

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

GARREY CARRUTHERS
GOVERNOR

POST OFFICE BOX 2086
STATE LAND OFFICE BUILDING
SANTA FE NEW MEXICO 87504
(505) 827-5600

December 4, 1989

Mobil Exploration & 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 Mr. Sweeney:

Reference is made to your request dated November 7, 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 September and October, 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. 136 Unit D, Section 26, T-17 South, Range 34 East;	3530 PSIG
NVAU Well No. 156 Unit J, Section 23, T-17 South, Range 34 East;	3625 PSIG
NVAU Well No. 206 Unit D, Section 19, T-17 South, Range 34 East; and	2310 PSIG

Injection Pressure Increase
Mobil Exploration and Producing U.S., Inc.
December 4, 1989
Page 2

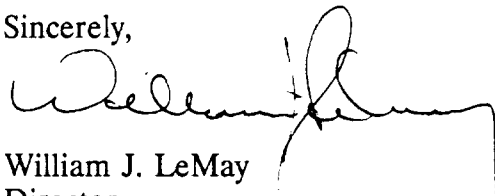
NVAU Well No. 230
Unit J, Section 13, T-17 South,
Range 34 East,

4128 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,

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

William J. LeMay
Director

cc: Oil Conservation Division - Hobbs
File: PMX-138
WFX-557
T. Gallegos
D. Catanach

Mobil Exploration & Producing U.S. Inc.

STATE OF NEW MEXICO DIVISION
OIL CONSERVATION
NOV 13 1989 10 59

November 7, 1989

P.O. BOX 633
MIL LAND, TEXAS 79702

State of New Mexico
Oil Conservation Division
310 Old Santa Fe Trail, Rm. 206
Santa Fe, New Mexico 87503

Attention: Mr. W. J. LeMay

INJECTION PRESSURE INCREASE REQUEST
NORTH VACUUM ABO FIELD
NORTH VACUUM ABO UNIT
WELL NO'S. 136, 156, 206, & 230
LEA COUNTY, NEW MEXICO

Gentlemen:

Under the provisions of Order No. PMX-138 dated November 12, 1985; and Order No. WFX-557 dated February 11, 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:

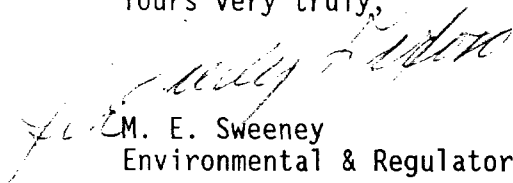
	<u>INJECTION INTERVALS</u>	<u>PRESENT SURFACE INJECTION PRESSURE LIMIT</u>	<u>REQUESTED SURFACE INJECTION PRESSURE LIMIT</u>
WELL NO. 136 UNIT D, SEC. 26 T-17-S, R-34-E Order No. PMX-138	8525-8680'	3125 psig	3530 psig
WELL NO. 156 UNIT J, SEC. 23 T-17-S, R-34-E ORDER NO. PMX-138	8472-8650'	3604 psig	3625 psig
WELL NO. 206 UNIT D, SEC. 19 T-17-S, R-34-E ORDER NO. WFX-557	8597-8763'	1719 psig	2310 psig

NORTH VACUUM ABO UNIT
WELL NOS. 136, 156, 206, & 230
LEA COUNTY, NEW MEXICO

WELL NO. 230
UNIT J, SEC. 13 8529-8781 4010 psig 4128 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.

JWDixon
Attachments
cc: District Director OCD - Hobbs

STEP RATE TEST ANALYSIS SHEET
HOBBS DISTRICT

Date 9-18-89

LEASE NORTH VAC. ALG
WELL 136

FIELD D-26-175 E+E

METERED INJECTION RATE _____ BWPD @ _____ PSI
RECOMMENDED INJ'N RATE 215 BWPD @ 3125 PSI

WELL TD 8700 WELL PBTD 8665
PACKER DEPTH 8440 TBG SIZE & TYPE 2 3/8

TOP OF PERFORATIONS 8525
BTM OF PERFORATIONS 8680
OPENHOLE INTERVAL _____

DATE OF TEST 9-18-89
PREVIOUS TEST DATE _____
TEST PERFORMED BY LEE

RECOMMENDED VOLUME STEPS 100 BWPD @ 15 MIN. INTERVALS
PROGRAMMED SAMPLE RATE 60 SECONDS
PROGRAMMED PRESSURE WINDOW 0 PSI

CURRENT MAXIMUM PERMITTED PRESSURE	TESTED PARTING PRESSURE	RECOMMENDED INJECTION PRESSURE
<u>3125</u> PSIG	<u>3580</u> PSIG	<u>3530</u> PSIG

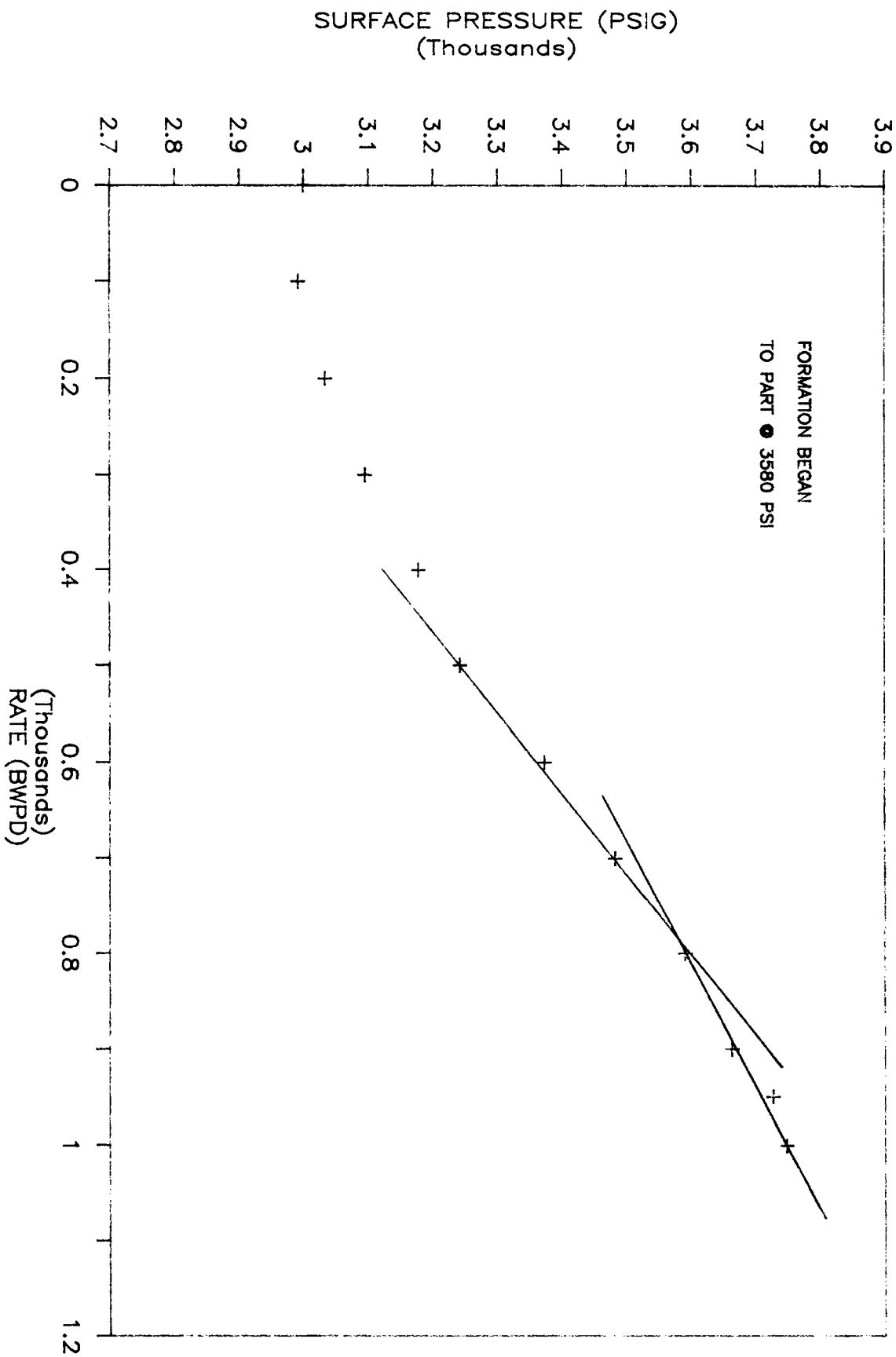
OPERATIONS ENGR REMARKS Name DGE Date 10-20-89
1st + second sections 2-27, no test - max allowable was 3125 psi. 2nd part completed?
Subm + to HMOB

RESERVOIR ENGR REMARKS Name MKM Date 10-31-89
Agree - Good test.
Subm H&L to E+R 10/31/89

REGULATORY LETTER FILED FOR RATE INCREASE: YES _____ NO _____
(Attach copy) Date _____

STEP RATE TEST

NVAU #136 (RUN 09-18-89)



STEP RATE TEST

COMPANY: MOBIL EXPLORATION AND PRODUCING U.S. INC.
LEASE: NORTH VACUUM ABO UNIT
WELL NO. 136
LOCATION: D26-17S-34E
TEST DATE: 09-18-89
PERFORATIONS: 8525' - 8680'
TOTAL DEPTH: 8700'
PLUG BACK TD: 8665'
PACKER SET AT: 8440'

TIME	SURFACE PRESSURE	RATE (BWPD)

11:10:23	11	0
11:11:23	13	0
11:12:23	12	0
11:13:23	12	0
11:14:23	12	0
11:15:23	12	0
11:16:23	12	0
11:17:23	12	0
11:18:23	12	0
11:19:23	12	0
11:20:23	12	0
11:21:23	12	0
11:22:23	12	0
11:23:23	13	0
11:24:23	3073	0
11:25:23	3075	0
11:26:23	3046	0
11:27:23	3039	0
11:28:23	3031	0
11:29:23	3025	0
11:30:23	3020	0
11:31:23	3015	0
11:32:23	3011	0
11:33:23	3006	0
11:34:23	3002	0
11:35:23	2999	0
11:36:23	3005	100
11:37:23	3005	100
11:38:23	3005	100
11:39:23	3004	100
11:40:23	3003	100
11:41:23	3002	100
11:42:23	3001	100
11:43:23	3000	100
11:44:23	2999	100
11:45:23	2997	100
11:46:23	2996	100

11:47:23	2994	100
11:48:23	2993	100
11:49:23	2992	100
11:50:23	2991	100
11:51:23	3002	200
11:52:23	3004	200
11:53:23	3007	200
11:54:23	3009	200
11:55:23	3011	200
11:56:23	3013	200
11:57:23	3013	200
11:58:23	3015	200
11:59:23	3014	200
12:00:23	3016	200
12:01:23	3016	200
12:02:23	3017	200
12:03:23	3017	200
12:04:23	3018	200
12:05:23	3033	200
12:06:23	3039	300
12:07:23	3047	300
12:08:23	3049	300
12:09:23	3052	300
12:10:23	3055	300
12:11:23	3058	300
12:12:23	3060	300
12:13:23	3062	300
12:14:23	3064	300
12:15:23	3067	300
12:16:23	3069	300
12:17:23	3071	300
12:18:23	3073	300
12:19:23	3074	300
12:20:23	3095	300
12:21:23	3103	400
12:22:23	3108	400
12:23:23	3114	400
12:24:23	3118	400
12:25:23	3121	400
12:26:23	3125	400
12:27:23	3128	400
12:28:23	3132	400
12:29:23	3135	400
12:30:23	3138	400
12:31:23	3141	400
12:32:23	3144	400
12:33:23	3147	400
12:34:23	3149	400
12:35:23	3177	400
12:36:23	3185	500
12:37:23	3191	500
12:38:23	3197	500
12:39:23	3202	500
12:40:23	3206	500
12:41:23	3211	500
12:42:23	3215	500

