



L. P. Thompson
Division Manager

John R. Kemp
Assistant Division Manager

Production Department
Hobbs Division
North American Production

Conoco Inc.
P. O. Box 460
1001 North Turner
Hobbs, NM 88240
(505) 393-4141

June 19, 1980

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

Attention Mr. Jerry Sexton

Gentlemen:

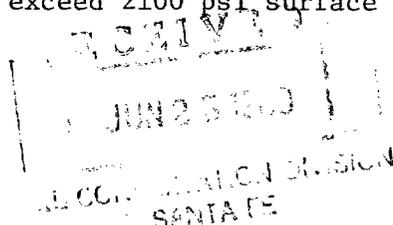
MCA Unit No. 256 Pressure Breakdown Re-test Administrative Approval
Order WFX-471

Attached are the results of the recent re-test of the confining strata breakdown pressure in MCA No. 256. This test was re-run at your suggestion to support our request for administrative approval to inject water in the seven wells named in Order WFX-471 at a surface pressure not to exceed 2100 psi. This injection pressure will be consistent with the other injection wells in this Grayburg-San Andres waterflood project.

This breakdown test showed that the injection pressure would have to exceed 2300 psi surface or 3850 psi bottom hole pressure to initiate fractures in the confining strata. We were unable to inject water into the caprock perforations, 3597' - 3603', at any of the 300 psi steps from 500 to 2300 psi surface pressure. We maintained the pressure at each step for a 15 minute period before proceeding to the next step.

Mr. Tommy Tyler of Step Rate Testers Inc. of Odessa conducted the test with Mr. Les Clements of the NMOCD and Mr. Lowell Deckert, Conoco, as witnesses.

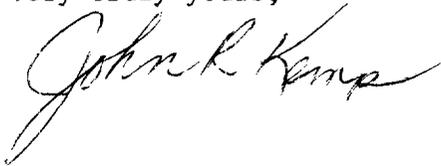
We again respectfully request that Conoco Inc. be permitted to inject water into the seven wells named in our letter dated January 3, 1980, at a pressure not to exceed 2100 psi surface pressure.



New Mexico Oil Conservation Division
Page 2
June 19, 1980

If you need any additional information on this re-test or our request for administrative approval of 2100 psi pressure limit on Order WFX-471, please let us know.

Very truly yours,

A handwritten signature in cursive script, appearing to read "John R. Kemp". The signature is written in dark ink and is positioned below the typed name "John R. Kemp".

LBD:rej
Enc

STEP RATE TEST

MCA Unit # 256

DATE 6-4-80

STABILIZATION:

Rate 0 BHPD.

Press. 0 PSI (Surface)

Cumulative 0 Bbls.

