

Mobil Producing Texas & New Mexico Inc.

P.O. BOX 633
MIDLAND, TEXAS 79702

June 9, 1987

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. 142,
146, 164 AND 170
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

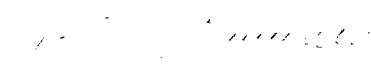
Under the provisions of Order No. WFX-557 dated February 11, 1986, and PMX-140 dated March 7, 1986, Mobil Producing Texas & New Mexico, Inc. (MPTM) was granted permission to inject water into the Abo formation for the subject wells. The order limited the pressure on the injection wells to no more than 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. 142 Unit J, Sec. 14 T-17-S, R-34-E WFX-557	8533-8607'	1707 psig.	3190 psig.
Well No. 146 Unit B, Sec. 14 T-17-S, R-34-E PMX-140	8516-8590'	1703 psig	2930 psig

	<u>Injection Interval</u>	<u>Present Surface Inj. Pressure Limit</u>	<u>Requested Surface Inj. Pressure Limit</u>
Well No. 164 Unit B, Sec. 15 T-17-S, R-34-S PMX-140	8677-8734'	1735 psig.	3280 Psig.
Well No. 170 Unit D, Sec. 14 T-17-S, R-34-E PMX-140	8579-8634'	1716 psig.	3225 psig.

Enclosed are copies of the step rate tests.

Yours very truly,


M. E. Sweeney
Environmental & Regulatory Mgr.

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 6-3-87						Unit
Total Depth 8700 Plug Back TD 8664 Elevation 4030						Lease NVAU
Csg size 5 1/2 Wt 17 d Set at Perfs: From 8533 To 8607						Well # 142
Tbg size 2 3/8 Wt 4.6 d Set at Perfs: From To						Sec 14 Twp-Blk 17S Rge 34E
Producing thru Packer set at 8450						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	
7:20	SI			2350			
7:25	Start	100		2330			
7:30		100		2350			
7:35		100		2360			
7:40	:15	100	1.3	2370			
7:45		200		2410			
7:50		200		2460			
7:55	:30	200	2.1	2490			
8:00		300		2570			
8:05		300		2590			
8:10	:45	300	3.1	2630			Test shut down at 8:15
9:10	Start	Test					Repair turbin meter
9:15		400		2680			Resume test at 8:55 -
9:20		400		2710			Pressure back to 2630 - Open
9:25	1:00	400	4.2	2730			choke to 400 BPD at 9:10
9:30		500		2780			
9:35		500		2810			
9:40	1:15	500	5.2	2840			
9:45		600		2890			
9:50		600		2920			
9:55	1:30	600	6.2	2950			
10:00		700		3000			
10:05		700		3020			
10:10	1:45	700	7.3	3040			
10:15		800		3090			
10:20		800		3120			
10:25	2:00	800	8.3	3140			
10:30		900		3190			
10:35		900		3210			
10:40	2:15	900	9.4	3235			