12:43:23	3219	500
12:44:23	3222	500
12:45:23	3226	500
12:46:23	3230	500
12:47:23	3233	500
12:48:23	3236	500
12:49:23	3239	500
12:50:23	3242	500
12:51:23	3274	500
12:52:23	3282	500
12:53:23	3289	500
12:54:23	3294	500
12:55:23	3304	500
12:56:23	3310	500
12:57:23	3315	500
12:58:23	3320	500
12:59:23	3324	500
13:00:23	3328	500
13:01:23	3332	500
13:02:23	3336	500
13:03:23	3340	500
13:04:23	3343	500
13:05:23	3373	500
13:06:23	3385	700
13:07:23	3393	700
13:08:23	3398	700
13:09:23	3403	700
13:10:23	3408	700
13:11:23	3412	700
13:12:23	3417	700
13:13:23	3423	700
13:14:23	3428	700
13:15:23	3432	700
13:16:23	3436	700
13:17:23	3439	700
13:18:23	3443	700
13:19:23	3446	700
13:20:23	3482	700
13:21:23	3490	800
13:22:23	3495	800
13:23:23	3505	800
13:24:23	3505	800
13:25:23	3514	800
13:26:23	3519	800
13:27:23	3522	800
13:28:23	3525	800
13:29:23	3529	800
13:30:23	3531	800
13:31:23	3535	800
13:32:23	3538	800
13:33:23	3541	800
13:34:23	3544	800
13:35:23	3590	800
13:36:23	3596	900
13:37:23	3601	900
13:38:23	3605	900

13:39:23	3609	900
13:40:23	3613	900
13:41:23	3616	900
13:42:23	3619	900
13:43:23	3622	900
13:44:23	3625	900
13:45:23	3628	900
13:46:23	3630	900
13:47:23	3637	900
13:48:23	3639	900
13:49:23	3642	900
13:50:23	3662	900
13:51:23	3665	950
13:52:23	3668	950
13:53:23	3672	950
13:54:23	3675	950
13:55:23	3677	950
13:56:23	3679	950
13:57:23	3682	950
13:58:23	3709	950
13:59:23	3712	950
14:00:23	3715	950
14:01:23	3718	950
14:02:23	3720	950
14:03:23	3722	950
14:04:23	3725	950
14:05:23	3726	950
14:06:23	3728	1000
14:07:23	3729	1000
14:08:23	3730	1000
14:09:23	3731	1000
14:10:23	3733	1000
14:11:23	3735	1000
14:12:23	3739	1000
14:13:23	3741	1000
14:14:23	3742	1000
14:15:23	3743	1000
14:16:23	3745	1000
14:17:23	3745	1000
14:18:23	3747	1000
14:19:23	3742	1000
14:20:23	3574	1000
14:21:23	3555	0
14:22:23	3538	0
14:23:23	3524	0
14:24:23	3512	0
14:25:23	3500	0
14:26:23	3489	0
14:27:23	3478	0
14:28:23	3469	0
14:29:23	3460	0
14:30:23	3451	0
14:31:23	3443	0
14:32:23	3435	0
14:33:23	3428	0
14:34:23	3420	0

14:35:23	3415	0
14:36:23	16	SI
14:37:23	12	SI
14:38:23	12	SI
14:39:23	12	SI
14:40:23	13	SI
14:41:23	13	SI
14:42:23	13	SI
14:43:23	13	SI
14:44:23	13	SI
14:45:23	13	SI
14:46:23	13	SI
14:47:23	13	SI
14:48:23	13	SI
14:49:23	13	SI
14:50:23	12	SI
14:51:23	12	SI
14:52:23	12	SI
14:53:23	12	SI
14:54:23	12	SI
14:55:23	12	SI
14:56:23	12	SI
14:57:23	12	SI
14:58:23	12	SI
14:59:23	12	SI
15:00:23	12	SI
15:01:23	12	SI
15:02:23	12	SI
15:03:23	12	SI
15:04:23	12	SI
15:05:23	12	SI
15:06:23	12	SI
15:07:23	12	SI
15:08:23	12	SI
15:09:23	12	SI
15:10:23	12	SI
15:11:23	12	SI
15:12:23	12	SI
15:13:23	12	SI
15:14:23	12	SI
15:15:23	12	SI
15:16:23	12	SI
15:17:23	12	SI
15:18:23	12	SI
15:19:23	12	SI
15:20:23	12	SI
15:21:23	12	SI
15:22:23	13	SI
15:23:23	13	SI
15:24:23	13	SI
15:25:23	13	SI
15:26:23	13	SI
15:27:23	12	SI
15:28:23	13	SI
15:29:23	12	SI

STEP RATE TEST ANALYSIS SHEET
HOBBS DISTRICT

Date 9-30-87

LEASE North Vacuum MCO
WELL 156

FIELD VACUUM AKE 18.74
J63 - T115 - 104E

METERED INJECTION RATE 106 BWPD @ 3298 PSI
RECOMMENDED INJ'N RATE ~~106~~ MAX. BWPD @ 3604 PSI

WELL TD 8750' WELL PBTD 4725
PACKER DEPTH 8380 TBG SIZE & TYPE 2 3/8

TOP OF PERFORATIONS 8472
BTM OF PERFORATIONS 7650
OPENHOLE INTERVAL _____

DATE OF TEST 9-30-87
PREVIOUS TEST DATE 4
TEST PERFORMED BY 163

RECOMMENDED VOLUME STEPS 100 BWPD @ 15 MIN. INTERVALS

PROGRAMMED SAMPLE RATE 60 SECONDS

PROGRAMMED PRESSURE WINDOW -5 PSI

CURRENT MAXIMUM PERMITTED PRESSURE	TESTED PARTING PRESSURE	RECOMMENDED INJECTION PRESSURE
<u>3604</u> PSIG	<u>3675</u> PSIG	<u>3625</u> PSIG

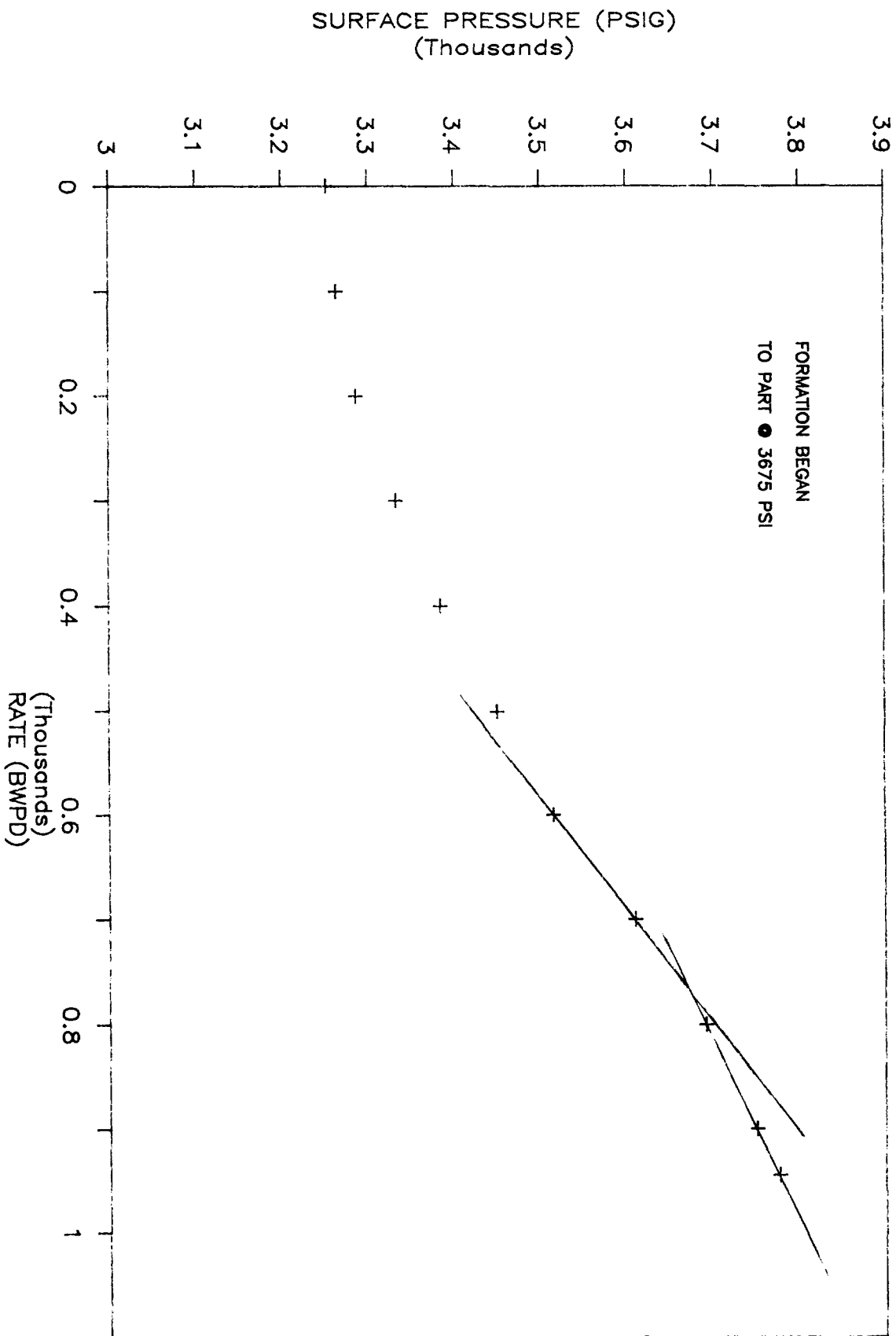
OPERATIONS ENGR REMARKS Name DGE Date 10-30-89
Last increase 10-1-87. Rec rate to max below possible under 3000. Parting pressure
above 5000 is 21. 21.2 greater than present limit - set 90% of work above, done so recommend
that Hobbs only submit to 21.2

RESERVOIR ENGR REMARKS Name MKM Date 10-31-89
Agreed - Subm Hdd to E-3 10/31/89

REGULATORY LETTER FILED FOR RATE INCREASE: YES _____ NO _____
(Attach copy) Date _____

STEP RATE TEST

NVAU #156 (RUN 09 20-89)



STEP RATE TEST

COMPANY: MOBIL EXPLORATION AND PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 156
 LOCATION: J23-T17S-R34E
 TEST DATE: 09-20-89
 PERFORATIONS: 8472' - 8650'
 TOTAL DEPTH: 8750'
 PLUG BACK TD: 8725'
 PACKER SET AT: 8380'

TIME	SURFACE PRESSURE	RATE (BWPD)
12:00:17	13	0
12:01:17	13	0
12:02:17	13	0
12:03:17	13	0
12:04:17	13	0
12:05:17	13	0
12:06:17	13	0
12:07:17	13	0
12:08:17	13	0
12:09:17	13	0
12:10:17	13	0
12:11:17	13	0
12:12:17	13	0
12:13:17	13	0
12:14:17	13	0
12:15:17	13	0
12:16:17	13	0
12:17:17	13	0
12:18:17	13	0
12:19:17	3249	0
12:20:17	3253	0
12:21:17	3253	100
12:22:17	3254	100
12:23:17	3254	100
12:24:17	3255	100
12:25:17	3255	100
12:26:17	3255	100
12:27:17	3256	100
12:28:17	3256	100
12:29:17	3256	100
12:30:17	3257	100
12:31:17	3257	100
12:32:17	3258	100
12:33:17	3258	100
12:34:89	3258	100

12:35:17	3264	100
12:36:17	3267	200
12:37:17	3269	200
12:38:17	3271	200
12:39:17	3273	200
12:40:17	3273	200
12:41:17	3276	200
12:42:17	3277	200
12:43:17	3279	200
12:44:17	3280	200
12:45:17	3281	200
12:46:17	3282	200
12:47:17	3283	200
12:48:17	3285	200
12:49:17	3285	200
12:50:17	3287	200
12:51:17	3298	300
12:52:17	3302	300
12:53:17	3305	300
12:54:17	3308	300
12:55:17	3311	300
12:56:17	3313	300
12:57:17	3316	300
12:58:17	3319	300
12:59:17	3321	300
13:00:17	3323	300
13:01:17	3325	300
13:02:17	3327	300
13:03:17	3329	300
13:04:17	3331	300
13:05:17	3333	300
13:06:17	3334	400
13:07:17	3351	400
13:08:17	3352	400
13:09:17	3355	400
13:10:17	3359	400
13:11:17	3362	400
13:12:17	3365	400
13:13:17	3368	400
13:14:17	3370	400
13:15:17	3374	400
13:16:17	3375	400
13:17:17	3378	400
13:18:17	3381	400
13:19:17	3383	400
13:20:17	3385	400
13:21:17	3405	500
13:22:17	3409	500
13:23:17	3414	500
13:24:17	3418	500
13:25:17	3422	500
13:26:17	3423	500
13:27:17	3427	500
13:28:17	3430	500
13:29:89	3433	500
13:30:17	3436	500

