

Mobil Exploration and Producing U.S. Inc.



July 6, 1987

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

State of New Mexico
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Attention: W. J. LeMay

MOBIL PRODUCING TX. & N.M., INC.
NORTH VACUUM ABO UNIT
WATER INJECTION WELL NOS. 158,
160, 200 AND 224
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

Under the provisions of Order No. PMX-140 dated March 7, 1986, Mobil Producing Texas & New Mexico, Inc. (MPTM) was granted permission to inject water into the Abo formation for the subject wells. The order limited the pressure on the injection wells to no more than 0.2 psi per foot to the uppermost injection interval. MPTM has completed step-rate tests for these wells which show that higher pressure will not result in migration of the injected fluid from the Abo formation. MPTM therefore requests an increase in the injection pressure as follows:

	<u>Injection Interval</u>	<u>Present Surface Inj. Pressure Limit</u>	<u>Requested Surface Inj. Pressure Limit</u>
Well No. 158 Unit J, Sec. 12 T-17-S, R-34-E	8531-8602'	1706 psig.	2960 psig.
Well No. 160 Unit B, Sec. 12 T-17-S, R-34-E	8581-8641'	1716 psig	2780 psig

	<u>Injection Interval</u>	<u>Present Surface Inj. Pressure Limit</u>	<u>Requested Surface Inj. Pressure Limit</u>
Well No. 200 Unit L, Sec. 2 T-17-S, R-34-S	8664-8702'	1733 psig.	3020 Psig.
Well No. 224 Unit B, Sec. 11 T-17-S, R-34-E	8588-8632'	1718 psig.	2620 psig.

Enclosed are copies of the step rate tests.

Yours very truly,



M. E. Sweeney
Environmental & Regulatory Manager

Mobil Producing Texas & New Mexico Inc.
acting by and through its agent
Mobil Exploration & Producing U.S. Inc.

CCSmith/

Attachments

cc: District Director OCD-Hobbs

B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914

Hobbs, New Mexico 88240

Company Mobil Producing Texas & New Mexico Test Date 6-17-87						Unit
Total Depth 11800	Plug Back TD 8700	Elevation				Lease NVAU
Csg size 7"	Wt 26#	d	Set at	Perfs: From 8531	To 8602	Well # 158
Tbg size 2 7/8, 2 1/2	Wt 18#	d	Set at	Perfs: From	To	Sec Twp-Blk Rge
Producing thru						County Lea State New Mexico
Packer set at 8450 SN8635						Co. Rep David Howell

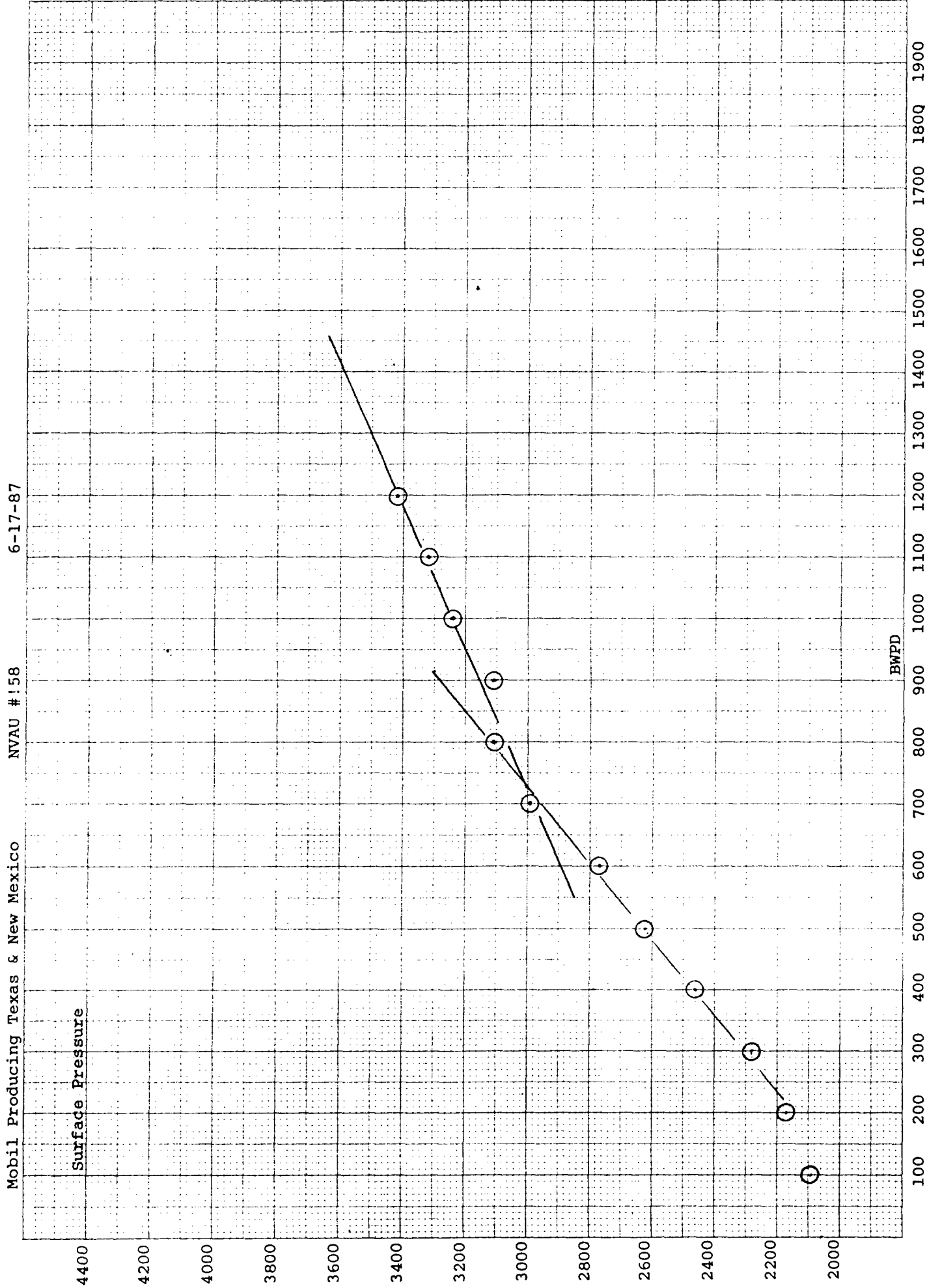
Time of Reading	Elap Time Hrs.	Well Information					Remarks
		Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	
8:50	SI			2060			
8:55	Start	100		2060			
9:00		100		2070			
9:05		100		2080			
9:10	:15	100	1.0	2090			
9:15		200		2130			
9:20		200		2160			
9:25	:30	200	2.0	2170			
9:30		300		2220			
9:35		300		2260			
9:40	:45	300	3.1	2280			
9:45		400		2350			
9:50		400		2390			
9:55	1:00	400	4.2	2430			
10:00		500		2520			
10:05		500		2570			
10:10	1:15	500	5.2	2610			
10:15		600		2690			
10:20		600		2730			
10:25	1:30	600	6.2	2770			
10:30		700		2860			
10:35		700		2910			
10:40	1:45	700	7.3	2950			
10:45		800		3030			
10:50		800		3070			
10:55	2:00	800	8.3	3110			
11:00		900		3140			
11:05		900		3080			
11:10	2:15	900	9.4	3110			