Step Rate Test

Page #2

Phone (505) 397-3914

Hobbs, New Mexico 88240

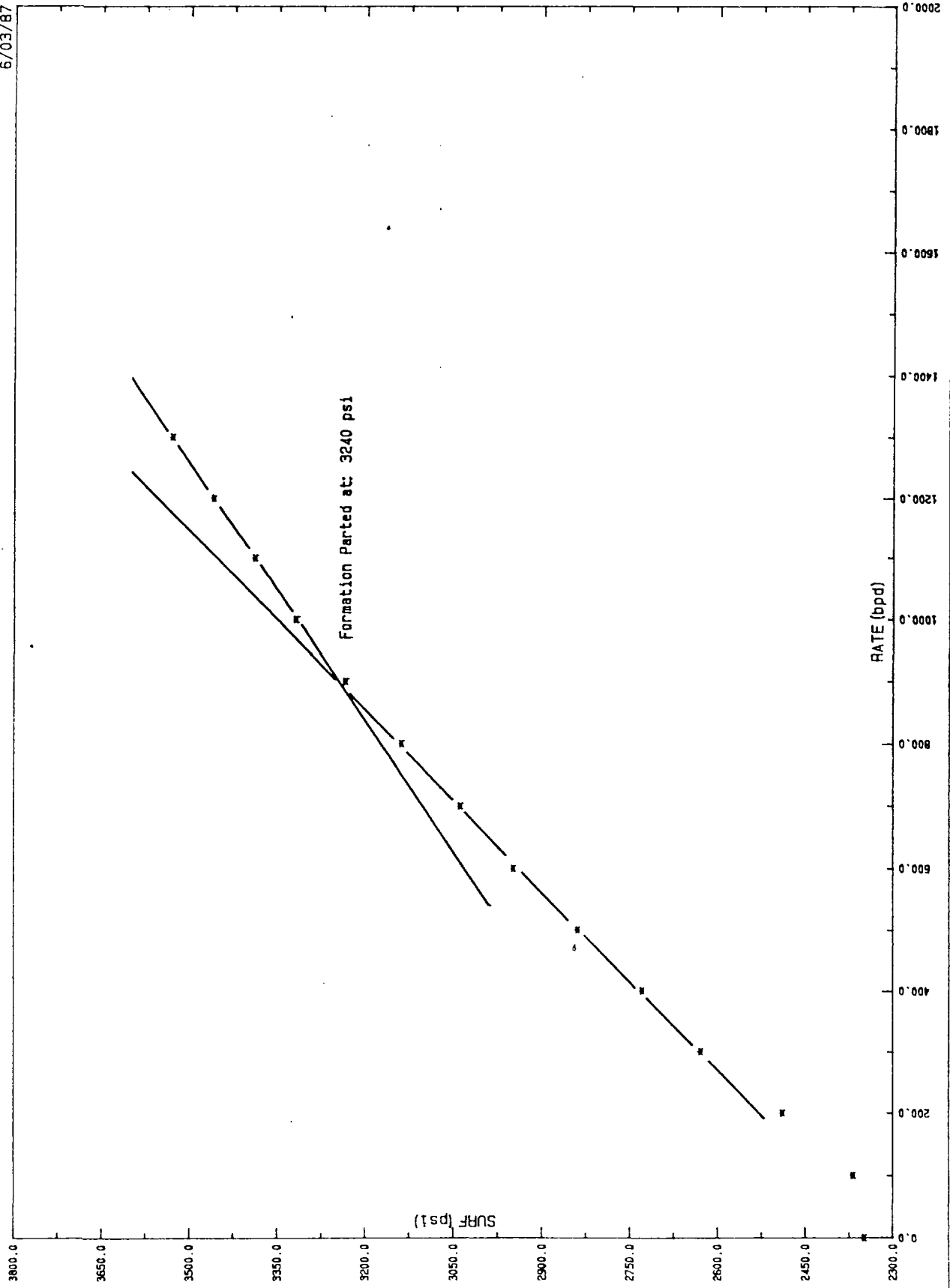
										Unit	
Company Mobil Producing Texas & New Mexico Test Date 6-3-87										Lease NVAU	
Total Depth 8700		Plug Back TD 8664		Elevation 4030		Well # 142					
Csg size 5½		Wt 17 d		Set at		Perfs: From 8533 To 8607		Sec 14 Twp-Blk 17S Rge 34E			
Tbg size 2 3/8		Wt 4.6 d		Set at		Perfs: From To		County Lea State New Mexico			
Producing thru				Packer set at 8450		Co. Rep David Howell					

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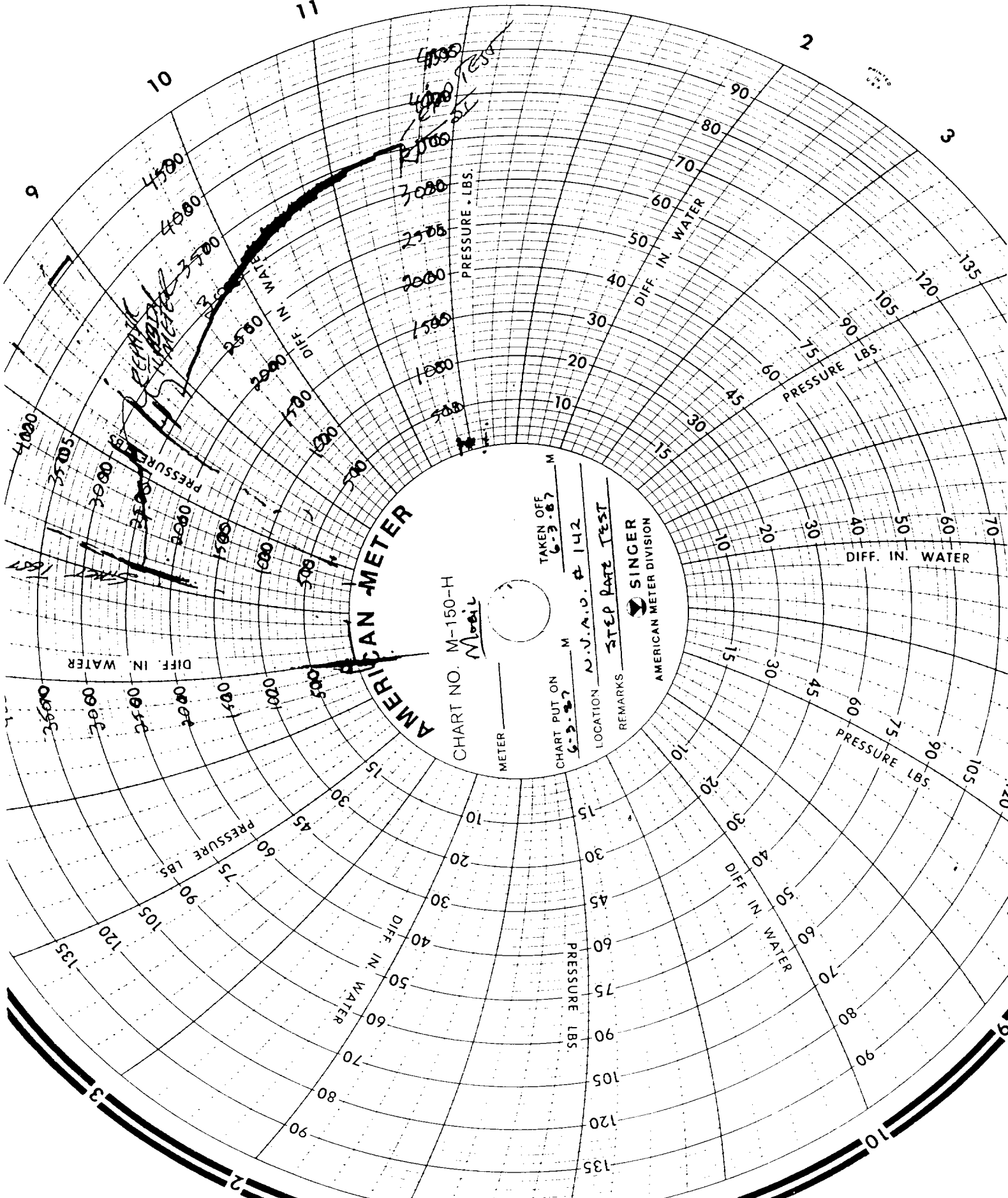
B & D WELL TESTERS