13:31:17	3439	500
13:32:17	3442	500
13:33:17	3445	500
13:34:17	3447	500
13:35:17	3450	500
13:36:17	3469	600
13:37:17	3473	600
13:38:17	3477	600
13:39:17	3481	600
13:40:17	3484	600
13:41:17	3488	600
13:42:17	3491	600
13:43:17	3494	600
13:44:17	3498	600
13:45:17	3501	600
13:46:17	3504	600
13:47:17	3507	600
13:48:17	3510	600
13:49:17	3513	600
13:50:17	3515	600
13:51:17	3521	700
13:52:17	3524	700
13:53:17	3527	700
13:54:17	3548	700
13:55:17	3552	700
13:56:17	3557	700
13:57:17	3561	700
13:58:17	3564	700
13:59:17	3567	700
14:00:17	3571	700
14:01:17	3574	700
14:02:17	3586	700
14:03:17	3583	700
14:04:17	3587	700
14:05:17	3610	700
14:06:17	3615	800
14:07:17	3619	800
14:08:17	3623	800
14:09:17	3628	800
14:10:17	3637	800
14:11:17	3641	800
14:12:17	3645	800
14:13:17	3648	800
14:14:17	3652	800
14:15:17	3655	800
14:16:17	3659	800
14:17:17	3662	800
14:18:17	3665	800
14:19:17	3668	800
14:20:17	3691	800
14:21:17	3696	900
14:22:17	3700	900
14:23:17	3704	900
14:24:89	3708	900
14:25:17	3711	900
14:26:17	3715	900

14:27:17	3718	900
14:28:17	3722	900
14:29:17	3731	900
14:30:17	3734	900
14:31:17	3737	900
14:32:17	3741	900
14:33:17	3744	900
14:34:17	3747	900
14:35:17	3750	900
14:36:17	3761	945
14:37:17	3765	945
14:38:17	3767	945
14:39:17	3771	945
14:40:17	3773	945
14:41:17	3776	945
14:42:17	3676	0
14:43:17	3669	0
14:44:17	3660	0
14:45:17	3654	0
14:46:17	3648	0
14:47:17	3641	0
14:48:17	29	0
14:49:17	20	0
14:50:17	22	0
14:51:17	22	0
14:52:17	22	0
14:53:17	22	0
14:54:17	23	0
14:55:17	23	0
14:56:17	23	0
14:57:17	23	0
14:58:17	23	0
14:59:17	23	0
15:00:17	14	0
15:01:17	14	0
15:02:17	14	0
15:03:17	14	0
15:04:17	13	0
15:05:17	13	0
15:06:17	14	0
15:07:17	14	0
15:08:17	14	0
15:09:17	14	0
15:10:17	14	0
15:11:17	14	0
15:12:17	14	0
15:13:17	14	0
15:14:17	14	0
15:15:17	14	0
15:16:17	14	0
15:17:17	14	0
15:18:17	14	0
15:19:89	15	0
15:20:17	14	0
15:21:17	14	0
15:22:17	14	0

15:23:17	14	0
15:24:17	14	0
15:25:17	14	0
15:26:17	14	0
15:27:17	14	0
15:28:17	14	0
15:29:17	14	0
15:30:17	14	0
15:31:17	14	0
15:32:17	14	0
15:33:17	14	0
15:34:17	14	0
15:35:17	14	0
15:36:17	14	0
15:37:17	14	0
15:38:17	14	0
15:39:17	14	0
15:40:17	14	0
15:41:17	14	0
15:42:17	14	0

NVA-1135B

STEP RATE TEST ANALYSIS SHEET
HOBBS DISTRICT

Date 1-19-89LEASE NVAU
WELL 206FIELD NO. VACUUM A65
D19-175-34EMETERED INJECTION RATE 139 BWPD @ 1545 PSI
RECOMMENDED INJ'N RATE 195 min BWPD @ 1719 PSIWELL TD 8800 WELL PBTD 8710
PACKER DEPTH 8510 TBG SIZE & TYPE 2 3/4
112TOP OF PERFORATIONS 8577
BTM OF PERFORATIONS 8763
OPENHOLE INTERVAL _____DATE OF TEST 10-19-89 PE-TEST
PREVIOUS TEST DATE 9- -89
TEST PERFORMED BY LSRECOMMENDED VOLUME STEPS 100 BWPD @ 15 MIN. INTERVALSPROGRAMMED SAMPLE RATE 60 SECONDSPROGRAMMED PRESSURE WINDOW 4 PSI

CURRENT MAXIMUM PERMITTED PRESSURE	TESTED PARTING PRESSURE	RECOMMENDED INJECTION PRESSURE
<u>1719</u> PSIG	<u>2360</u> PSIG	<u>2310</u> PSIG

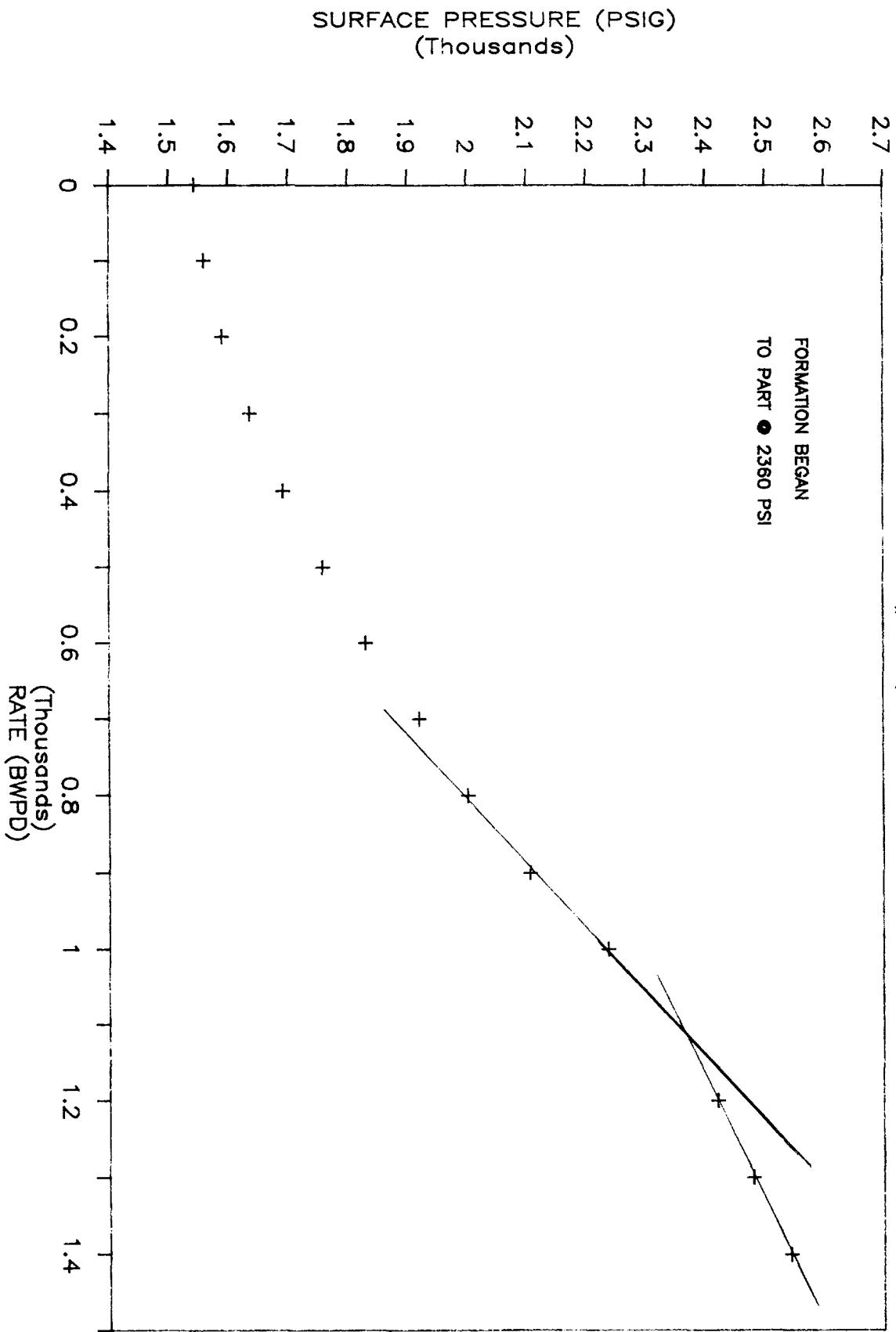
OPERATIONS ENGR REMARKS Name LS Date 10-20-89
Additional gain test rate test. send report after 10/24/89. Recommendation to be
to HAD.

RESERVOIR ENGR REMARKS Name MKM Date 10-31-89
Agree Good test.
SUBMITTED TO E+R 10/31/89.

REGULATORY LETTER FILED FOR RATE INCREASE: YES _____ NO _____
 (Attach copy) Date _____

STEP RATE TEST

INVAU #206 (RUN 10 19 89)



STEP RATE TEST

COMPANY: MOBIL EXPLORATION AND PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 206
 LOCATION: D19-T17S-R34E
 TEST DATE: 10-19-89
 PERFORATIONS: 8597' - 8763'
 TOTAL DEPTH: 8800'
 PLUG BACK TD: 8780'
 PACKER SET AT: 8510'

TIME	SURFACE PRESSURE	RATE (BWPD)

11:51:25	13	0
11:52:25	13	0
11:53:25	13	0
11:54:25	13	0
11:55:25	13	0
11:56:25	13	0
11:57:25	13	0
11:58:25	13	0
11:59:25	13	0
12:00:25	13	0
12:01:25	13	0
12:02:25	13	0
12:03:25	13	0
12:04:25	13	0
12:05:25	13	0
12:06:25	13	0
12:07:25	13	0
12:08:25	13	0
12:09:25	13	0
12:10:25	13	0
12:11:25	10	0
12:12:25	7	0
12:13:25	13	0
12:14:25	13	0
12:15:25	14	0
12:16:25	14	0
12:17:25	14	0
12:18:25	14	0
12:19:25	14	0
12:20:25	14	0
12:21:25	14	0
12:22:25	14	0
12:23:25	14	0
12:24:25	14	0

12:25:25	14	0
12:26:25	15	0
12:27:25	14	0
12:28:25	15	0
12:29:25	15	0
12:30:25	15	0
12:31:25	15	0
12:32:25	1559	0
12:33:25	1558	0
12:34:25	1569	0
12:35:25	1553	0
12:36:25	1555	0
12:37:25	1554	0
12:38:25	1553	0
12:39:25	1553	0
12:40:25	1548	0
12:41:25	1546	0
12:42:25	1544	0
12:43:25	1542	0
12:44:25	1541	0
12:45:25	1544	0
12:46:25	1547	100
12:47:25	1548	100
12:48:25	1549	100
12:49:25	1549	100
12:50:25	1550	100
12:51:25	1550	100
12:52:25	1550	100
12:53:25	1550	100
12:54:25	1550	100
12:55:25	1550	100
12:56:25	1550	100
12:57:25	1551	100
12:58:25	1550	100
12:59:25	1557	100
13:00:25	1559	100
13:01:25	1561	200
13:02:25	1562	200
13:03:25	1564	200
13:04:25	1566	200
13:05:25	1567	200
13:06:25	1569	200
13:07:25	1570	200
13:08:25	1571	200
13:09:25	1572	200
13:10:25	1573	200
13:11:25	1574	200
13:12:25	1575	200
13:13:25	1576	200
13:14:25	1585	200
13:15:25	1590	200
13:16:25	1592	300
13:17:25	1595	300
13:18:25	1598	300
13:19:25	1600	300
13:20:25	1602	300

