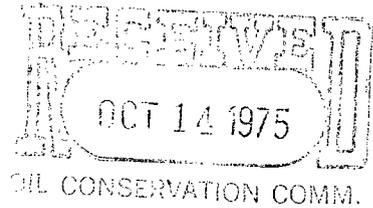




**PHILLIPS PETROLEUM COMPANY**

ODESSA, TEXAS 79761  
PHILLIPS BUILDING

NATURAL RESOURCES GROUP  
Exploration and Production



October 8, 1975

DHC - 182  
Date - 11/4/75

Application for Exception to Statewide Rule No. 303-C to Down-Hole Commingle Production from the Ranger Lake Bough and Ranger Lake Penn Pools - Ranger Well No. 7, Lea County, New Mexico

File: W4-Ta-197-75

New Mexico Oil Conservation Commission - 2  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey  
Secretary

Gentlemen:

We respectfully request administrative approval, subject to the twenty day waiting period, to down-hole commingle production from the Ranger Lake Bough and Ranger Lake Penn Pools in our Ranger Well No. 7, located in Unit L, 1980' FS line and 3660' FW line of Section 26, T-12-S, R-34-E, Lea County, New Mexico, as provided by Statewide Rule No. 303-C. Pertinent well and production data follows;

1. Both zones to be commingled in the well bore are classified as oil zones and both zones require artificial lift.
2. The total daily production from the two zones before commingling does not exceed 80 BOPD as allowed for the deepest perforations in the lower zone. Further, neither zone produces more water than the combined oil limit as determined above.
3. The Penn zone of this well bore was completed in August of 1959 through perforations 10212' to 10313'. Our last official well test on the Penn zone was in June of 1974, producing 34 BOPD, 3 BWPD, GOR 88/1, Gravity - 40.0 Degrees. The Penn zone was temporarily abandoned and the well bore recompleted in the Bough zone in June, 1974. Bough zone completion is through selected perforations between 9941' and 9969'. On test dated September 30, 1975, the Bough produced 14 BOPD, 48 BWPD, with a GOR of 1687/1 and oil gravity of 40.9 degrees. The oil and/or water production is compatible one zone with the other and there should be no undue formation of precipitates from combined produced waters or hydrocarbons. We attach formation water analysis on each zone.

10313 - bottom pf

Penn prod - 34 BO = 71 %

Bough " - 14 BO 29 %

Total 48 - OK (max allowed 80 BOPD)

Phillips Petroleum Company

File: W4-Ta-197-75

October 8, 1975

Page 2

4. Crude gravities are; Bough - 40.9 degrees, Penn - 40.0 degrees. These crudes are classified as intermediate sweet with a posted price of \$13.00 for 40 degrees gravity (and above) crude. Consequently, there would be no difference in the price of combined crude over that of the crudes produced and sold separately. Royalty and working interest are common throughout and there is no overriding royalty. The State royalty beneficiary is Common School Land.
5. Bottom hole pressures are estimated at 2000 psi for the Bough and 2500 psi for the Penn.
6. Our forecast of production is; first year, Bough - 33 BOPD, 50 BWPD; Penn - 25 BOPD, 25 BWPD. Second year, Bough - 25 BOPD, 75 BWPD; Penn - 20 BOPD, 25 BWPD. We attach prior production curves on each zone.
7. Completion history; spudded on 6-21-59, TD of 10,365' on 8-1-59. Elevation - 4161' RKB. 13-3/8" casing set in 17-1/2" hole at 351', cemented with 375 sacks regular cement with cement circulated at the surface; 8-5/8" casing set in 11" hole at 4211' and cemented with 511 sacks regular cement with 40% DD, followed by 150 sacks regular cement with cement circulated at the surface; 5-1/2" casing set in 7-7/8" hole at 10,363', cemented with 400 sacks Incor SR with 40% DD and 150 sacks TRSS. Temperature survey TOC at 4000'.

We propose to allocate production to each zone based on the individual well test established herein and reflected on the attached Form C-116.

Since the Penn zone has been temporarily abandoned, no application for the multiple completion of these zones has been filed. We have filed Form C-103 with the Hobbs District office covering the proposal to down-hole commingle these zones in the well bore. Your approval of this down-hole commingle without the formality of an approved multiple completion is requested. Subject to your approval, the operation of down-hole commingling these zones will be performed.

