

Mobil Exploration & Producing U.S. Inc.

May 18, 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 UNIT
WELL NO. 143, AND 158
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. 143 UNIT B, SEC. 27 T-17-S, R-34-E Order No. WFX-557	8605-8674'	2970 psig	3619 psig
WELL No. 158 UNIT J SEC. 12 T-17-S, R-34-E	8531-8602'	2950 psig	3530 psig

State of New Mexico
North Vacuum Abo Unit

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Enclosed are copies of the Step-rate test.

Yours very truly,

A handwritten signature in cursive script, appearing to read "M E Sweeney".

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

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 143
 LOCATION: B-27-T17S-R34E LEA COUNTY, NEW MEXICO
 TEST DATE: 3-31-88
 PERFORATIONS: 8605-8680'
 TOTAL DEPTH: 8745'
 PLUG BACK TD: 8730'
 PACKER SET AT: 8530'

TIME	SURFACE PRESSURE	RATE (BWPD)

08:00	3086	0
08:01	3094	100
08:02	3092	100
08:03	3094	100
08:04	3096	100
08:05	3096	100
08:06	3097	100
08:07	3098	100
08:08	3099	100
08:09	3099	100
08:10	3100	100
08:11	3100	100
08:12	3101	100
08:13	3101	100
08:14	3102	100
08:15	3102	100
08:16	3103	200
08:17	3112	200
08:18	3121	200
08:19	3126	200
08:20	3130	200
08:21	3133	200
08:22	3137	200
08:23	3140	200
08:24	3143	200
08:25	3146	200
08:26	3149	200
08:27	3151	200
08:28	3154	200
08:29	3156	200
08:30	3159	200
08:31	3161	300
08:32	3177	300
08:33	3185	300
08:34	3191	300
08:35	3197	300
08:36	3202	300
08:37	3207	300
08:38	3212	300
08:39	3216	300
08:40	3220	300
08:41	3225	300
08:42	3229	300

STEP RATE TEST -----

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
LEASE: NORTH VACUUM ABO UNIT
WELL NO. 143
LOCATION: B-27-T17S-R34E LEA COUNTY, NEW MEXICO
TEST DATE: 3-31-88
PERFORATIONS: 8605-8680'
TOTAL DEPTH: 8745'
PLUG BACK TD: 8730'
PACKER SET AT: 8530'

TIME	SURFACE PRESSURE	RATE (BWPD)

08:43	3233	300
08:44	3237	300
08:45	3240	300
08:46	3244	400
08:47	3247	400
08:48	3250	400
08:49	3272	400
08:50	3280	400
08:51	3286	400
08:52	3293	400
08:53	3298	400
08:54	3304	400
08:55	3309	400
08:56	3314	400
08:57	3319	400
08:58	3323	400
08:59	3328	400
09:00	3332	400
09:01	3336	400
09:02	3340	400
09:03	3344	400
09:04	3366	400
09:05	3374	500
09:06	3381	500
09:07	3386	500
09:08	3393	500
09:09	3397	500
09:10	3402	500
09:11	3407	500
09:12	3412	500
09:13	3416	500
09:14	3420	500
09:15	3424	500
09:16	3429	600
09:17	3452	600
09:18	3460	600
09:19	3465	600
09:20	3472	600
09:21	3477	600
09:22	3481	600
09:23	3486	600
09:24	3491	600
09:25	3496	600

STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 143
 LOCATION: B-27-T17S-R34E LEA COUNTY, NEW MEXICO
 TEST DATE: 3-31-88
 PERFORATIONS: 8605-8680'
 TOTAL DEPTH: 8745'
 PLUG BACK TD: 8730'
 PACKER SET AT: 8530'

TIME	SURFACE PRESSURE	RATE (BWPD)

09:26	3500	600
09:27	3504	600
09:28	3507	600
09:29	3512	600
09:30	3515	600
09:31	3532	700
09:32	3546	700
09:33	3552	700
09:34	3557	700
09:35	3561	700
09:36	3568	700
09:37	3572	700
09:38	3577	700
09:39	3581	700
09:40	3585	700
09:41	3590	700
09:42	3594	700
09:43	3598	700
09:44	3603	700
09:45	3608	700
09:46	3622	800
09:47	3636	800
09:48	3640	800
09:49	3645	800
09:50	3649	800
09:51	3652	800
09:52	3656	800
09:53	3659	800
09:54	3662	800
09:55	3665	800
09:56	3667	800
09:57	3669	800
09:58	3672	800
09:59	3674	800
10:00	3676	800
10:01	3678	850
10:02	3695	850
10:03	3694	850
10:04	3697	850
10:05	3697	850
10:06	3698	850
10:07	3699	850
10:08	3699	850

STEP RATE TEST

 COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 143
 LOCATION: B-27-T17S-R34E LEA COUNTY, NEW MEXICO
 TEST DATE: 3-31-88
 PERFORATIONS: 8605-8680'
 TOTAL DEPTH: 8745'
 PLUG BACK TD: 8730'
 PACKER SET AT: 8530'

