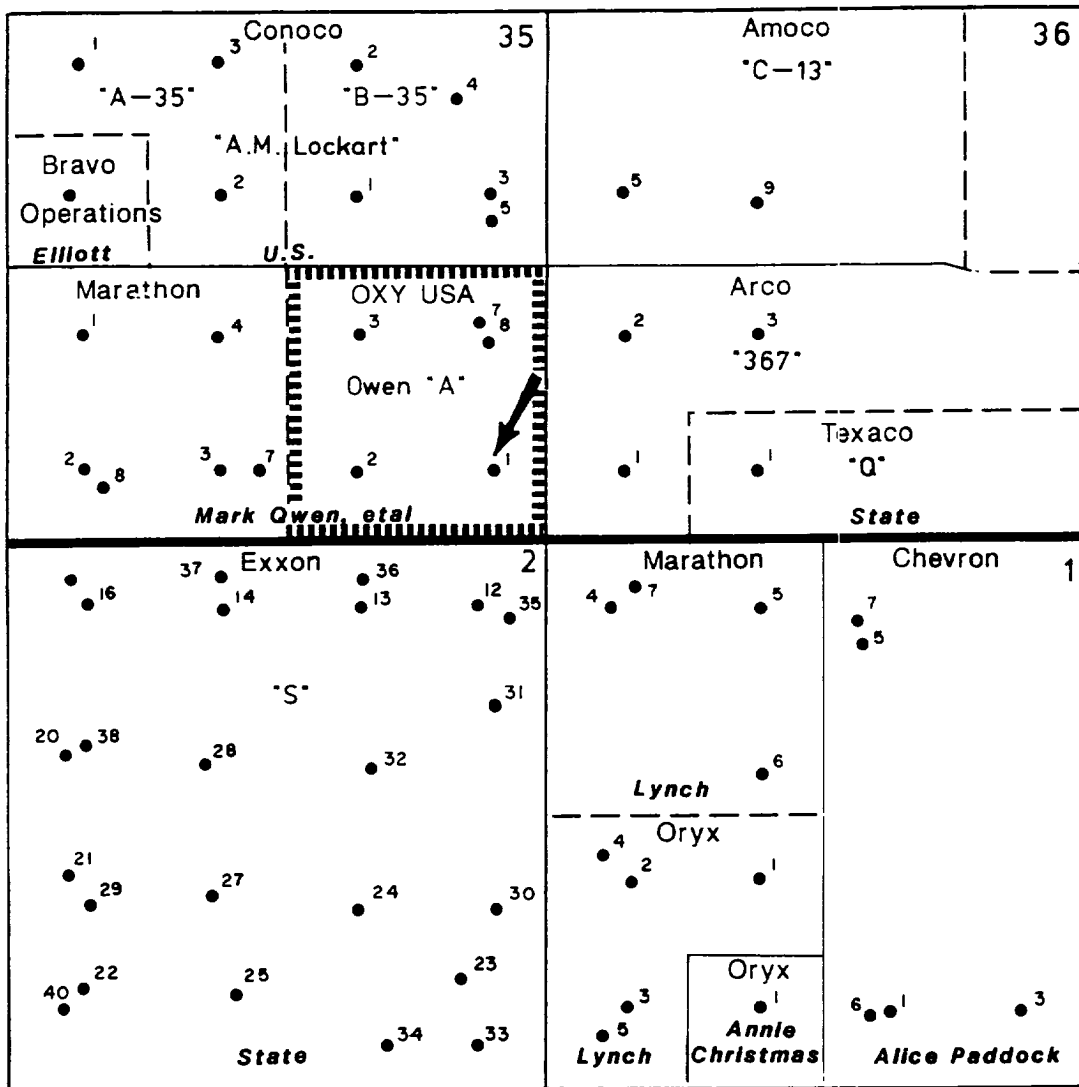
Exxon Company, USA
New Mexico "S" State #36
Unit B, Sec 2, T-22-S, R-37-E, Lea Co., NM
NMOCD Administrative Order No. DHC-770