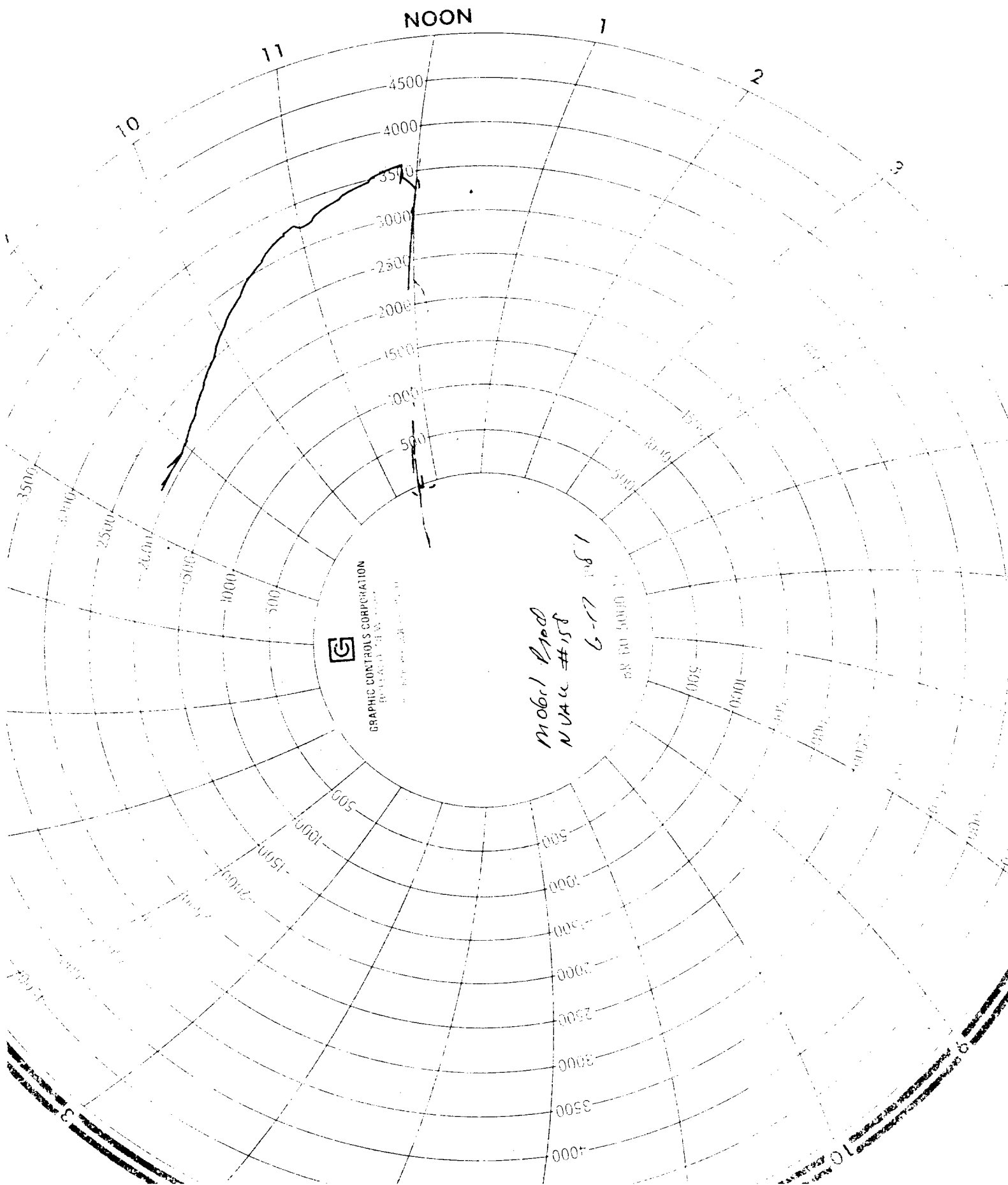
Step Rate Test

Hobbs, New Mexico 88240

Phone (505) 397-3914

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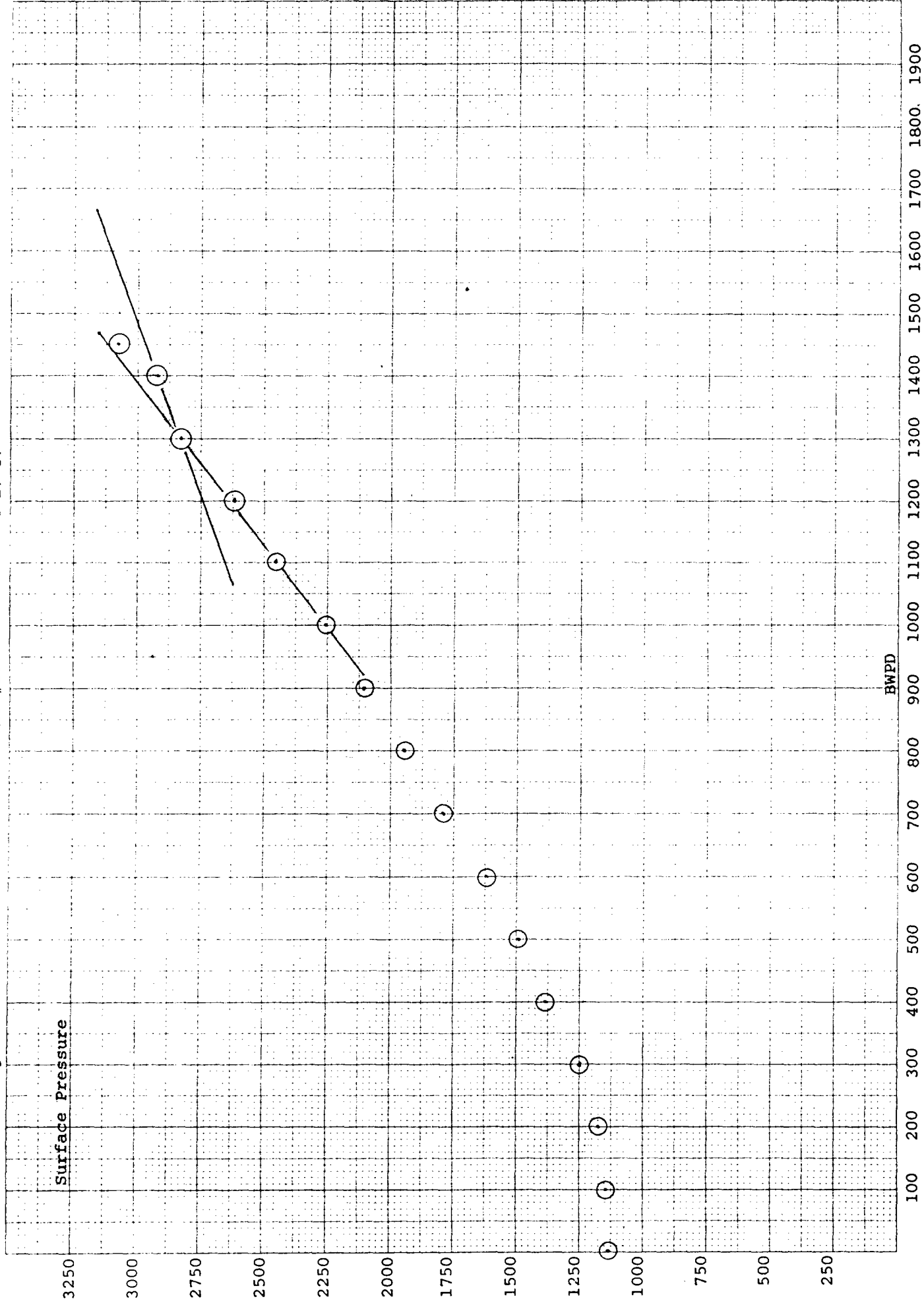




Step Rate Test

Hobbs, New Mexico 88240

Company Mobil Producing Texas & New Mexico Test Date 6-17-87							Unit
Total Depth 8800 Plug Back TD 8761 Elevation							Lease NVAU
Csg size 5½ Wt d Set at Perfs: From 8581 To 8641							Well # 160
Tbg size 2 3/8 Wt d Set at Perfs: From To							Sec 12 Twp-Blk 17S Rge 34E
Producing thru Packer set at 8480							County Lea State New Mexico
Co. Rep David Howell							
Time of Reading	Elap Time Hrs.	Well Information					Remarks
		Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	
8:45	SI			1130			1" T.M.
9:00	Start	100		1130			
9:05		100		1140			
9:10		100		1140			
9:15	:15	100	1.1	1140			
9:20		200		1150			
9:25		200		1165			
9:30	:30	200	2.2	1175			
9:35		300		1220			
9:40		300		1240			
9:45	:45	300	3.1	1250			
9:50		400		1310			
9:55		400		1330			
10:00	1:00	400	4.1	1380			
10:05		500		1410			
10:10		500		1440			
10:15	1:15	500	5.2	1490			
10:20		600		1555			
10:25		600		1600			
10:30	1:30	600	6.2	1620			
10:35		700		1700			
10:40		700		1750			
10:45	1:45	700	7.3	1790			
10:50		800		1880			
10:55		800		1890			
11:00	2:00	800	8.3	1940			
11:05		900		2000			
11:10		900		2050			
11:15	2:15	900	9.4	2110			