Offset operators are hereby notified, with the request that their original waivers of objections be mailed direct to your attention, and a copy sent to this office. Mr. R. J. Stringer will answer questions on this application, if any arise.

Phillips Petroleum Company  
File: W4-Ta-197-75  
October 8, 1975  
Page 3

Your consideration and advice will be appreciated.

Yours very truly,



T. Harold McLemore  
PHILLIPS PETROLEUM COMPANY

THM:jc  
Attachments

cc: New Mexico Oil Conservation Commission  
Box 1980  
Hobbs, New Mexico 88240

Offset Operators:

American Trading and Production Company  
Drawer 992  
Midland, Texas 79701

✓ Amoco Production Company  
Box 68  
Hobbs, New Mexico 88240

Gordon M. Cone  
Box 1148  
Lovington, New Mexico 88260

✓ Exxon Corporation  
Box 1600  
Midland, Texas 79701

Getty Oil Company  
Box 1231  
Midland, Texas 79701

Corine Grace  
Box 763  
Hobbs, New Mexico 88240

Texaco, Inc.  
Box 3109  
Midland, Texas 79701



NEW MEXICO OIL CONSERVATION COMMISSION  
GAS-OIL RATIO TESTS

C-116  
Revised 1-1-65

Operator		Pool		County		Completion		Special	
Phillips Petroleum Company		Ranger Lake Penn		Lea		<input type="checkbox"/>		<input checked="" type="checkbox"/>	
Address		TYPE OF TEST - (X)		SCHEDULED		PROD. DURING TEST		GAS - OIL RATIO	
Room 711, Phillips Bldg., Odessa, Texas 79761		CHOKE SIZE		DAILY ALLOWABLE		WATER GRAV. OIL		GAS M.C.F.	
LEASE NAME		DATE OF TEST		LENGTH OF TEST HOURS		BBLs.		CU. FT./BBL	
Ranger		6-74		24		3 40.0 34		3 88	
<p>Test for down-hole commingling allocation.</p>									

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

W.J. Mueller  
Engineering Advisor

(Signature)

(Title)

10-8-75  
(Date)

No well will be assigned an allowable greater than the amount of oil produced on the official test.  
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 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.  
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  
Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

HALLIBURTON DIVISION LABORATORY  
HALLIBURTON COMPANY  
LOVINGTON, NEW MEXICO

~~Bob Strong~~  
HARRIS FILE

LABORATORY WATER ANALYSIS

No. W74-677

To Phillips Petroleum Co.

Date 9-11-74

Box 1178

Lovington, N. Mex.

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by \_\_\_\_\_

Date Rec. 9-10-74

Well No. As Indicated

Depth \_\_\_\_\_

Formation Bough

County \_\_\_\_\_

Field BAYREN LAKE

Source \_\_\_\_\_

	Ranger #10	Ranger #15	
Resistivity	0.082 @ 70°F	0.090 @ 70°F	
Specific Gravity	1.068	1.062	
pH	7.1	7.3	
Calcium (Ca)	4635	3330	*MPL
Magnesium (Mg)	941	684	
Chlorides (Cl)	62500	55000	
Sulfates (SO <sub>4</sub> )	1130	1540	
Bicarbonates (HCO <sub>3</sub> )	159	256	
Soluble Iron (Fe)	Light to Moderate	Nil	
.....			
.....			
.....			

Remarks:

\*Milligrams per liter

Respectfully submitted,

Analyst: Griffin  
cc: \_\_\_\_\_

HALLIBURTON COMPANY

By [Signature]  
CHEMIST

NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

# HALLIBURTON DIVISION LABORATORY

HALLIBURTON COMPANY  
LOVINGTON, NEW MEXICO

No. W3-165-64

## LABORATORY REPORT

Date March 9, 1964

TO Phillips Petroleum Company  
Box 1178  
Lovington, New Mexico

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company

Date Received \_\_\_\_\_

Well & Lease ? Depth \_\_\_\_\_ Formation Penn

Location \_\_\_\_\_ Field Ranger Lake Source Heater Treater  
Heater Treater Fresh Water