Exxon Company, USA
New Mexico "S" State #37
Unit C, Sec 2, T-22-S, R-37-E, Lea Co., NM
NMOCD Administrative Order No. DHC-769

Marathon Oil Company
Mark Owen # 7
Unit N, Sec 35, T-22-S, R-37-E, Lea Co., NM
NMOCD Order No. - Unknown

Marathon Oil Company
Mark Owen # 8
Unit M, Sec 35, T-22-S, R-37-E, Lea Co., NM
NMOCD Order No. - Unknown

Attachment 5
PLAT SHOWING OWEN "A" LEASE
AND ALL OFFSET OPERATORS

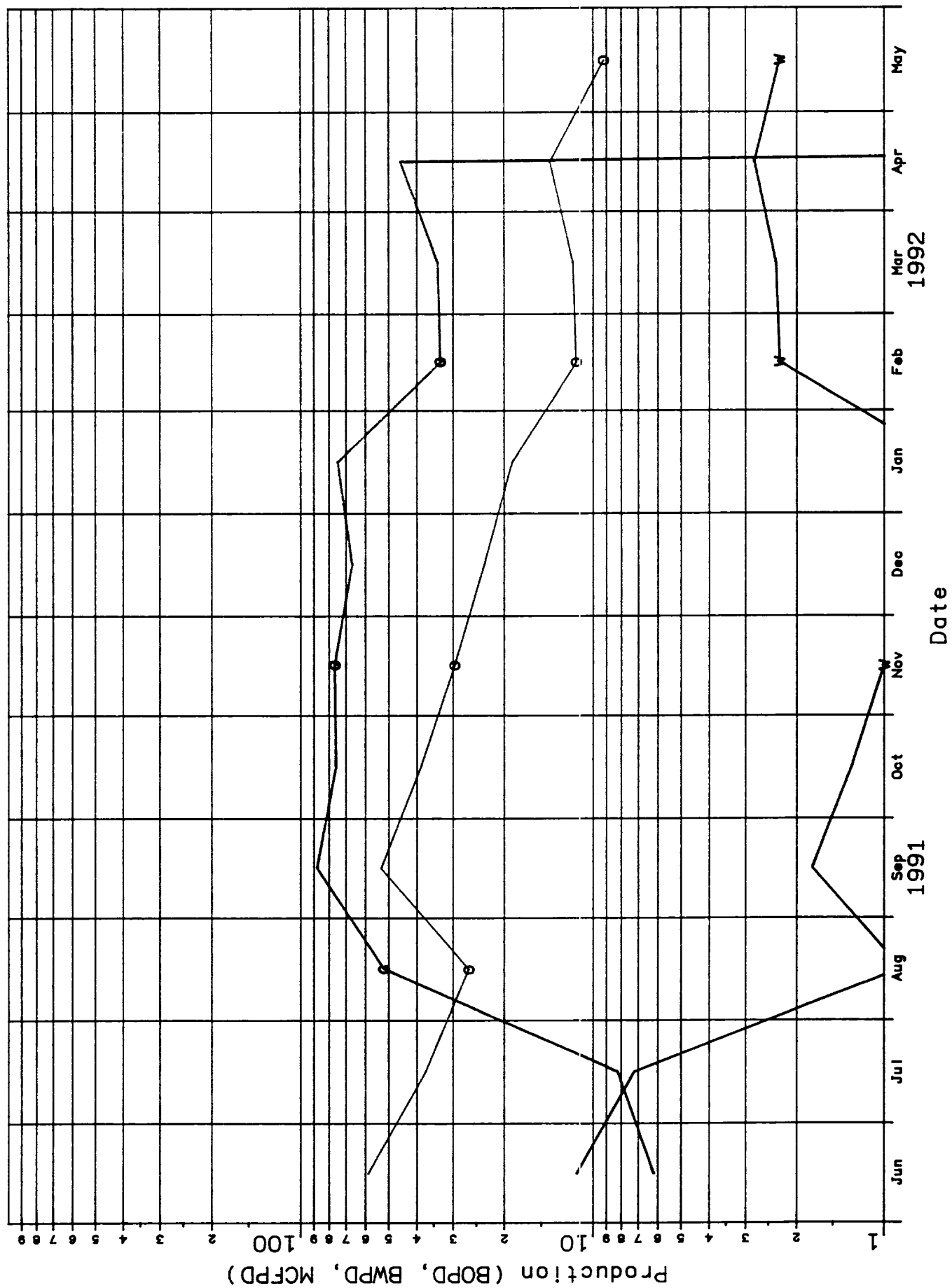


OXY USA, INC.
OWEN "A" LEASE
SEC. 35, T-22-S, R-37-E
 LEA CO., NEW MEXICO

0 1/2
 MILE

JUNE, 1992

OWEN A #1 WANTZ - ABO



to Appropriate
District Office
State Leases - 4 copies
Fee Leases - 3 copies