Customer: Mobil Producing
Well: N.V.A.U. #142

6/03/87



NOON



Step Rate Test

Hobbs, New Mexico 88240

Company Mobil Producing Texas & New Mexico Test Date 6-3-87							Unit
Total Depth 8700 Plug Back TD 8669 Elevation							Lease NVAU
Csg size 5 1/2 Wt d Set at Perfs: From 8516 To 8590							Well # 146
Tbg size 2 3/8 Wt d Set at Perfs: From To							Sec 14 Twp-Blk 17S Rge 34E
Producing thru Packer set at 8405							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	
7:40	SI			1760			1" T.M.
7:45	Start	100		1760			
7:50		100		1770			
7:55		100		1770			
8:00	:15	100	1.0	1775			
8:05		200		1805			
8:10		200		1820			
8:15	:30	200	2.0	1840			
8:20		300		1875			
8:25		300		1910			
8:30	:45	300	3.1	1930			
8:35		400		1985			
8:40		400		2030			
8:45	1:00	400	4.1	2055			
8:50		500		2130			
8:55		500		2170			
9:00	1:15	500	5.1	2210			
9:05		600		2290			
9:10		600		2340			
9:15	1:30	600	6.2	2380			
9:20		700		2450			
9:25		700		2510			
9:30	1:45	700	7.2	2550			
9:35		800		2620			
9:40		800		2670			
9:45	2:00	800	8.3	2715			
9:50		900		2790			
9:55		900		2830			
10:00	2:15	900	9.4	2870			
See Page #2							

