



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

February 12, 1988

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 January 18, 1988, to increase the surface injection pressure on five wells located within the North Vacuum Abo Unit. This request is based on step rate tests conducted on these wells January 6, 1988. 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.

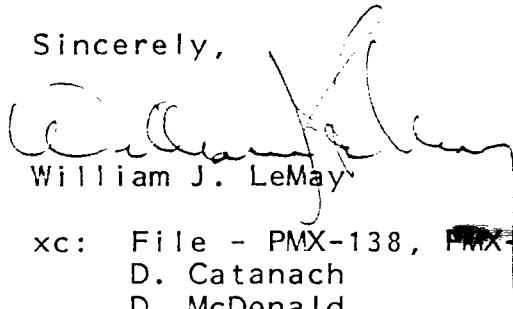
<u>WELL & LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
NVAU Well No. 112 Unit D, Section 25, Township 17 South, Range 34 East;	3960 PSIG
NVAU Well No. 116 Unit L, Section 24, Township 17 South, Range 34 East;	3790 PSIG
NVAU Well No. 137 Unit B, Section 26, Township 17 South, Range 34 East;	3600 PSIG
NVAU Well No. 139 Unit L, Section 14, Township 17 South, Range 34 East;	3625 PSIG

NVAU Well No. 146
Unit B, Section 14,
Township 17 South, Range 34 East.

3420 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-138, ~~PMX-140~~, WFX-557
D. Catanach
D. McDonald
OCD - Hobbs



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

February 23, 1988

Mobil Exploration and Production Company
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 February 10, 1988, 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 January 27 and 28, 1988. 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. 152 Unit D, Section 13, Township 17 South, Range 34 East, NMPM;	2450 PSIG
NVAU Well No. 163 Unit J, Section 15, Township 17 South, Range 34 East, NMPM;	3670 PSIG
NVAU Well No. 170 Unit-D, Section 14, Township 17 South, Range 34 East, NMPM;	3970 PSIG

All in 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,



for William J. LeMay
Director

xc: OCD - Hobbs
D. McDonald
D. Catanach
File: WFX - 557; ~~PMX~~ - 140



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

March 21, 1989

Mobil Exploration & Production U.S., Inc.
P.O. Box 633
Midland, TX 79702

Attention: M.E. Sweeney

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

Dear Mr. Sweeney:

Reference is made to your request dated February 9, 1989, 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 during January, 1989. 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.

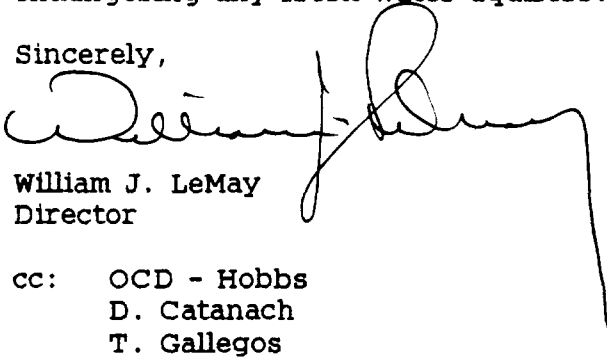
<u>WELL AND LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
NVAU Well No. 142 Unit J, Section 14, T-17 South, R-34 East, NMPM	3790 PSIG
NVAU Well No. 146 Unit B, Section 14, T-17 South, R-34 East, NMPM	3690 PSIG
NVAU Well No. 152 Unit B, Section 13, T-17 South, R-34 East, NMPM	3420 PSIG
NVAU Well No. 164 Unit B, Section 15, T-17 South, Range 34 East, NMPM	4030 PSIG

All in Lea County, New Mexico.

Injection Pressure Increase
Mobil Exploration and Producing, U.S., Inc.
March 21, 1989
Page 2

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 flourish extending to the right.

William J. LeMay
Director

cc: OCD - Hobbs
D. Catanach
T. Gallegos
File: WFX-557, PMX-140



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

August 1, 1989

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

Mobil Exploration & 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 Mr. Sweeney:

Reference is made to your request dated June 27, 1989, to increase the surface injection pressure on four wells within the North Vacuum Abo Unit. This request is based on step rate tests conducted on these wells May 31 - June 2, 1989. 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.

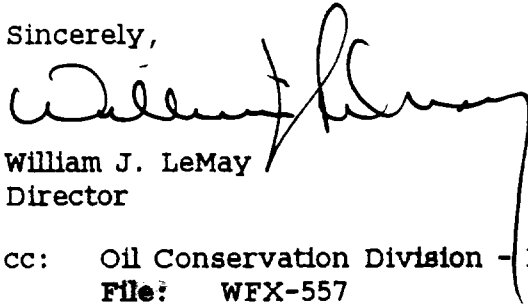
<u>WELL AND LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
NVAU Well No. 129 Unit B, Section 23, T-17 South, R-34 East, NMPM;	4340 PSIG
NVAU Well No. 135 Unit L, Section 11, T-17 South, R-34 East, NMPM;	4250 PSIG
NVAU Well No. 155 Unit D, Section 23, T-17 South, R-34 East, NMPM;	4370 PSIG
NVAU Well No. 170 Unit D, Section 14, T-17 South, R-34 East, NMPM;	4310 PSIG

All in Lea County, New Mexico

Injection Pressure Increase
Mobil Exploration and Producing U.S. Inc.
August 1, 1989
Page 2

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
Director

cc: Oil Conservation Division - Hobbs
File: WFX-557
PMX-140
T. Gallegos
D. Catanach



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

June 7, 1989

Mobil Exploration & 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 Mr. Sweeney:

Reference is made to your request dated May 12, 1989, 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 during April and May, 1989. 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.

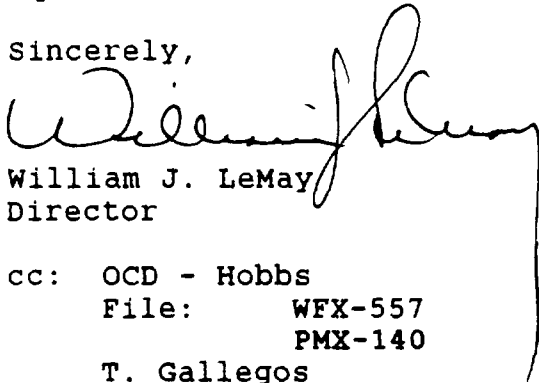
<u>WELL AND LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
North Vacuum Abo Unit Well No. 121 Unit L, Section 13, T-17 South, R-34 East, NMPM;	3450 PSIG
North Vacuum Abo Unit Well No. 158 Unit J, Section 12, T-17 South, R-34 East, NMPM;	3910 PSIG
North Vacuum Abo Unit Well No. 203 Unit B, Section 22, T-17 South, R-34 East, NMPM; and	3920 PSIG
North Vacuum Abo Unit Well No. 204 Unit D, Section 24, T-17 South, R-34 East, NMPM,	4275 PSIG

All in Lea County, New Mexico.

Injection Pressure Increase
Mobil Exploration and Producing, U.S., Inc.
June 7, 1989
Page 2

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', is written over the typed name and extends downwards with a long vertical line.

William J. LeMay
Director

cc: OCD - Hobbs
File: WFX-557
PMX-140
T. Gallegos
D. Catanach



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

May 3, 1989

Mobil Exploration & 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 Mr. Sweeney:

Reference is made to your request dated April 17, 1989, to increase the surface injection pressure on four wells within the North Vacuum Abo Unit Pressure Maintenance Project. This request is based on step rate tests conducted on these wells during March, 1989. 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.

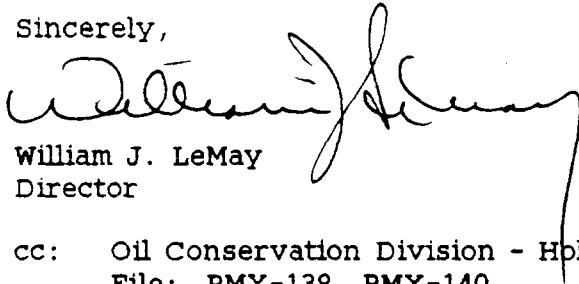
<u>WELL AND LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
NVAU Well No. 162 Unit J, Section 11, T-17 South, Range 34 East, NMPM;	4250 PSIG
NVAU Well No. 201 Unit J, Section 10, T-17 South, Range 34 East, NMPM;	3450 PSIG
NVAU Well No. 205 Unit B, Section 24, T-17 South, Range 34 East, NMPM;	4320 PSIG
NVAU Well No. 229 Unit L, Section 10, T-17 South, Range 34 East, NMPM,	4140 PSIG

All in Lea County, New Mexico.

Injection Pressure Increase
Mobil Exploration & Producing U.S., Inc.
May 3, 1989
Page 2

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 cursive script, appearing to read "William J. LeMay". The signature is written in dark ink and is positioned above the printed name and title.

William J. LeMay
Director

cc: Oil Conservation Division - Hobbs
File: PMX-138, PMX-140
T. Gallegos
D. Catanach



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

April 4, 1988

Mobil Exploration and Production, Inc.
P.O. Box 633
Midland, TX 79702

Attention: M. E. Sweeney

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

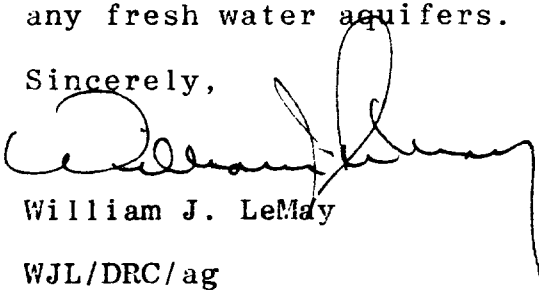
Dear Sir:

Reference is made to your request dated March 7, 1988, to increase the surface injection pressure on seven wells in the North Vacuum Abo Unit. This request is based on a step rate test conducted on these wells on February 16-19, 1988. 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 wells described on Exhibit "A" attached to this order.