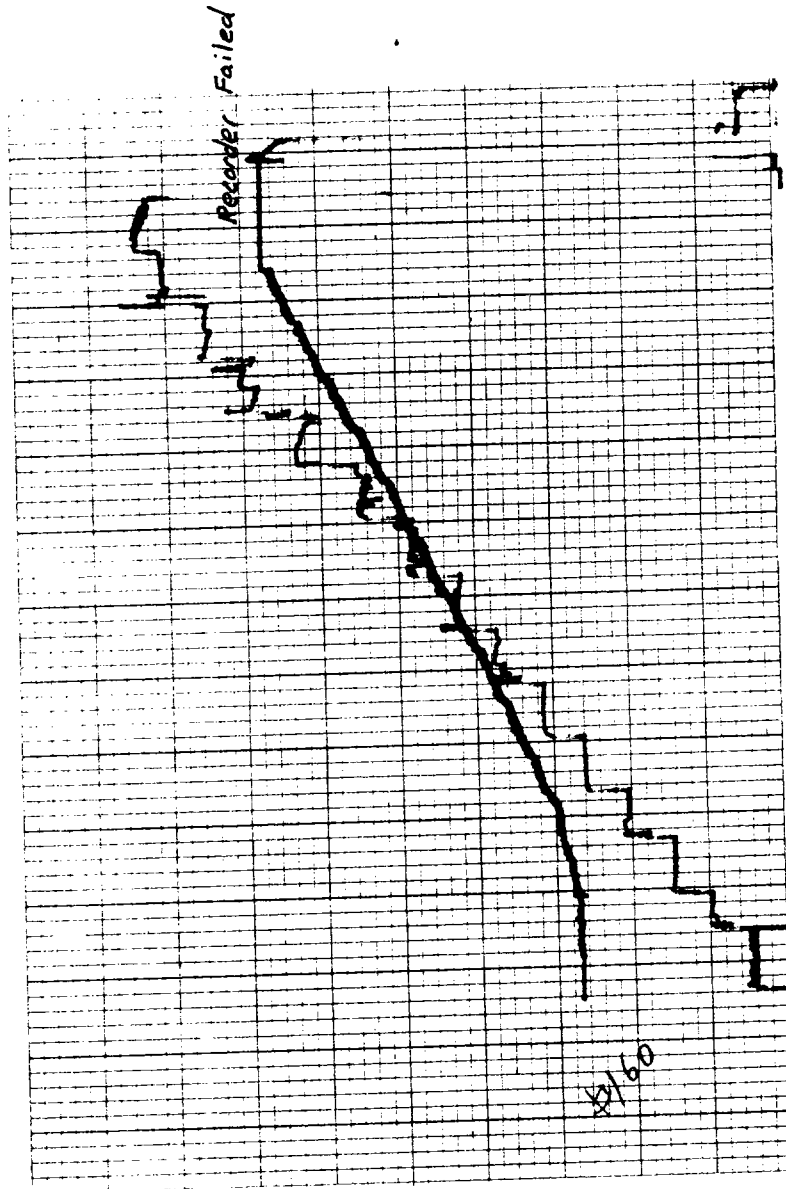
B & D WELL TESTERS, INC.