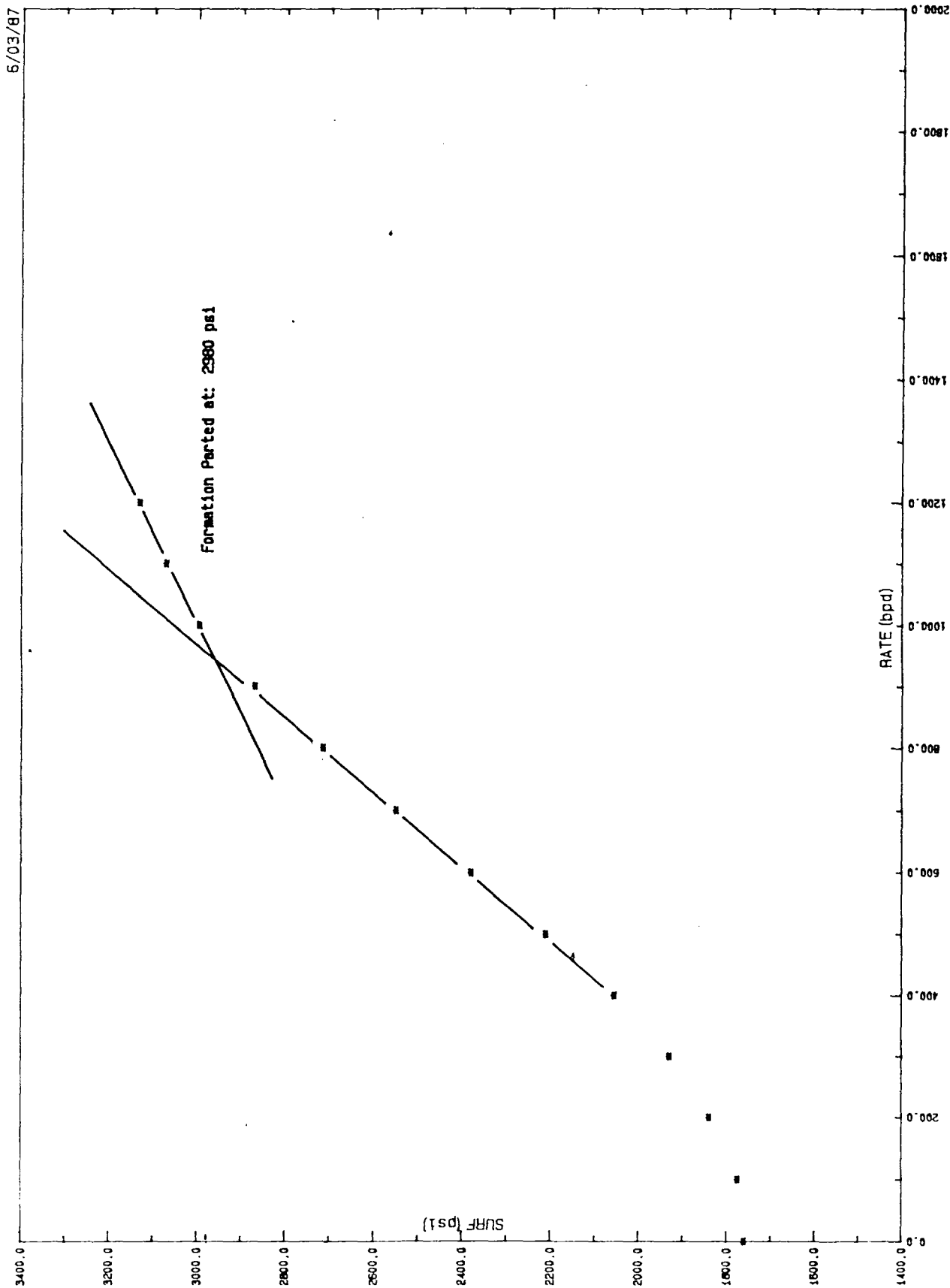
Step Rate Test

Hobbs, New Mexico 88240

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B & D WELL TESTERS

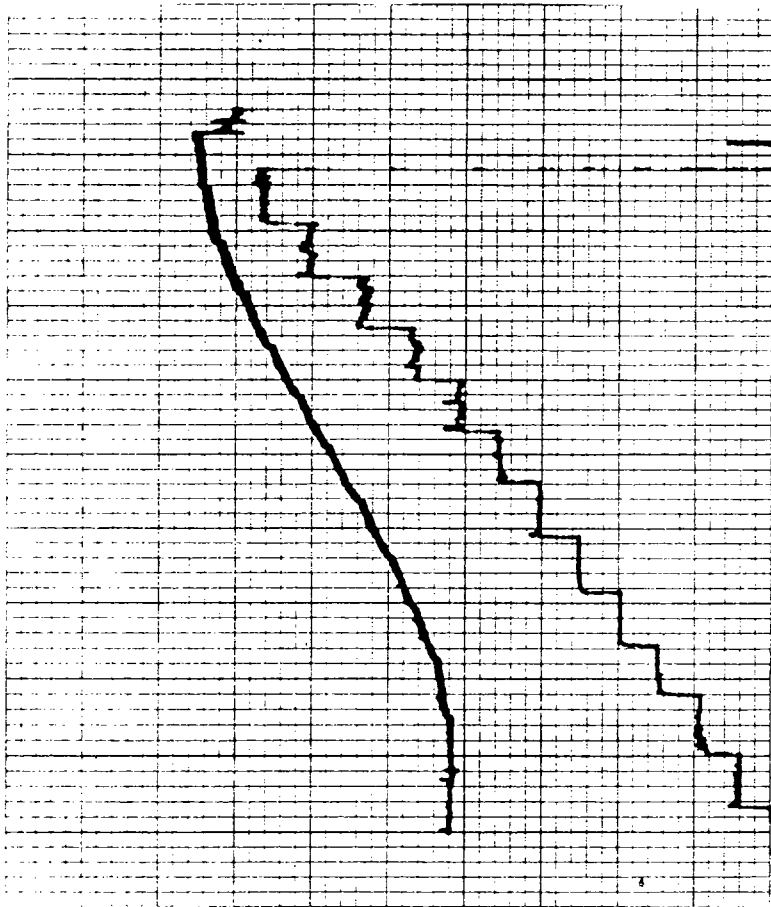
Customer: Mobil Producing
Well: N.V.A.U. #146



B & D WELL TESTERS, INC.