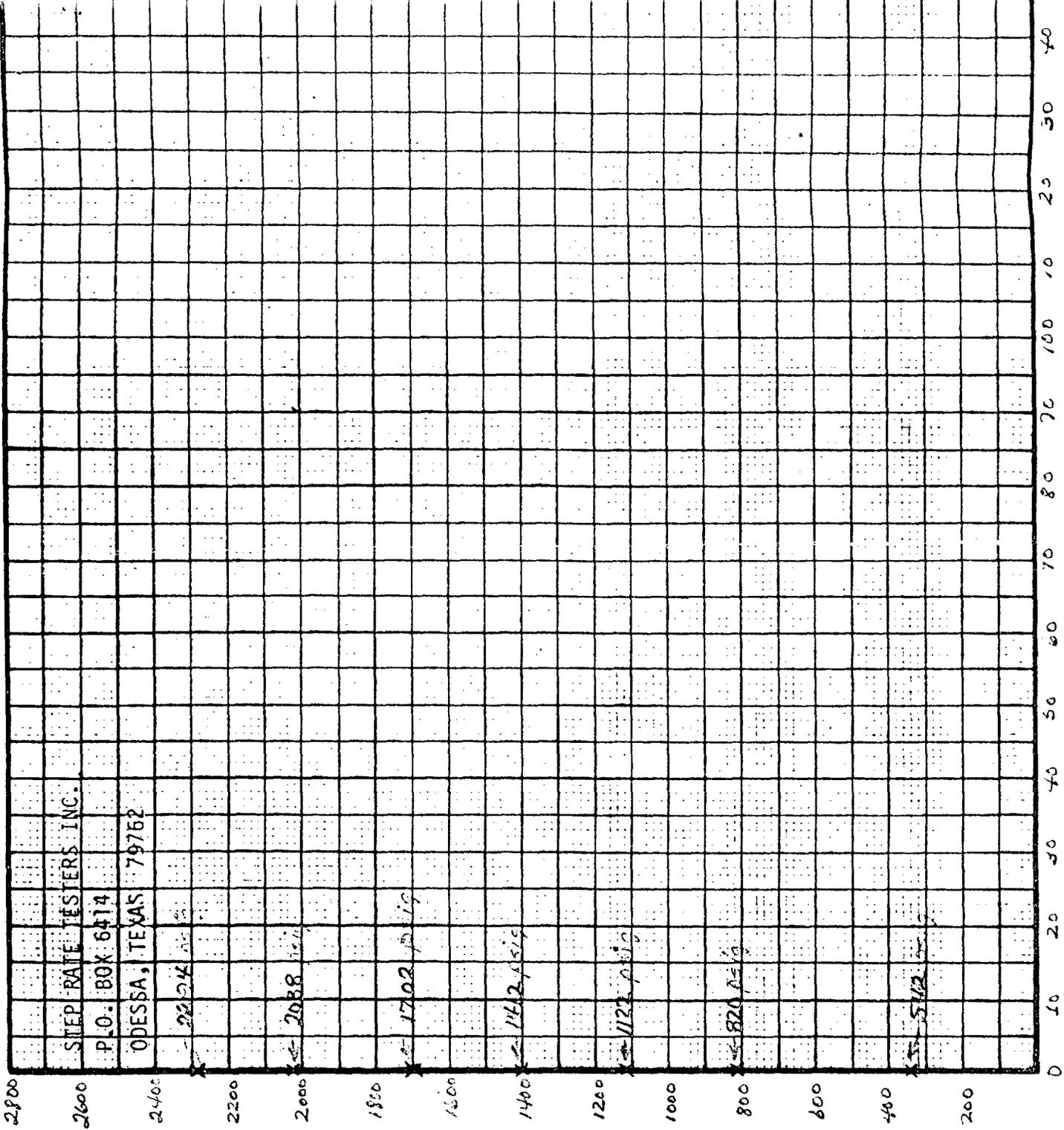
INCREMENTS:

Rate BHPD

Pressure 300 PSI

Time .25 Hrs.

BOTTOM HOLE OR SURFACE PRESSURE (PSI) ~ ()



STEP RATE TESTERS INC.

P.O. BOX 6414

ODESSA, TEXAS 79762

INJECTION RATE ~ BHPD

915-366-3409

STEP RATE TESTERS INC.
P.O. BOX 6414
ODESSA TEXAS 79762

COMPANY Conoco DATE 6-4-80
ADDRESS Box 460, Hobbs, NM 88240 COMPANY REPRESENTATIVE L.B. Deckert
WELL# 256 LEASE MCA Unit LOCATION Mojamar Field
Lea Co., NM.

