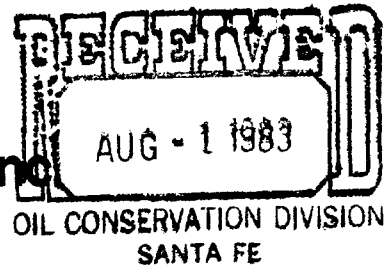


Mobil Producing Texas & New Mexico Inc



July 26, 1983

NINE GREENWAY PLAZA—SUITE 2700
HOUSTON, TEXAS 77046

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

Attention Mr. J. D. Ramey

7.01
AMENDMENT TO ADMIN. ORDER WFX-505
WATERFLOOD INJECTION WELL
MOBIL PRODUCING TX. & N.M. INC.
DENTON NORTH WOLFCAMP UNIT
WELL #7-7
DENTON NORTH WOLFCAMP POOL
LEA COUNTY, NM

Gentlemen:

Mobil Producing TX. & N.M. Inc. requests authorization to amend administrative order WFX-505 to authorize an increased wellhead pressure from 1848 psig to 3300 psig.

The results of a recent step rate test indicates the fracture pressure is approximately 3500 psig at the wellhead or 7700 psig bottom hole pressure. This pressure translates into a .83 psi/ft pressure gradient which allows for a greater wellhead pressure than the present .2 psi/ft pressure gradient guide. The additional wellhead pressure is necessary to insure future injection into the waterflooded zone. From past experience in this field, high wellhead pressures occur because of perforation plugging. This plugging creates a tremendous pressure drop across the perforations which is not seen by the formation. Initially, the step rate test shows that the 400-600 BWPD required for the waterflood should go into the formation at less than 850 psig wellhead pressure; however, this pressure will increase significantly and rapidly as solids in the injection water plug and restrict fluid flow through the perforations. In conclusion, the 3300 psig wellhead pressure is essential for an effective waterflood and this pressure is below the formation fracture pressure.

This request is supported by a copy of the step rate test conducted by B&D Well Tester in Hobbs, NM. Please refer to two previously submitted well information packets dated January 25, 1983 and March 11, 1983 for other pertinent data.

Mobil

Oil Conservation Division

July 26, 1983

Page 2

We would appreciate your earliest consideration of this request. Should you have any further questions, please contact J.A. Morris (713-871-5350) or S. D. Marino (713-871-5351).

Yours truly,

A handwritten signature in cursive script, appearing to read "Ja Morris".

J. A. Morris
Regulatory Engineering Supervisor

cc: Director, District 1

B & D WELL TESTERS
(505) 397-3914

STEP RATE TEST

HOBBS,
NEW MEXICO

FIELD DATA SHEET

Type Test:	☐ Initial	☐ Annual	☐ Special	Test Date	7-18-83	Lease No. or Serial No.	
Company	Mobil Producing Texas and New Mexico Inc.					Allottee	
Field	Reservoir	Location			Unit		
Completion Date	Total Depth	Plug Back TD	Elevation	Form or Lease Name			
			GL 3800	Denton North Wolfcamp			
Csg. Size	5 1/2" Wt.	d	Set At	Perforations: From	To	Well No.	
	2 3/8" Wt.	d	Set At	Perforations: From	To	Sec.	7-7
	1.99					Top - Dk	145
Type Completion (Describe)					Packer Set At	County or Parish	37E
					9124	Lea	
Producing Thru tubing	Reservoir Temp. F	Mean Ground Temp. F	Baro. Press. - P	State			
			13.2	N.M.			

CO. REPRESENTATIVE John Garcia

DATE	ELAP. TIME	well information	surf.	remarks
Time of Reading	Hrs.	Rate BPD	Surf. Psig B.H.P.	psi. cor. friction
10:15			Vacuum	mid point 9286 well on vacuum
11:10	0		40	4257 Start Test Column Wt. 4242
11:25	15	300	40	4275 33
11:40	30	400	220	4436 194
11:55	45	500	490	4716 474
12:10	1	800	1105	4872 630 1094
12:25	15	960	1635	5841 1599
12:40	30	1440	2700	6805 2563
12:55	45	1730	3450	7531 3289
1:10	2	2250	3990	7826 3584
				Bombs on bottom at 10:10 AM
				Top bomb #16786 X 9150 X 12 hr.
				Bottom bomb #14418 X 9250 X 12 hr.
				1.055 fluid gravity