Specific gravity 60/60 °F	<u>1.094</u>	1.003
Color, filtrate	<u>Colorless</u>	Colorless
pH	<u>5.9</u>	7.8
Resistivity °F	<u>ND</u>	ND
Chlorides, Cl	<u>80,000</u> ppm (mpl)	140
Sulfates, SO <sub>4</sub>	<u>2,800</u>	1,500
Alkalinity, HCO <sub>3</sub>	<u>ND</u>	ND
Calcium, Ca	<u>8,800</u>	65
Magnesium, Mg	<u>1,260</u>	29
Iron, Fe	<u>Negl.</u>	Negl.
Sodium, Na*	<u>40,800</u>	690
Sulfides, H <sub>2</sub> S	<u>Negl.</u>	Negl.

Remarks \_\_\_\_\_

ppm equals Parts per million uncorrected or milligrams per liter  
\* includes Potassium as Na.

Respectfully submitted,

HALLIBURTON COMPANY

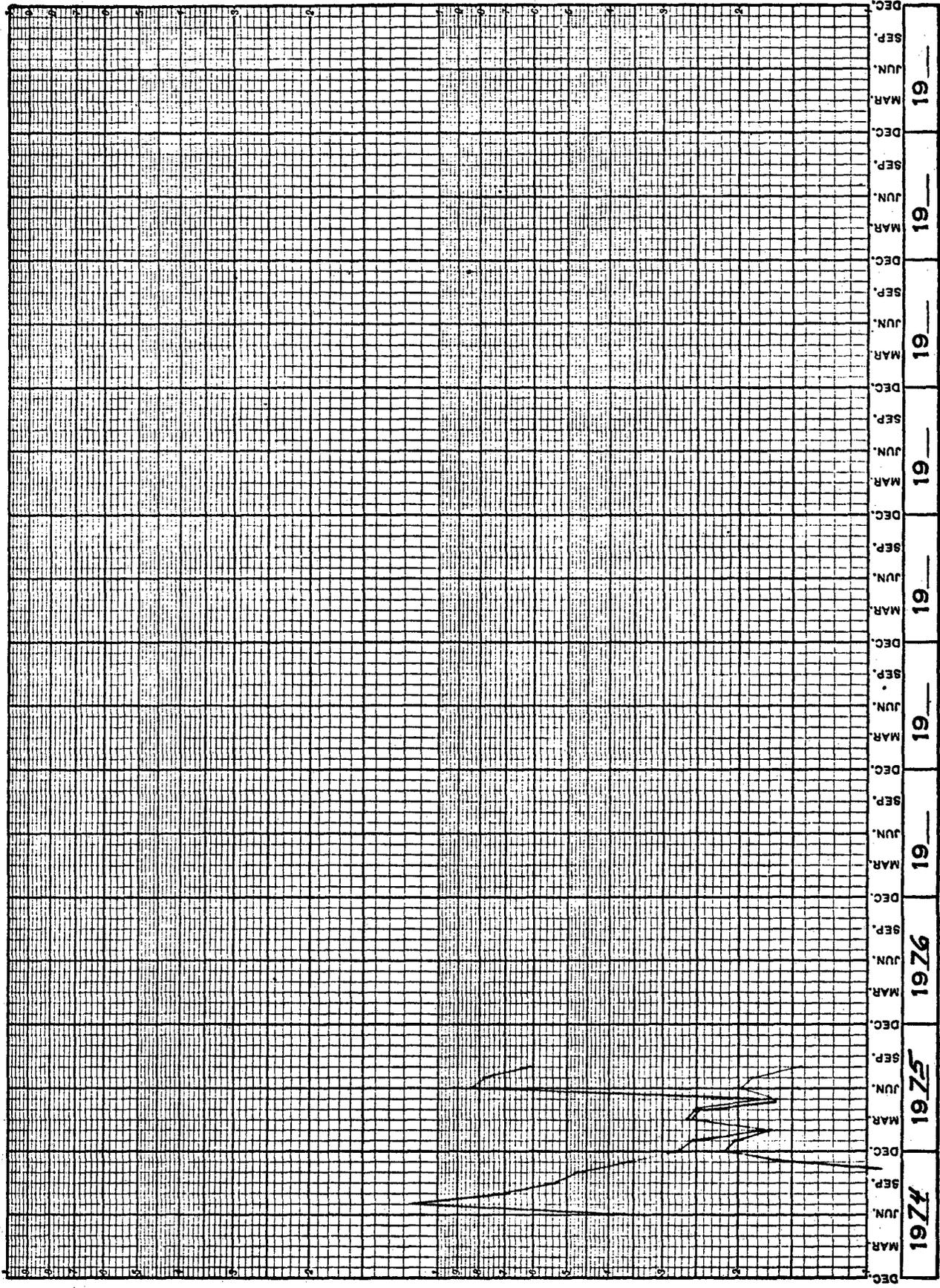
By Dave Sutton  
Dave Sutton, Division Chemist