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

WJL/DRC/ag

xc: D. Catanach
D. McDonald
PMX-138
PMX-140
WFX-557

EXHIBIT "A"

<u>WELL LOCATION</u>	<u>MAXIMUM SURFACE INJECTION PRESSURE</u>
NVAU Well No. 142 Unit J, Section 14, T-17S, R-34E	3520 PSIG
NVAU Well No. 149 Unit J, Section 27, T-17S, R-34E	3150 PSIG
NVAU Well No. 164 Unit B, Section 15, T-17S, R-34E	3612 PSIG
NVAU Well No. 201 Unit J, Section 10, T-17S, R-34E	2779 PSIG
NVAU Well No. 203 Unit B, Section 22, T-17S, R-34E	3550 PSIG
NVAU Well No. 205 Unit B, Seciton 24, T-17S, R-34E	4174 PSIG
NVAU Well No. 210 Unit L, Section 23, T-17S, R-34E	3600 PSIG

ALL WELLS IN LEA COUNTY, NEW MEXICO

Mobil Exploration & Producing U.S. Inc.

June 1, 1988

P.O. BOX 633
MIDLAND, TEXAS 79702

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 ABO UNIT
WELL NO'S. 162, 200, 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. A step-rate test for these wells has been completed which shows 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. 162 UNIT J, SEC. 11 T-17-S, R-34-E Order No. PMX-140	8552-8634'	3450 psig	4010 psig
WELL No. 200 UNIT B, SEC. 2 T-17-S, R-34-E Order No. PMX-140	8664-8702'	3020 psig	3775 psig

State of New Mexico
North Vacuum Abo Unit
Well No's. 162, 200, 229
Lea County, New Mexico

	<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 Order No. PMX-140	8745-8810'	2950 psig	3755 psig

Enclosed are copies of the Step-rate test.

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/arr

Attachments

cc: District Director OCD - Hobbs

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 162
 LOCATION: J11-T17S-R34E
 TEST DATE: 4-26-88
 PERFORATIONS: 8561 - 8613'
 TOTAL DEPTH: 8750'
 PLUG BACK TD: 8693'
 PACKER SET AT: 8466'

TIME	SURFACE PRESSURE	RATE (BWPD)
08:20	3160	0
08:21	3368	50
08:22	3368	50
08:23	3372	50
08:24	3372	50
08:25	3372	50
08:26	3372	50
08:27	3372	50
08:28	3372	50
08:29	3372	50
08:30	3372	50
08:31	3371	50
08:32	3371	50
08:33	3371	50
08:34	3371	50
08:35	3371	50
08:36	3371	50
08:37	3370	50
08:38	3370	50
08:39	3374	50
08:40	3377	50
08:41	3378	100
08:42	3380	100
08:43	3381	100
08:44	3381	100
08:45	3383	100
08:46	3384	100
08:47	3386	100
08:48	3387	100
08:49	3389	100
08:50	3390	100
08:51	3391	100
08:52	3392	100
08:53	3399	100
08:54	3401	100
08:55	3404	100
08:56	3407	150
08:57	3410	150
08:58	3413	150
08:59	3415	150
09:00	3417	150
09:01	3419	150
09:02	3421	150

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
LEASE: NORTH VACUUM ABO UNIT
WELL NO. 162
LOCATION: J11-T17S-R34E
TEST DATE: 4-26-88
PERFORATIONS: 8561 - 8613'
TOTAL DEPTH: 8750'
PLUG BACK TD: 8693'
PACKER SET AT: 8466'

TIME	SURFACE PRESSURE	RATE (BWPD)
09:03	3423	150
09:04	3425	150
09:05	3427	150
09:06	3429	150
09:07	3431	150
09:08	3439	150
09:09	3444	150
09:10	3446	150
09:11	3449	200
09:12	3453	200
09:13	3456	200
09:14	3459	200
09:15	3462	200
09:16	3465	200
09:17	3468	200
09:18	3471	200
09:19	3473	200
09:20	3475	200
09:21	3478	200
09:22	3481	200
09:23	3490	200
09:24	3495	200
09:25	3499	200
09:26	3503	250
09:27	3506	250
09:28	3509	250
09:29	3512	250
09:30	3516	250
09:31	3519	250
09:32	3522	250
09:33	3525	250
09:34	3528	250
09:35	3534	250
09:36	3536	250
09:37	3539	250
09:38	3550	250
09:39	3555	250
09:40	3560	250
09:41	3565	300
09:42	3569	300
09:43	3573	300
09:44	3577	300
09:45	3581	300

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
LEASE: NORTH VACUUM ABO UNIT
WELL NO. 162
LOCATION: J11-T175-R34E
TEST DATE: 4-26-88
PERFORATIONS: 8561 - 8613'
TOTAL DEPTH: 8750'
PLUG BACK TD: 8693'
PACKER SET AT: 8466'

TIME	SURFACE PRESSURE	RATE (BWPD)
09:46	3584	300
09:47	3588	300
09:48	3591	300
09:49	3594	300
09:50	3598	300
09:51	3601	300
09:52	3604	300
09:53	3615	300
09:54	3621	300
09:55	3625	300
09:56	3629	350
09:57	3633	350
09:58	3637	350
09:59	3641	350
10:00	3645	350
10:01	3648	350
10:02	3652	350
10:03	3656	350
10:04	3659	350
10:05	3662	350
10:06	3672	350
10:07	3681	350
10:08	3685	350
10:09	3690	350
10:10	3695	350
10:11	3698	400
10:12	3703	400
10:13	3707	400
10:14	3711	400
10:15	3715	400
10:16	3718	400
10:17	3723	400
10:18	3726	400
10:19	3728	400
10:20	3734	400
10:21	3736	400
10:22	3749	400
10:23	3757	400
10:24	3762	400
10:25	3768	400
10:26	3772	450
10:27	3774	450
10:28	3779	450

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
LEASE: NORTH VACUUM ABO UNIT
WELL NO. 162
LOCATION: J11-T17S-R34E
TEST DATE: 4-26-88
PERFORATIONS: 8561 - 8613
TOTAL DEPTH: 8750'
PLUG BACK TD: 8693'
PACKER SET AT: 8466'

TIME	SURFACE PRESSURE	RATE (BWPD)
10:29	3782	450
10:30	3787	450
10:31	3791	450
10:32	3795	450
10:33	3798	450
10:34	3802	450
10:35	3806	450
10:36	3809	450
10:37	3825	450
10:38	3831	450
10:39	3834	450
10:40	3839	450
10:41	3845	500
10:42	3849	500
10:43	3853	500
10:44	3856	500
10:45	3860	500
10:46	3864	500
10:47	3867	500
10:48	3871	500
10:49	3875	500
10:50	3877	500
10:51	3884	500
10:52	3896	500
10:53	3901	500
10:54	3905	500
10:55	3909	500
10:56	3914	550
10:57	3920	550
10:58	3923	550
10:59	3927	550
11:00	3931	550
11:01	3934	550
11:02	3937	550
11:03	3941	550
11:04	3946	550
11:05	3950	550
11:06	3953	550
11:07	3968	550
11:08	3971	550
11:09	3976	550
11:10	3981	550
11:11	3985	600

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 162
 LOCATION: J11-T17S-R34E
 TEST DATE: 4-26-88
 PERFORATIONS: 8561 - 8613'
 TOTAL DEPTH: 8750'
 PLUG BACK TD: 8693'
 PACKER SET AT: 8466'

TIME	SURFACE PRESSURE	RATE (BWPD)
11:12	3998	600
11:13	3992	600
11:14	3995	600
11:15	3998	600
11:16	4007	600
11:17	4010	600
11:18	4013	600
11:19	4017	600
11:20	4019	600
11:21	4022	600
11:22	4037	600
11:23	4042	600
11:24	4045	600
11:25	4049	600
11:26	4052	650
11:27	4055	650
11:28	4057	650
11:29	4061	650
11:30	4064	650
11:31	4070	650
11:32	4073	650
11:33	4076	650
11:34	4079	650
11:35	4082	650
11:36	4085	650
11:37	4099	650
11:38	4103	650
11:39	4106	650
11:40	4109	650
11:41	4112	700
11:42	4115	700
11:43	4121	700
11:44	4124	700
11:45	4127	700
11:46	4129	700
11:47	4132	700
11:48	4135	700
11:49	4137	700
11:50	4139	700
11:51	4141	700
11:52	4093	0
11:53	4055	0
11:54	4050	0