13:21:25	1604	300
13:22:25	1606	300
13:23:25	1608	300
13:24:25	1610	300
13:25:25	1611	300
13:26:25	1612	300
13:27:25	1614	300
13:28:25	1616	300
13:29:25	1632	300
13:30:25	1636	300
13:31:25	1640	400
13:32:25	1643	400
13:33:25	1646	400
13:34:25	1649	400
13:35:25	1651	400
13:36:25	1654	400
13:37:25	1656	400
13:38:25	1659	400
13:39:25	1661	400
13:40:25	1663	400
13:41:25	1665	400
13:42:25	1668	400
13:43:25	1670	400
13:44:25	1689	400
13:45:25	1692	400
13:46:25	1696	500
13:47:25	1699	500
13:48:25	1703	500
13:49:25	1706	500
13:50:25	1709	500
13:51:25	1712	500
13:52:25	1715	500
13:53:25	1718	500
13:54:25	1721	500
13:55:25	1723	500
13:56:25	1726	500
13:57:25	1728	500
13:58:25	1731	500
13:59:25	1741	500
14:00:25	1758	500
14:01:25	1763	600
14:02:25	1767	600
14:03:25	1771	600
14:04:25	1776	600
14:05:25	1779	600
14:06:25	1783	600
14:07:25	1786	600
14:08:25	1789	600
14:09:25	1793	600
14:10:25	1796	600
14:11:25	1799	600
14:12:25	1802	600
14:13:25	1805	600
14:14:25	1808	600
14:15:25	1830	600
14:16:25	1835	700

14:17:25	1840	700
14:18:25	1844	700
14:19:25	1849	700
14:20:25	1852	700
14:21:25	1856	700
14:22:25	1860	700
14:23:25	1863	700
14:24:25	1867	700
14:25:25	1870	700
14:26:25	1874	700
14:27:25	1877	700
14:28:25	1880	700
14:29:25	1912	700
14:30:25	1920	700
14:31:25	1935	800
14:32:25	1930	800
14:33:25	1930	800
14:34:25	1934	800
14:35:25	1938	800
14:36:25	1942	800
14:37:25	1946	800
14:38:25	1950	800
14:39:25	1953	800
14:40:25	1957	800
14:41:25	1960	800
14:42:25	1964	800
14:43:25	1967	800
14:44:25	1980	800
14:45:25	2002	800
14:46:25	2019	900
14:47:25	2025	900
14:48:25	2019	900
14:49:25	2025	900
14:50:25	2029	900
14:51:25	2034	900
14:52:25	2040	900
14:53:25	2041	900
14:54:25	2045	900
14:55:25	2047	900
14:56:25	2052	900
14:57:25	2066	900
14:58:25	2070	900
14:59:25	2076	900
15:00:25	2106	900
15:01:25	2112	1.000
15:02:25	2118	1.000
15:03:25	2120	1.000
15:04:25	2124	1.000
15:05:25	2128	1.000
15:06:25	2133	1.000
15:07:25	2137	1.000
15:08:25	2141	1.000
15:09:25	2146	1.000
15:10:25	2150	1.000
15:11:25	2154	1.000
15:12:25	2158	1.000

15:13:25	2162	1000
15:14:25	2227	1000
15:15:25	2237	1000
15:16:25	2255	1200
15:17:25	2269	1200
15:18:25	2281	1200
15:19:25	2298	1200
15:20:25	2315	1200
15:21:25	2328	1200
15:22:25	2340	1200
15:23:25	2358	1200
15:24:25	2372	1200
15:25:25	2388	1200
15:26:25	2396	1200
15:27:25	2403	1200
15:28:25	2410	1200
15:29:25	2414	1200
15:30:25	2420	1200
15:31:25	2426	1300
15:32:25	2431	1300
15:33:25	2436	1300
15:34:25	2444	1300
15:35:25	2452	1300
15:36:25	2454	1300
15:37:25	2459	1300
15:38:25	2460	1300
15:39:25	2460	1300
15:40:25	2462	1300
15:41:25	2469	1300
15:42:25	2470	1300
15:43:25	2471	1300
15:44:25	2473	1300
15:45:25	2480	1300
15:46:25	2486	1400
15:47:25	2492	1400
15:48:25	2497	1400
15:49:25	2502	1400
15:50:25	2507	1400
15:51:25	2512	1400
15:52:25	2516	1400
15:53:25	2520	1400
15:54:25	2525	1400
15:55:25	2529	1400
15:56:25	2534	1400
15:57:25	2538	1400
15:58:25	2542	1400
15:59:25	2331	1400
16:00:25	2286	1400
16:01:25	2261	0
16:02:25	2243	0
16:03:25	2227	0
16:04:25	2213	0
16:05:25	2200	0
16:06:25	2187	0
16:07:25	2176	0
16:08:25	2166	0

16:09:25	22	0
16:10:25	14	0
16:11:25	14	0
16:12:25	14	0
16:13:25	14	0
16:14:25	14	0
16:15:25	14	0
16:16:25	14	0
16:17:25	14	0
16:18:25	14	0
16:19:25	14	0
16:20:25	14	0
16:21:25	14	0
16:22:25	14	0
16:23:25	14	0
16:24:25	14	0
16:25:25	14	0
16:26:25	14	0
16:27:25	14	0
16:28:25	14	0
16:29:25	14	0
16:30:25	14	0
16:31:25	14	0
16:32:25	14	0
16:33:25	14	0
16:34:25	14	0
16:35:25	14	0
16:36:25	14	0
16:37:25	14	0
16:38:25	14	0
16:39:25	14	0
16:40:25	14	0
16:41:25	14	0
16:42:25	14	0
16:43:25	14	0
16:44:25	14	0
16:45:25	14	0
16:46:25	14	0
16:47:25	14	0
16:48:25	14	0
16:49:25	14	0
16:50:25	14	0
16:51:25	14	0
16:52:25	14	0
16:53:25	14	0

STEP RATE TEST ANALYSIS SHEET
HOBBS DISTRICT

Date 9-2-89

LEASE NVAH
WELL 230

FIELD J 13-7195-234E

METERED INJECTION RATE 155 BWPD @ 4099 PSI
RECOMMENDED INJ'N RATE 283 MAX BWPD @ 4010 PSI

WELL TD 10299 WELL PBTD 10076
PACKER DEPTH 9297 TBG SIZE & TYPE 5 7/8
11.5

TOP OF PERFORATIONS 9569
BTM OF PERFORATIONS 8981
OPENHOLE INTERVAL

DATE OF TEST 9-2-89
PREVIOUS TEST DATE
TEST PERFORMED BY LGD

RECOMMENDED VOLUME STEPS 100 BWPD @ 15 MIN. INTERVALS

PROGRAMMED SAMPLE RATE 15 SECONDS

PROGRAMMED PRESSURE WINDOW 5 PSI

CURRENT MAXIMUM PERMITTED PRESSURE	TESTED PARTING PRESSURE	RECOMMENDED INJECTION PRESSURE
<u>2015</u> PSIG	<u>12 PART</u> PSIG	<u>4128</u> PSIG

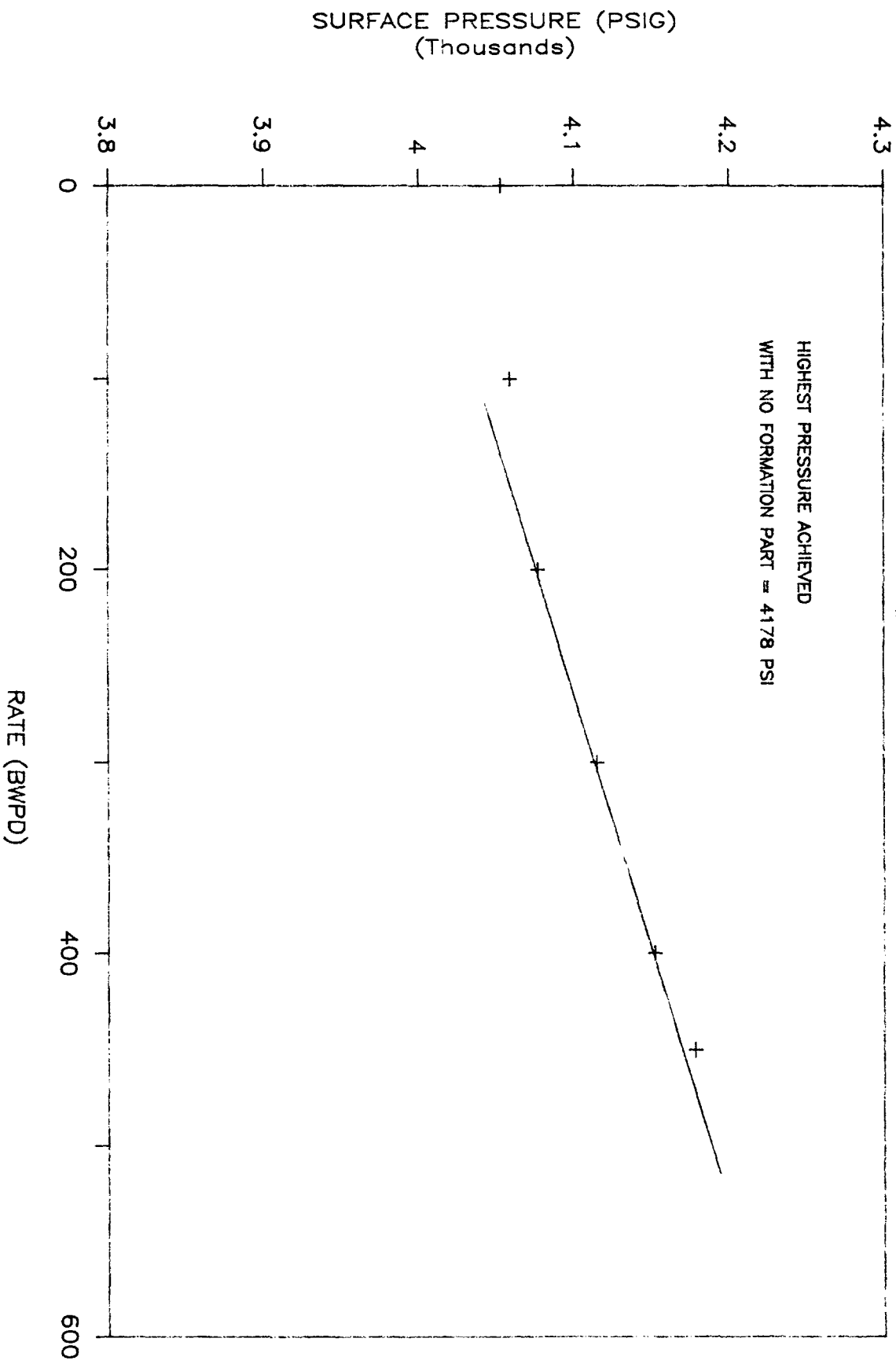
OPERATIONS ENGR REMARKS Name DGE Date 10-30-89
Last increase received 9-88. Pres rate = max 283 under 4010 psi. Ran out of water, mixer
test completed, yet never saw formation fracture. Pres to given - to 10000

RESERVOIR ENGR REMARKS Name MMU Date 10-31-89
Submitted to ETR 10/31/89

REGULATORY LETTER FILED FOR RATE INCREASE: YES _____ NO _____
(Attach copy) Date _____

STEP RATE TEST

NVAU #230 (RUN 09 20 89)



STEP RATE TEST

COMPANY: MOBIL EXPLORATION AND PRODUCING U.S. INC.
LEASE: NORTH VACUUM ABO UNIT
WELL NO. 230
LOCATION: J13-T17S-R34E
TEST DATE: 09-20-89
PERFORATIONS: 8529' - 8781'
TOTAL DEPTH: 10299'
PLUG BACK TD: 10086'
PACKER SET AT: 8287'

TIME	SURFACE PRESSURE	RATE (BWPd)

08:54:17	4080	0
08:55:17	4080	0
08:56:17	4080	0
08:57:17	4080	0
08:58:17	4080	0
08:59:17	4079	0
09:00:17	4080	0
09:01:17	4080	0
09:02:17	4080	0
09:03:17	4078	0
09:04:17	4066	0
09:05:17	4065	0
09:06:17	4063	0
09:07:17	4062	0
09:08:17	4061	0
09:09:17	4059	0
09:10:17	4058	0
09:11:17	4057	0
09:12:17	4056	0
09:13:17	4055	0
09:14:17	4054	0
09:15:17	4053	0
09:16:17	4057	100
09:17:17	4058	100
09:18:17	4059	100
09:19:17	4059	100
09:20:17	4059	100
09:21:17	4059	100
09:22:17	4059	100
09:23:17	4059	100
09:24:17	4060	100
09:25:17	4060	100
09:26:17	4059	100
09:27:17	4059	100
09:28:17	4059	100