Laboratory Analyst

Brewer

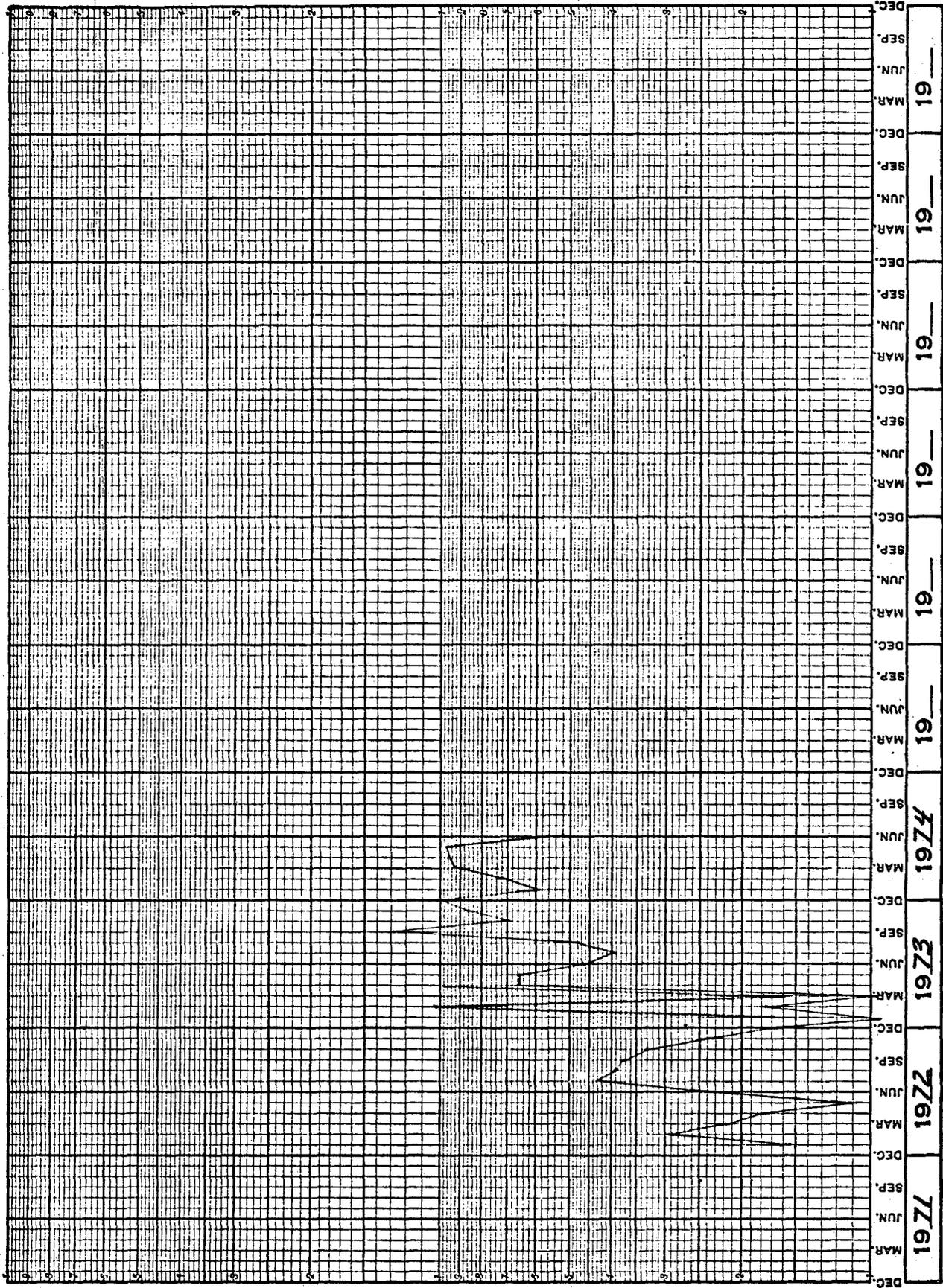
### NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether due to act or omission, resulting from such report or its use.