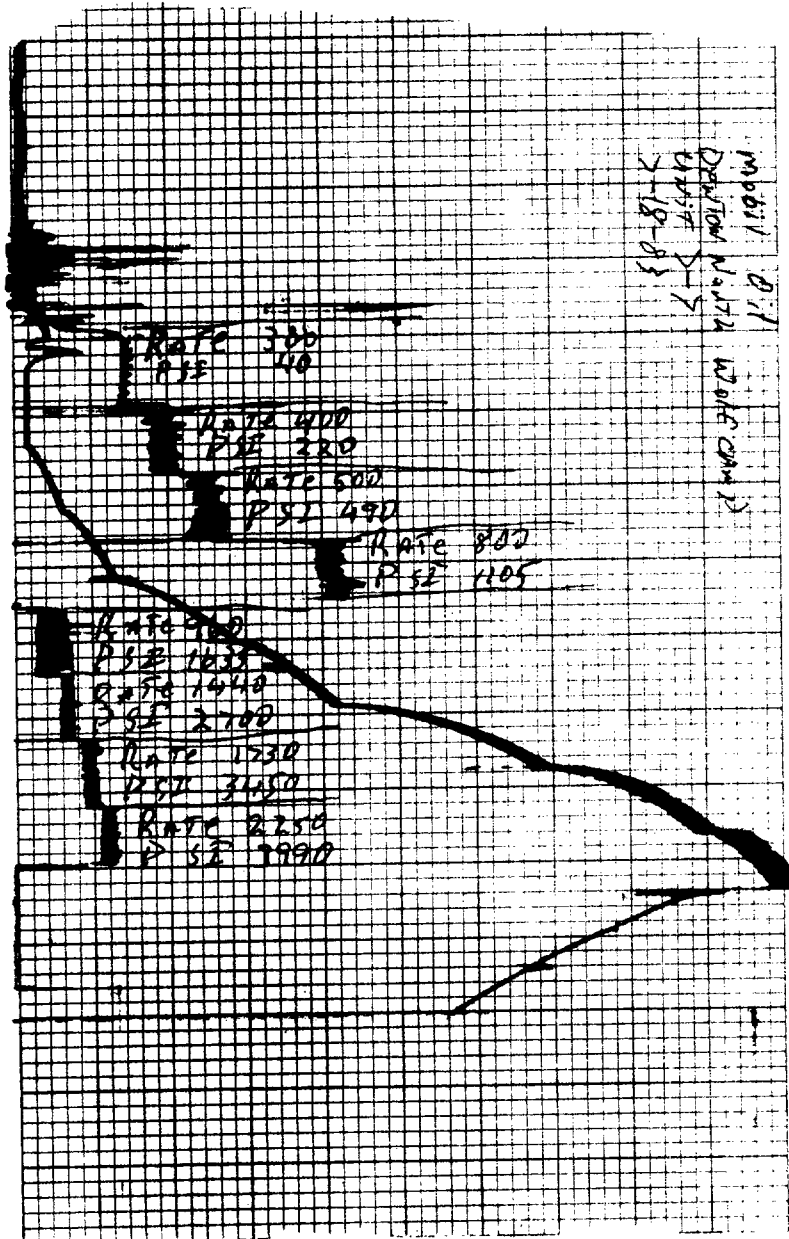
RECEIVED		
ENVIRONMENTAL & REGULATORY		
JUL 21 '83		
WJS	ADK	ENV. SEC.
JDC	LSP	REG. STENO 1
JAM		REG. STENO 2
WBS	WHE	ENV. FILE
HSW	SDM	REG. FILE

Step Rate Test

Conducted by B & D Well Testers
for
Mobil Producing Texas and New Mexico, Inc.

Denton North Wolfcamp #7-7
7-18-83

PRINTED IN U.S.A.



SURFACE PUMP PRESSURES AND RATES

JARREL SERVICES, INC.