TIME	TEST DATA	
	RATE	PRESSURE
DEPART SHOP	PRESSURE	PRESSURE
<u>9:00</u>	<u>0</u>	<u>542</u>
ARRIVE LEASE <u>11:00</u>	<u>0</u>	<u>870</u>
START TIME <u> </u>	<u>0</u>	<u>1122</u>
COMPLETE TEST <u> </u>	<u>0</u>	<u>1412</u>
DEPART LEASE <u>6:00</u>	<u>0</u>	<u>1702</u>
ARRIVE SHOP <u> </u>	<u>0</u>	<u>2038</u>
DRIVING TIME <u>5 hrs</u>	<u>0</u>	<u>2294</u>
TESTING TIME <u> </u>	<u> </u>	<u> </u>
RT. MILAGE <u>290 mi</u>	<u> </u>	<u> </u>
TOTAL FLUID INJECTED PRIOR TO TESTING <u>0</u>	<u> </u>	<u> </u>

BILLING Base 350.00
290 mi @ 50¢/mi 145.00
5 hr @ 7.50/hr 37.50

DATE OF LAST TEST
T.D. 4145' PERF 3597-3603'*

T BOTTOM TOTAL CHARGE THIS TEST \$ 532.50
CSG. SIZE 5 7/8"
WATER WEIGHT 8.34 # GAL. FRAC POINT — PSI BPD
FG FOOT I.I. PST

DESCRIPTION OF WORK Used base than one barrel of fluid from start to finish of test after 1 hr. was added.
* perforations were isolated by packer + plug prior to test

TESTER Tommy Tyler COMPANY REPRESENTATIVE L.B. Deckert



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

August 12, 1980

Conoco Production Dept.
P. O. Box 460
Hobbs, New Mexico 88240

Attention: Hugh Ingram

Gentlemen:

Pertinent to your request for increased injection pressures in the MCA unit, wells numbers 309, 298, 255, 61, 263, 291, and 106, your request to inject at surface pressures not to exceed 2100 psi is granted under the following conditions:

- (1) Before initiation of higher injection pressures, a Bradenhead test of these wells and all offset wells in Sections 19, 20, and 30 of Township 17 South, Range 32 East shall be performed and
- (2) Every 60 days thereafter commencing increased pressures, Bradenhead tests of all subject and offset wells will be conducted with results submitted to the Hobbs district office of the OCD.

Sincerely,

JOE D. RAMEY
Division Director

JDR/MH/og



Production Department
Hobbs Division
Western Hemisphere Petroleum Division

Conoco Inc.
P. O. Box 460
1001 North Turner
Hobbs, NM 88240
(505) 393-4141

August 8, 1980

New Mexico Oil Conservation Division
Department of Energy and Minerals
P.O. Box 2088
Santa Fe, New Mexico 87501

Attention Mike Holland

Gentlemen:

MCA Unit No. 256 Pressure Breakdown Re-test Administrative Approval
Order WFX-471

Per your phone call today, I am sending a copy of the requested data from our file. If you need anything more, please call either Randy Darr or myself.

Very truly yours,


H. A. Ingram
Conservation Coordinator

HAI:rej
Enc



Well File
MCA No. 61

January 3, 1980

Oil Conservation Division (3)
Department of Energy and Minerals
State of New Mexico
P.O. Box 2088
Santa Fe, New Mexico 87501

RECEIVED
AUG 11 1980
OIL CONSERVATION DIVISION
SANTA FE

Attention Mr. Dan Nutter

Gentlemen:

Administrative Approval

New Mexico Oil Conservation Division Administrative Order WFX No. 471 dated December 20, 1978, authorized Conoco Inc. to inject water into the Grayburg and San Andres formations in the following described wells for purposes of secondary recovery, to wit:

- MCA Unit Well No. 61, located in Unit L of Section 20;
- MCA Unit Well No. 106, located in Unit C of Section 30;
- MCA Unit Well No. 255, located in Unit C of Section 20;
- MCA Unit Well No. 263, located in Unit L of Section 20;
- MCA Unit Well No. 291, located in Unit L of Section 19;
- MCA Unit Well No. 298, located in Unit H of Section 19; and
- MCA Unit Well No. 309, located in Unit H of Section 19,

all of which are in Township 17 South, Range 32 East, NMPM, Lea County, New Mexico.

It was further ordered that the injection wells or system be equipped with a pop-off valve or device which will limit the wellhead pressure to a maximum of 700 pounds per square inch. It further provided that the Division Director may administratively authorize a pressure limitation in excess of the above upon the operator's establishing that such higher pressure will not result in fracturing of confining strata.