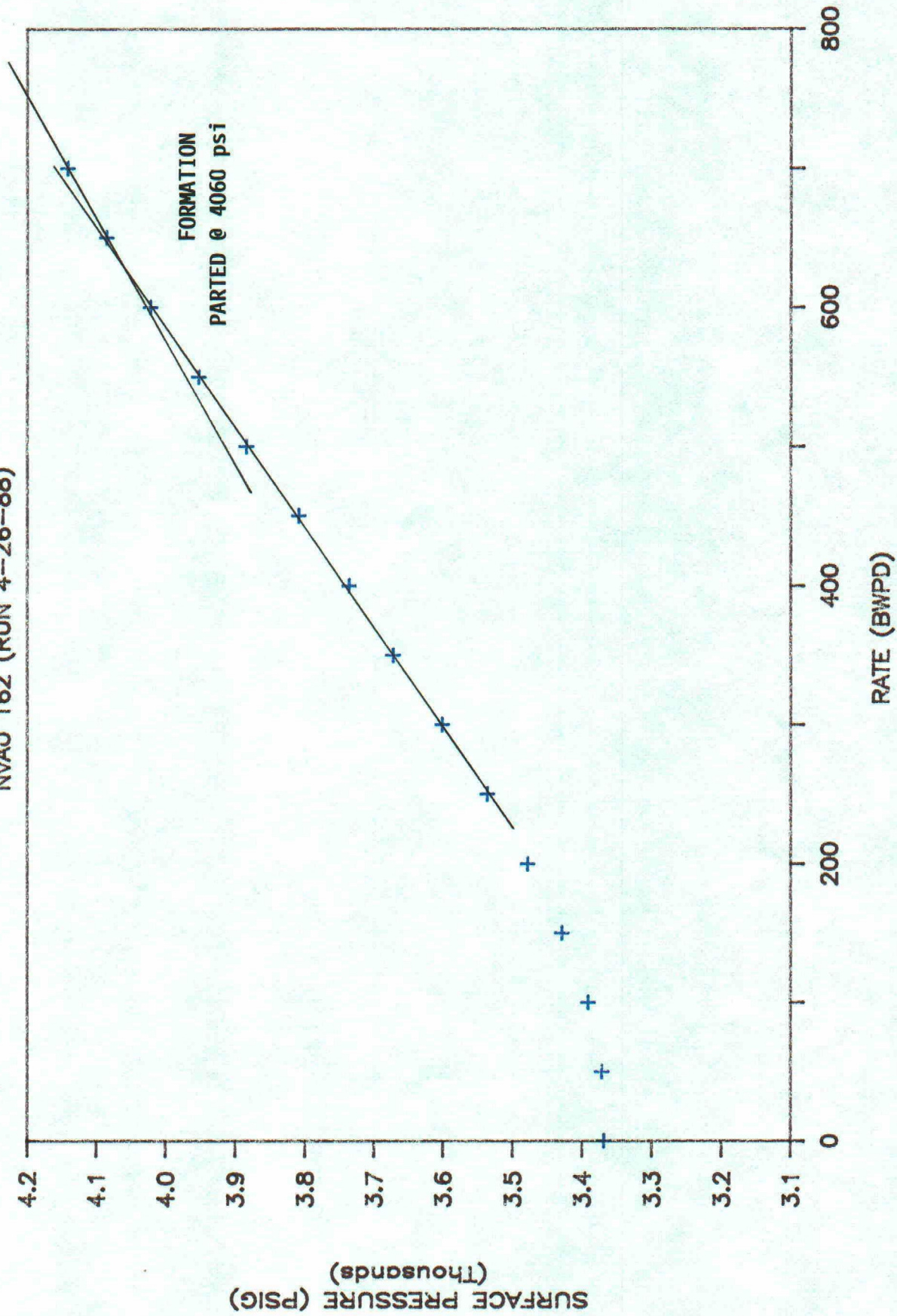
STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
LEASE: NORTH VACUUM ABO UNIT
WELL NO. 162
LOCATION: J11-T17S-R34E
TEST DATE: 4-26-88
PERFORATIONS: 8561 - 8613'
TOTAL DEPTH: 8750'
PLUG BACK TD: 8693'
PACKER SET AT: 8466'

TIME	SURFACE PRESSURE	RATE (BWPD)
11:55	4045	0
11:56	4039	0
11:57	4033	0
11:58	4028	0

STEP RATE TEST

NVAU 162 (RUN 4--26--88)



STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 200
 LOCATION: L2-T17S-R34E
 TEST DATE: 4-26-88
 PERFORATIONS: 8664 - 8702'
 TOTAL DEPTH: 10,990'
 PLUG BACK TD: 10,890'
 PACKER SET AT: 8600'

TIME	SURFACE PRESSURE	RATE (BWPD)
12:15	2815	0
12:16	2817	100
12:17	2821	100
12:18	2824	100
12:19	2826	100
12:20	2827	100
12:21	2828	100
12:22	2829	100
12:23	2830	100
12:24	2830	100
12:25	2831	100
12:26	2831	100
12:27	2832	100
12:28	2832	100
12:29	2832	100
12:30	2833	100
12:31	2833	100
12:32	2844	100
12:33	2852	100
12:34	2858	100
12:35	2863	100
12:36	2868	200
12:37	2872	200
12:38	2876	200
12:39	2880	200
12:40	2883	200
12:41	2887	200
12:42	2890	200
12:43	2893	200
12:44	2896	200
12:45	2898	200
12:46	2902	200
12:47	2922	200
12:48	2937	200
12:49	2948	200
12:50	2958	200
12:51	2967	300
12:52	2975	300
12:53	2983	300
12:54	2990	300
12:55	2997	300
12:56	3004	300

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 200
 LOCATION: L2-T17S-R34E
 TEST DATE: 4-26-88
 PERFORATIONS: 8664 - 8702'
 TOTAL DEPTH: 10,990'
 PLUG BACK TD: 10,890'
 PACKER SET AT: 8600'

TIME	SURFACE PRESSURE	RATE (BWPD)
12:58	3019	300
12:59	3026	300
01:00	3033	300
01:01	3040	300
01:02	3071	300
01:03	3089	300
01:04	3106	300
01:05	3116	300
01:06	3128	400
01:07	3139	400
01:08	3150	400
01:09	3160	400
01:10	3170	400
01:11	3179	400
01:12	3192	400
01:13	3202	400
01:14	3212	400
01:15	3221	400
01:16	3230	400
01:17	3260	400
01:18	3280	400
01:19	3294	400
01:20	3307	400
01:21	3320	500
01:22	3332	500
01:23	3342	500
01:24	3353	500
01:25	3362	500
01:26	3372	500
01:27	3381	500
01:28	3390	500
01:29	3398	500
01:30	3415	500
01:31	3425	500
01:32	3461	500
01:33	3479	500
01:34	3493	500
01:35	3508	500
01:36	3520	600
01:37	3534	600
01:38	3543	600
01:39	3555	600
01:40	3549	600

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 200
 LOCATION: L2-T17S-R34E
 TEST DATE: 4-26-88
 PERFORATIONS: 8664 - 8702'
 TOTAL DEPTH: 10,990'
 PLUG BACK TD: 10,890'
 PACKER SET AT: 8600'

TIME	SURFACE PRESSURE	RATE (BWPD)
01:41	3577	600
01:42	3583	600
01:43	3596	600
01:44	3606	600
01:45	3620	600
01:46	3631	600
01:47	3651	600
01:48	3660	600
01:49	3670	600
01:50	3679	600
01:51	3687	650
01:52	3683	650
01:53	3688	650
01:54	3692	650
01:55	3697	650
01:56	3702	650
01:57	3707	650
01:58	3710	650
01:59	3715	650
02:00	3718	650
02:01	3721	650
02:02	3743	650
02:03	3749	650
02:04	3754	650
02:05	3759	650
02:06	3763	700
02:07	3766	700
02:08	3770	700
02:09	3773	700
02:10	3776	700
02:11	3778	700
02:12	3780	700
02:13	3784	700
02:14	3785	700
02:15	3789	700
02:16	3792	700
02:17	3814	700
02:18	3819	700
02:19	3824	700
02:20	3828	700
02:21	3833	750
02:22	3835	750
02:23	3840	750

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 200
 LOCATION: L2-T17S-R34E
 TEST DATE: 4-26-88
 PERFORATIONS: 8664 - 8702'
 TOTAL DEPTH: 10,990'
 PLUG BACK TD: 10,890'
 PACKER SET AT: 8600'

TIME	SURFACE PRESSURE	RATE (BWPD)
02:24	3847	750
02:25	3850	750
02:26	3853	750
02:27	3856	750
02:28	3859	750
02:29	3862	750
02:30	3864	750
02:31	3865	750
02:32	3881	750
02:33	3885	750
02:34	3887	750
02:35	3890	750
02:36	3892	800
02:37	3893	800
02:38	3897	800
02:39	3898	800
02:40	3900	800
02:41	3901	800
02:42	3905	800
02:43	3907	800
02:44	3910	800
02:45	3911	800
02:46	3912	800
02:47	3927	800
02:48	3930	800
02:49	3932	800
02:50	3934	800
02:51	3936	850
02:52	3938	850
02:53	3941	850
02:54	3943	850
02:55	3945	850
02:56	3947	850
02:57	3948	850
02:58	3950	850
02:59	3952	850
03:00	3953	850
03:01	3952	850
03:02	3957	850
03:03	3959	850
03:04	3961	850
03:05	3963	850
03:06	3964	900

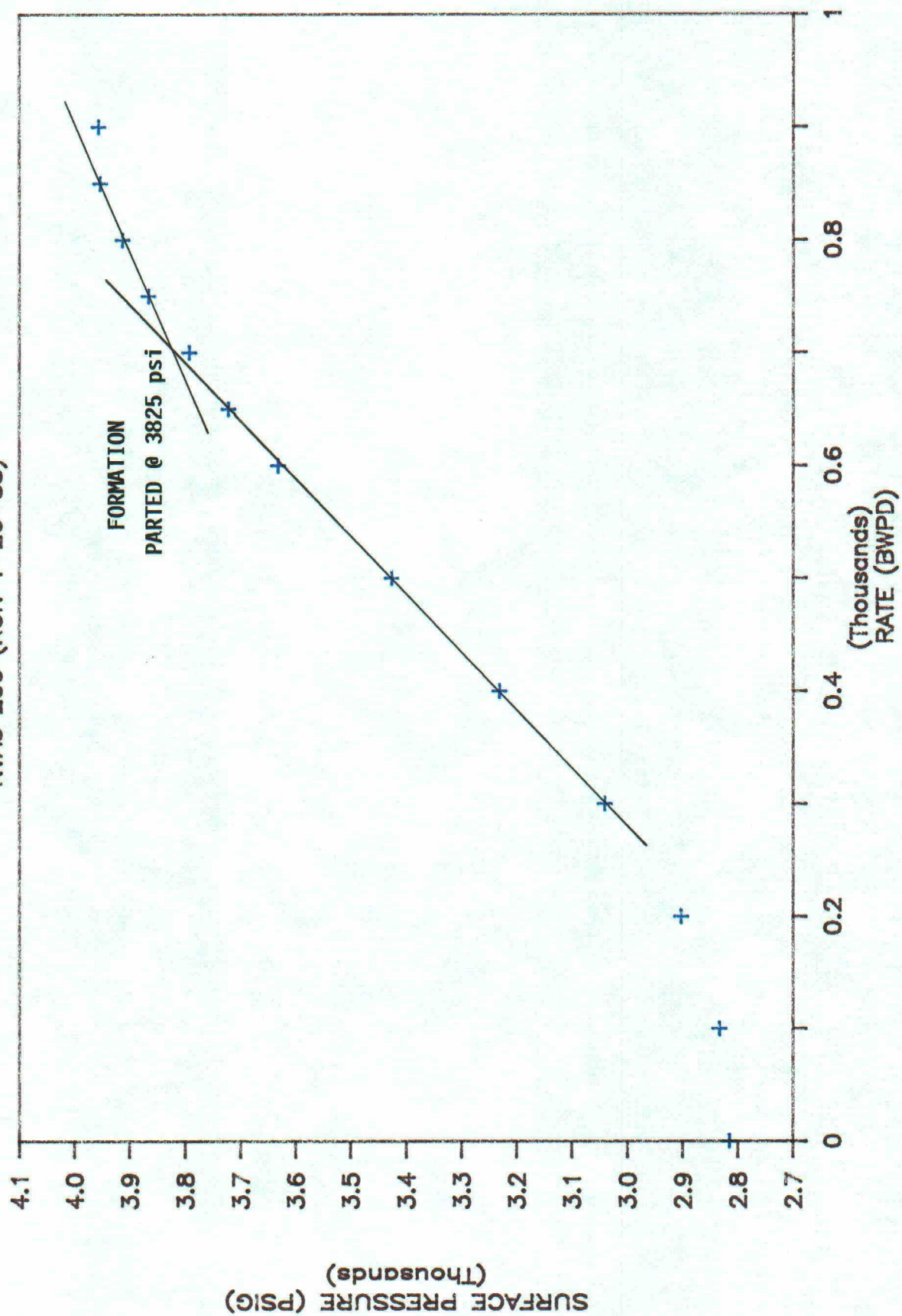
STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 200
 LOCATION: L2-T17S-R34E
 TEST DATE: 4-26-88
 PERFORATIONS: 8664 - 8702'
 TOTAL DEPTH: 10,990'
 PLUG BACK TD: 10,890'
 PACKER SET AT: 8600'