P.O. Box 5683
HOBBS, NEW MEXICO
505 397-3914

Mobil Producing Texas & New Mexico

NVAU #160

6-17-87

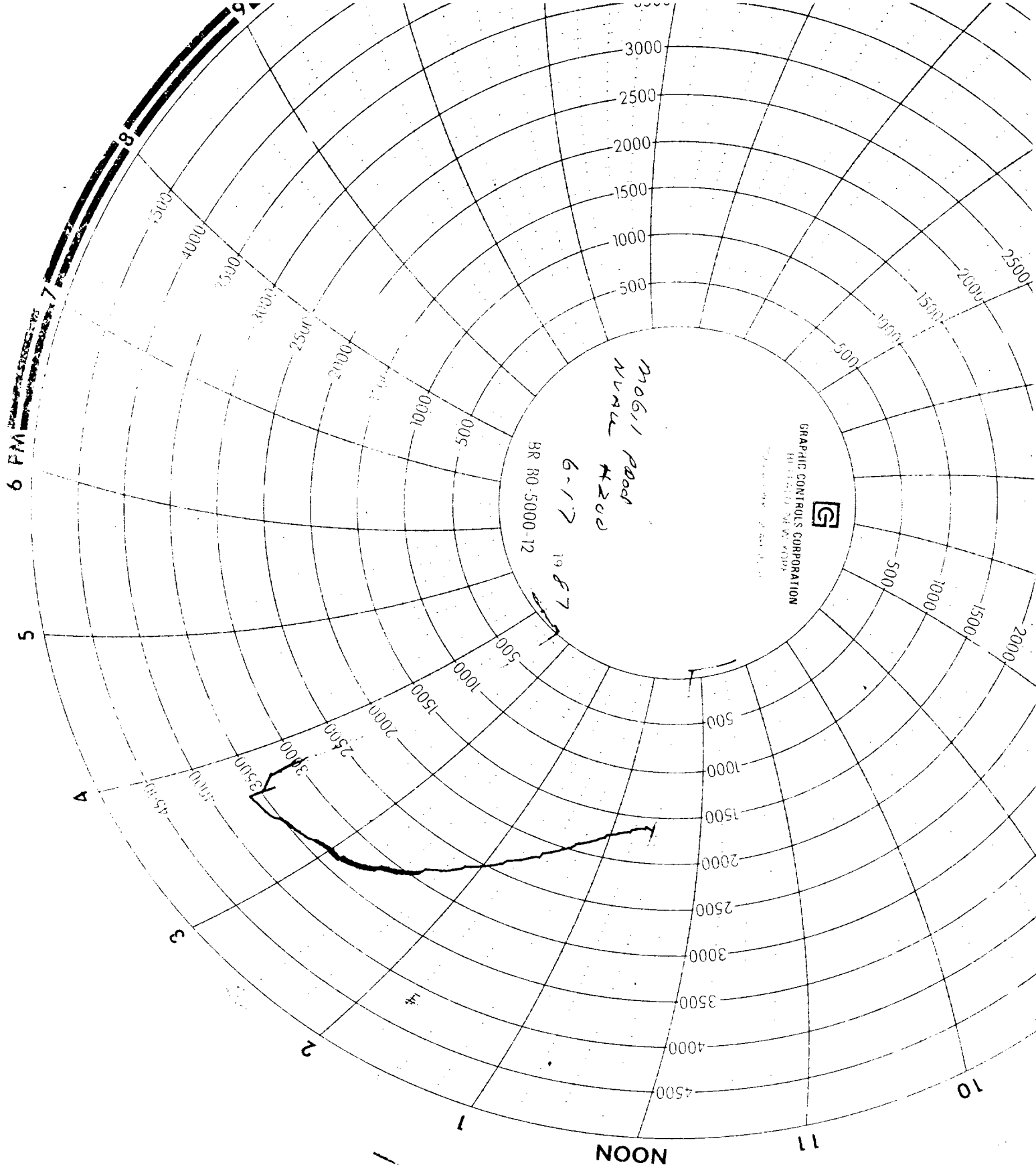


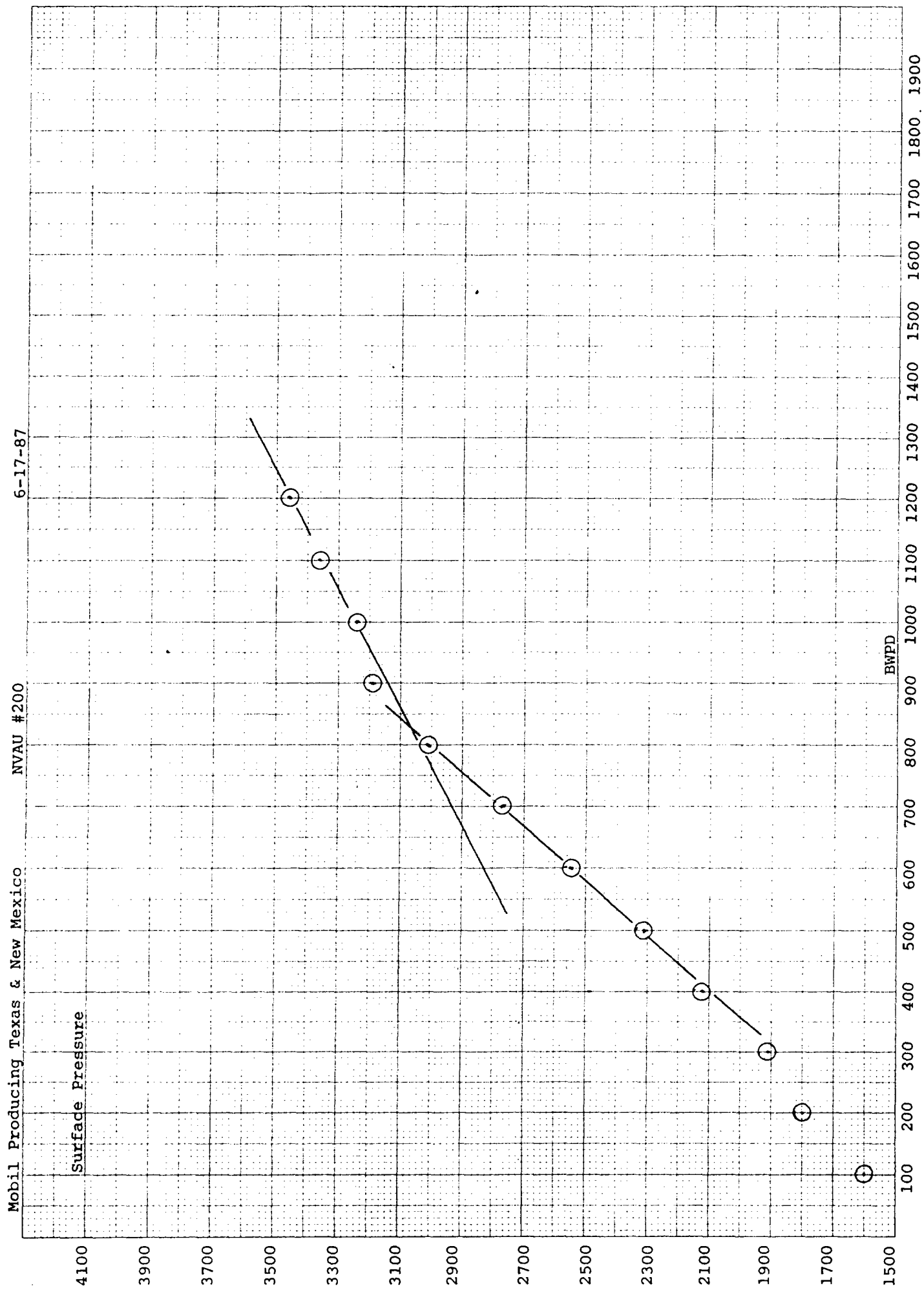
Step Rate Test

Phone (505) 397-3914

Hobbs, New Mexico 88240

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B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914

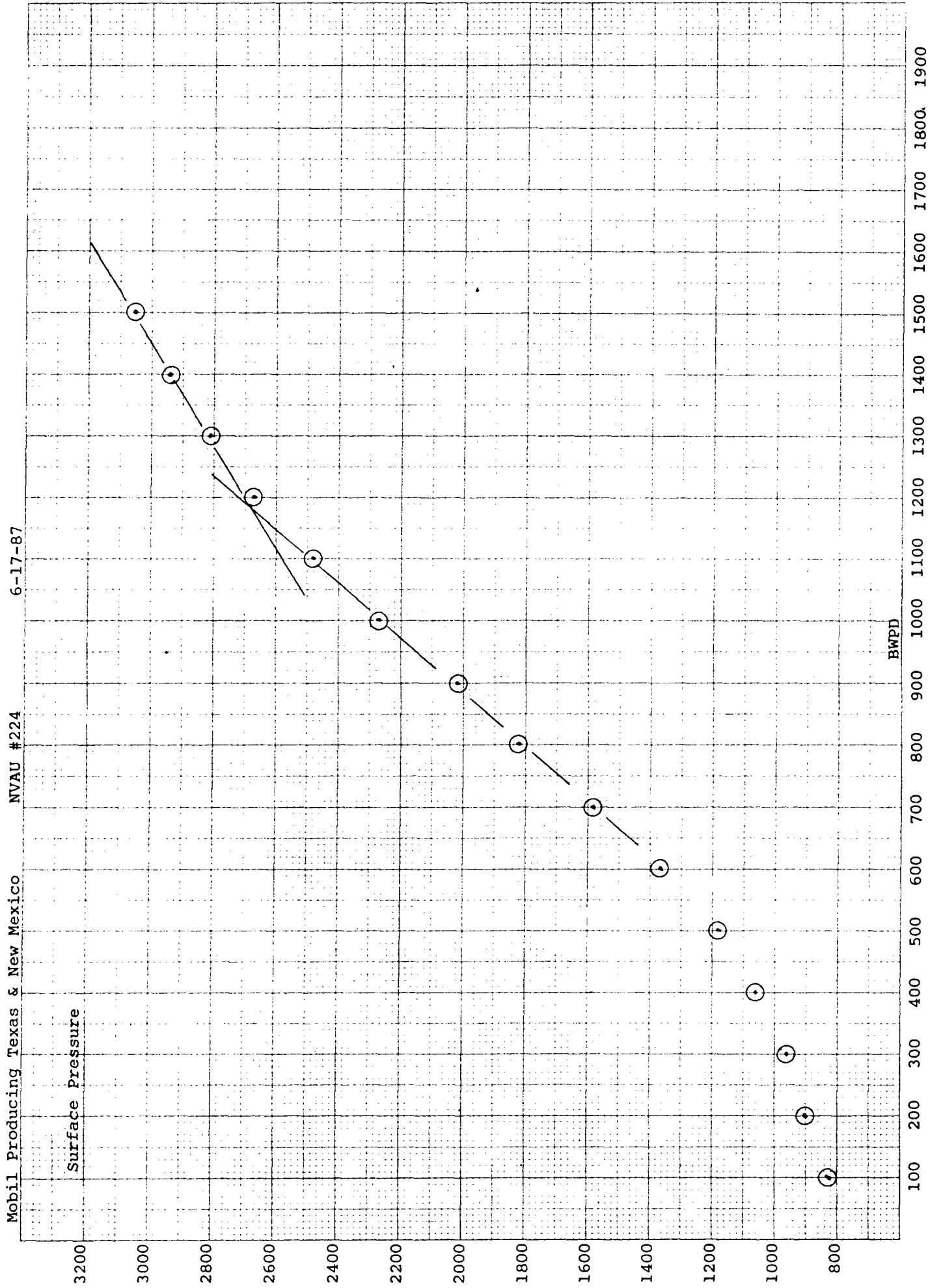
Hobbs, New Mexico 88240

Company Mobil Producing Texas & New Mexico Test Date 6-17-87							Unit
Total Depth 8730 Plug Back TD 8676 Elevation							Lease NVAU
Csg size 5 1/2 Wt 17# d Set at Perfs: From 8588 To 8632							Well # 224
Tbg size 2 7/8 Wt d Set at Perfs: From To							Sec 11 Twp-Blk 17S Rge 34E
Producing thru Packer set at 8500							County Lea State New Mexico
Co. Rep David Howell							
Time of Reading	Elap Time Hrs.	Well Information					Remarks
		Rate BBLs Per Day	Total BBLs Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	
2:45	SI			800			1" T.M.
2:50	Start	100		800			
2:55		100		810			
3:00		100		830			
3:05	:15	100	1.1	830			
3:10		200		850			
3:15		200		880			
3:20	:30	200	2.1	900			
3:25		300		880			
3:30		300		900			
3:35	:45	300	3.2	960			
3:40		400		990			
3:45		400		1025			
3:50	1:00	400	4.1	1060			
3:55		500		1120			
4:00		500		1160			
4:05	1:15	500	5.2	1180			
4:10		600		1250			
4:15		600		1340			
4:20	1:30	600	6.2	1370			
4:25		700		1500			
4:30		700		1530			
4:35	1:45	700	7.3	1580			
4:40		800		1660			
4:45		800		1770			
4:50	2:00	800	8.3	1820			
4:55		900		1885			
5:00		900		1950			
5:05	2:15	900	9.4	2020			

Step Rate Test

Page #2
Hobbs, New Mexico 88240

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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

July 17, 1987

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

OIL CONSERVATION DIVISION
P.O. BOX 2088
SANTA FE, NEW MEXICO 87504-2088

RE: APPLICATION FOR PRESSURE LIMIT INCREASE FOR DISPOSAL & INJECTION WELLS

Gentlemen:

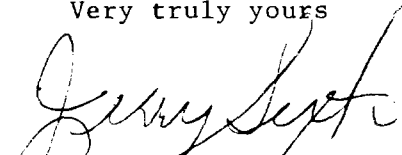
I have examined the step rate test for the:

Mobil Producing TX & NM Inc.	N. Vac. Abo Ut #160-B	12-17-34
Operator	Lease & Well No.	Unit S-T-R

and my recommendations are as follows:

RE-DUE OK DC.