09:29:17	4059	100
09:30:17	4059	100
09:31:17	4069	200
09:32:17	4071	200
09:33:17	4072	200
09:34:17	4073	200
09:35:17	4074	200
09:36:17	4074	200
09:37:17	4075	200
09:38:17	4076	200
09:39:17	4076	200
09:40:17	4076	200
09:41:17	4076	200
09:42:17	4076	200
09:43:17	4076	200
09:44:17	4076	200
09:45:17	4077	200
09:46:17	4096	300
09:47:17	4098	300
09:48:17	4099	300
09:49:17	4100	300
09:50:17	4102	300
09:51:17	4103	300
09:52:17	4104	300
09:53:17	4105	300
09:54:17	4105	300
09:55:17	4110	300
09:56:17	4111	300
09:57:17	4112	300
09:58:17	4113	300
09:59:17	4114	300
10:00:17	4115	300
10:01:17	4138	400
10:02:17	4140	400
10:03:17	4141	400
10:04:17	4143	400
10:05:17	4144	400
10:06:17	4145	400
10:07:17	4146	400
10:08:17	4148	400
10:09:17	4148	400
10:10:17	4148	400
10:11:17	4150	400
10:12:17	4150	400
10:13:17	4151	400
10:14:17	4152	400
10:15:17	4152	400
10:16:17	4167	450
10:17:17	4169	450
10:18:17	4170	450
10:19:17	4170	450
10:20:17	4171	450
10:21:17	4172	450
10:22:17	4173	450
10:23:17	4174	450
10:24:17	4175	450

10:25:17	4176	450
10:26:17	4176	450
10:27:17	4177	450
10:28:17	4178	450
10:29:17	4149	0
10:30:17	4122	0
10:31:17	4119	0
10:32:17	4116	0
10:33:17	4114	0
10:34:17	4111	0
10:35:17	4109	0
10:36:17	4108	0
10:37:17	44	0
10:38:17	16	0
10:39:17	15	0
10:40:17	15	0
10:41:17	13	0
10:42:17	13	0
10:43:17	13	0
10:44:17	12	0
10:45:17	12	0
10:46:17	13	0
10:47:17	13	0
10:48:17	13	0
10:49:17	12	0
10:50:17	12	0
10:51:17	12	0
10:52:17	13	0
10:53:17	13	0
10:54:17	13	0
10:55:17	13	0
10:56:17	12	0
10:57:17	13	0
10:58:17	13	0
10:59:17	13	0
11:00:17	12	0
11:01:17	13	0
11:02:17	12	0
11:03:17	13	0
11:04:17	13	0
11:05:17	13	0
11:06:17	12	0
11:07:17	12	0
11:08:17	13	0
11:09:17	13	0
11:10:17	13	0
11:11:17	13	0
11:12:17	12	0
11:13:17	12	0
11:14:17	12	0
11:15:17	12	0
11:16:17	12	0
11:17:17	12	0
11:18:17	12	0
11:19:17	12	0
11:20:17	12	0

11:21:17	12	0
11:22:17	12	0
11:23:17	12	0
11:24:17	12	0
11:25:17	12	0
11:26:17	12	0
11:27:17	13	0
11:28:17	13	0
11:29:17	13	0
11:30:17	12	0
11:31:17	12	0
11:32:17	12	0
11:33:17	13	0
11:34:17	12	0
11:35:17	13	0
11:36:17	13	0
11:37:17	12	0
11:38:17	12	0
11:39:89	11	0
11:40:17	12	0
11:41:17	12	0
11:42:17	12	0



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

'89 NOV 27 HOBBS DISTRICT OFFICE

November 9, 1989

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:

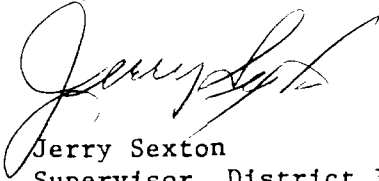
I have examined the step rate test for the:

Mobil Expl. & Prod, Inc.	North Vacuum Abo Unit 156-J	23-17-34
Operator	Lease & Well No.	Unit
		S-T-R

and my recommendations are as follows:

I would RAISE IT 1000 P

Very truly yours

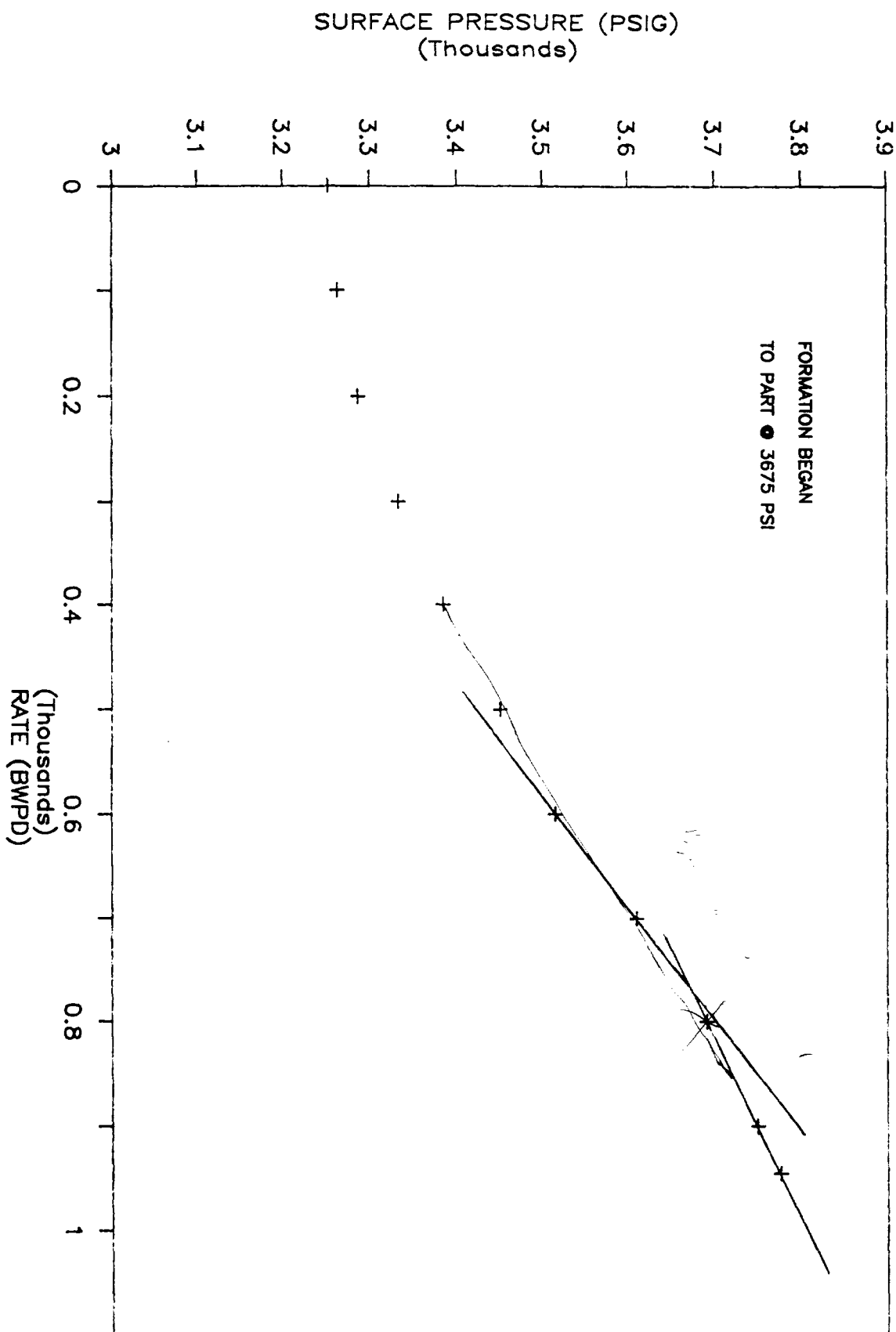


Jerry Sexton
Supervisor, District I

/bp

STEP RATE TEST

NVAU #156 (RUN 09-20-89)





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

November 9, 1989

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 Expl. & Prod, Inc.	North Vacuum Abo Unit 206-D	19-17-34
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

November 9, 1989

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 Expl. & Prod, Inc.	North Vacuum Abo Unit #230-J	13-17-34
Operator	Lease & Well No.	Unit
		S-T-R

and my recommendations are as follows:

*Probably started rate too high Slope
is too flat not to be fractured*

Very truly yours

Jerry Sexton
Jerry Sexton
Supervisor, District I

/bp



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

November 9, 1989

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 Expl. & Prod, Inc.	North Vacuum Abo Unit	136-D	26-17-34
Operator	Lease & Well No.	Unit	S-T-R

and my recommendations are as follows:

OK

Very truly yours

Jerry Sexton
Supervisor, District I

/bp

Mobil Exploration & Producing U.S. Inc.

April 17, 1989

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

RECEIVED

APR 20 1989

OIL CONSERVATION DIV.
SANTA FE

INJECTION PRESSURE INCREASE REQUEST
NORTH VACUUM ABO UNIT
WELL NOS. 162, 201, 205 & 229
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

Under the provisions of Order No. PMX-138 dated November 12, 1985; and Order No. PMX-140 dated March 7, 1986, permission was granted to inject water into the Abo formation for the subject well. The order limited the pressure on the injection well to no more than 0.2 psi. per foot to the uppermost injection interval. A step-rate test for this well 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'	4010 psig	4250 psig
WELL NO. 201 UNIT J, SEC. 10 T-17-S, R-34-E Order No. PMX-140	8670-8733'	2779 psig	3450 psig
WELL NO. 205 UNIT B, SEC. 24 T-17-S, R-34-E Order No. PMX-138	8502-8570'	4174 psig	4320 psig

State of New Mexico
North Vacuum Abo Unit
Well Nos. 162, 201, 205 & 229
Lea County, New Mexico

-2-

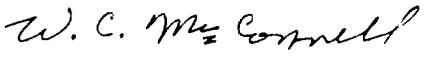
April 17, 1989

WELL NO. 229			
UNIT L, SEC. 10	8745-8810'	3755 psig	4140 psig
T-17-S, R-34-E			
Order No. PMX-140			

Rates after parting pressure were limited by the maximum available system pressure for wells No. 162, 205 and 229.

Enclosed is a copy of the Step-rate test.