TIME	SURFACE PRESSURE	RATE (BWPD)
03:07	3966	900
03:08	3959	900
03:09	3956	900
03:10	3954	900
03:11	3954	900
03:12	3954	900
03:13	3954	900
03:14	3954	900
03:15	3954	900
03:16	3955	900
03:17	3836	0
03:23	3804	0
03:24	3785	0
03:25	3768	0
03:26	3751	0
03:27	3736	0

STEP RATE TEST

NVAU 200 (RUN 4--26--88)



COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
LEASE: NORTH VACUUM ABO UNIT
WELL NO. 229
LOCATION: L10-T17S-R34E LEA COUNTY, NEW MEXICO
TEST DATE: 4-27-88
PERFORATIONS: 8745 - 8810'
TOTAL DEPTH: 8978'
PLUG BACK TD: 8945'
PACKER SET AT: 8670'

TIME	SURFACE PRESSURE	RATE (BWPD)
11:25	2676	0
11:26	2673	100
11:27	2668	100
11:28	2665	100
11:29	2671	100
11:30	2677	100
11:31	2685	100
11:32	2690	100
11:33	2696	100
11:34	2700	100
11:35	2704	100
11:36	2708	100
11:37	2711	100
11:38	2715	100
11:39	2718	100
11:40	2721	100
11:41	2724	100
11:42	2727	100
11:43	2730	100
11:44	2732	100
11:45	2745	100
11:46	2756	100
11:47	2767	100
11:48	2776	200
11:49	2786	200
11:50	2794	200
11:51	2801	200
11:52	2809	200
11:53	2817	200
11:54	2823	200
11:55	2830	200
11:56	2836	200
11:57	2845	200
11:58	2851	200
11:59	2865	200
12:00	2881	200
12:01	2898	200
12:02	2911	200
12:03	2925	300
12:04	2937	300
12:05	2948	300
12:06	2959	300
12:07	2969	300

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
LEASE: NORTH VACUUM ABO UNIT
WELL NO. 229
LOCATION: L10-T17S-R34E LEA COUNTY, NEW MEXICO
TEST DATE: 4-27-88
PERFORATIONS: 8745 - 8810'
TOTAL DEPTH: 8978'
PLUG BACK TD: 8945'
PACKER SET AT: 8670'

TIME	SURFACE PRESSURE	RATE (BWPD)
12:08	2980	300
12:09	2988	300
12:10	2998	300
12:11	3007	300
12:12	3015	300
12:13	3023	300
12:14	3039	300
12:15	3055	300
12:16	3071	300
12:17	3087	300
12:18	3103	400
12:19	3112	400
12:20	3125	400
12:21	3138	400
12:22	3151	400
12:23	3163	400
12:24	3173	400
12:25	3184	400
12:26	3193	400
12:27	3204	400
12:28	3213	400
12:29	3222	400
12:30	3245	400
12:31	3261	400
12:32	3276	400
12:33	3290	500
12:34	3303	500
12:35	3316	500
12:36	3328	500
12:37	3339	500
12:38	3350	500
12:39	3360	500
12:40	3371	500
12:41	3380	500
12:42	3390	500
12:43	3400	500
12:44	3410	500
12:45	3431	500
12:51	3445	500
12:52	3456	500
12:53	3468	600
12:54	3479	600
12:55	3492	600

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
LEASE: NORTH VACUUM ABU UNIT
WELL NO. 229
LOCATION: L10-T17S-R34E LEA COUNTY, NEW MEXICO
TEST DATE: 4-27-88
PERFORATIONS: 8745 - 8810'
TOTAL DEPTH: 8978'
PLUG BACK TD: 8945'
PACKER SET AT: 8670'

TIME	SURFACE PRESSURE	RATE (BWPD)
12:56	3503	600
12:57	3514	600
12:58	3525	600
12:59	3535	600
01:00	3544	600
01:01	3552	600
01:02	3561	600
01:03	3570	600
01:04	3588	600
01:05	3601	600
01:06	3615	600
01:07	3628	600
01:08	3639	700
01:09	3650	700
01:10	3661	700
01:11	3668	700
01:12	3679	700
01:13	3688	700
01:14	3696	700
01:15	3704	700
01:16	3712	700
01:17	3723	700
01:18	3731	700
01:19	3745	700
01:20	3759	700
01:21	3770	700
01:22	3780	700
01:23	3789	800
01:24	3798	800
01:25	3809	800
01:26	3817	800
01:27	3823	800
01:28	3829	800
01:29	3835	800
01:30	3842	800
01:31	3848	800
01:32	3854	800
01:33	3862	800
01:34	3874	800
01:35	3879	800
01:36	3885	800
01:37	3892	800
01:38	3897	850

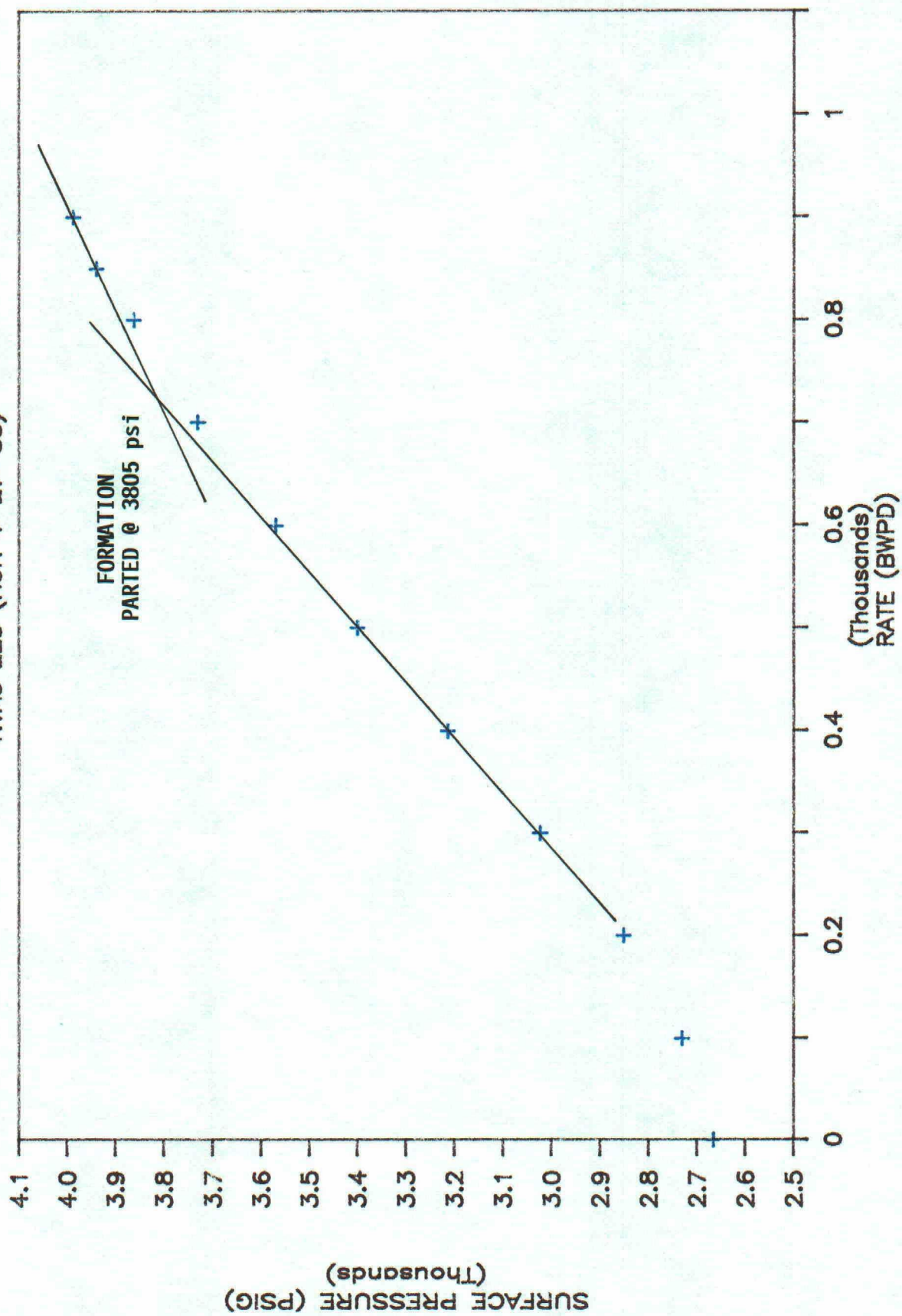
STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 229
 LOCATION: L10-T17S-R34E LEA COUNTY, NEW MEXICO
 TEST DATE: 4-27-88
 PERFORATIONS: 8745 - 8810'
 TOTAL DEPTH: 8978'
 PLUG BACK TD: 8945'
 PACKER SET AT: 8670'