Very truly yours


Jerry Sexton
Supervisor, District I

/bp



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

July 17, 1987

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

OIL CONSERVATION DIVISION
P.O. BOX 2088
SANTA FE, NEW MEXICO 87504-2088

RE: APPLICATION FOR PRESSURE LIMIT INCREASE FOR DISPOSAL & INJECTION WELLS

Gentlemen:

I have examined the step rate test for the:

Mobil Producing TX & NM Inc.	N. Vac. Abo Ut #200-L	2-17-34
Operator	Lease & Well No.	Unit S-T-R

and my recommendations are as follows:

OK

Very truly yours

Jerry Sexton
Supervisor, District I

/bp



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

July 17, 1987

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

OIL CONSERVATION DIVISION
P.O. BOX 2088
SANTA FE, NEW MEXICO 87504-2088

RE: APPLICATION FOR PRESSURE LIMIT INCREASE FOR DISPOSAL & INJECTION WELLS

Gentlemen:

I have examined the step rate test for the:

Mobil Producing TX & NM Inc.	No. Vac Abo Ut 158-J	12-17-34
Operator	Lease & Well No.	Unit
		S-T-R

and my recommendations are as follows:

OK

Very truly yours

Jerry Sexton
Supervisor, District I

/bp



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

July 17, 1987

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

OIL CONSERVATION DIVISION
P.O. BOX 2088
SANTA FE, NEW MEXICO 87504-2088

RE: APPLICATION FOR PRESSURE LIMIT INCREASE FOR DISPOSAL & INJECTION WELLS

Gentlemen:

I have examined the step rate test for the:

Mobil Producing TX & NM Inc.	N. Vac Abo Ut #224-B	11-17-34
Operator	Lease & Well No.	Unit S-T-R

and my recommendations are as follows:

OK

Very truly yours

Jerry Sexton
Supervisor, District I

/bp

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNORPOST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

July 7, 1987

Mobil Producing Texas & New Mexico, Inc.
P.O. Box 633
Midland, TX 79702

Attention: M.E. Sweeney

RE: Injection Pressure Increase
North Vacuum Abo Unit
Lea County, New Mexico

Dear Sir:

Reference is made to your request dated June 9, 1987, to increase the surface injection pressure on four wells within the North Vacuum Abo Unit Waterflood Project. This request is based on a step rate test conducted on these wells on June 3, 1987. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

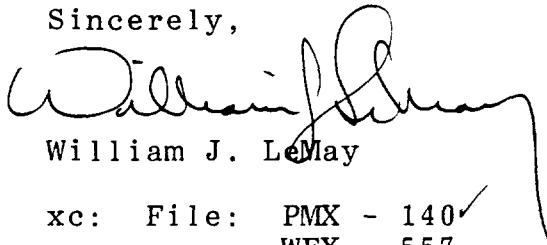
You are therefore authorized to increase the surface injection pressure on the following wells.

<u>WELL & LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
N. Vacuum Abo Unit No. 142 1807' FSL & 1880' FEL (Unit J) Sec. 14, T-17S, R-34E, NMPM	3190 PSIG
N. Vacuum Abo Unit No. 146 534' FNL & 2134' FEL (Unit B) Sec. 14, T-17S, R-34E, NMPM	2930 PSIG
N. Vacuum Abo Unit No. 164 660' FNL & 1980' FEL (Unit B) Sec. 15, T-17S, R-34E, NMPM	3280 PSIG
N. Vacuum Abo Unit No. 170 660' FNL & 740' FWL (Unit D) Sec. 14, T-17S, R-34E, NMPM	3225 PSIG

Page 2
Injection Pressure Increase

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

A handwritten signature in dark ink, appearing to read 'William J. LeMay', with a long, sweeping horizontal stroke extending to the right.

William J. LeMay

xc: File: PMX - 140 ✓
WFX - 557

OCD - Hobbs
D. McDonald
D. Catanach

July 7, 1987

Mobil Producing Texas & New Mexico, Inc.

P.O. Box 633

Midland, TX 79702

Attention: M.E. Sweeney

RE: Injection Pressure Increase

North Vacuum Abo Unit

Lea County, New Mexico

Dear Sir:

Reference is made to your request dated June 9, 1987, to increase the surface injection pressure on four wells within the North Vacuum Abo Unit Waterflood Project. This request is based on a step rate test conducted on these wells on June 3, 1987. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following wells.

<u>WELL & LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
N. Vacuum Abo Unit No. 142 1807' FSL & 1880' FEL (Unit J) Sec. 14, T-17S, R-34E, NMPM	3190 PSIG
N. Vacuum Abo Unit No. 146 534' FNL & 2134' FEL (Unit B) Sec. 14, T-17S, R-34E, NMPM	2930 PSIG
N. Vacuum Abo Unit No. 164 660' FNL & 1980' FEL (Unit B) Sec. 15, T-17S, R-34E, NMPM	3280 PSIG
N. Vacuum Abo Unit No. 170 660' FNL & 740' FWL (Unit D) Sec. 14, T-17S, R-34E, NMPM	3225 PSIG

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

William J. LeMay

xc: File: PMX - 140

WFX - 557

OCD - Hobbs

D. McDonald

D. Catanach

ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISIONGARREY CARRUTHERS
GOVERNORPOST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

August 11, 1987

Mobil Exploration and Producing U.S., Inc.
P.O. Box 633
Midland, TX 79702

Attention: M.E. Sweeney

RE: Injection Pressure Increase
N. Vacuum Abo Unit
Lea County, New Mexico

Dear Sir:

Reference is made to your request dated July 6, 1987, to increase the surface injection pressure on four wells within the North Vacuum Abo Unit Waterflood Project. This request is based on step rate tests conducted on these wells on June 17, 1987. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

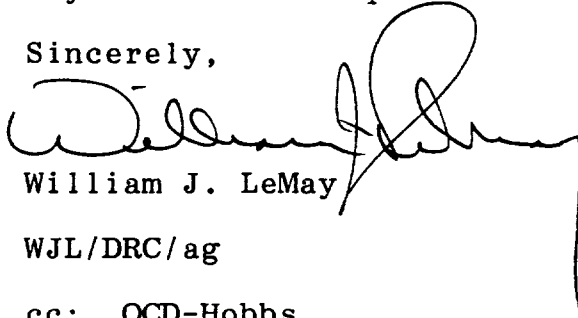
You are therefore authorized to increase the surface injection pressure on the following wells.

<u>WELL & LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
NVAU Well No. 158 Unit J, Section 12	2950 PSIG
NVAU Well No. 160 Unit B, Section 12	2780 PSIG
NVAU Well No. 200 Unit L, Section 2	3020 PSIG
NVAU Well No. 224 Unit B, Section 11	2620 PSIG

All in Township 17 South, Range 34 East, NMPM, Lea County, New Mexico.

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

A handwritten signature in black ink, appearing to read 'William J. LeMay', with a long horizontal stroke extending to the right.

William J. LeMay

WJL/DRC/ag

cc: OCD-Hobbs
D. Catanach
D. McDonald
✓File - PMX-140

Mobil Exploration and Producing U.S. Inc.

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

September 9, 1987

State of New Mexico
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. W. J. LeMay

INJECTION PRESSURE INCREASE REQUEST
NORTH VACUUM ABO FIELD
NORTH VACUUM UNIT
WELL NOS. 135, 162 AND 229
LEA COUNTY, NEW MEXICO

Gentlemen:

Under the provisions of Order No. PMX-140 dated March 7, 1986, permission was granted to inject water into the Abo formation for the subject wells. The order limited the pressure on the injection wells to no more than 0.2 psi. per foot to the uppermost injection interval. Step-rate tests for these wells have been completed which show that higher pressure will not result in migration of the injected fluid from the Abo formation. Permission is requested to increase the injection pressure as follows:

	<u>INJECTION INTERVALS</u>	<u>PRESENT SURFACE INJECTION PRESSURE LIMIT</u>	<u>REQUESTED SURFACE INJECTION PRESSURE LIMIT</u>
WELL NO. 135 UNIT L, SEC. 11 T-17-S, R-34-E	8609-8649'	1722 psig	3180 psig
WELL NO. 162 UNIT J, SEC. 11 T-17-S, R-34-E	8552-8634'	1712 psig	3450 psig

State of New Mexico
Oil Conservation Division
North Vacuum Abo Field

-2-

September 9, 1987

	<u>INJECTION INTERVALS</u>	<u>PRESENT SURFACE INJECTION PRESSURE LIMIT</u>	<u>REQUESTED SURFACE INJECTION PRESSURE LIMIT</u>
WELL NO. 229 UNIT L, SEC. 10 T-17-S, R-34-E	8745-8810'	1749 psig	2950 psig

Enclosed are copies of the Step-rate tests.

Yours very truly,



M. E. Sweeney
Environmental & Regulatory Manager

Mobil Exploration & Producing U.S. Inc.
as Agent for
Mobil Producing Texas & New Mexico Inc.