POST OFFICE BOX 1854

PHONES 505 393-5396 — 393-8274

HOBBS, NEW MEXICO 88240

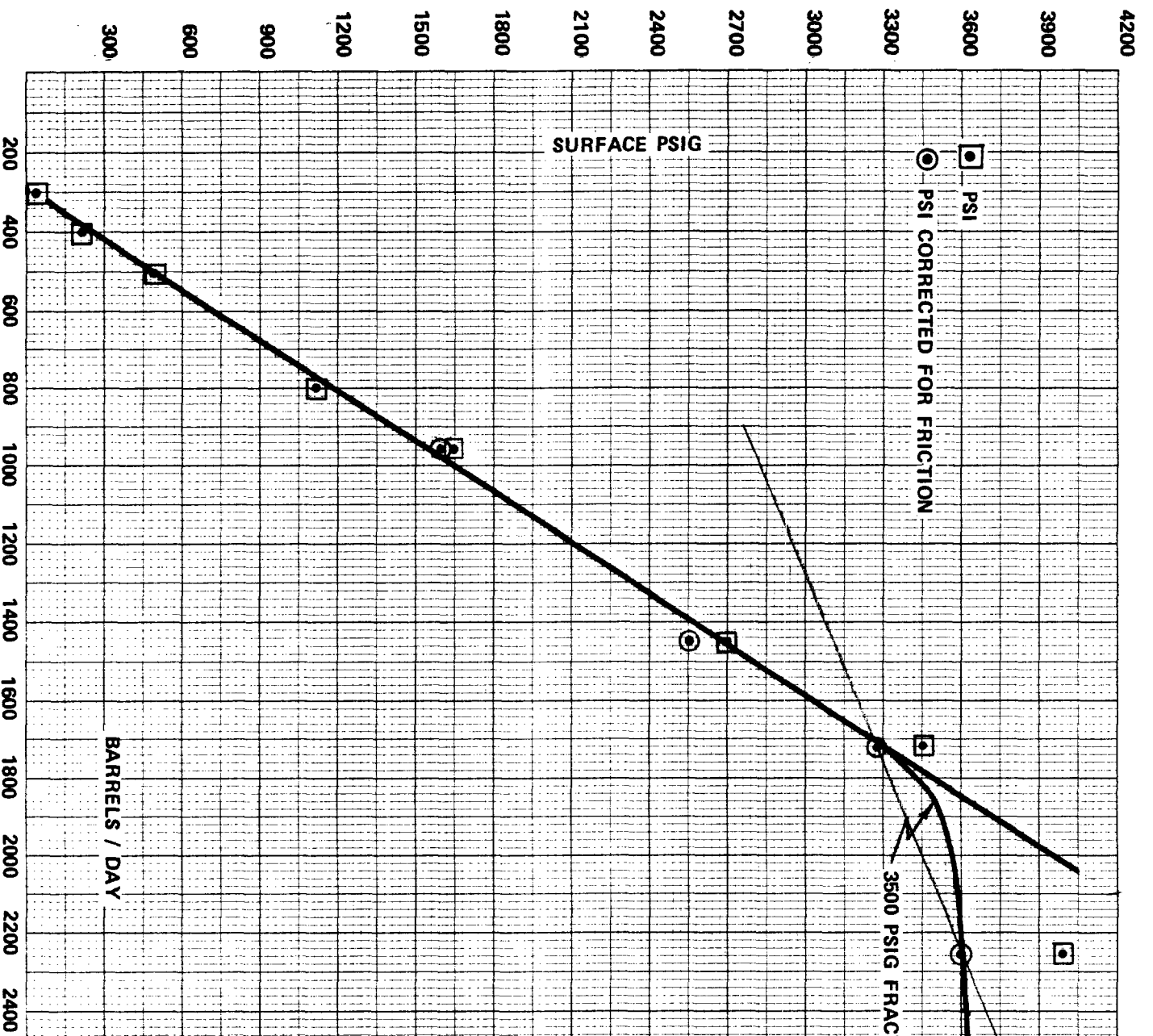
COMPANY MOBIL PRODUCING TEXAS & NEW MEXICO INC