TIME	SURFACE PRESSURE	RATE (BWPD)
01:39	3902	850
01:40	3905	850
01:41	3910	850
01:42	3916	850
01:43	3920	850
01:44	3924	850
01:45	3928	850
01:46	3933	850
01:47	3936	850
01:48	3939	850
01:49	3947	850
01:50	3951	850
01:51	3955	850
01:52	3957	850
01:53	3961	900
01:54	3964	900
01:55	3966	900
01:56	3969	900
01:57	3972	900
01:58	3975	900
01:59	3978	900
02:00	3980	900
02:01	3983	900
02:02	3985	900
02:03	3987	900
02:04	3975	0
02:05	3932	0
02:06	3916	0
02:07	3901	0
02:08	3887	0
02:09	3874	0
02:10	3860	0
02:11	3848	0

STEP RATE TEST

NVAU 229 (RUN 4--27--88)





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

June 6, 1988

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:

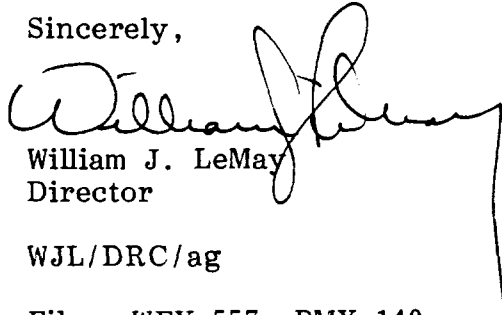
Reference is made to your request dated May 18, 1988, to increase the surface injection pressure on two wells within the North Vacuum Abo Unit Waterflood Project. This request is based on a step rate test conducted on these wells during March and April, 1988. The results of the tests have been reviewed 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. 143 Unit B, Section 27, T-17 South, R-34 East,	3619 PSIG
N. Vacuum Abo Unit No. 158 Unit J. Section 12, T-17 South, R-34 East,	3530 PSIG
Both in 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". The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

William J. LeMay
Director

WJL/DRC/ag

File: WFX-557, PMX-140
D. McDonald
D. Catanach
Oil Conservation Division - Hobbs



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

June 22, 1988

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 Mr. Sweeney:

Reference is made to your request dated June 1, 1988, to increase the surface injection pressure on 4 wells within the North Vacuum Abo Unit Waterflood Project. This request is based on step rate tests conducted on these wells on May 25 and 26, 1988. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

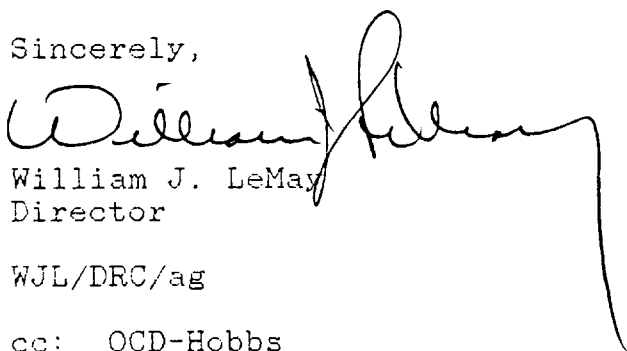
You are therefore authorized to increase the surface injection pressure on the following wells.

<u>WELL AND LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
NVAU Well No. 88 Unit J, Section 26, T-17 South, R-34 East	3785 PSIG
NVAU Well No. 123 Unit B, Section 26, T-17 South, R-34 East	4110 PSIG
NVAU Well No. 138 Unit I, Section 26, T-17 South, R-34 East	4020 PSIG
NVAU Well No. 214 Unit D, Section 11, T-17 South, R-34 East	2810 PSIG

All in 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 fresh water aquifers.

Sincerely,

A handwritten signature in black ink, appearing to read "William J. LeMay". The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

William J. LeMay
Director

WJL/DRC/ag

cc: OCD-Hobbs
File: PMX-138, 140; WFX-557
D. Catanach
D. McDonald

Mobil Exploration & Producing U.S. Inc.

September 21, 1988

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: Mr. W. J. LeMay

INJECTION PRESSURE INCREASE REQUEST
NORTH VACUUM ABO FIELD
NORTH VACUUM ABO UNIT
WELL NO'S. 121 135, and 155
LEA COUNTY, NEW MEXICO

Gentlemen:

Under the provisions of Order No. WFX-557 dated February 11, 1986; and 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. A step-rate test for these wells has been completed which shows 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. 121 UNIT L, SEC. 13 T-17-S, R-34-E Order No. WFX-557	8485-8530'	1697 psig	3190 psig
WELL No. 135 UNIT L, SEC. 11 T-17-S, R-34-E Order No. PMX-140	8610-8649'	3170 psig	3925 psig

State of New Mexico
North Vacuum Abo Unit
Well No's. 121, 135, 155

-2-

September 21, 1988

WELL NO. 155			
UNIT D, SEC. 23	8592-8655'	4050 psig	4230 psig
T-17-S, R-34-E			
Order No. WFX-557			

Enclosed are copies of the Step-rate test.

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/arr

Attachments

cc: District Director OCD - Hobbs

State of New Mexico
North Vacuum Abo Unit
Well No's. 121, 135, 155

-2-

September 21, 1988

WELL NO. 155
UNIT D, SEC. 23 8592-8655' 4050 psig 4230 psig
T-17-S, R-34-E
Order No. WFX-557

Enclosed are copies of the Step-rate test.

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/arr

Attachments

cc: District Director OCD - Hobbs

1 CENTRAL FILES
1 REGULATORY FILES
1 PRORATION ACCT. - HOUSTON
1 RESERVOIR ENGR. MGR.
1 DIST. OP. MGR. *Alcott*
1 AREA PROD. SUPV. *Zeale*

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 121
 LOCATION: L13-T17S-R34E
 TEST DATE: 6-07-88
 PERFORATIONS: 8485'-8530'
 TOTAL DEPTH: 10550'
 PLUG BACK TD: 9400'
 PACKER SET AT: 8400'

TIME	SURFACE PRESSURE	RATE (BWPD)
6:45	1414	0
6:46	1416	100
6:47	1416	100
6:48	1416	100
6:49	1416	100
6:50	1415	100
6:51	1420	100
6:52	1429	100
6:53	1433	100
6:54	1436	100
6:55	1439	100
6:56	1442	100
6:57	1444	100
6:58	1447	100
6:59	1449	100
7:00	1451	100
7:01	1453	100
7:02	1456	100
7:03	1458	100
7:04	1459	100
7:05	1469	100
7:06	1476	100
7:07	1482	100
7:08	1487	100
7:09	1491	200
7:10	1496	200
7:11	1498	200
7:12	1502	200
7:13	1505	200
7:14	1509	200
7:15	1512	200
7:16	1515	200
7:17	1518	200
7:18	1521	200
7:19	1524	300
7:20	1527	200
7:21	1542	200
7:22	1550	200
7:23	1556	300
7:24	1561	300
7:25	1567	300
7:26	1572	300
7:27	1576	300

STEP RATE TEST

 COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 121
 LOCATION: L13-T17S-R34E
 TEST DATE: 6-07-88
 PERFORATIONS: 8485'-8530'
 TOTAL DEPTH: 10550'
 PLUG BACK TD: 9400'
 PACKER SET AT: 8400'

TIME	SURFACE PRESSURE	RATE (BWPD)
7:28	1581	300
7:29	1585	300
7:30	1590	300
7:31	1594	300
7:32	1598	300
7:33	1602	300
7:34	1605	300
7:35	1609	300
7:36	1627	300
7:37	1636	300
7:38	1644	300
7:39	1651	400
7:40	1657	400
7:41	1663	400
7:42	1669	400
7:43	1674	400
7:44	1679	400
7:45	1684	400
7:46	1689	400
7:47	1694	400
7:48	1699	400
7:49	1703	400
7:50	1720	400
7:51	1730	400
7:52	1739	400
7:53	1746	400
7:54	1752	500
7:55	1759	500
7:56	1765	500
7:57	1772	500
7:58	1778	500
7:59	1784	500
8:00	1789	500
8:01	1795	500
8:02	1800	500
8:03	1805	500
8:04	1810	500
8:05	1815	500
8:06	1837	500
8:07	1846	500
8:08	1855	500
8:09	1862	600
8:10	1870	600

STEP RATE TEST

 COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 121
 LOCATION: L13-T17S-R34E
 TEST DATE: 6-07-88
 PERFORATIONS: 8485'-8530'
 TOTAL DEPTH: 10550'
 PLUG BACK TD: 9400'
 PACKER SET AT: 8400'

TIME	SURFACE PRESSURE	RATE (BWPD)
8:11	1877	600
8:12	1884	600
8:13	1890	600
8:14	1897	600
8:15	1903	600
8:16	1909	600
8:17	1915	600
8:18	1921	600
8:19	1927	600
8:20	1940	600
8:21	1949	600
8:22	1956	600
8:23	1963	600
8:24	1970	650
8:25	1977	650
8:26	1983	650
8:27	1986	650
8:28	1996	650
8:29	2003	650
8:30	2009	650
8:31	2015	650
8:32	2021	650
8:33	2027	650
8:34	2033	650
8:35	2045	650
8:36	2054	650
8:37	2061	650
8:38	2067	650
8:39	2069	650
8:40	2069	700
8:41	2070	700
8:42	2071	700
8:43	2073	700
8:44	2076	700
8:45	2079	700
8:46	2083	700
8:47	2086	700
8:48	2090	700
8:49	2095	700
8:50	2108	700
8:51	2116	700
8:52	2123	700
8:53	2128	700

STEP RATE TEST

 COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 121
 LOCATION: L13-T17S-R34E
 TEST DATE: 6-07-88
 PERFORATIONS: 8485'-8530'
 TOTAL DEPTH: 10550'
 PLUG BACK TD: 9400'
 PACKER SET AT: 8400'