TIME	SURFACE PRESSURE	RATE (BWPD)

10:09	3700	850
10:10	3699	850
10:11	3700	850
10:12	3701	850
10:13	3703	850
10:14	3703	850
10:15	3701	850
10:16	3703	900
10:17	3716	900
10:18	3716	900
10:19	3717	900
10:20	3717	900
10:21	3717	900
10:22	3718	900
10:23	3718	900
10:24	3718	900
10:25	3718	900
10:26	3718	900
10:27	3717	900
10:28	3718	900
10:29	3717	900
10:30	3717	900
10:31	3717	950
10:32	3731	950
10:33	3732	950
10:34	3732	950
10:35	3733	950
10:36	3733	950
10:37	3733	950
10:38	3734	950
10:39	3734	950
10:40	3735	950
10:41	3735	950
10:42	3736	950
10:43	3736	950
10:44	3737	950
10:45	3738	950
10:46	3742	0
10:47	3623	0
10:48	3607	0
10:49	3599	0
10:50	3594	0
10:51	3589	0

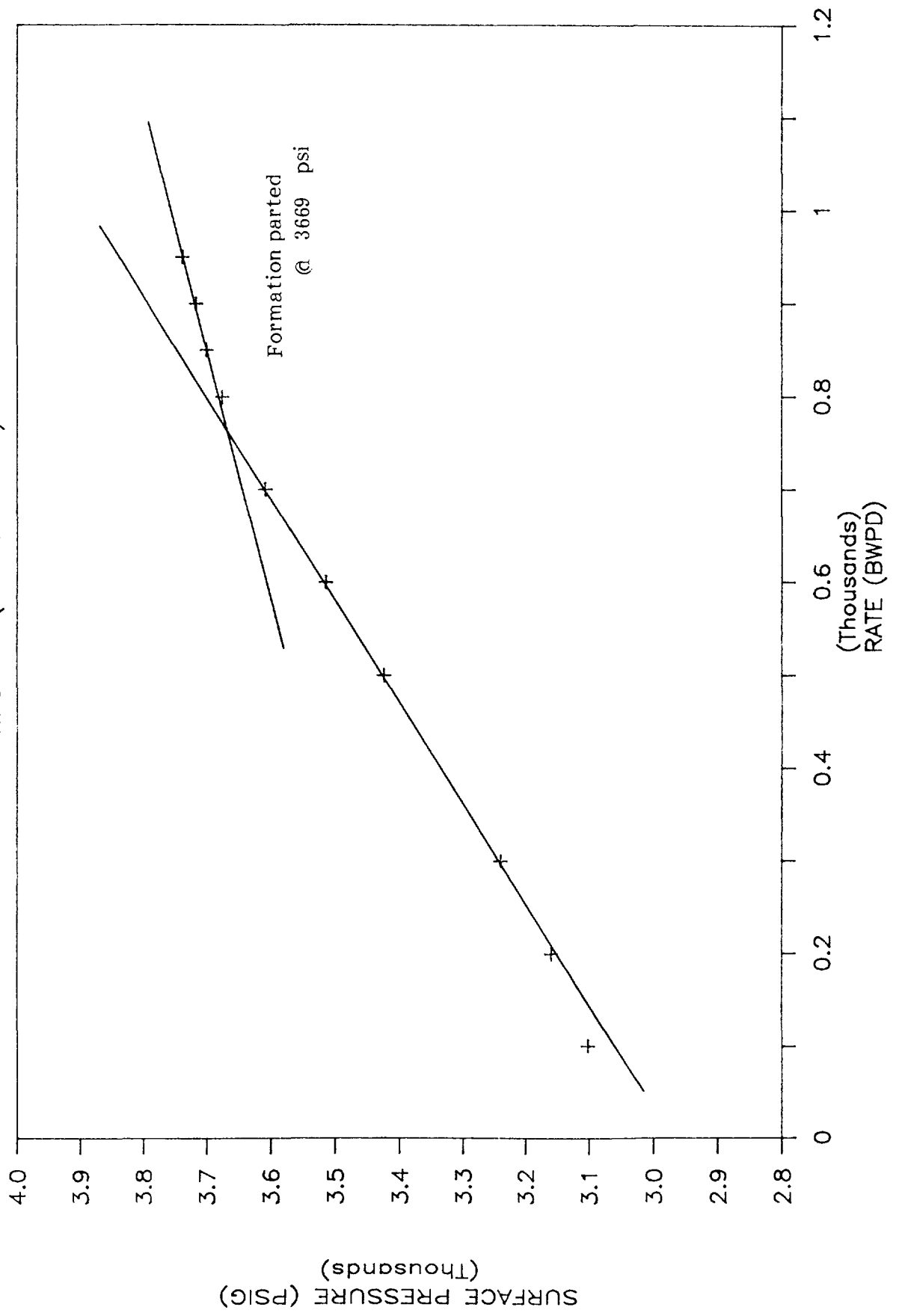
STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
LEASE: NORTH VACUUM ABO UNIT
WELL NO. 143
LOCATION: B-27-T17S-R34E LEA COUNTY, NEW MEXICO
TEST DATE: 3-31-88
PERFORATIONS: 8605-8680'
TOTAL DEPTH: 8745'
PLUG BACK TD: 8730'
PACKER SET AT: 8530'

