



PHILLIPS PETROLEUM COMPANY

ODESSA, TEXAS 79761
PHILLIPS BUILDING

NATURAL RESOURCES GROUP
Exploration and Production

October 8, 1975

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 2660' 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.

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 BOPD; Penn - 25 BOPD, 25 BOPD. Second year, Bough - 25 BOPD, 75 BOPD; Penn - 20 BOPD, 25 BOPD. 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.

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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 1-1-63

Operator Phillips Petroleum Company		County Lea												
Address Room 711, Phillips Bldg., Odessa, Texas 79761		Ranger Lake Bough												
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	Completion <input type="checkbox"/> Special <input checked="" type="checkbox"/>				
		U	S	T						R	WATER BBLs.	PROD. GRAV. OIL	OIL BBLs.	GAS M.C.F.
Ranger	7	L	26	12-S	34-E	9-30-75			24	48	40.1	14	24	1687
Test for down-hole commingling allocations.														

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.

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)

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator Phillips Petroleum Company		Pool Ranger Lake Penn		County Lea										
Address Room 711, Phillips Bldg., Odessa, Texas 79761		TYPE OF TEST - (X)		Completion <input type="checkbox"/> Scheduled <input type="checkbox"/>										
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			Special <input checked="" type="checkbox"/>	
		U	S	T						R	WATER BBLs.	GRAV. OIL		OIL BBLs.
Ranger	7	L	26	12-S	34-E	6-74	P		24	3	40.0	34	3	88
Test for down-hole commingling allocation.														

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.

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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 local rules.

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

W.J. Mueller
Engineering Advisor

(Title)
10-8-75
(Date)

HALLIBURTON DIVISION LABORATORY
HALLIBURTON COMPANY
LOVINGTON, NEW MEXICO

LABORATORY WATER ANALYSIS

No. W74-677To Phillips Petroleum Co.Date 9-11-74Box 1178Lovington, 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. 9-10-74Well No. As Indicated

Depth _____

Formation Bough

County _____

Field Bargen 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 ₄)	1130	1540	
Bicarbonates (HCO ₃)	159	256	
Soluble Iron (Fe)	Light to Moderate	Nil	

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Griffin
cc:

HALLIBURTON COMPANY

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

Remarks _____

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

Respectfully submitted,

HALLIBURTON COMPANY

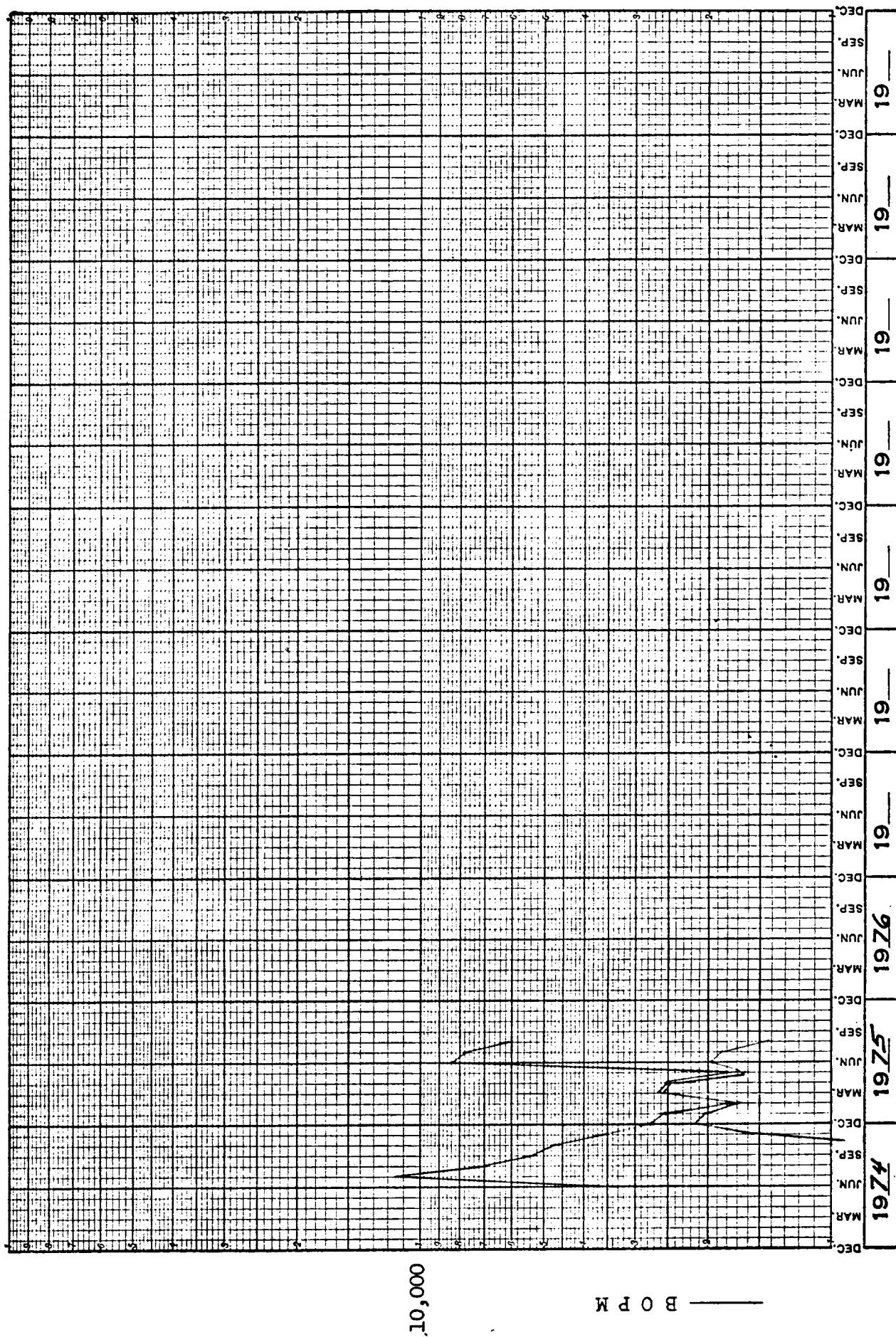
By Dave Sutton, Division Chemist

Laboratory Analyst

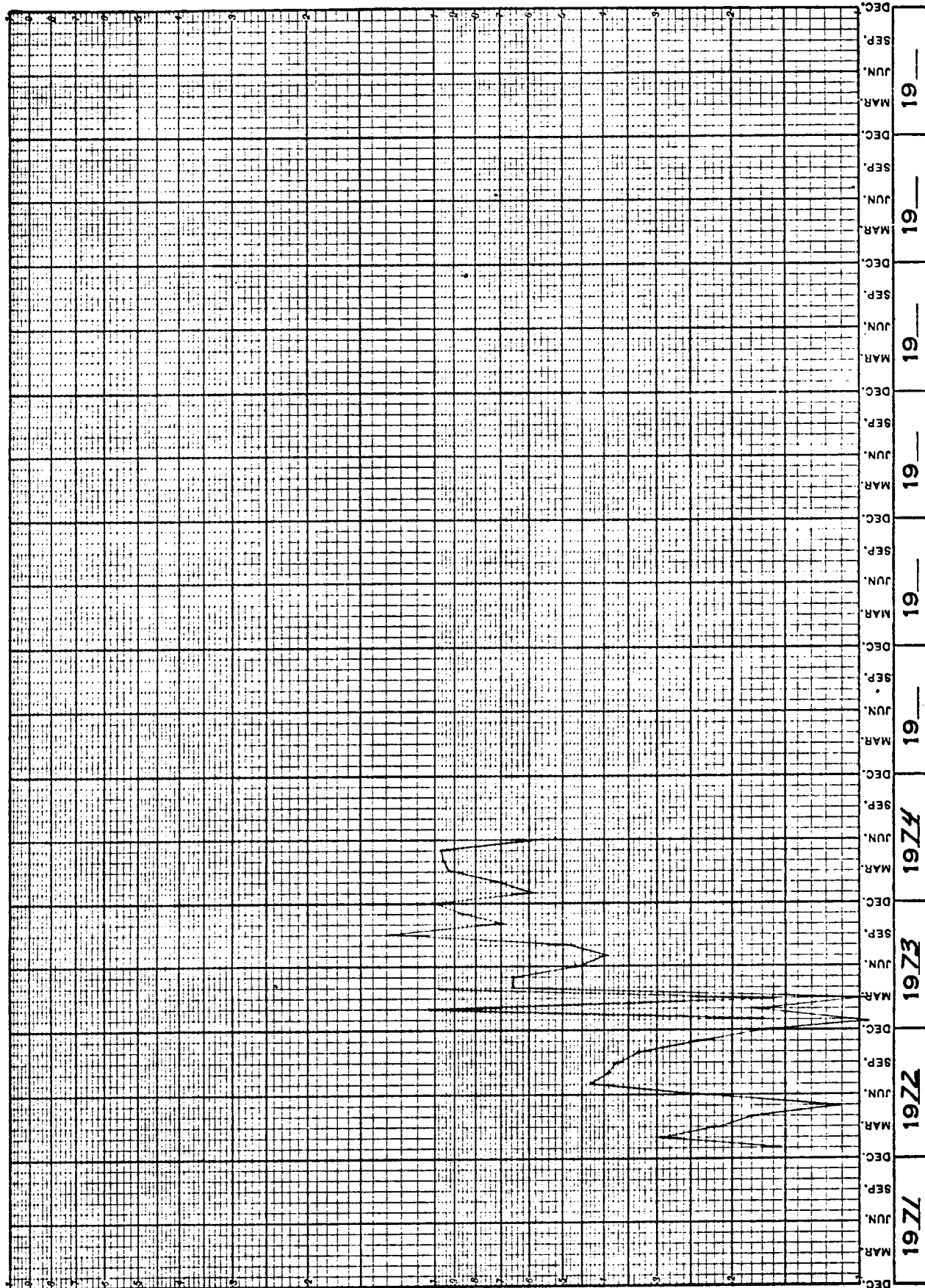
Brewer

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.



PHILLIPS PETROLEUM COMPANY
RANGER - BOUGH WELL # 7



— B W P M —

— B O P M —