TIME	SURFACE PRESSURE	RATE (BWPD)
8:54	2134	750
8:55	2140	750
8:56	2146	750
8:57	2151	750
8:58	2156	750
8:59	2162	750
9:00	2167	750
9:01	2172	750
9:02	2177	750
9:03	2182	750
9:04	2187	750
9:05	2201	750
9:06	2209	750
9:07	2215	750
9:08	2222	750
9:09	2228	800
9:10	2233	800
9:11	2238	800
9:12	2244	800
9:13	2250	800
9:14	2255	800
9:15	2260	800
9:16	2265	800
9:17	2270	800
9:18	2275	800
9:19	2280	800
9:20	2285	800
9:21	2300	800
9:22	2308	800
9:23	2314	800
9:24	2320	850
9:25	2326	850
9:26	2331	850
9:27	2338	850
9:28	2343	850
9:29	2348	850
9:30	2354	850
9:31	2360	850
9:32	2363	850
9:33	2370	850
9:34	2376	850
9:35	2381	850
9:36	2397	850

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 121
 LOCATION: L13-T17S-R34E
 TEST DATE: 6-07-88
 PERFORATIONS: 8485'-8530'
 TOTAL DEPTH: 10550'
 PLUG BACK TD: 9400'
 PACKER SET AT: 8400'

TIME	SURFACE PRESSURE	RATE (BWPD)

9:37	2404	850
9:38	2411	850
9:39	2417	900
9:40	2423	900
9:41	2429	900
9:42	2434	900
9:43	2439	900
9:44	2446	900
9:45	2452	900
9:46	2457	900
9:47	2462	900
9:48	2468	900
9:49	2473	900
9:50	2488	900
9:51	2495	900
9:52	2501	900
9:53	2508	900
9:54	2513	950
9:55	2519	950
9:56	2525	950
9:57	2530	950
9:58	2538	950
9:59	2543	950
10:00	2549	950
10:01	2554	950
10:02	2560	950
10:03	2565	950
10:04	2569	950
10:05	2575	950
10:06	2592	950
10:07	2599	950
10:08	2606	950
10:09	2611	1000
10:10	2617	1000
10:11	2624	1000
10:12	2629	1000
10:13	2634	1000
10:14	2639	1000
10:15	2645	1000
10:16	2650	1000
10:17	2657	1000
10:18	2663	1000
10:19	2668	1000

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 121
 LOCATION: L13-T17S-R34E
 TEST DATE: 6-07-88
 PERFORATIONS: 8485'-8530'
 TOTAL DEPTH: 10550'
 PLUG BACK TD: 9400'
 PACKER SET AT: 8400'

TIME	SURFACE PRESSURE	RATE (BWPD)

10:20	2684	1000
10:21	2691	1000
10:22	2698	1000
10:23	2704	1000
10:24	2710	1050
10:25	2719	1050
10:26	2725	1050
10:27	2730	1050
10:28	2736	1050
10:29	2741	1050
10:30	2747	1050
10:31	2752	1050
10:32	2757	1050
10:33	2763	1050
10:34	2771	1050
10:35	2786	1050
10:36	2794	1050
10:37	2800	1050
10:38	2806	1050
10:39	2812	1100
10:40	2817	1100
10:41	2823	1100
10:42	2829	1100
10:43	2834	1100
10:44	2843	1100
10:45	2850	1100
10:46	2855	1100
10:47	2860	1100
10:48	2865	1100
10:49	2871	1100
10:50	2876	1100
10:51	2893	1100
10:52	2900	1100
10:53	2907	1100
10:54	2913	1150
10:55	2919	1150
10:56	2924	1150
10:57	2931	1150
10:58	2937	1150
10:59	2942	1150
11:00	2947	1150
11:01	2953	1150
11:02	2959	1150

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 121
 LOCATION: L13-T17S-R34E
 TEST DATE: 6-07-88
 PERFORATIONS: 8485'-8530'
 TOTAL DEPTH: 10550'
 PLUG BACK TD: 9400'
 PACKER SET AT: 8400'

TIME	SURFACE PRESSURE	RATE (BWPD)
11:03	2964	1150
11:04	2969	1150
11:05	2985	1150
11:06	2992	1150
11:07	2997	1150
11:08	3004	1150
11:09	3009	1200
11:10	3014	1200
11:11	3019	1200
11:12	3024	1200
11:13	3029	1200
11:14	3033	1200
11:15	3042	1200
11:16	3048	1200
11:17	3057	1200
11:18	3063	1200
11:19	3068	1200
11:20	3082	1200
11:21	3090	1200
11:22	3097	1200
11:23	3103	1200
11:24	3108	1250
11:25	3113	1250
11:26	3119	1250
11:27	3124	1250
11:28	3137	1250
11:29	3138	1250
11:30	3143	1250
11:31	3148	1250
11:32	3153	1250
11:33	3159	1250
11:34	3163	1250
11:35	3181	1250
11:36	3188	1250
11:37	3194	1250
11:38	3200	1250
11:39	3206	1300
11:40	3211	1300
11:41	3216	1300
11:42	3221	1300
11:43	3226	1300
11:44	3231	1300
11:45	3236	1300

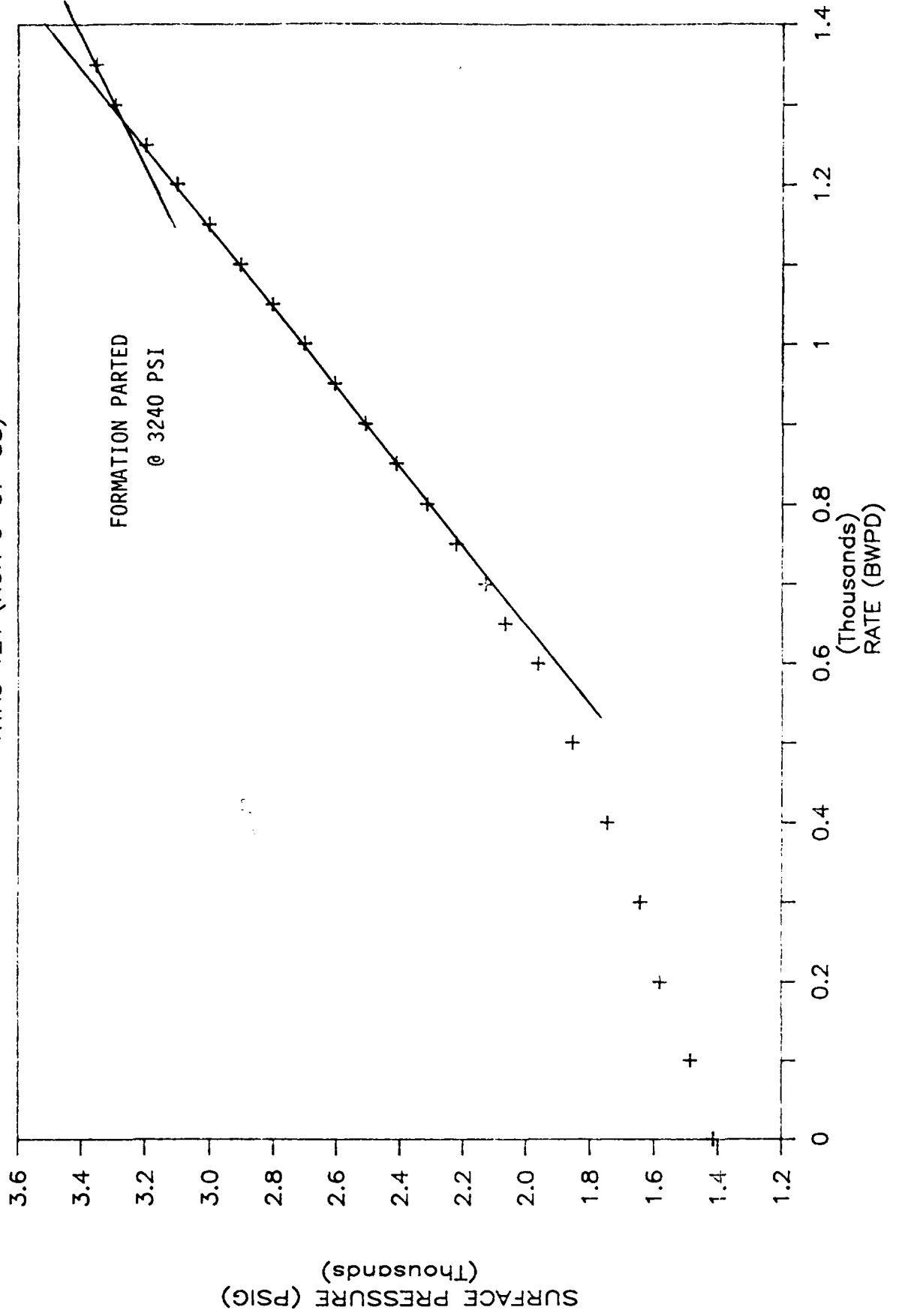
STEP RATE TEST

 COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 121
 LOCATION: L13-T17S-R34E
 TEST DATE: 6-07-88
 PERFORATIONS: 8485'-8530'
 TOTAL DEPTH: 10550'
 PLUG BACK TD: 9400'
 PACKER SET AT: 8400'

TIME	SURFACE PRESSURE	RATE (BWPD)
11:46	3242	1300
11:47	3251	1300
11:48	3256	1300
11:49	3262	1300
11:50	3278	1300
11:51	3285	1300
11:52	3291	1300
11:53	3297	1300
11:54	3303	1350
11:55	3308	1350
11:56	3312	1350
11:57	3317	1350
11:58	3322	1350
11:59	3327	1350
12:00	3331	1350
12:01	3336	1350
12:02	3342	1350
12:03	3350	1350
12:04	3356	1350
12:05	3206	0
12:06	3164	0
12:07	3127	0
12:08	3092	0
12:09	3063	0
12:10	3037	0

STEP RATE TEST

NVAU 121 (RUN 6-07-88)



STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 135
 LOCATION: L13-T17S-R34E
 TEST DATE: 6-07-88
 PERFORATIONS: 8610'-8649'
 TOTAL DEPTH: 8700'
 PLUG BACK TD: 8686'
 PACKER SET AT: 8550'