WELL DENTON NORTH WOLF CAMP UNIT, No 7-7 FIELD DENTON WOLF CAMP

CHRONOLOGICAL PRESSURE DATA

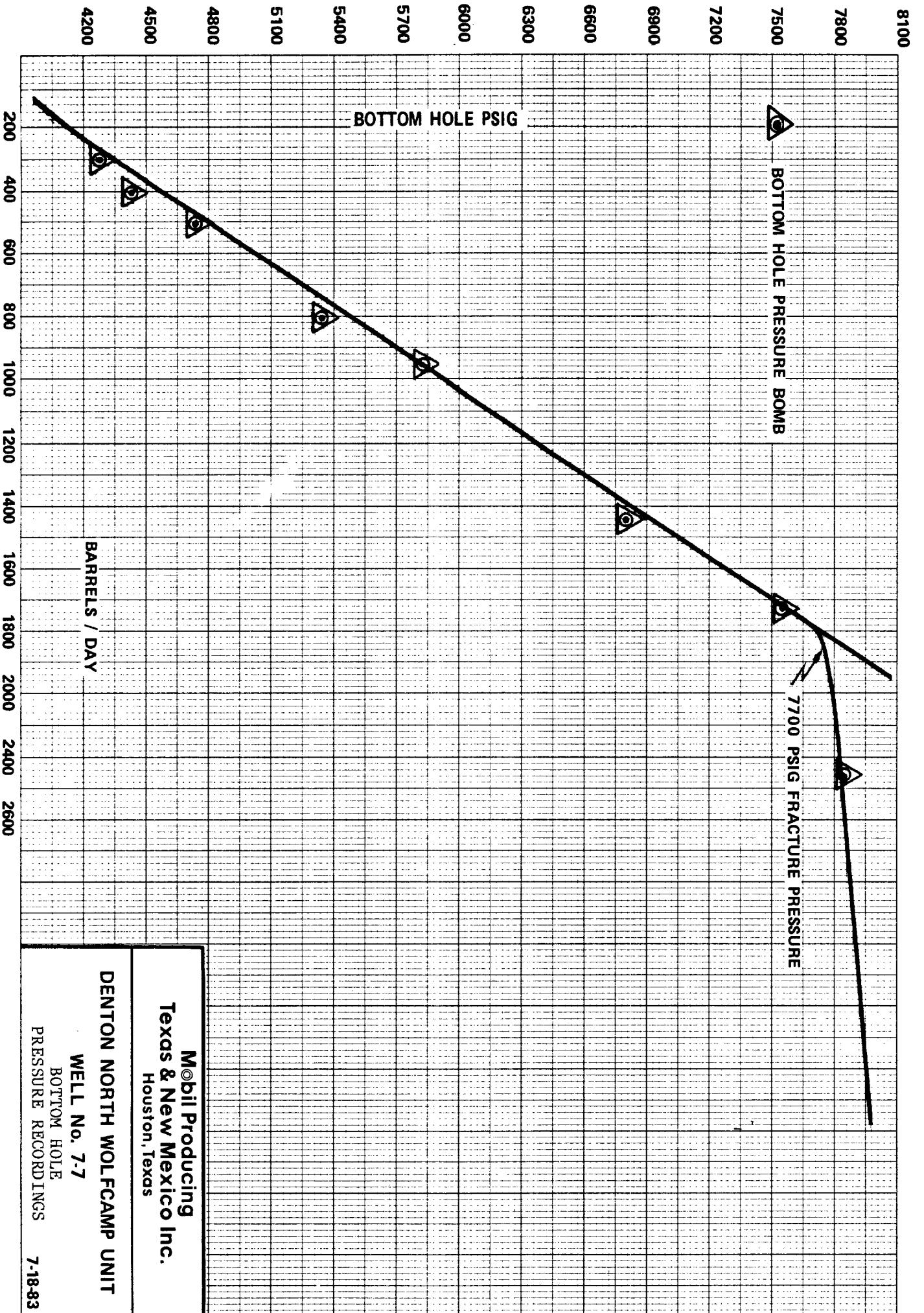
DATE	STATUS OF WELL	TIME	ELAPSED TIME		SURFACE PRESSURE		BHP at (-5486)	
			HRS.	MIN.	TBG	CSG	9286' psi	
	SHUT IN, RUN	10:10AM	—	—	0	—	.619	2866
	THROTTLED PUMP							
	* LIFTED PUMPS							
	① 9286'							
	STARTED PUMPING	10:15	0	05			.619	2866
	STARTED 1ST RATE	11:10	0	55	—	—	.924	4257
	FINISHED 1ST RATE	11:25	0	15			.928	4275
	STARTED 2ND RATE							
	FINISHED 2ND RATE	11:40	0	15			.963	4436
	STARTED 3RD RATE							
	FINISHED 3RD RATE	11:55	0	15			1.024	4716
	STARTED 4TH RATE							5347
	FINISHED 4TH RATE	12:10PM	0	15			1.158	487
	STARTED 5TH RATE							
	FINISHED 5TH RATE	12:25	0	15			1.271	5541
	STARTED 6TH RATE							
	FINISHED 6TH RATE	12:40	0	15			1.484	6805
	STARTED 7TH RATE							
	FINISHED 7TH RATE	12:55	0	15			1.646	7531
	STARTED 8TH RATE							
	FINISHED 8TH RATE	1:10	0	15			1.712	7526
	* STOPPED PUMPING							
	ROAD DOWN	1:15	0	05	—	—	1.659	7589
	"	1:20	0	10	—	—	1.601	7330
	"	1:25	0	15	—	—	1.560	7147
	"	1:30	0	20	—	—	1.502	6887
	"	1:35	0	25	—	—	1.464	6715
	PULLED PUMPS	1:40	0	30	—	—	1.423	6529

ILLEGIBLE



Mobil Producing
Texas & New Mexico Inc.
Houston, Texas

DENTON NORTH WOLFCAMP UNIT
WELL No. 7-7
SURFACE PRESSURE RECORDINGS
7-18-83



Mobil Producing
Texas & New Mexico Inc.
Houston, Texas

DENTON NORTH WOLFCAMP UNIT
WELL No. 7-7
BOTTOM HOLE
PRESSURE RECORDINGS
7-18-83