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

Mobil Producing Texas & New Mexico
NVAU #146
6-3-87



GRAPHIC CONTROLS CORPORATION BUFFALO NEW YORK

Step Rate Test

Hobbs, New Mexico 88240

Company Mobil Producing Texas & New Mexico Test Date 6-3-87							Unit
Total Depth 8802 Plug Back TD 8850 Elevation 4047							Lease NVAU
Csg size 5 1/2 Wt 17 d Set at Perfs: From 8677 To 8734							Well # 164
Tbg size 2 3/8 Wt 4.7 d Set at Perfs: From To							Sec 15 Twp-Blk 17S Rge 34E
Producing thru Packer set at 8634							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	
12:50	SI			2490			
12:55	Start			2510			
1:00		100		2530			
1:05		100		2540			
1:10	:15	100	1.0	2560			
1:15		200		2610			
1:20		200		2630			
1:25	:30	200	2.1	2660			
1:30		300		2720			
1:35		300		2750			
1:40	:45	300	3.1	2780			
1:45		400		2850			
1:50		400		2880			
1:55	1:00	400	4.2	2920			
2:00		500		2990			
2:05		500		3030			
2:10	1:15	500	5.2	3060			
2:15		600		3130			
2:20		600		3170			
2:25	1:30	600	6.2	3200			
2:30		700		3270			
2:35		700		3305			
2:40	1:45	700	7.3	3330			
2:45		800		3380			
2:50		800		3400			
2:55	2:00	800	8.3	3420			
3:00		900		3480			
3:05		900		3500			
3:10	2:15	900	9.4	3520			

Step Rate Test

Hobbs, New Mexico 88240

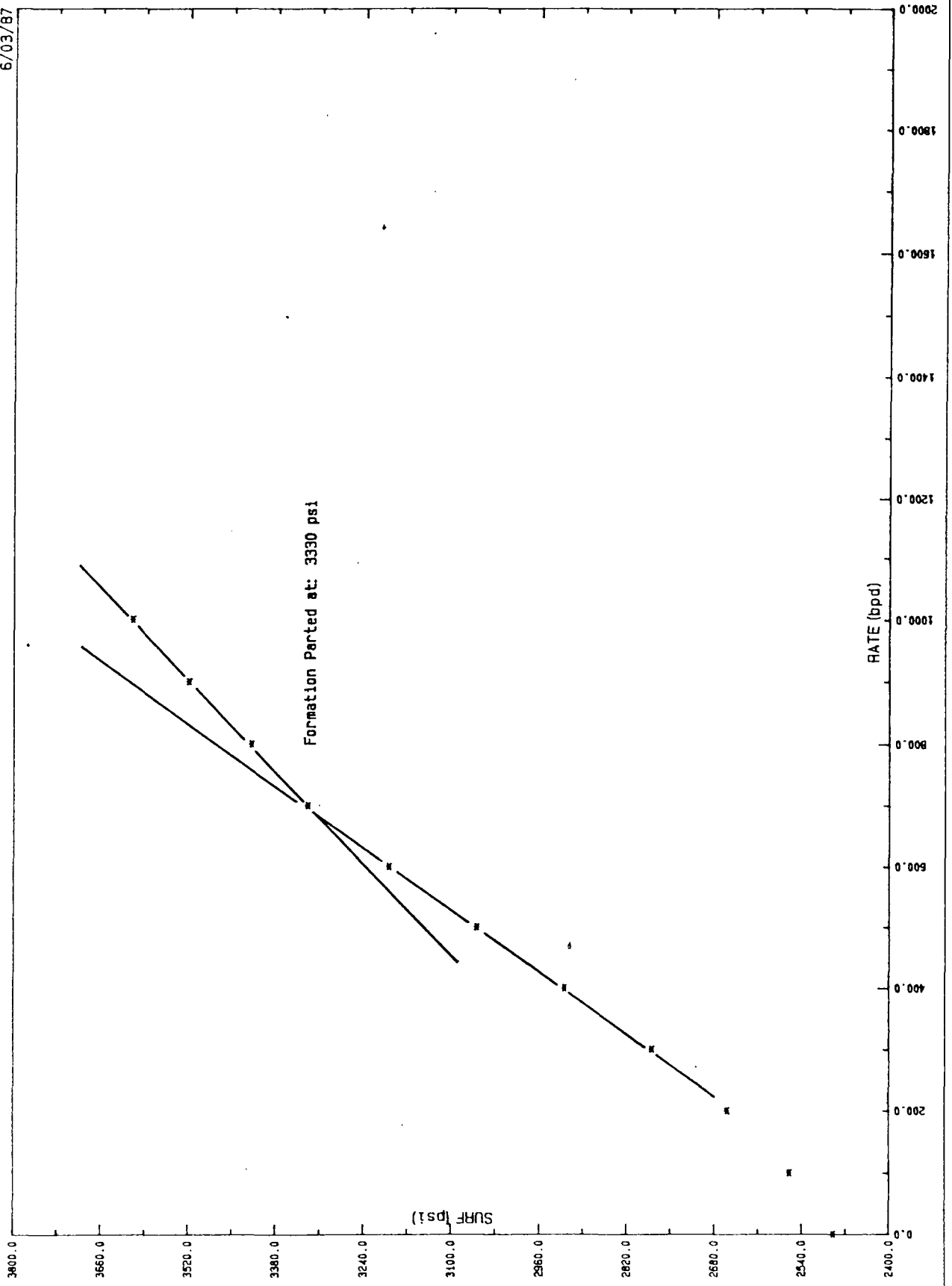
										Unit	
Company Mobil Producing Texas & New Mexico Test Date 6-3-87										Lease NVAU	
Total Depth 8802		Plug Back TD 8850		Elevation 4047		Well # 164					
Csg size 5½	Wt 17	d	Set at	Perfs: From 8677	To 8734	Sec 15 Twp-Blk 17S Rge 34E					
Tbg size 2 3/8	Wt 4.7	d	Set at	Perfs: From	To	County Lea State New Mexico					
Producing thru				Packer set at 8634		Co. Rep David Howell					