Yours very truly,


For M. E. Sweeney
Environmental & Regulatory Manager

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

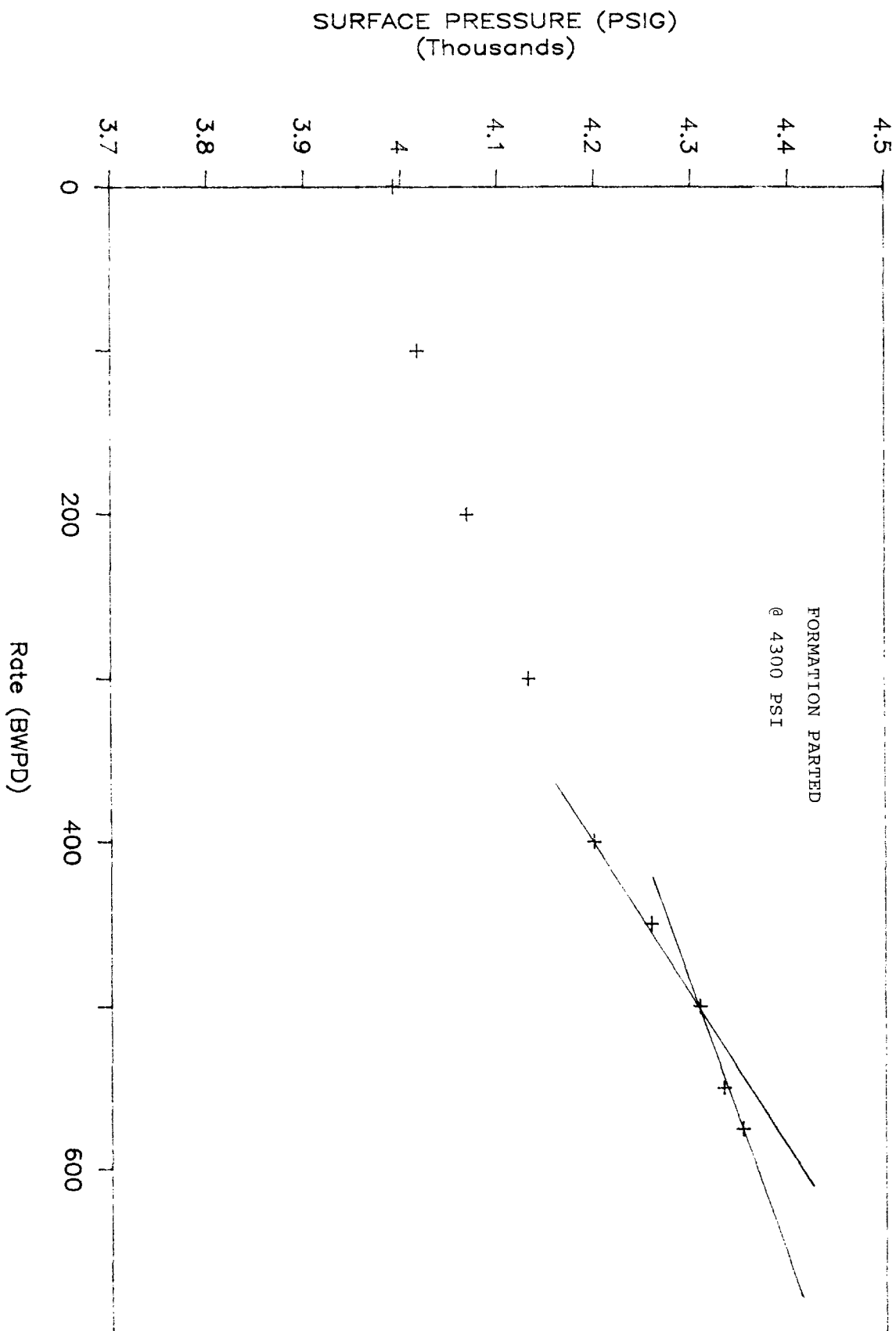
CCSmith/arr

Attachments

cc: District Director OCD - Hobbs

Step Rate Test

NVAU #162 (Run 5/30/89)



STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO.: 162
 LOCATION: J11-T17S-R34E
 TEST DATE: 3/30/89
 PERFORATIONS: 8552' - 8634'
 TOTAL DEPTH: 8750'
 PLUG BACK TD: 8693'
 PACKER SET AT: 8500'

TIME	SURFACE PRESSURE	RATE (BWPD)

09:47:29	20	0
09:48:29	20	0
09:49:29	20	0
09:50:29	20	0
09:51:29	20	0
09:52:29	20	0
09:53:29	20	0
09:54:29	19	0
09:55:29	19	0
09:56:29	19	0
09:57:29	20	0
09:58:29	20	0
09:59:29	20	0
10:00:29	19	0
10:01:29	19	0
10:02:29	19	0
10:03:29	19	0
10:04:29	20	0
10:05:29	20	0
10:06:29	19	0
10:07:29	4000	0
10:08:29	4003	0
10:09:29	4003	0
10:10:29	4004	0
10:11:29	4004	0
10:12:29	4004	0
10:13:29	4004	0
10:14:29	4004	0
10:15:29	4003	0
10:16:29	4003	0
10:17:29	4003	0
10:18:29	4003	0
10:19:29	4003	0
10:20:29	4003	0
10:21:29	4002	0
10:22:29	4003	0
10:23:29	4003	0
10:24:29	4003	0
10:25:29	4002	0
10:26:29	4002	0
10:27:29	4001	0

10:28:29	4001	0
10:29:29	4000	0
10:30:29	4000	0
10:31:29	4000	0
10:32:29	4000	0
10:33:29	3999	0
10:34:29	3999	0
10:35:29	3999	0
10:36:29	3999	0
10:37:29	3998	0
10:38:29	3998	0
10:39:29	3998	0
10:40:29	3998	0
10:41:29	3998	0
10:42:29	3997	0
10:43:29	3997	0
10:44:29	3997	0
10:45:29	3997	0
10:46:29	3997	0
10:47:29	3997	0
10:48:29	3996	0
10:49:29	3996	0
10:50:29	3996	0
10:51:29	3996	0
10:52:29	3996	0
10:53:29	3995	0
10:54:29	3995	0
10:55:29	3995	0
10:56:29	3995	0
10:57:29	3995	0
10:58:29	3995	0
10:59:29	3982	0
11:00:29	3990	0
11:01:29	3986	0
11:02:29	3992	0
11:03:29	3993	0
11:04:29	3995	100
11:05:29	3996	100
11:06:29	3996	100
11:07:29	3997	100
11:08:29	3998	100
11:09:29	3998	100
11:10:29	3999	100
11:11:29	4000	100
11:12:29	4001	100
11:13:29	4001	100
11:14:29	4002	100
11:15:29	4003	100
11:16:29	4003	100
11:17:29	4014	100
11:18:29	4017	100
11:19:29	4021	200
11:20:29	4024	200
11:21:29	4026	200
11:22:29	4028	200
11:23:29	4031	200
11:24:29	4033	200
11:25:29	4035	200
11:26:29	4037	200

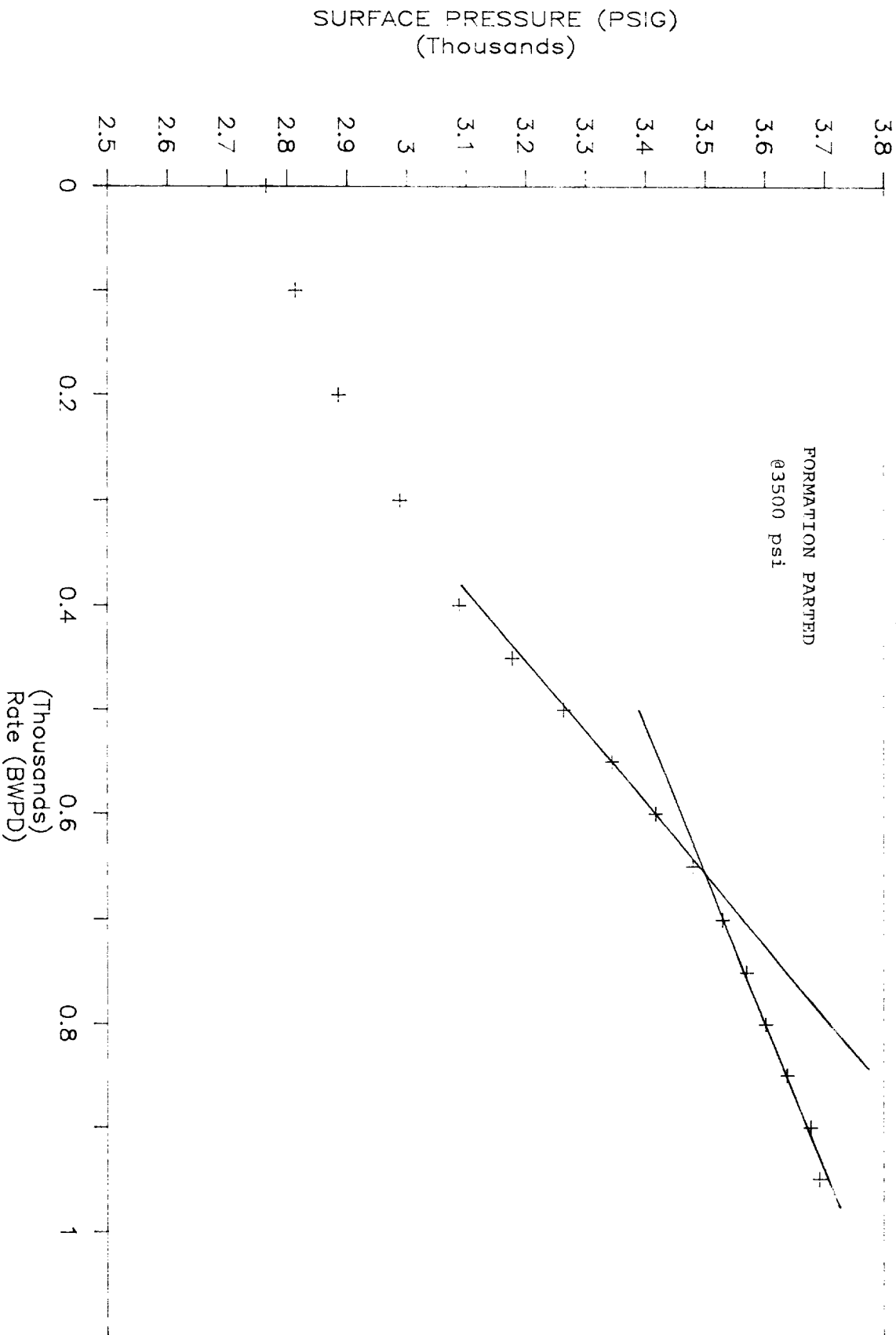
11:27:29	4039	200
11:28:29	4042	200
11:29:29	4043	200
11:30:29	4045	200
11:31:29	4049	200
11:32:29	4061	200
11:33:29	4068	200
11:34:29	4070	300
11:35:29	4074	300
11:36:29	4076	300
11:37:29	4080	300
11:38:29	4082	300
11:39:29	4086	300
11:40:29	4089	300
11:41:29	4092	300
11:42:29	4095	300
11:43:29	4097	300
11:44:29	4101	300
11:45:29	4102	300
11:46:29	4118	300
11:47:29	4126	300
11:48:29	4132	300
11:49:29	4136	400
11:50:29	4140	400
11:51:29	4145	400
11:52:29	4149	400
11:53:29	4153	400
11:54:29	4156	400
11:55:29	4160	400
11:56:29	4164	400
11:57:29	4167	400
11:58:29	4170	400
11:59:29	4174	400
12:00:29	4175	400
12:01:29	4189	400
12:02:29	4194	400
12:03:29	4199	400
12:04:29	4203	450
12:05:29	4207	450
12:06:29	4209	450
12:07:29	4213	450
12:08:29	4216	450
12:09:29	4220	450
12:10:29	4223	450
12:11:29	4225	450
12:12:29	4229	450
12:13:29	4231	450
12:14:29	4234	450
12:15:29	4237	450
12:16:29	4240	450
12:17:29	4254	450
12:18:29	4258	450
12:19:29	4261	500
12:20:29	4266	500
12:21:29	4268	500
12:22:29	4271	500
12:23:29	4274	500
12:24:29	4277	500
12:25:29	4280	500

12:26:29	4282	500
12:27:29	4285	500
12:28:29	4287	500
12:29:29	4290	500
12:30:29	4292	500
12:31:29	4302	500
12:32:29	4305	500
12:33:29	4308	500
12:34:29	4311	550
12:35:29	4314	550
12:36:29	4316	550
12:37:29	4318	550
12:38:29	4320	550
12:39:29	4323	550
12:40:29	4325	550
12:41:29	4327	550
12:42:29	4329	550
12:43:29	4331	550
12:44:29	4333	550
12:45:29	4336	575
12:46:29	4339	575
12:47:29	4341	575
12:48:29	4342	575
12:49:29	4344	575
12:50:29	4346	575
12:51:29	4348	575
12:52:29	4352	575
12:53:29	37	0
12:54:29	38	0

Step Rate Test

NVAU #201 (Run 5-15-89)

FORMATION PARTED
@3500 psi



STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO
 WELL NO.: 201
 LOCATION: J10-T17S-R34E
 TEST DATE: 03/15/89
 PERFORATIONS: 8670' - 8733'
 TOTAL DEPTH: 12740'
 PLUG BACK TD: 8906'
 PACKER SET AT: 8600'

TIME	SURFACE PRESSURE	RATE (BWPD)
07:35:25	79	0
07:36:25	80	0
07:37:25	80	0
07:38:25	80	0
07:39:25	80	0
07:40:25	80	0
07:41:25	80	0
07:42:25	80	0
07:43:25	80	0
07:44:25	80	0
07:45:25	81	0
07:46:25	80	0
07:47:25	81	0
07:48:25	80	0
07:49:25	81	0
07:50:25	81	0
07:51:25	81	0
07:52:25	81	0
07:53:25	81	0
07:54:25	81	0
07:55:25	2760	0
07:56:25	2758	0
07:57:25	2755	0
07:58:25	2752	0
07:59:25	2752	0
08:00:25	2751	0
08:01:25	2743	0
08:02:25	2761	0
08:03:25	2765	0
08:04:25	2769	100
08:05:25	2772	100
08:06:25	2774	100
08:07:25	2776	100
08:08:25	2778	100
08:09:25	2780	100
08:10:25	2781	100
08:11:25	2783	100
08:12:25	2784	100