Testimony was presented in Case No. 6580 on September 19, 1979 to the

Oil Conservation Division

January 3, 1980

Page 2

effect that a pressure breakdown test in the MCA Well No. 256 showed that the bottomhole pressure would have to exceed 3700 psi in order to initiate fractures in the confining strata. Attached is a chart of the above test showing surface pressure of approximately 2100 psi. As a result of the recent NMOCB bradenhead survey, several wells within the unit boundary require re-entry. The closest of these wells (MCA No. 208, Unit O, Section 28) is about two miles away; others are from 2 1/2 to 3 miles away.

As a result of this testing, and in accordance with the provision for Administrative approval contained in Order WFX-471, it is respectfully requested that Conoco Inc. be permitted to inject water into the above-named wells at a pressure consistent with other injection wells in the project, but not to exceed 2100 psi surface pressure.

Your consideration of this request will be appreciated.

Very truly yours,

SIGNED: JOHN R. KEMP

HAI:rej
Enc

MCA #256

FRACTURE GRADIENT TEST
PRESSURE AND RATE VS. TIME
PERFORATIONS: 3539'-45'
TEST RUN: JUNE 20, 1979

SCALE

Time: Each Major Div. - 15 min.
Pressure: Each Major Div. -
250 psig
Rate: Each Major Div. - 50 BPD