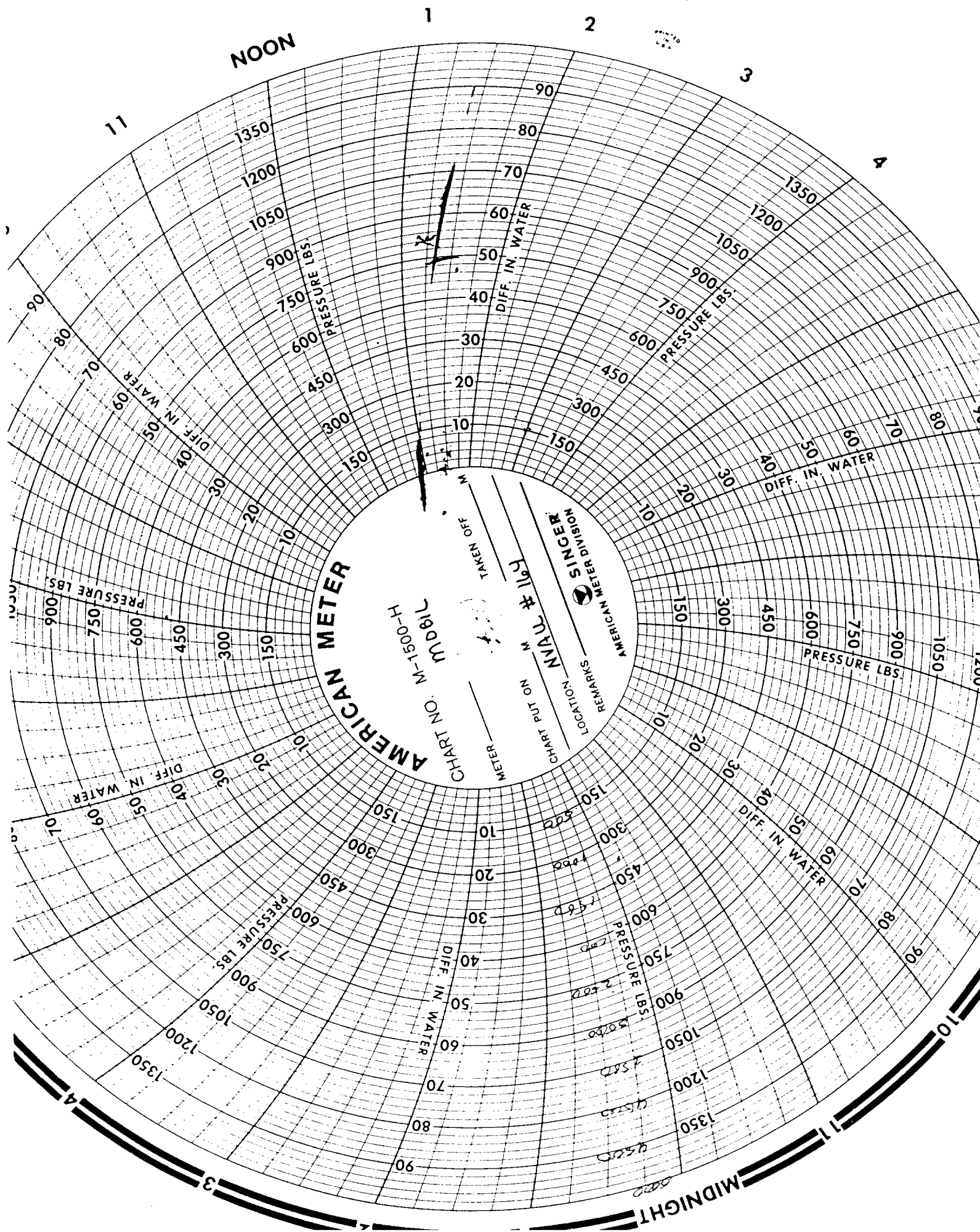
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B & D WELL TESTERS