08:13:25	2785	100
08:14:25	2787	100
08:15:25	2788	100
08:16:25	2800	100
08:17:25	2808	100
08:18:25	2814	100
08:19:25	2819	200
08:20:25	2823	200
08:21:25	2827	200
08:22:25	2830	200
08:23:25	2834	200
08:24:25	2838	200
08:25:25	2841	200
08:26:25	2844	200
08:27:25	2847	200
08:28:25	2849	200
08:29:25	2852	200
08:30:25	2856	200
08:31:25	2863	200
08:32:25	2877	200
08:33:25	2886	200
08:34:25	2894	300
08:35:25	2900	300
08:36:25	2906	300
08:37:25	2912	300
08:38:25	2917	300
08:39:25	2922	300
08:40:25	2927	300
08:41:25	2931	300
08:42:25	2936	300
08:43:25	2940	300
08:44:25	2944	300
08:45:25	2948	300
08:46:25	2967	300
08:47:25	2980	300
08:48:25	2989	300
08:49:25	2998	400
08:50:25	3005	400
08:51:25	3012	400
08:52:25	3019	400
08:53:25	3025	400
08:54:25	3031	400
08:55:25	3037	400
08:56:25	3043	400
08:57:25	3048	400
08:58:25	3053	400
08:59:25	3059	400
09:00:25	3064	400
09:01:25	3074	400
09:02:25	3082	400
09:03:25	3089	400
09:04:25	3096	450
09:05:25	3102	450
09:06:25	3105	450
09:07:25	3112	450
09:08:25	3117	450

09:09:25	3122	450
09:10:25	3127	450
09:11:25	3132	450
09:12:25	3136	450
09:13:25	3141	450
09:14:25	3145	450
09:15:25	3150	450
09:16:25	3161	450
09:17:25	3170	450
09:18:25	3178	450
09:19:25	3185	500
09:20:25	3192	500
09:21:25	3197	500
09:22:25	3203	500
09:23:25	3208	500
09:24:25	3213	500
09:25:25	3218	500
09:26:25	3223	500
09:27:25	3228	500
09:28:25	3232	500
09:29:25	3236	500
09:30:25	3241	500
09:31:25	3250	500
09:32:25	3258	500
09:33:25	3264	500
09:34:25	3269	550
09:35:25	3274	550
09:36:25	3279	550
09:37:25	3283	550
09:38:25	3287	550
09:39:25	3292	550
09:40:25	3296	550
09:41:25	3301	550
09:42:25	3305	550
09:43:25	3308	550
09:44:25	3312	550
09:45:25	3316	550
09:46:25	3329	550
09:47:25	3338	550
09:48:25	3345	550
09:49:25	3351	600
09:50:25	3357	600
09:51:25	3362	600
09:52:25	3366	600
09:53:25	3371	600
09:54:25	3375	600
09:55:25	3379	600
09:56:25	3383	600
09:57:25	3387	600
09:58:25	3391	600
09:59:25	3395	600
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10:02:25	3414	600
10:03:25	3418	600
10:04:25	3423	650

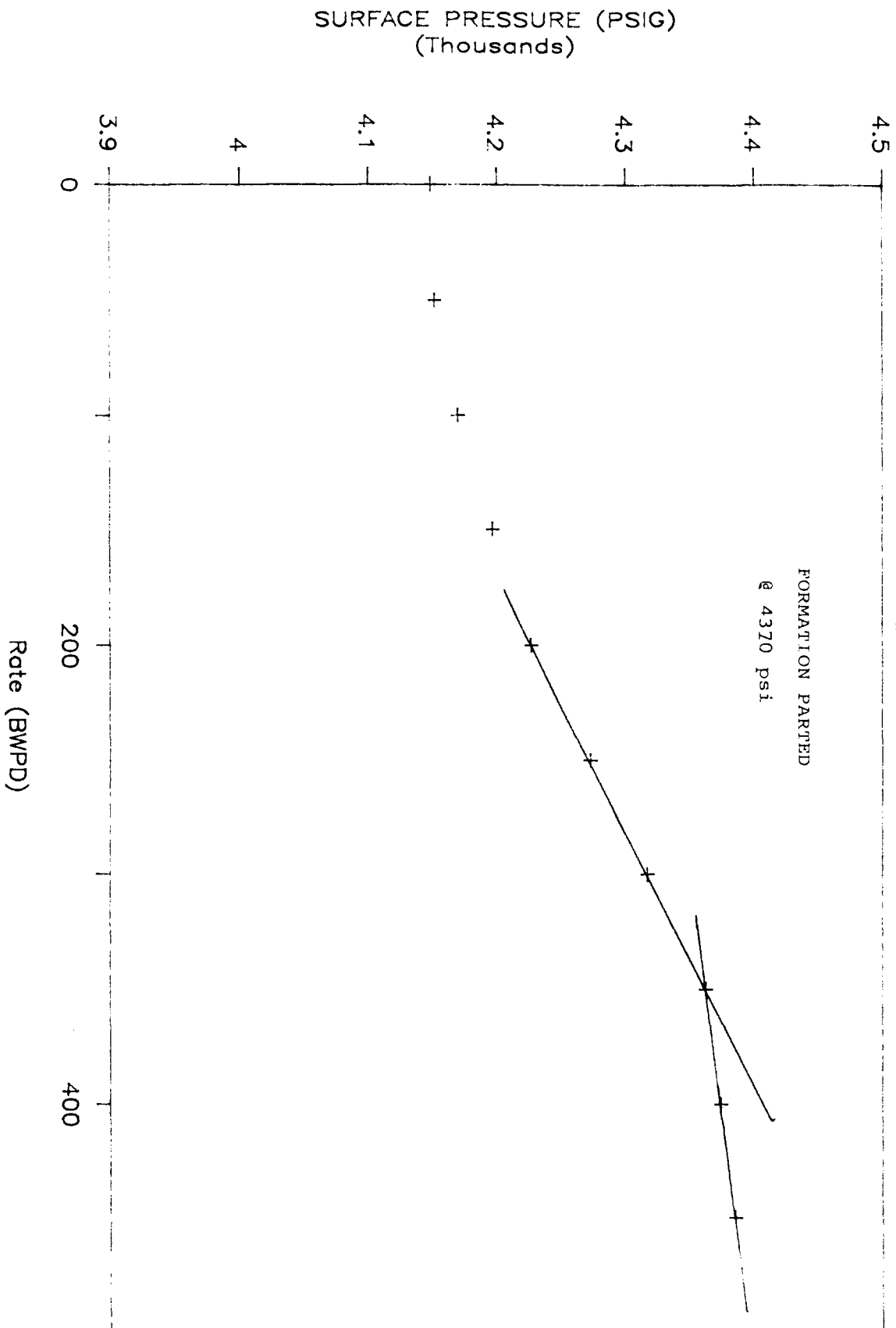
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10:06:25	3429	650
10:07:25	3432	650
10:08:25	3436	650
10:09:25	3439	650
10:10:25	3440	650
10:11:25	3444	650
10:12:25	3448	650
10:13:25	3450	650
10:14:25	3453	650
10:15:25	3457	650
10:16:25	3469	650
10:17:25	3474	650
10:18:25	3480	650
10:19:25	3484	700
10:20:25	3487	700
10:21:25	3490	700
10:22:25	3492	700
10:23:25	3494	700
10:24:25	3497	700
10:25:25	3500	700
10:26:25	3502	700
10:27:25	3504	700
10:28:25	3507	700
10:29:25	3509	700
10:30:25	3512	700
10:31:25	3522	700
10:32:25	3527	700
10:33:25	3530	700
10:34:25	3533	750
10:35:25	3536	750
10:36:25	3538	750
10:37:25	3540	750
10:38:25	3542	750
10:39:25	3544	750
10:40:25	3547	750
10:41:25	3548	750
10:42:25	3549	750
10:43:25	3551	750
10:44:25	3552	750
10:45:25	3554	750
10:46:25	3562	750
10:47:25	3567	750
10:48:25	3570	750
10:49:25	3572	800
10:50:25	3574	800
10:51:25	3576	800
10:52:25	3577	800
10:53:25	3579	800
10:54:25	3580	800
10:55:25	3582	800
10:56:25	3582	800
10:57:25	3582	800
10:58:25	3583	800
10:59:25	3584	800
11:00:25	3586	800

11:01:25	3596	800
11:02:25	3599	800
11:03:25	3602	800
11:04:25	3603	850
11:05:25	3606	850
11:06:25	3607	850
11:07:25	3609	850
11:08:25	3611	850
11:09:25	3612	850
11:10:25	3613	850
11:11:25	3615	850
11:12:25	3616	850
11:13:25	3618	850
11:14:25	3620	850
11:15:25	3621	850
11:16:25	3633	850
11:17:25	3636	850
11:18:25	3638	850
11:19:25	3640	900
11:20:25	3642	900
11:21:25	3644	900
11:22:25	3645	900
11:23:25	3646	900
11:24:25	3648	900
11:25:25	3649	900
11:26:25	3650	900
11:27:25	3652	900
11:28:25	3653	900
11:29:25	3655	900
11:30:25	3657	900
11:31:25	3671	900
11:32:25	3675	900
11:33:25	3677	900
11:34:25	3680	950
11:35:25	3681	950
11:36:25	3683	950
11:37:25	3685	950
11:38:25	3685	950
11:39:25	3686	950
11:40:25	3687	950
11:41:25	3689	950
11:42:25	3689	950
11:43:25	3690	950
11:44:25	3692	950
11:45:25	3693	0
11:46:25	3636	0
11:47:25	3592	0
11:48:25	3569	0
11:49:25	3553	0
11:50:25	3538	0
11:51:25	3525	0
11:52:25	3512	0
11:53:25	29	0
11:54:25	31	0
11:55:25	31	0
11:56:25	31	0

11:57:25	32	0
11:58:25	32	0
11:59:25	32	0
12:00:25	33	0
12:01:25	33	0
12:02:25	33	0
12:03:25	33	0
12:04:25	33	0
12:05:25	33	0
12:06:25	34	0
12:07:25	34	0
12:08:25	34	0
12:09:25	34	0
12:10:25	34	0

Step Rate Test

NVAU #205 (Run 3/23/89)



STRENGTH TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABG
 WELL NO.: 205
 LOCATION: B24-T17S-R34E
 TEST DATE: 03/23/89
 PERFORATIONS: 8502' - 8660'
 TOTAL DEPTH: 101399
 PLUG BACK TD: 9495'
 PACKER SET AT: 8438'

TIME	SURFACE PRESSURE	RATE (BWPD)
11:45:18	86	0
11:46:18	87	0
11:47:18	88	0
11:48:18	89	0
11:49:18	90	0
11:50:18	91	0
11:51:18	92	0
11:52:18	93	0
11:53:18	94	0
11:54:18	94	0
11:55:18	94	0
11:56:18	94	0
11:57:18	94	0
11:58:18	4146	0
11:59:18	4146	0
12:00:18	4146	0
12:01:18	4149	0
12:02:18	4148	0
12:03:18	4148	0
12:04:18	4148	50
12:05:18	4148	50
12:06:18	4148	50
12:07:18	4147	50
12:08:18	4147	50
12:09:18	4147	50
12:10:18	4146	50
12:11:18	4146	50
12:12:18	4146	50
12:13:18	4145	50
12:14:18	4145	50
12:15:18	4145	50
12:16:18	4145	50
12:17:18	4145	50
12:18:18	4145	50

12:19:18	4151	100
12:20:18	4154	100
12:21:18	4154	100
12:22:18	4155	100
12:23:18	4156	100
12:24:18	4157	100
12:25:18	4157	100
12:26:18	4159	100
12:27:18	4160	100
12:28:18	4160	100
12:29:18	4161	100
12:30:18	4161	100
12:31:18	4161	100
12:32:18	4163	100
12:33:18	4164	100
12:34:18	4170	150
12:35:18	4170	150
12:36:18	4171	150
12:37:18	4172	150
12:38:18	4173	150
12:39:18	4173	150
12:40:18	4174	150
12:41:18	4175	150
12:42:18	4180	150
12:43:18	4181	150
12:44:18	4181	150
12:45:18	4183	150
12:46:18	4184	150
12:47:18	4185	150
12:48:18	4187	150
12:49:18	4189	200
12:50:18	4191	200
12:51:18	4193	200
12:52:18	4194	200
12:53:18	4196	200
12:54:18	4197	200
12:55:18	4198	200
12:56:18	4199	200
12:57:18	4201	200
12:58:18	4201	200
12:59:18	4201	200
13:00:18	4201	200
13:01:18	4202	200
13:02:18	4201	200
13:03:18	4202	200
13:04:18	4204	250
13:05:18	4205	250
13:06:18	4205	250
13:07:18	4206	250
13:08:18	4206	250
13:09:18	4207	250
13:10:18	4207	250
13:11:18	4207	250
13:12:18	4207	250
13:13:18	4208	250
13:14:18	4208	250