CCSmith/jlt

Attachments

cc: District Director OCD - Hobbs

B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914

Hobbs, New Mexico 88240

Company Mobil Producing Texas & NM										Test Date 8-20-87		Unit	
Total Depth 8700		Plug Back TD 8686		Elevation 4047		Lease NVAU		Well # 135					
Csg size 5½	Wt 15#	d	Set at 8700	Perfs: From	To	Sec	Twp-Blk	Rge					
Tbg size 2 3/8	Wt	d	Set at 8550	Perfs: From 8609	To 8649	County	Lea	State New Mexico					
Producing thru tbg		Packer set at 8550				Co. Rep	D. Howell						
Time of Reading	Elap Time Hrs.	Well Information					Remarks						
		Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP							
11:10	SI			1210									
11:15	Start test			1240									
11:16				1240									
11:17				1240									
11:18				1240									
11:19				1240									
11:20				1250									
11:21				1260									
11:22				1260									
11:23				1270									
11:24				1270									
11:25				1280									
11:26				1280									
11:27				1280									
11:28				1280									
11:29				1290									
11:30		100		1290									
11:31				1300									
11:32				1310									
11:33				1320									
11:34				1340									
11:35				1340									
11:36				1360									
11:37				1360									
11:38				1370									
11:39				1380									
11:40				1380									
11:41				1380									
11:42				1390									
11:43				1400									
11:44				1400									
11:45		200		1410									
11:46				1440									
11:47				1440									
11:48				1450									
11:49				1470									
11:50				1470									
11:51				1480									

B & D WELL TESTERS

Step Rate Test

Page #2

Phone (505) 397-3914

Hobbs, New Mexico 88240

Company Mobil Producing Texas & NM						Test Date 8-20-87		Unit
Total Depth 8700 Plug Back TD 8686						Elevation 4047		Lease NVAU
Csg size 5½ Wt 15# d Set at 8700 Perfs: From To						Sec Twp-Blk Rge		Well # 135
Tbg size 2 3/8 Wt d Set at 8550 Perfs: From 8609 To 8649						County Lea State New Mexico		
Producing thru tbg Packer set at 8550						Co. Rep D. Howell		
Well Information								
Time of Reading	Elap Time Hrs.	Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks	
11:52				1490				
11:53				1500				
11:54				1510				
11:55				1520				
11:56				1540				
11:57				1540				
11:58				1550				
11:59				1560				
12:00		300		1570				
12:01				1610				
12:02				1620				
12:03				1640				
12:04				1650				
12:05				1660				
12:06				1680				
12:07				1700				
12:08				1720				
12:09				1730				
12:10				1750				
12:11				1760				
12:12				1780				
12:13				1800				
12:14				1820				
12:15		400		1830				
12:16				1880				
12:17				1900				
12:18				1920				
12:19				1930				
12:20				1950				
12:21				1970				
12:22				1980				
12:23				1990				
12:24				2010				
12:25				2030				
12:26				2040				
12:27				2050				
12:28				2060				
12:29				2075				

B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914

Page #3
Hobbs, New Mexico 88240

Company Mobil Producing Texas & NM						Test Date 8-20-87		Unit	
Total Depth 8700 Plug Back TD 8686						Elevation 4047		Lease NVAU	
Csg size 5 1/2 Wt 15# d						Set at 8700 Perfs: From To		Well # 135	
Tbg size 2 3/8 Wt d						Set at 8550 Perfs: From 8609 To 8649		Sec Twp-Blk Rge	
Producing thru tbg						Packer set at 8550		County Lea State New Mexico	
								Co. Rep D. Howell	
Well Information									
Time of Reading	Elap Time Hrs.	Rate BBLs Per Day	Total BBLs Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks		
12:30		500		2090					
12:31				2140					
12:32				2160					
12:33				2180					
12:34				2200					
12:35				2220					
12:36				2230					
12:37				2260					
12:38				2270					
12:39				2285					
12:40				2300					
12:41				2320					
12:42				2320					
12:43				2340					
12:44				2350					
12:45		600		2360					
12:46				2400					
12:47				2430					
12:48				2450					
12:49				2470					
12:50				2480					
12:51				2500					
12:52				2520					
12:53				2540					
12:54				2560					
12:55				2580					
12:56				2600					
12:57				2620					
12:58				2630					
12:59				2650					
1:00		700		2665			Shut down 2 hours due to meter turbine problems. Start test at 700 BPD rate and continue test.		
3:01				2725					
3:02				2770					
3:03				2780					
3:04				2810					
3:05				2820					
3:06				2840					

B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914

Page #4

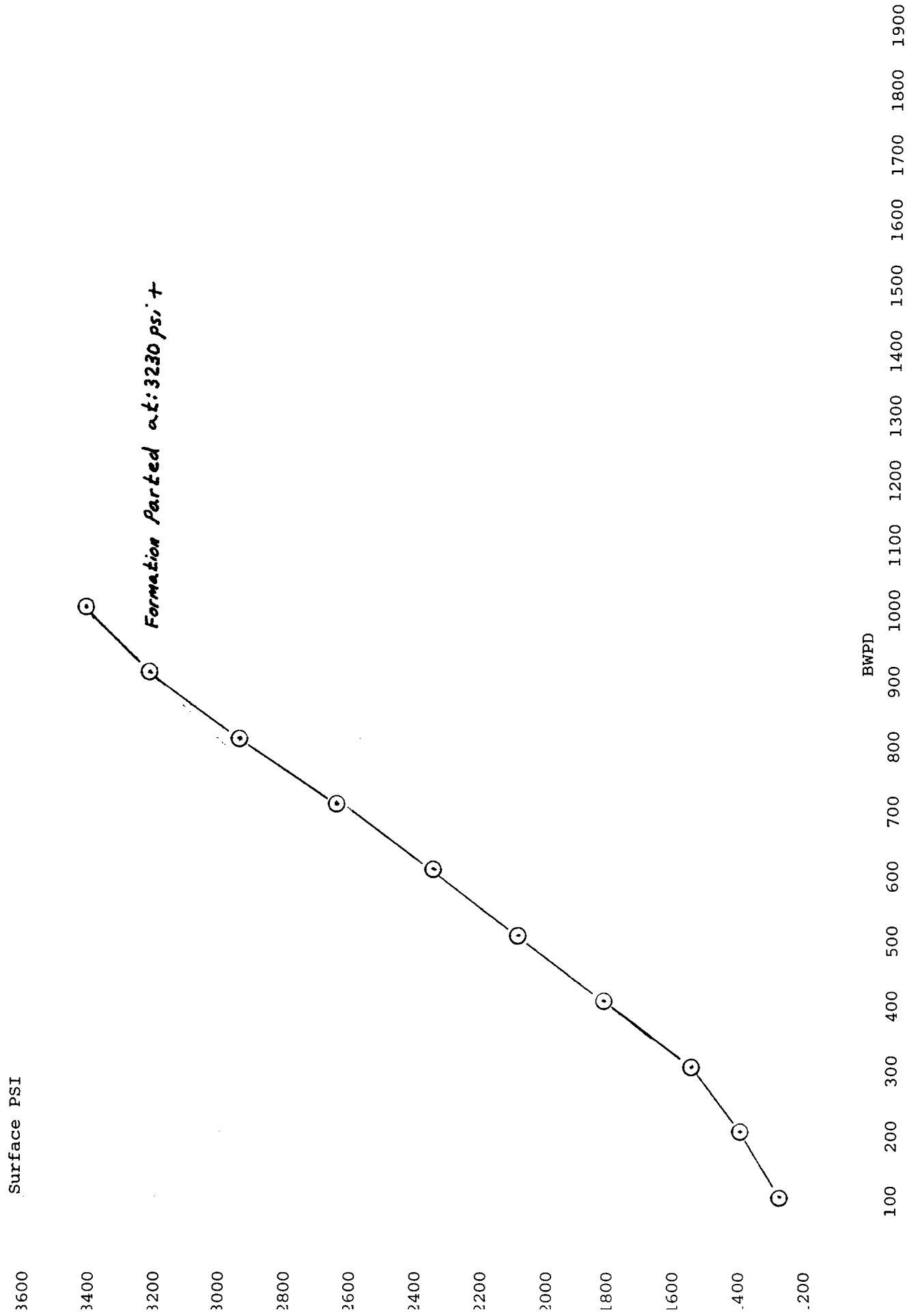
Hobbs, New Mexico 88240

Company Mobil Producing Texas & New Mexico						Test Date 8-20-87		Unit	
Total Depth 8700 Plug Back TD 8686						Elevation 4047		Lease NVAU	
Csg size 5½ Wt 15# d						Set at 8700Perfs: From To		Well # 135	
Tbg size 2 3/8 Wt d						Set at 8550Perfs: From 8609 To 8649		Sec Twp-Blk Rge	
Producing thru tbg						Packer set at 8550		County Lea State New Mexico	
						Co. Rep D. Howell			
Well Information									
Time of Reading	Elap Time Hrs.	Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	Remarks		
3:07				2840					
3:08				2850					
3:09				2850					
3:10				2860					
3:11				2880					
3:12				2900					
3:13				2920					
3:14				2950					
3:15		800		2960					
3:16				3000					
3:17				3030					
3:18				3050					
3:19				3070					
3:20				3090					
3:21				3110					
3:22				3120					
3:23				3140					
3:24				3150					
3:25				3170					
3:26				3185					
3:27				3200					
3:28				3220					
3:29				3220					
3:30		900		3230					
3:31				3270					
3:32				3280					
3:33				3300					
3:34				3310					
3:35				3320					
3:36				3330					
3:37				3350					
3:38				3360					
3:39				3370					
3:40				3380					
3:41				3390					
3:42				3400					
3:43				3410					
3:44				3420					