2250 psig

2000 psig

1750 psig

1500 psig

1250 psig

1000 psig

750 psig

100 BHPD

50 BHPD

0 BHPD

11:17

11:40

11:12

10:42

10:52

10:27

10:05

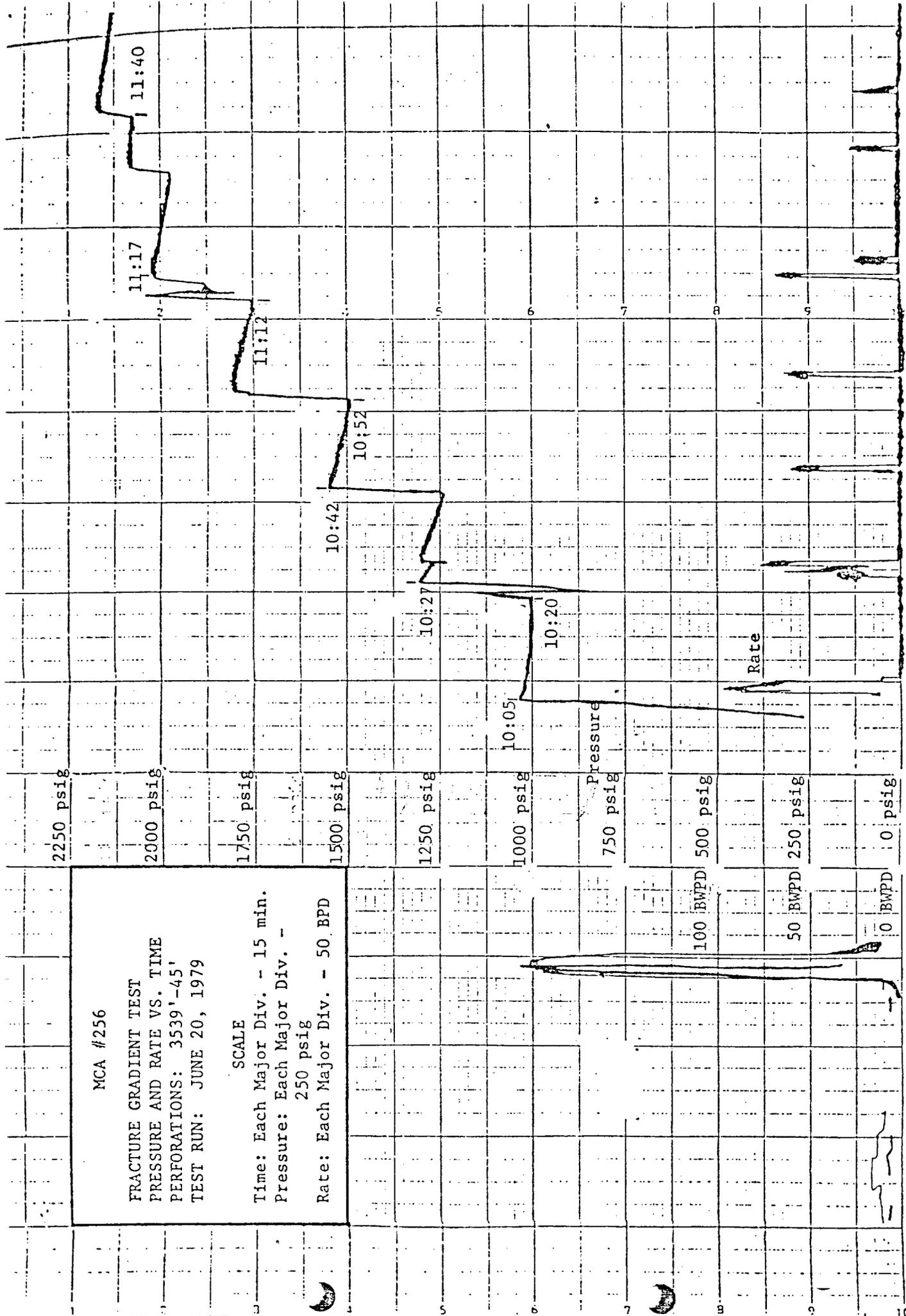
10:20

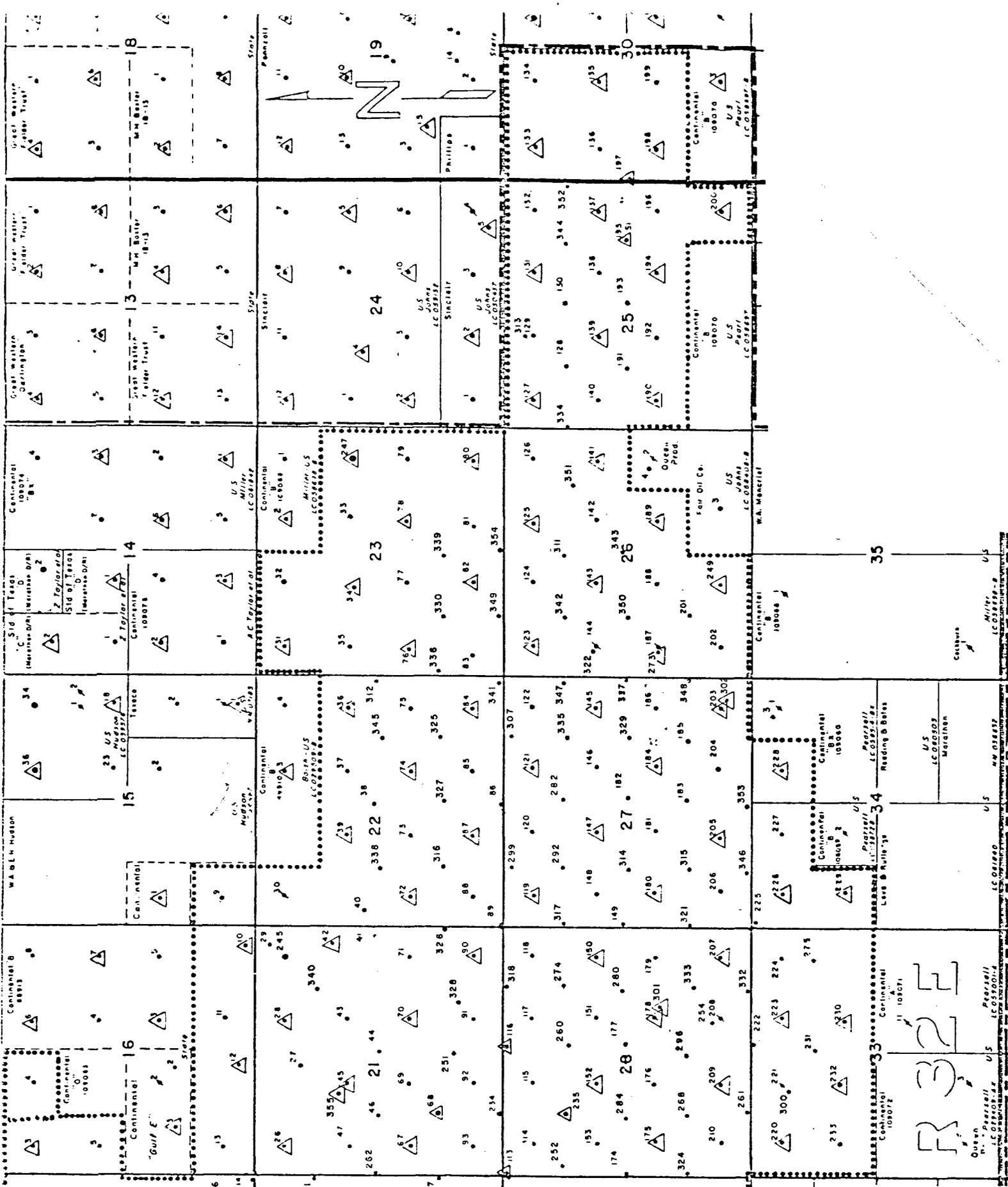
Rate

Pressure

Start of Test

Tubing-Fillup





CONOCO

PRODUCTION DEPARTMENT HOBBS DIVISION

LEA COUNTY, NEW MEXICO

Water Inject or Well
MCA Unit Boundary
Participating Area

SCALE IN FEET
0 1000 2000

R3ZE



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
 OIL CONSERVATION DIVISION

JERRY APODACA
 GOVERNOR

NICK FRANKLIN
 SECRETARY

December 20, 1978

RECEIVED HOBBS DIVISION		JAN 5 '79	
	Est.	Revised	S. N.
Div. Manager	✓		
Asst. Div. Man'g'r	✓		
Div. Engr.	✓		
Cons'v. Coord.	✓		✓
Sup. Prod. Eng.			
Sup. Resv. Eng.			
Prod. Supt.			
Adm. Supv.	✓		✓
Sys. Supv.			
Training Coord.			
Div. Off. Mgr.			