State of New Mexico
Bureau of Geology, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator OXY USA Inc.			Lease Owen		Well No. 1
Unit Letter P	Section 35	Township 21S	Range 37E	County Lea	
Actual Footage Location of Well: 660 feet from the South line and 660 feet from the East line					
Ground level Elev. 3368'	Producing Formation Abo		Pool Wantz Abo		Dedicated Acreage: 40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.

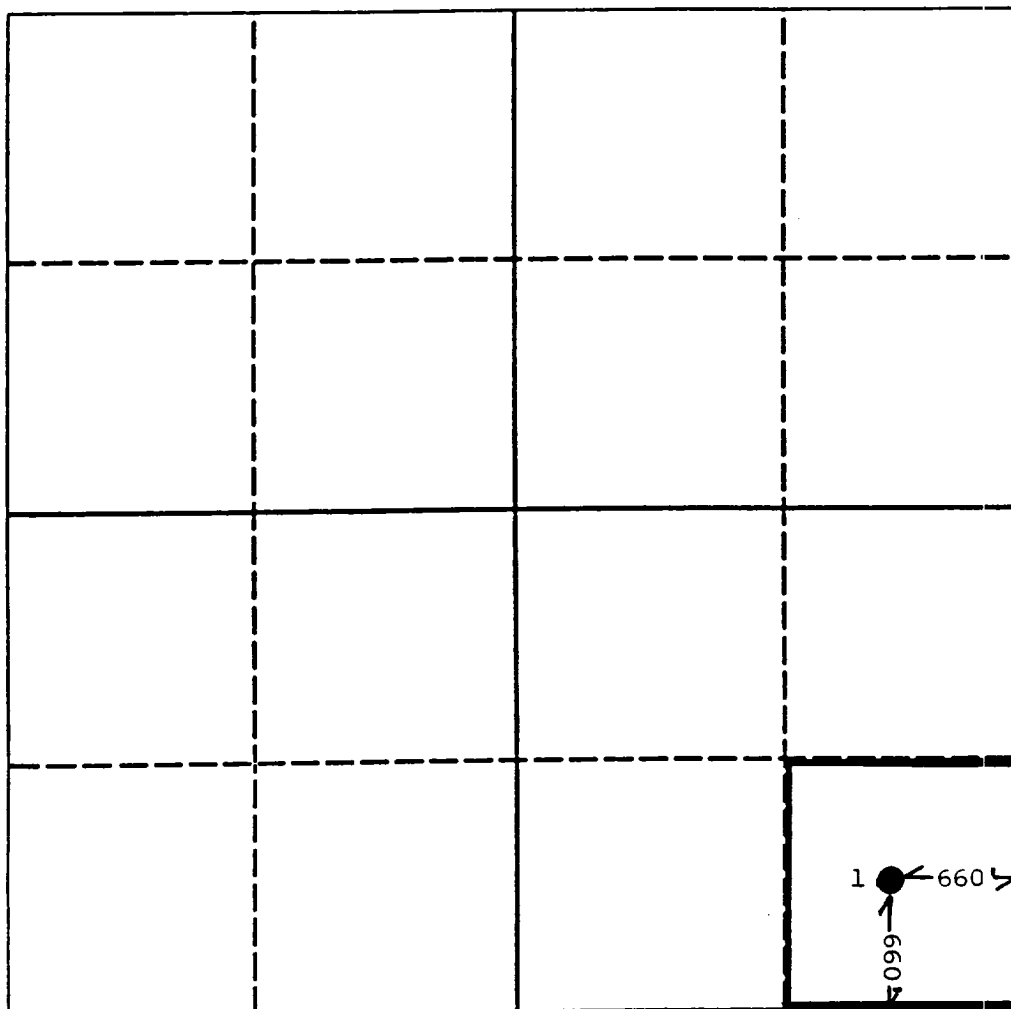
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interest 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 interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature

Printed Name

David Stewart

Position

Production Accountant

Company

OXY USA Inc.

Date

5/8/91

SURVEYOR CERTIFICATION

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

Signature & Seal of
Professional Surveyor

Certificate No.

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

OIL CONSERVATION DIVISION

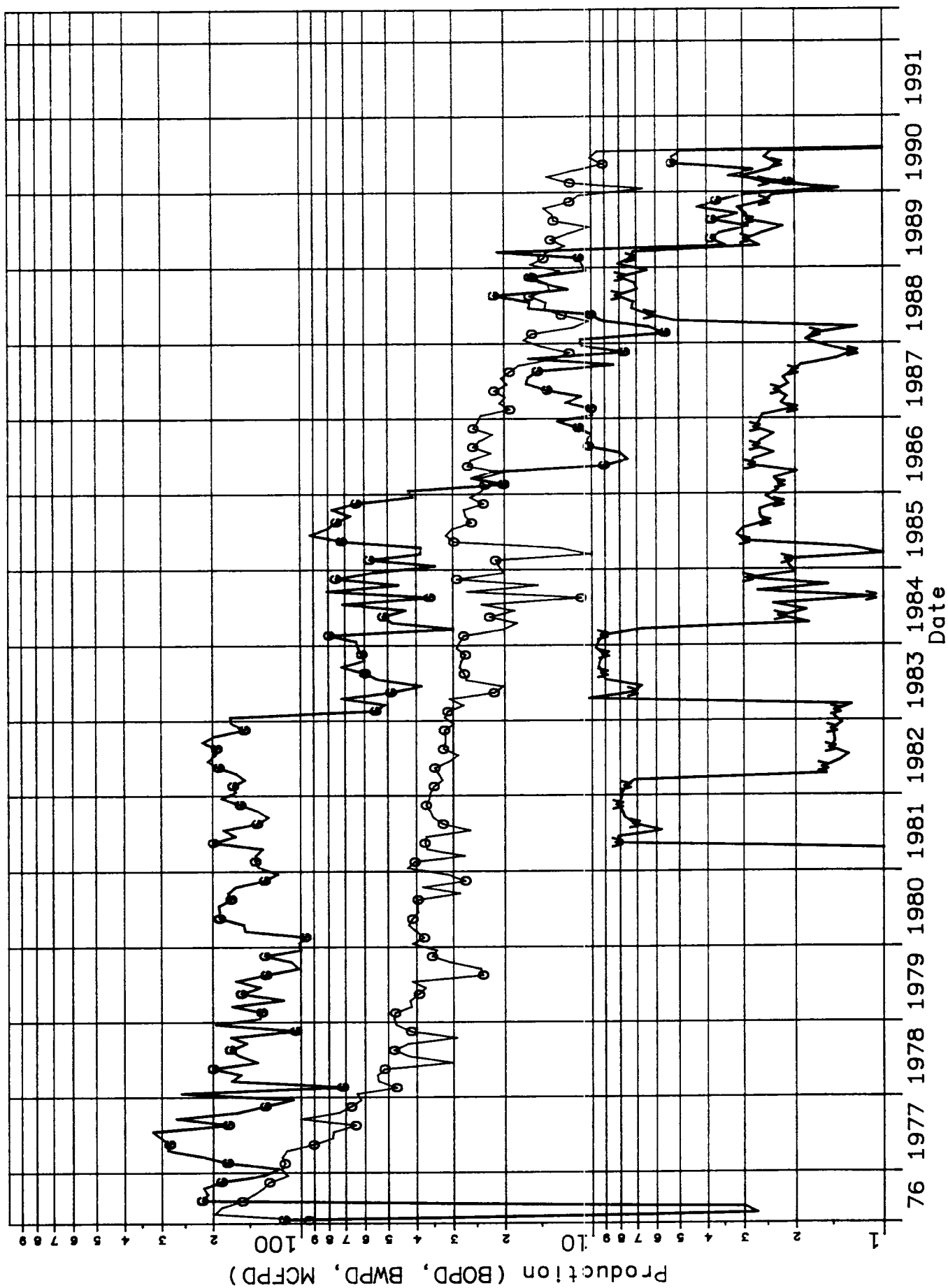
P.O. Box 2088

Santa Fe, New Mexico 87504 - 2088

GAS - OIL RATIO TEST

Operator WANTZ ABO		Pod WANTZ ABO		County LEA												
Address P.O. Box 50250, Midland, Texas 79710																
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	TYPE OF TEST - (X)	SCHEDULED	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	COMPLETION			SPECIAL			GAS RATIO CU.FT/BBL
		U	S	T						R	CHOKE SIZE	TBG PRESS	WATER BBLs	PROD. GRAV OIL	OIL BBLs	
WEN A	1	P	35	21S	37E	02/12/92	P		24	4	20	42	2100			
	2	O	35	21S	37E	02/13/92	F		24	2	3	90	30000			
	3	J	35	21S	37E	02/14/92	P		24	2	3	90	30000			
	8	I	35	21S	37E	02/15/92	F		24	3	5	80	16000			
	13	I	3	22S	37E	02/18/92	F		24	1	2	142	71000			
<p>Instructions:</p> <p>During gas-oil ratio test each well shall be produced at a rate not exceeding the top it allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25% tolerance in order that well can be assigned increased allowables when authorized by the Division.</p> <p>Gas volumes must be reported in MCF measured at a pressure base of 15.025 and a temperature of 60 F. Specific gravity base will be 0.60.</p> <p>Report casing pressure in lieu of tubing pressure for any well producing through casing.</p>																
<p>I hereby certify that the above information is true and complete to the best of my knowledge and belief.</p> <p><i>Joe M. Fleming</i> Signature</p> <p>Joe M. Fleming - Senior Engineering Technician Printed name and title</p> <p>February 28, 1992 915-685-5600</p>																