Step Rate Test

Page #5
Hobbs, New Mexico 88240

[illegible]



B & D WELL TESTERS
Step Rate Test

Phone (505) 397-3914

Hobbs, New Mexico 88240

Company Mobil Producing Texas & New Mexico						Unit
Test Date 8-20-87						Lease NVAU
Total Depth 8750		Plug Back TD 8693		Elevation 4040 GL		Well # 162
Csg size 5½	Wt 17#	d	Set at	Perfs: From 8552	To 8634	Sec 11 Twp-Blk 17S Rge 34E
Tbg size 2 3/8	Wt	d	Set at 8500	Perfs: From	To	County Lea State New Mexico
Producing thru inj thru tbg Packer set at 8500						Co. Rep D. Howell

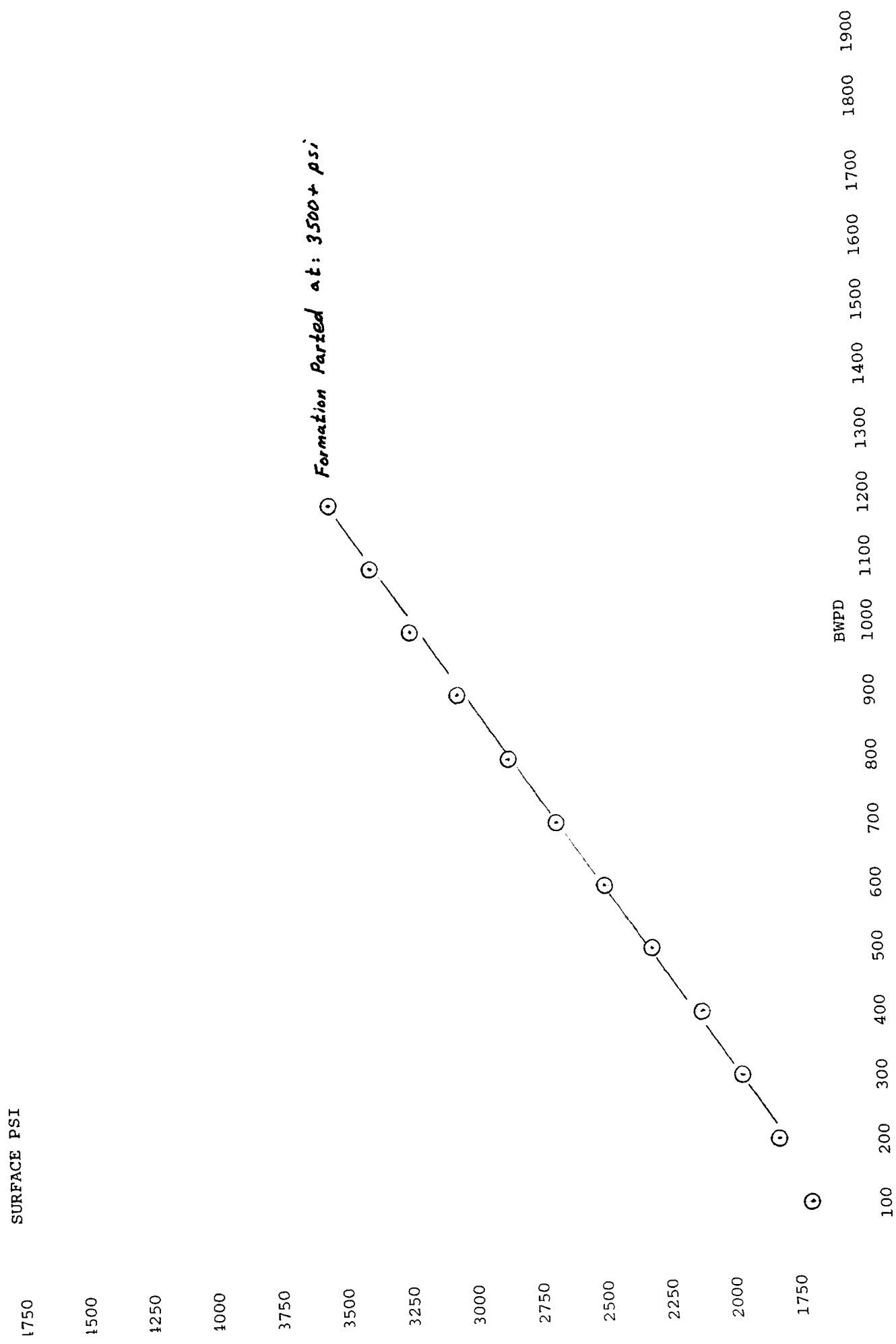
Time of Reading	Elap Time Hrs.	Well Information					Remarks
		Rate BBLS Per Day	Total BBLS Per Rate	Surface PSIG	Surface PSI Cor for Friction	BHP	
8:55	Start			1630			
9:00		100		1660			
9:05		100		1680			
9:10	:15	100	1.10	1700			
9:15		200		1750			
9:20		200		1790			
9:25	:30	200	2.57	1820			
9:30		300		1880			
9:35		300		1920			
9:40	:45	300	3.30	1960			
9:45		400		2020			
9:50		400		2060			
9:55	1:00	400	4.12	2100			
10:00		500		2190			
10:05		500		2240			
10:10	1:15	500	5.37	2290			
10:15		600		2370			
10:20		600		2430			
10:25	1:30	600	6.35	2470			
10:30		700		2550			
10:35		700		2600			
10:40	1:45	700	7.30	2650			
10:45		800		2730			
10:50		800		2790			
10:55	2:00	800	8.35	2830			
11:00		900		2920			
11:05		900		2980			
11:10	2:15	900	9.25	3020			
11:15		1000		3100			
11:20		1000		3160			
11:25	2:30	1000	10.76	3200			