B W P M

B O P M



1000  
B O P M

100  
B O P M

**EXXON** COMPANY, U.S.A.

POST OFFICE BOX 1600 · MIDLAND, TEXAS 79701

October 14, 1975

PRODUCTION DEPARTMENT  
MIDCONTINENT DIVISION

R. W. BOWDON  
OPERATIONS MANAGER

Phillips Ranger Well No. 7  
Downhole Commingle Production  
Ranger Lake Bough and Penn Pools  
Lea County, New Mexico

New Mexico Oil Conservation Commission  
P.O. Box 2088  
Santa Fe, New Mexico 87501

ATTENTION: Mr. Joe D. Ramey

Gentlemen:

Exxon has no objection to Phillips proposal in their letter of October 8, 1975, to downhole commingle production in their Ranger well No. 7 from the Ranger Lake Bough and Penn Pools. This well is located in Unit L of Section 26, T-12-S, R-34-E, Lea County, New Mexico.

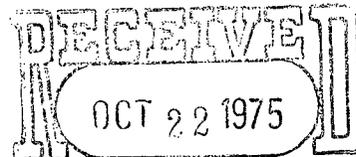
Yours very truly,



R.W. Bowdon

HNR:cb

cc: Phillips Petroleum Co.  
Phillips Building  
Odessa, Texas 79761



OIL CONSERVATION COMM.  
Santa Fe

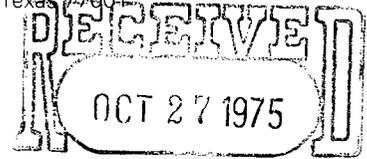


E. E. Morris  
Division Engineering  
Manager

October 23, 1975

**Amoco Production Company**

500 Jefferson Building  
P.O. Box 3092  
Houston, Texas 77001



OIL CONSERVATION COMM.  
Santa Fe

File: DRC-986.51NM-3791

Re: Application to Down-Hole Commingle  
Ranger Well No. 7  
Ranger Lake Bough & Ranger Lake Penn Pools  
Lea County, New Mexico

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, NM 87501

Gentlemen:

Phillips Petroleum Company has requested administrative approval to commingle down-hole production in its Ranger Well No. 1, located in Unit I, 1980' FS line and 1660' FW line of Section 26, T-12-S, R-34-E, Lea County, New Mexico.

Production will be from the Ranger Lake Bough and Ranger Lake Penn Pools.

As an offset operator, Amoco Production Company has no objection to granting administrative approval of this request and hereby waives notice and hearing.

Yours very truly,

cc: Phillips Petroleum Company  
Phillips Building  
Odessa, TX 79761

# Memo

From

MELBA CARPENTER

To Carl Ulvog

Please note that  
in Par. 1 of this  
application the location  
is shown as 1980/S + 1660/W  
This should be 1980/S + 660/W

OIL CONSERVATION COMMISSION  
Hobbs DISTRICT

OIL CONSERVATION COMMISSION  
BOX 2088  
SANTA FE, NEW MEXICO

DATE Oct. 14, 1975

RE: Proposed MC \_\_\_\_\_  
Proposed DHC X \_\_\_\_\_  
Proposed NSL \_\_\_\_\_  
Proposed SWD \_\_\_\_\_  
Proposed WFX \_\_\_\_\_  
Proposed PMX \_\_\_\_\_

Gentlemen:

I have examined the application dated \_\_\_\_\_

for the Phillips Pet. Co. Ranger #7-L 26-12-34  
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

O.K.---J.W.R.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Yours very truly,

*John W. Penyan*