Customer: Mobil Producing
Well: N.V.A.U. #164

6/03/87





B & D WELL TESTERS

Step Rate Test

Phone (505) 397-3914

Hobbs, New Mexico 88240

Company Mobil Producing Texas & New Mexico Test Date 6-3-87							Unit
Total Depth 8800 Plug Back TD 8694 Elevation							Lease NVAU
Csg size 5 1/2 Wt d Set at Perfs: From 8579 To 8634							Well # 170
Tbg size 2 3/8 Wt d Set at Perfs: From To							Sec 14 Twp-Blk 17S Rge 34E
Producing thru Packer set at							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	
11:50	SI			1795			1" T.M.
11:55	Start	100		1795			
12:00		100		1840			
12:05		100		1865			
12:10	:15	100	1.0	1880			
12:15		200		1940			
12:20		200		1960			
12:25	:30	200	2.0	1985			
12:30		300		2040			
12:35		300		2065			
12:40	:45	300	3.1	2095			
12:45		400		2160			
12:50		400		2195			
12:55	1:00	400	4.1	2230			
1:00		500		2295			
1:05		500		2340			
1:10	1:15	500	5.2	2380			
1:15		600		2450			
1:20		600		2505			
1:25	1:30	600	6.2	2540			
1:30		700		2630			
1:35		700		2675			
1:40	1:45	700	7.3	2715			
1:45		800		2790			
1:50		800		2830			
1:55	2:00	800	8.3	2875			
2:00		900		2960			
2:05		900		3005			
2:10	2:15	900	9.4	3040			
See Page #2							

Step Rate Test

Hobbs, New Mexico 88240

Company Mobil Producing Texas & New Mexico						Test Date 6-3-87		Unit	
Total Depth 8800						Plug Back TD 8694		Elevation	
Csg size 5 1/2 Wt d						Set at		Perfs: From 8579 To 8634	
Tbg size 2 3/8 Wt d						Set at		Perfs: From To	
Producing thru						Packer set at		Co. Rep David 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		
2:15		1000		3130					
2:20		1000		3170					
2:25	2:30	1000	10.4	3215					
2:30		1100		3280					
2:35		1100		3315					
2:40	2:45	1100	11.5	3340					
2:45		1200		3390					
2:50		1200		3430					
2:55	3:00	1200	12.6	3450					
3:00		1300		3500					
3:05		1300		3525					
3:10	3:15	1300	13.5	3540			End Test		
3:11	ISIP			3370					
3:12	5 minute fall-off			3320					
3:13				3290					
3:14				3270					
3:15				3250					

B & D WELL TESTERS, INC.