TIME	SURFACE PRESSURE	RATE (BWPD)
10:52	3585	0

STEP RATE TEST

NVAU 143 (RUN 3-31-88)



STEP RATE TEST

 COMPANY : MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 158
 LOCATION J-12-T17S-R34E
 TEST DATE: 4-18-88
 PERFORATIONS: 8531-8602'
 TOTAL DEPTH: 11,800'
 PLUG BACK TD: 8700'
 PACKER SET AT: 8481'

TIME	SURFACE PRESSURE (PSIG)	RATE (BWPD)

13:40	2698	0
13:41	2690	100
13:42	2694	100
13:43	2706	100
13:44	2702	100
13:45	2701	100
13:46	2703	100
13:47	2703	100
13:48	2704	100
13:49	2705	100
13:50	2706	100
13:51	2706	100
13:52	2708	100
13:53	2708	100
13:54	2708	100
13:55	2709	100
13:56	2710	200
13:57	2710	200
13:58	2716	200
13:59	2728	200
14:00	2736	200
14:01	2743	200
14:02	2750	200
14:03	2755	200
14:04	2757	200
14:05	2763	200
14:06	2767	200
14:07	2771	200
14:08	2775	200
14:09	2779	200
14:10	2782	200
14:11	2785	200
14:12	2801	300
14:13	2811	300
14:14	2820	300
14:15	2828	300
14:16	2836	300
14:17	2843	300
14:18	2850	300
14:19	2856	300
14:20	2862	300
14:21	2867	300
14:22	2874	300
14:23	2880	300

14:24	2886	300
14:25	2891	300
14:26	2897	300
14:27	2916	400
14:28	2930	400
14:29	2941	400
14:30	2951	400
14:31	2960	400
14:32	2968	400
14:33	2977	400
14:34	2984	400
14:35	2994	400
14:36	3001	400
14:37	3009	400
14:38	3017	400
14:39	3023	400
14:40	3030	400
14:41	3037	400
14:42	3063	500
14:43	3077	500
14:44	3089	500
14:45	3100	500
14:46	3106	500
14:47	3119	500
14:48	3131	500
14:49	3140	500
14:50	3148	500
14:51	3158	500
14:52	3166	500
14:53	3173	500
14:54	3182	500
14:55	3189	500
14:56	3197	500
14:57	3226	600
14:58	3240	600
14:59	3252	600
15:00	3263	600
15:01	3273	600
15:02	3283	600
15:03	3299	600
15:04	3307	600
15:05	3316	600
15:06	3325	600
15:07	3334	600
15:08	3342	600
15:09	3350	600
15:10	3358	600
15:11	3365	600
15:12	3396	700
15:13	3410	700
15:14	3421	700
15:15	3432	700
15:16	3442	700
15:17	3448	700
15:18	3459	700
15:19	3467	700
15:20	3482	700
15:21	3491	700

15:22	3499	700
15:23	3507	700
15:24	3514	700
15:25	3521	700
15:26	3527	700
15:27	3568	800
15:28	3574	800
15:29	3585	800
15:30	3594	800
15:31	3602	800
15:32	3616	800
15:33	3625	800
15:34	3633	800
15:35	3639	800
15:36	3646	800
15:37	3651	800
15:38	3656	800
15:39	3660	800
15:40	3665	800
15:41	3668	800
15:42	3699	900
15:43	3707	900
15:44	3713	900
15:45	3718	900
15:46	3720	900
15:47	3723	900
15:48	3727	900
15:49	3726	900
15:50	3726	900
15:51	3725	900
15:52	3725	900
15:53	3726	900
15:54	3729	900
15:55	3732	900
15:56	3735	900
15:57	3751	950
15:58	3755	950
15:59	3759	950
16:00	3762	950
16:01	3766	950
16:02	3769	950
16:03	3771	950
16:04	3771	950
16:05	3775	950
16:06	3776	950
16:07	3778	950
16:08	3781	950
16:09	3782	950
16:10	3785	950
16:11	3787	950
16:12	3802	1000
16:13	3805	1000
16:14	3808	1000
16:15	3810	1000
16:16	3813	1000
16:17	3815	1000
16:18	3817	1000
16:19	3818	1000

16:20	3820	1000
16:21	3822	1000
16:22	3825	1000
16:23	3827	1000
16:24	3829	1000
16:25	3831	1000
16:26	3833	1000
16:27	3835	0
16:28	3836	0
16:29	3836	0
16:30	3691	0
16:31	3694	0
16:32	3673	0
16:33	3659	0
16:34	3646	0

STEP RATE TEST

NVAU 158 (RUN 4-18-88)