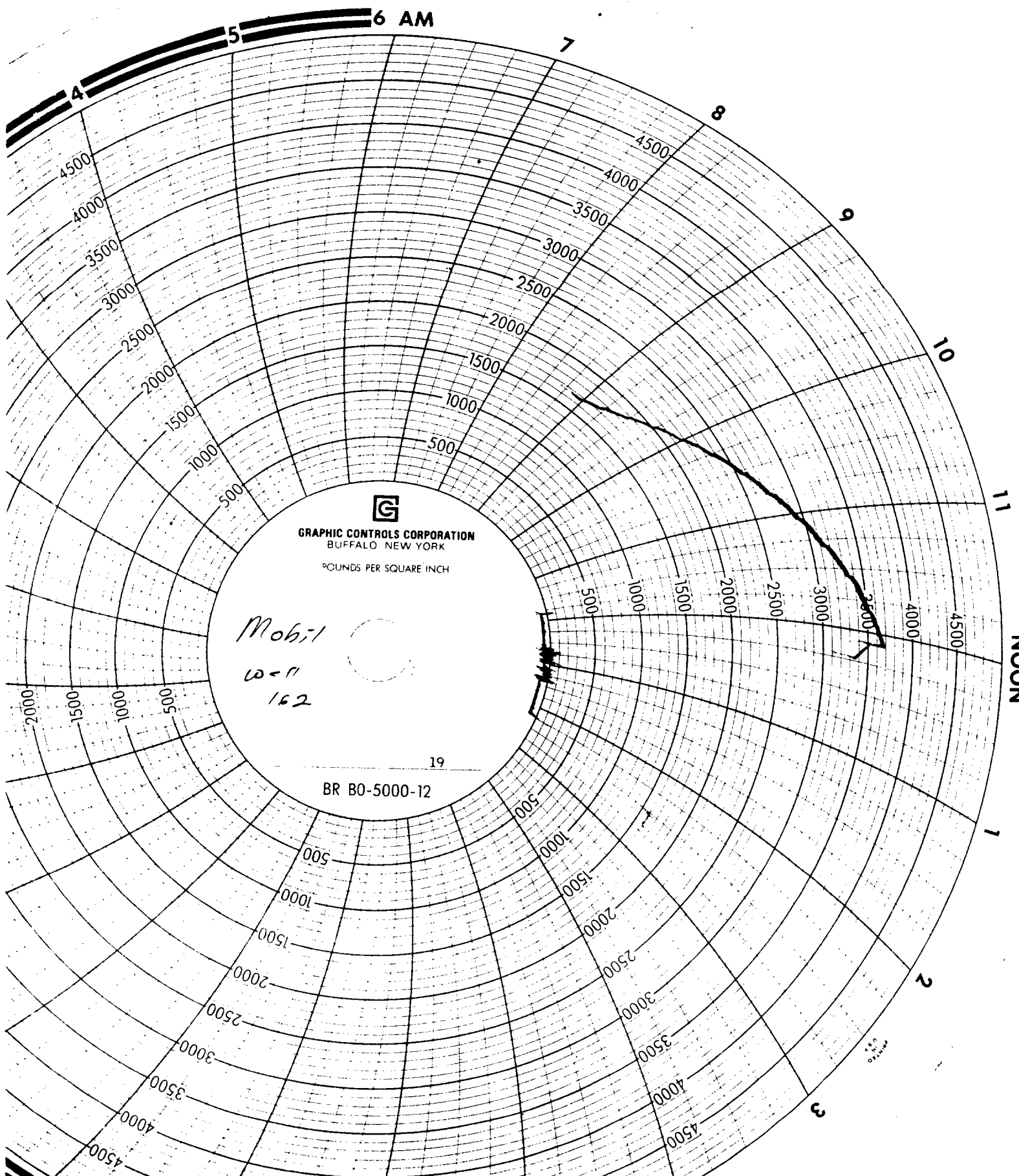
Step Rate Test

Hobbs, New Mexico 88240

Phone (505) 397-3914

[illegible]





Surface PSI

4750

4500

4250

4000

3750

3500

3250

3000

2750

2500

2250

2000

1750

BWPD

100

200

300

400

500

600

700

800

900

1000

1100

1200

1300

1400

1500

1600

1700

1800

1900

Formation Parted at: 3000 + psi

①

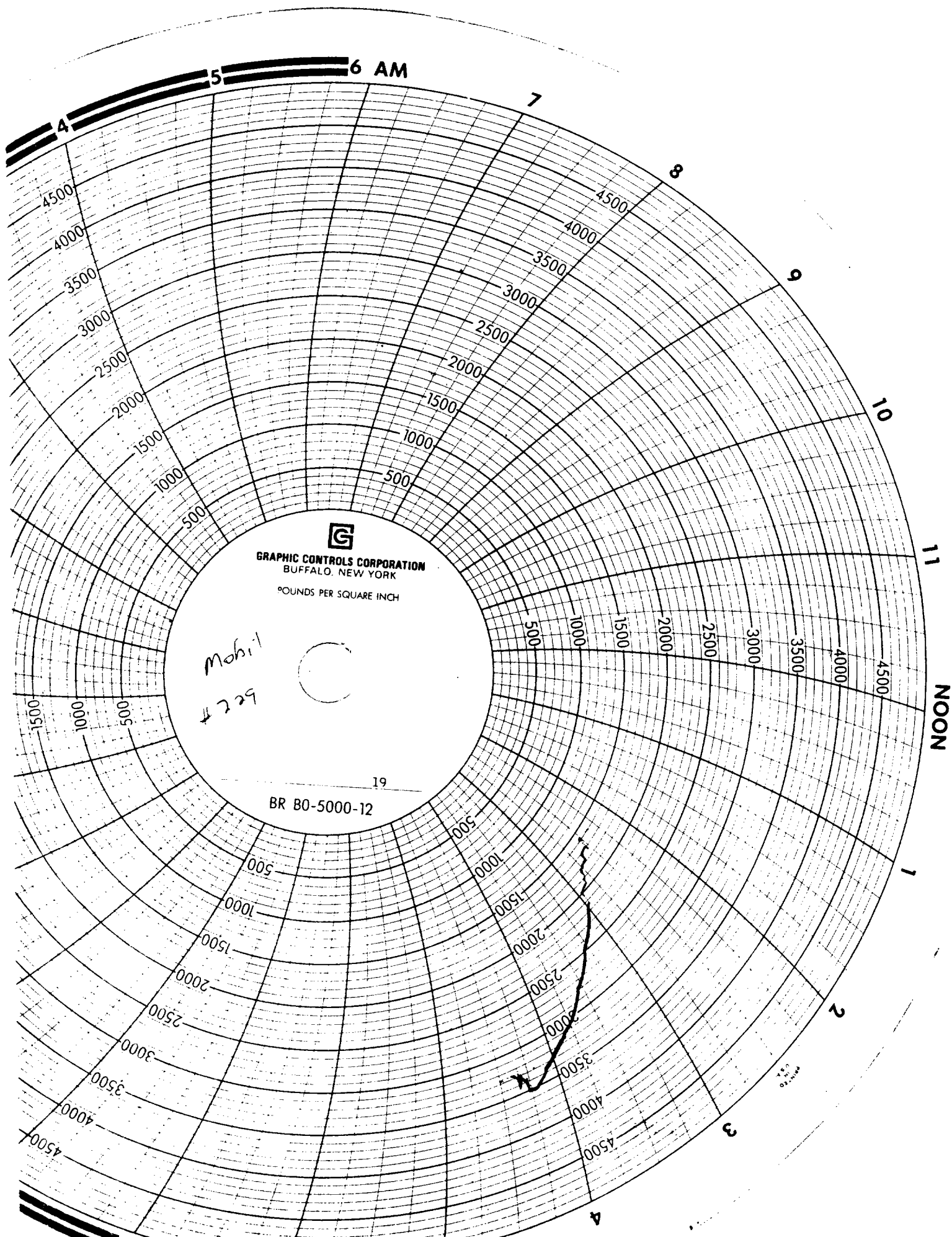
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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

GARREY CARRUTHERS
DIRECTOR

September 11, 1987

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

David R. Catanach
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Re: Step Rate Tests for Mobil Prod. TX & NM Inc.

Dear Mr. Catanach:

We have received the results on the Step Rate Tests on the Mobil Producing TX & MN, Inc North Vacuum Abo wells No. 135, No. 162, and No. 229.

I recommend that Well No. 135 be allowed a pressure limit of no more than 3200 psi.

The test on Well No. 162 indicates a pressure limit of 3500 would be satisfactory.

Although the test results on Well No. 229 are not very conclusive, the 3000 psi indicated would be satisfactory.

As indicated in the letter from Mobil, the formal request for a pressure limit increase will be coming from C. C. Smith of Midland, Texas.

Very truly yours

OIL CONSERVATION DIVISION

Jerry Sexton
Jerry Sexton
Supervisor, District I

JS:bp

File



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

September 14, 1987

Mobil Exploration and Producing U.S. Inc.
P.O. Box 633
Midland, TX 79702

Attention: M.E. Sweeney

RE: Injection Pressure Increase
North Vacuum Abo Unit
Lea County, New Mexico

Dear Sir:

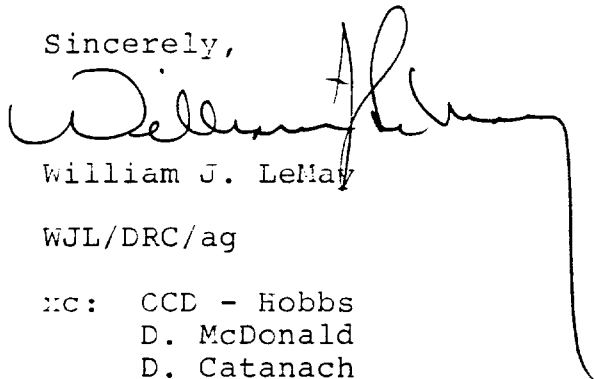
Reference is made to your request dated September 9, 1987, to increase the surface injection pressure on three wells within the North Vacuum Abo Unit. This request is based on step rate tests conducted on these wells on August 20, 1987. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following wells.

<u>WELL & LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
NVAU Well No. 135 1980 FSL & 860 FWL (Unit L) Section 11, Township 17 South, Range 34 East.	3170 PSIG
NVAU Well No. 162 1980 FSL & 2180 FEL (Unit J) Section 11, Township 17 South, Range 34 East.	3450 PSIG
NVAU Well No. 229 2000 FSL & 600 FWL (Unit L) Section 10, Township 17 South, Range 34 East.	2950 PSIG

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

A handwritten signature in dark ink, appearing to read 'William J. LeMay', with a long, sweeping horizontal line extending to the right.

William J. LeMay

WJL/DRC/ag

cc: CCD - Hobbs
D. McDonald
D. Catanach
File: PMX-140