OWEN A #1
WANTZ - GRANITE WASH



NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

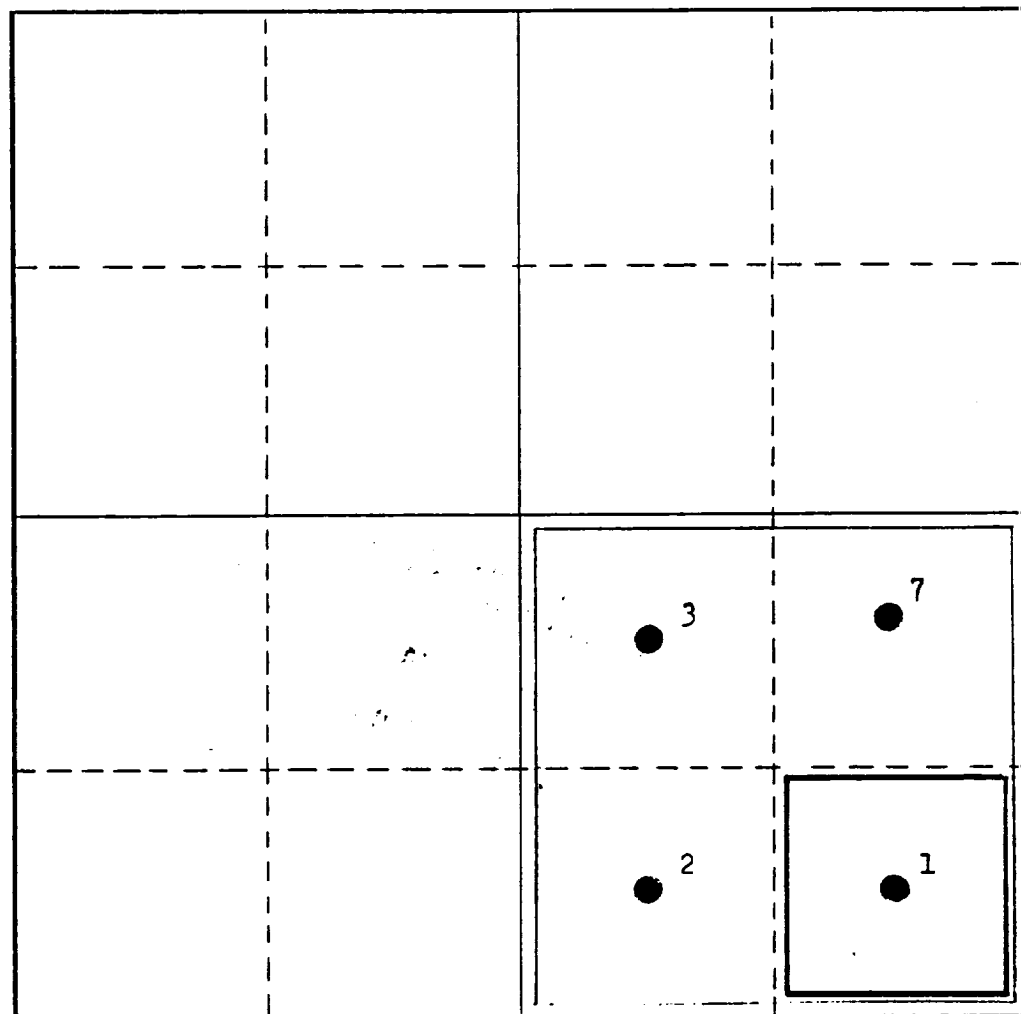
Operator Cities Service Oil Company			Lease Owen			Well No. 1		
Unit Letter P	Section 35	Township 21S	Range 37E	County Lea				
Actual Footage Location of Well: 660 feet from the South line and 660 feet from the East line								
Ground Level Elev. 3368'	Producing Formation Granite Wash		Pool Und. Granite Wash			Dedicated Acreage: 40 Acres		

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. 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.



CERTIFICATION

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

Name E. Smith
Position
Region Operation Manager
Company
Cities Service Oil Company
Date
March 12, 1976

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

Registered Professional Engineer
and/or Land Surveyor

Certificate No.

Submit 2 copies to Appropriate

District Office

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-116

Revised 1/1/89

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

GAS - OIL RATIO TEST

Operator OXY USA Inc.		Pool WANTZ GRANITE WASH		County LEA										
Address P.O. Box 50250, Midland, Texas 79710		TYPE OF TEST -(X)		Completion X		Special		GA. OIL RATIO						
LEASE NAME OWEN A	WELL NO. 1	LOCATION			DATE OF TEST 4/27/91	CHOKE SIZE P	TBG PRESS	SCHEDULED DAILY ALLOW- ABLE	LENGTH OF TEST HOURS 24	PROD. DURING TEST		GAS MCF 5	OIL BBL 10	CU.FT/BBL 500
		U P	S T R	WATER BBL 2						GRAV OIL 40.9				

Instructions:

During gas-oil ratio test each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25% tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60 F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing. (See Rule 301, Rule 1116 & appropriate pool rules)

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



Signature

JOE FLEMING - SENIOR ENGINEERING TECH.

Printed name and title

MAY 15, 1991

Date

915/685/5600

Telephone No.