TIME	SURFACE PRESSURE	RATE (BWPD)
12:22	3028	0
12:23	3028	0
12:24	3026	0
12:25	3032	0
12:26	3039	0
12:27	3043	0
12:28	3046	0
12:29	3049	100
12:30	3051	100
12:31	3053	100
12:32	3055	100
12:33	3058	100
12:34	3060	100
12:35	3062	100
12:36	3063	100
12:37	3065	100
12:38	3067	100
12:39	3081	100
12:40	3089	100
12:41	3095	100
12:42	3102	100
12:43	3110	100
12:44	3116	200
12:45	3122	200
12:46	3127	200
12:47	3132	200
12:48	3137	200
12:49	3142	200
12:50	3147	200
12:51	3151	200
12:52	3156	200
12:53	3160	200
12:54	3164	200
12:55	3168	200
12:56	3189	200
12:57	3197	200
12:58	3206	200
12:59	3215	300
13:00	3223	300
13:01	3230	300
13:02	3237	300
13:03	3244	300
13:04	3251	300

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 135
 LOCATION: L13-T17S-R34E
 TEST DATE: 6-07-88
 PERFORATIONS: 8610'-8649'
 TOTAL DEPTH: 8700'
 PLUG BACK TD: 8686'
 PACKER SET AT: 8550'

TIME	SURFACE PRESSURE	RATE (BWPD)
13:05	3256	300
13:06	3262	300
13:07	3269	300
13:08	3274	300
13:09	3280	300
13:10	3304	300
13:11	3316	300
13:12	3326	300
13:13	3336	300
13:14	3346	400
13:15	3354	400
13:16	3362	400
13:17	3371	400
13:18	3378	400
13:19	3385	400
13:20	3392	400
13:21	3399	400
13:22	3406	400
13:23	3416	400
13:24	3422	400
13:25	3448	400
13:26	3461	400
13:27	3473	400
13:28	3483	400
13:29	3492	500
13:30	3501	500
13:31	3509	500
13:32	3518	500
13:33	3527	500
13:34	3534	500
13:35	3542	500
13:36	3550	500
13:37	3557	500
13:38	3564	500
13:39	3571	500
13:40	3595	500
13:41	3605	500
13:42	3614	500
13:43	3624	500
13:44	3632	550
13:45	3640	550
13:46	3647	550
13:47	3654	550

STEP RATE TEST

 COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 135
 LOCATION: L13-T17S-R34E
 TEST DATE: 6-07-88
 PERFORATIONS: 8610'-8649'
 TOTAL DEPTH: 8700'
 PLUG BACK TD: 8686'
 PACKER SET AT: 8550'

TIME	SURFACE PRESSURE	RATE (BWPD)
13:48	3682	550
13:49	3693	550
13:50	3703	550
13:51	3714	550
13:52	3722	550
13:53	3731	550
13:54	3739	550
13:55	3758	550
13:56	3772	550
13:57	3781	550
13:58	3790	550
13:59	3799	600
14:00	3807	600
14:01	3821	600
14:02	3830	600
14:03	3837	600
14:04	3844	600
14:05	3851	600
14:06	3857	600
14:07	3863	600
14:08	3869	600
14:09	3875	600
14:10	3894	600
14:11	3901	600
14:12	3908	600
14:13	3914	600
14:14	3920	650
14:15	3929	650
14:16	3934	650
14:17	3938	650
14:18	3943	650
14:19	3947	650
14:20	3951	650
14:21	3955	650
14:22	3958	650
14:23	3961	650
14:24	3964	650
14:25	3967	650
14:26	3985	650
14:27	3989	650
14:28	3993	650
14:29	3996	700
14:30	3999	700

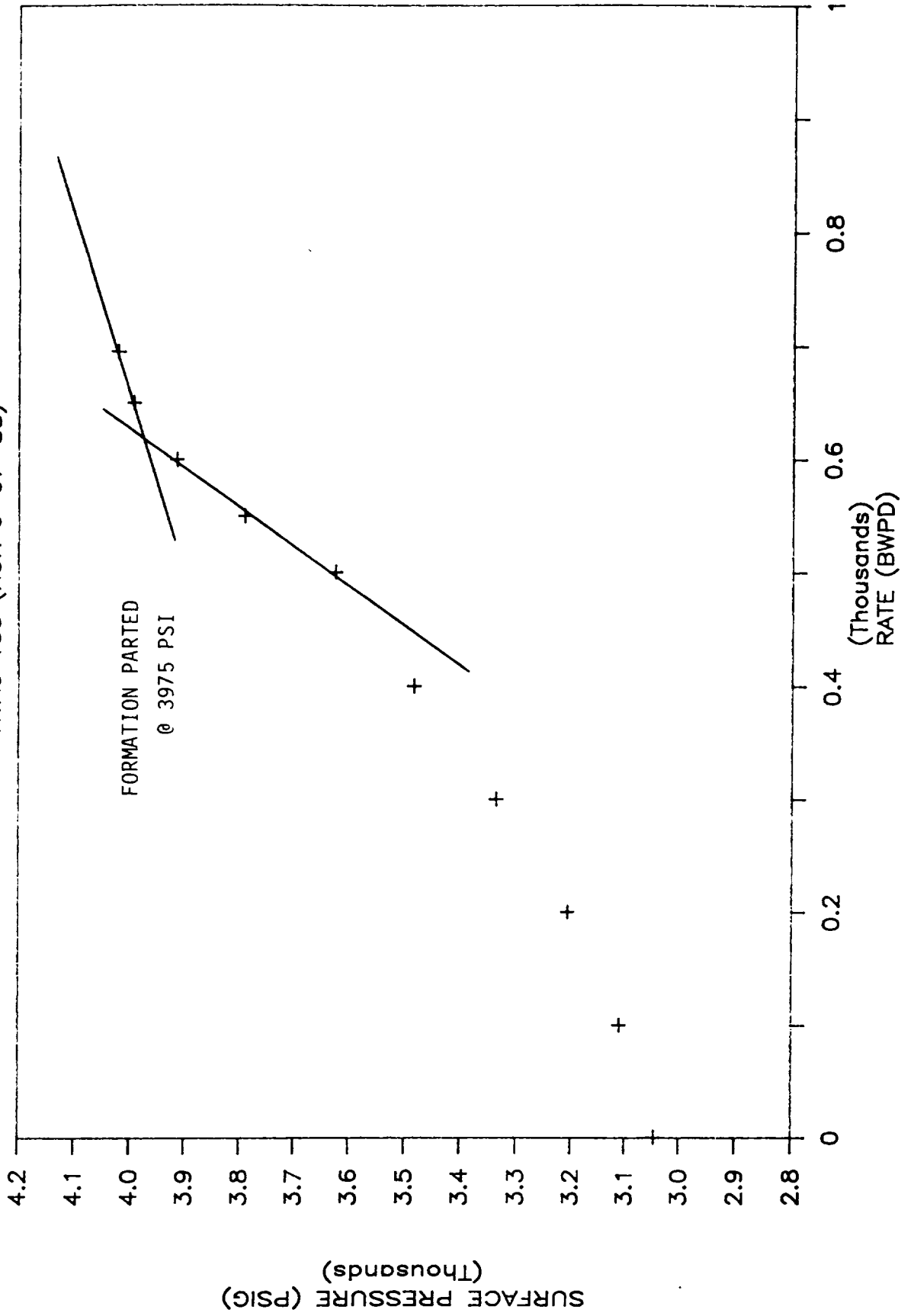
STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 135
 LOCATION: L13-T17S-R34E
 TEST DATE: 6-07-88
 PERFORATIONS: 8610'-8649'
 TOTAL DEPTH: 8700'
 PLUG BACK TD: 8686'
 PACKER SET AT: 8550'

TIME	SURFACE PRESSURE	RATE (BWPD)
14:31	4001	700
14:32	4004	700
14:33	4008	700
14:34	4010	700
14:35	4012	700
14:36	4013	700
14:37	4013	700
14:38	4015	700
14:39	4015	700
14:40	4016	700
14:41	4022	700
14:42	4022	700
14:43	4022	700
14:44	4021	750
14:45	4020	750
14:46	4019	750
14:47	4017	750
14:48	4013	750
14:49	4011	750
14:50	4010	750
14:51	4010	750
14:52	4011	750
14:53	4011	750
14:54	4011	750

STEP RATE TEST

NVAU 135 (RUN 6-07-88)



STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
LEASE: NORTH VACUUM ABO UNIT
WELL NO. 155
LOCATION: L13-T17S-R34E
TEST DATE: 06-09-88
PERFORATIONS: 8592'-8655'
TOTAL DEPTH: 8700'
PLUG BACK TD: 8692'
PACKER SET AT: 8510'

TIME	SURFACE PRESSURE	RATE (BWPD)
8:22	3843	0
8:23	3844	0
8:24	3844	0
8:25	3850	0
8:26	3849	0
8:27	3858	0
8:28	3860	0
8:29	3862	100
8:30	3864	100
8:31	3866	100
8:32	3868	100
8:33	3869	100
8:34	3871	100
8:35	3873	100
8:36	3874	100
8:37	3876	100
8:38	3877	100
8:39	3878	100
8:40	3880	100
8:41	3889	100
8:42	3893	100
8:43	3897	100
8:44	3901	200
8:45	3904	200
8:46	3907	200
8:47	3910	200
8:48	3913	200
8:49	3916	200
8:50	3917	200
8:51	3921	200
8:52	3924	200
8:53	3926	200
8:54	3929	200
8:55	3932	200
8:56	3946	200
8:57	3950	200
8:58	3956	200
8:59	3960	300
9:00	3964	300
9:01	3968	300
9:02	3972	300
9:03	3976	300
9:04	3979	300

STEP RATE TEST

 COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 155
 LOCATION: L13-T17S-R34E
 TEST DATE: 06-09-88
 PERFORATIONS: 8592'-8655'
 TOTAL DEPTH: 8700'
 PLUG BACK TD: 8692'
 PACKER SET AT: 8510'

TIME	SURFACE PRESSURE	RATE (BWPd)

9:05	3982	300
9:06	3986	300
9:07	3989	300
9:08	3992	300
9:09	3995	300
9:10	4012	300
9:11	4018	300
9:12	4024	300
9:13	4029	300
9:14	4034	400
9:15	4037	400
9:16	4042	400
9:17	4046	400
9:18	4050	400
9:19	4053	400
9:20	4057	400
9:21	4061	400
9:22	4067	400
9:23	4071	400
9:24	4075	400
9:25	4078	400
9:26	4090	400
9:27	4093	400
9:28	4099	400
9:29	4101	450
9:30	4105	450
9:31	4109	450
9:32	4112	450
9:33	4118	450
9:34	4122	450
9:35	4126	450
9:36	4129	450
9:37	4132	450
9:38	4136	450
9:39	4141	450
9:40	4144	450
9:41	4155	450
9:42	4160	450
9:43	4163	450
9:44	4169	500
9:45	4172	500
9:46	4176	500
9:47	4179	500