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Continental Oil Company
 P. O. Box 460
 1001 North Turner
 Hobbs, New Mexico 88240

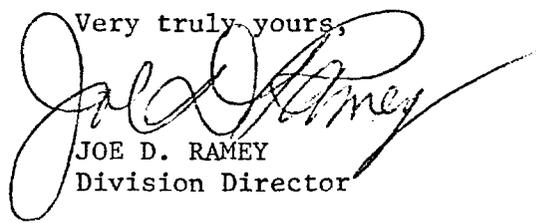
WFB

Re: Administrative Order No. WFX-471

Gentlemen:

Enclosed herewith please find Administrative Order WFX No. 471 for the following described wells:

- MCA Unit Well No. 61 - Unit L, Section 20;
- MCA Unit Well No. 106 - Unit C, Section 30;
- MCA Unit Well No. 255 - Unit C, Section 20;
- MCA Unit Well No. 263 - Unit L, Section 20;
- MCA Unit Well No. 291 - Unit L, Section 19;
- MCA Unit Well No. 298 - Unit H, Section 19; and
- MCA Unit Well No. 309 - Unit H, Section 19, all in Township 17 South, Range 32 East, NMPM, Lea County, New Mexico.

Very truly yours,

 JOE D. RAMEY
 Division Director

JDR/CU/og

cc: Oil Conservation Division
 Box 1980
 Hobbs, New Mexico