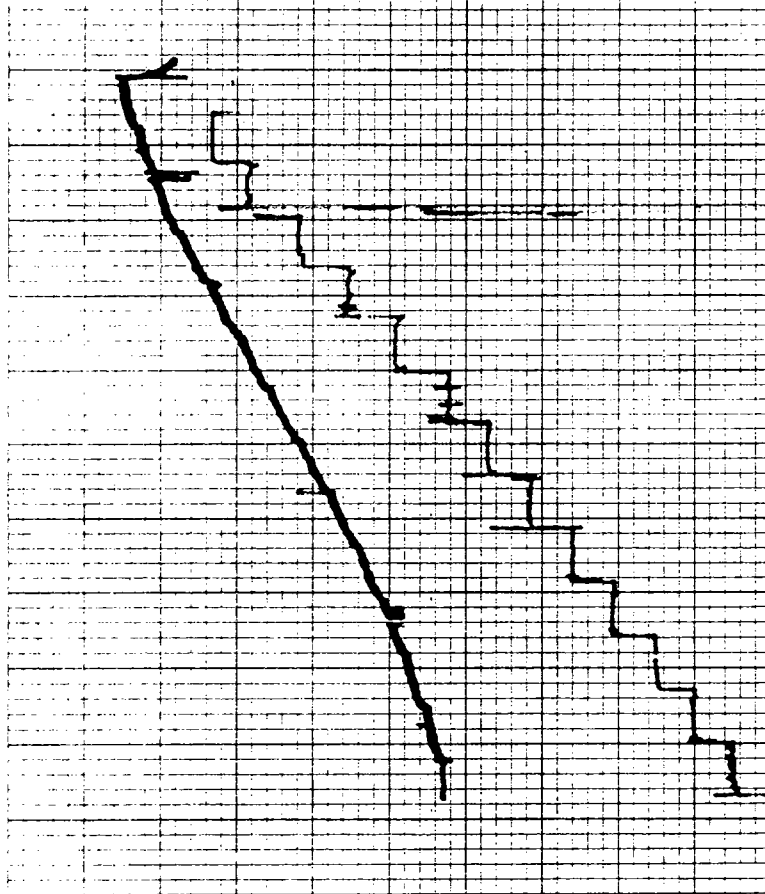
P.O. Box 5683
HOBBS, NEW MEXICO

505 397-3914

Mobil Producing Texas & New Mexico

NVAU #170

6-3-87

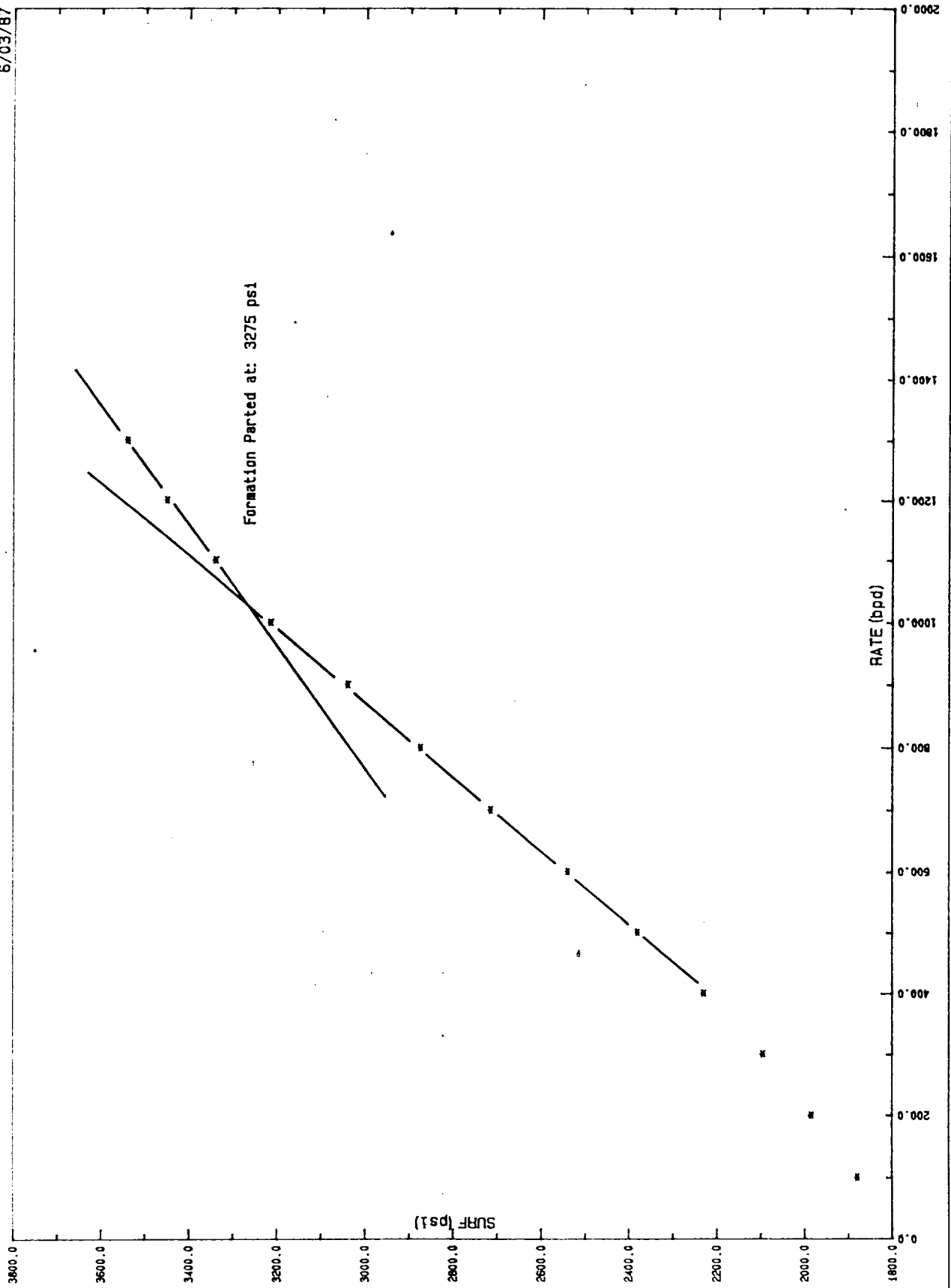


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B & D WELL TESTERS

Customer: Mobil Producing
Well: N.V.A.U. #170

6/03/87





STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE
June 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.	North Vacuum Abo Unit #170-D	14-17-34
Operator	Lease & Well No.	Unit S-T-R

and my recommendations are as follows:

OK JJ

Very truly yours

Jerry Sexton
Supervisor, District I

/bp



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

June 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.	North Vacuum Abo Unit 164-B	15-17-34
Operator	Lease & Well No.	Unit S-T-R

and my recommendations are as follows:

on LS

Very truly yours

Jerry Sexton
Supervisor, District I

/bp



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

June 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.	North Vacuum Abo Unit #146-B	14-17-34
Operator	Lease & Well No.	Unit S-T-R

and my recommendations are as follows:

OK LS

Very truly yours

Jerry Sexton
Supervisor, District I

/bp



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

June 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.	North Vacuum Abo Unit #142-J	14-17-34
Operator	Lease & Well No.	Unit S-T-R

and my recommendations are as follows:

OK JS

Very truly yours

Jerry Sexton
Supervisor, District I

/bp