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 155
 LOCATION: L13-T17S-R34E
 TEST DATE: 06-09-88
 PERFORATIONS: 8592'-8655'
 TOTAL DEPTH: 8700'
 PLUG BACK TD: 8692'
 PACKER SET AT: 8510'

TIME	SURFACE PRESSURE	RATE (BWPD)
9:48	4184	500
9:49	4188	500
9:50	4191	500
9:51	4195	500
9:52	4198	500
9:53	4201	500
9:54	4204	500
9:55	4216	500
9:56	4219	500
9:57	4223	500
9:58	4226	500
9:59	4229	550
10:00	4231	550
10:01	4238	550
10:02	4241	550
10:03	4240	550
10:04	4243	550
10:05	4245	550
10:06	4247	550
10:07	4255	550
10:08	4257	550
10:09	4260	550
10:10	4266	550
10:11	4269	550
10:12	4272	550
10:13	4274	550
10:14	4277	600
10:15	4279	600
10:16	4281	600
10:17	4283	600
10:18	4285	600
10:19	4287	600
10:20	4288	600
10:21	4290	600
10:22	4292	600
10:23	4294	600
10:24	4296	600
10:25	4233	600
10:26	4250	600
10:27	4242	600
10:28	4237	600
10:29	4233	0
10:30	4230	0

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.

LEASE: NORTH VACUUM ABO UNIT

WELL NO. 155

LOCATION: L13-T17S-R34E

TEST DATE: 06-09-88

PERFORATIONS: 8592'-8655'

TOTAL DEPTH: 8700'

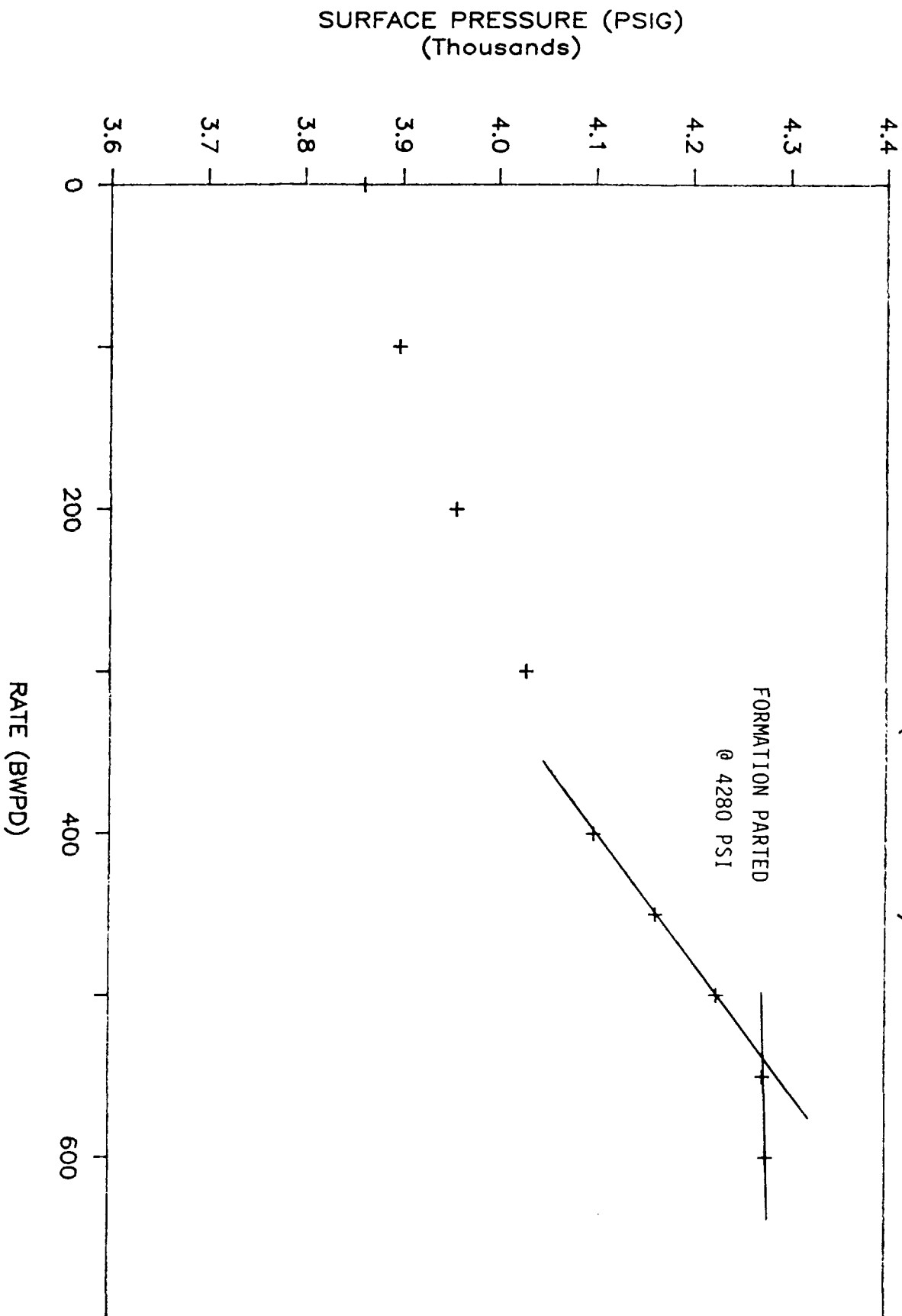
PLUG BACK TD: 8692'

PACKER SET AT: 8510'

TIME	SURFACE PRESSURE	RATE (BWPD)
10:31	4226	0

STEP RATE TEST

NVAU 155 (RUN 6-09-88)





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

September 27, 1988

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 Exploration & Producing U.S. Inc. N. Vacuum Abo Unit #155-D	23-17-34
Operator	Lease & Well No. Unit S-T-R

and my recommendations are as follows:

Need 3 points

Very truly yours

Jerry Sexton
Supervisor, District I

/bp



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

September 27, 1988

GARREY CARRUTHERS
GOVERNOR

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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 Exploration & Producing U.S. Inc.	N. Vacuum Abo Unit #135-L	11-17-34
Operator	Lease & Well No.	Unit S-T-R

and my recommendations are as follows:

Need 3 points above fracture point

Very truly yours

Jerry Sexton
Supervisor, District I

/bp



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

September 27, 1988

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 Exploration & Producing U.S. Inc.	N. Vacuum Abo Unit #121-L	13-17-34
Operator	Lease & Well No.	Unit S-T-R

and my recommendations are as follows:

Need 3 points above fracture

Very truly yours

Jerry Sexton
Supervisor, District I

/bp



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

PMX-140

GARREY CARRUTHERS
GOVERNOR

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

September 21, 1988

Mobil Exp & Prod. 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 Mr. Sweeney:

Reference is made to your request dated July 15, 1988, to increase the surface injection pressure on three wells within the North Vacuum Abo Unit Waterflood Project. This request is based on step rate tests conducted on these wells on June 22-23, 1988. 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.

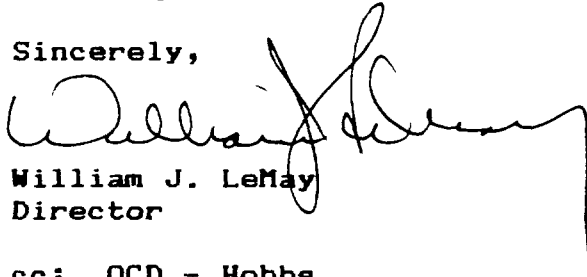
You are therefore authorized to increase the surface injection pressure on the following wells.

<u>WELL AND LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
N. Vacuum Abo Unit Well No. 131 Unit B, Section 10, T-17 South, R-34 East, NMPM, Lea County, New Mexico	3450 PSIG
N. Vacuum Abo Unit Well No. 160 Unit B, Section 12, T-17 South, R-34 East, NMPM, Lea County, New Mexico	3530 PSIG
N. Vacuum Abo Unit Well No. 230 Unit J, Section 13, T-17 South, R-34 East, NMPM, Lea County, New Mexico	4010 PSIG

Injection Pressure Increase
North Vacuum Abo Unit
Page No. 2

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
Director

cc: OCD - Hobbs
D. Catanach
D. McDonald
File: WFX-557
PMX-140



STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS
GOVERNOR

October 25, 1988

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

Mobil Exploration &
Producing US Inc.
P.O. Box 633
Midland, Texas 79702

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

Dear Sir:

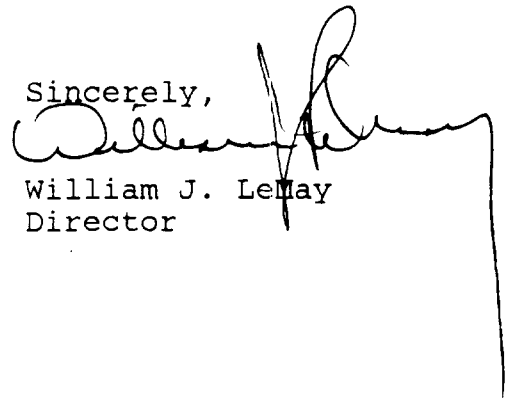
Reference is made to your request dated September 21, 1988, to increase the surface injection pressure on three wells within the North Vacuum Abo Unit Waterflood Project. This request is based on step rate tests conducted on these wells during June 6-9, 1988. The results of the tests have been reviewed 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. 121 Unit L, Section 13, T-17 South, R-34 East, NMPM	3190 PSIG
NVAU Well No. 135 Unit L, Section 11, T-17 South, R-34 East, NMPM	3925 PSIG
NVAU Well No. 155 Unit D, Section 23, T-17 South, R-34 East, NMPM	4230 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 cursive script, appearing to read 'William J. LeMay', with a long vertical line extending downwards from the end of the signature.

William J. LeMay
Director

xc: OCD-Hobbs
D. Catanach
D. McDonald
File- WFX-557, PMX-140