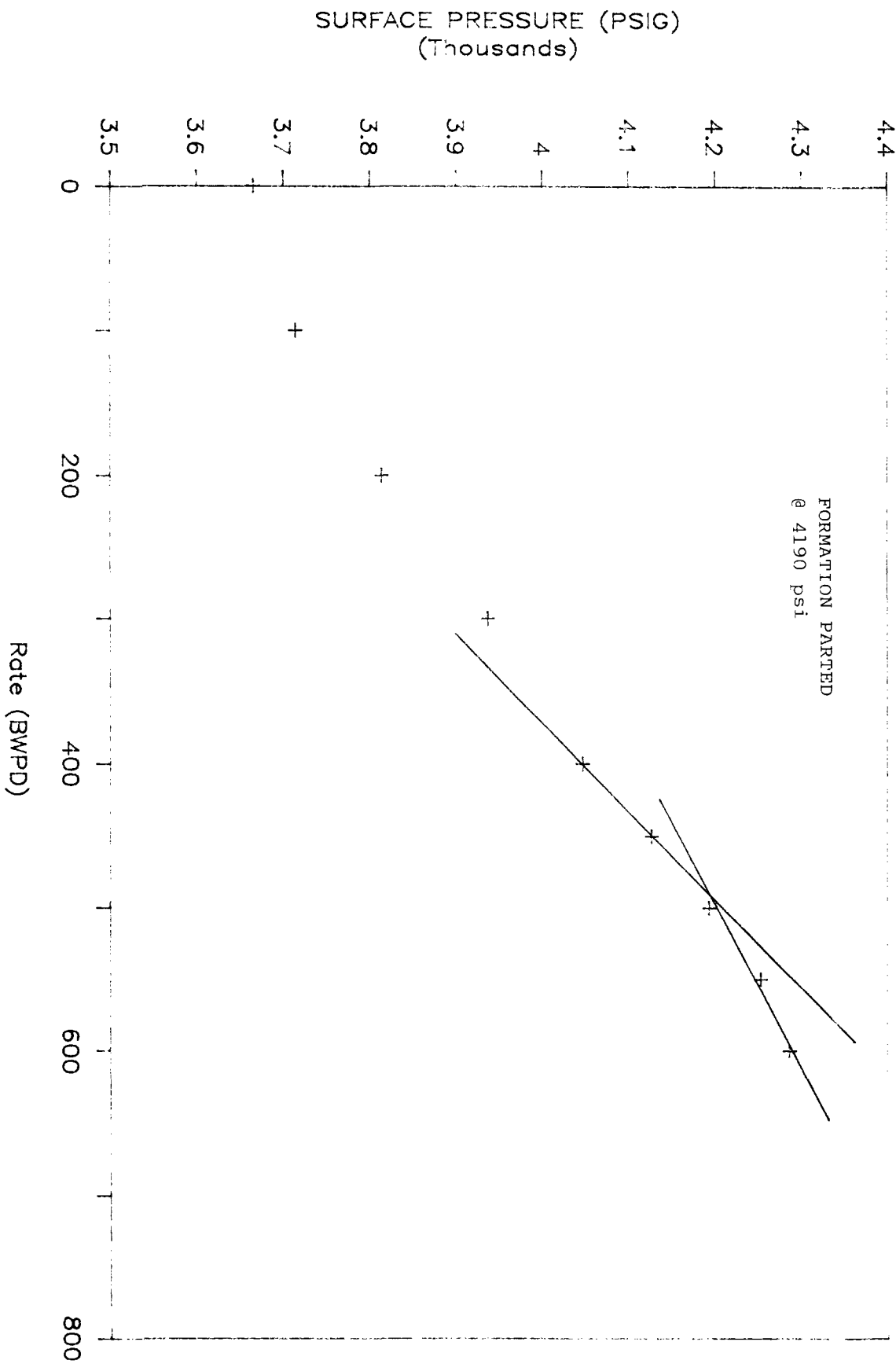
13:15:18	4155	250
13:16:18	4157	250
13:17:18	4157	250
13:18:18	4157	250
13:19:18	4158	290
13:20:18	4173	300
13:21:18	4190	300
13:22:18	4191	300
13:23:18	4194	300
13:24:18	4198	300
13:25:18	4198	300
13:26:18	4199	300
13:27:18	4191	300
13:28:18	4194	300
13:29:18	4196	300
13:30:18	4199	300
13:31:18	4191	300
13:32:18	431	300
13:33:18	431	300
13:34:18	4319	350
13:35:18	4311	351
13:36:18	4311	351
13:37:18	4311	351
13:38:18	4319	350
13:39:18	4319	350
13:40:18	4381	350
13:41:18	4301	350
13:42:18	4349	351
13:43:18	4341	351
13:44:18	4344	350
13:45:18	4347	350
13:46:18	4348	350
13:47:18	4351	350
13:48:18	4361	350
13:49:18	4364	400
13:50:18	4369	400
13:51:18	4369	400
13:52:18	4371	400
13:53:18	4373	450
13:54:18	4379	450
13:55:18	4388	450
13:56:18	4379	0
13:57:18	4381	0
13:58:18	4387	0
13:59:18	4389	0
14:00:18	110	0
14:01:18	118	0
14:02:18	143	0
14:03:18	147	0
14:04:18	149	0
14:05:18	149	0
14:06:18	149	0
14:07:18	0	0
14:08:18	141	0
14:09:18	142	0
14:10:18	143	0

14:11:18	38	0
14:12:18	38	0
14:13:18	38	0
14:14:18	38	0
14:15:18	38	0
14:16:18	38	0
14:17:18	38	0
14:18:18	38	0
14:19:18	38	0
14:20:18	38	0
14:21:18	38	0
14:22:18	38	0
14:23:18	38	0
14:24:18	38	0
14:25:18	38	0
14:26:18	38	0
14:27:18	38	0
14:28:18	38	0
14:29:18	38	0
14:30:18	38	0
14:31:18	38	0
14:32:18	38	0
14:33:18	38	0
14:34:18	38	0
14:35:18	38	0
14:36:18	38	0
14:37:18	38	0
14:38:18	38	0
14:39:18	38	0
14:40:18	38	0
14:41:18	38	0
14:42:18	38	0
14:43:18	38	0
14:44:18	38	0
14:45:18	38	0
14:46:18	38	0
14:47:18	38	0
14:48:18	38	0
14:49:18	38	0
14:50:18	38	0
14:51:18	38	0

Step Rate Test

NVAU #2229 (Run 3/28/89)

FORMATION PARTED
@ 4190 psi



STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
LEASE: NORTH VACUUM ABO UNIT
WELL NO.: 229
LOCATION: L10-T17S-R34E
TEST DATE: 3/28/89
PERFORATIONS: 8745' - 8810'
TOTAL DEPTH: 8973'
PLUG BACK TD: 8945'
PACKER SET AT: 8670'

TIME	SURFACE PRESSURE	RATE (BWP/D)
07:50:29	17	0
07:51:29	16	0
07:52:29	16	0
07:53:29	16	0
07:54:29	16	0
07:55:29	16	0
07:56:29	16	0
07:57:29	16	0
07:58:29	16	0
07:59:29	16	0
08:00:29	16	0
08:01:29	16	0
08:02:29	16	0
08:03:29	16	0
08:04:29	16	0
08:05:29	16	0
08:06:29	16	0
08:07:29	16	0
08:08:29	16	0
08:09:29	16	0
08:10:29	16	0
08:11:29	16	0
08:12:29	16	0
08:13:29	16	0
08:14:29	16	0
08:15:29	16	0
08:16:29	16	0
08:17:29	16	0
08:18:29	16	0
08:19:29	16	0
08:20:29	16	0
08:21:29	16	0
08:22:29	16	0
08:23:29	16	0
08:24:29	16	0
08:25:29	16	0
08:26:29	16	0
08:27:29	16	0

08:28:29	16	0
08:29:29	16	0
08:30:29	16	0
08:31:29	16	0
08:32:29	16	0
08:33:29	16	0
08:34:29	16	0
08:35:29	16	0
08:36:29	16	0
08:37:29	16	0
08:38:29	16	0
08:39:29	16	0
08:40:29	16	0
08:41:29	16	0
08:42:29	16	0
08:43:29	16	0
08:44:29	16	0
08:45:29	16	0
08:46:29	16	0
08:47:29	16	0
08:48:29	16	0
08:49:29	16	0
08:50:29	16	0
08:51:29	14	0
08:52:29	16	0
08:53:29	16	0
08:54:29	16	0
08:55:29	16	0
08:56:29	16	0
08:57:29	16	0
08:58:29	16	0
08:59:29	16	0
09:00:29	16	0
09:01:29	16	0
09:02:29	16	0
09:03:29	16	0
09:04:29	16	0
09:05:29	16	0
09:06:29	16	0
09:07:29	16	0
09:08:29	16	0
09:09:29	16	0
09:10:29	16	0
09:11:29	3659	0
09:12:29	3661	0
09:13:29	3662	0
09:14:29	3663	0
09:15:29	3666	0
09:16:29	3656	0
09:17:29	3661	0
09:18:29	3668	0
09:19:29	3669	100
09:20:29	3671	100
09:21:29	3672	100
09:22:29	3675	100
09:23:29	3677	100

09:34:29	3679	100
09:35:29	3681	100
09:36:29	3683	100
09:37:29	3684	100
09:38:29	3686	100
09:39:29	3687	100
09:40:29	3689	100
09:41:29	3696	100
09:42:29	3706	100
09:43:29	3715	100
09:44:29	3722	200
09:45:29	3728	200
09:46:29	3734	200
09:47:29	3741	200
09:48:29	3746	200
09:49:29	3752	200
09:49:29	3755	200
09:41:29	3763	200
09:42:29	3765	200
09:43:29	3770	200
09:44:29	3774	200
09:45:29	3778	200
09:46:29	3793	200
09:47:29	3803	200
09:48:29	3814	200
09:49:29	3825	300
09:50:29	3834	300
09:51:29	3842	300
09:52:29	3850	300
09:53:29	3857	300
09:54:29	3864	300
09:55:29	3871	300
09:56:29	3877	300
09:57:29	3883	300
09:58:29	3888	300
09:59:29	3894	300
10:00:29	3899	300
10:01:29	3914	300
10:02:29	3926	300
10:03:29	3937	300
10:04:29	3948	400
10:05:29	3957	400
10:06:29	3965	400
10:07:29	3972	400
10:08:29	3978	400
10:09:29	3985	400
10:10:29	3992	400
10:11:29	3999	400
10:12:29	4004	400
10:13:29	4010	400
10:14:29	4016	400
10:15:29	4020	400
10:16:29	4033	400
10:17:29	4039	400
10:18:29	4047	400
10:19:29	4054	450

10:20:29	4060	450
10:21:29	4065	450
10:22:29	4069	450
10:23:29	4073	450
10:24:29	4077	450
10:25:29	4082	450
10:26:29	4088	450
10:27:29	4092	450
10:28:29	4095	450
10:29:29	4100	450
10:30:29	4102	450
10:31:29	4112	450
10:32:29	4120	450
10:33:29	4127	450
10:34:29	4132	500
10:35:29	4135	500
10:36:29	4141	500
10:37:29	4145	500
10:38:29	4148	500
10:39:29	4152	500
10:40:29	4156	500
10:41:29	4160	500
10:42:29	4164	500
10:43:29	4167	500
10:44:29	4170	500
10:45:29	4173	500
10:46:29	4182	500
10:47:29	4189	500
10:48:29	4193	500
10:49:29	4198	550
10:50:29	4202	550
10:51:29	4205	550
10:52:29	4208	550
10:53:29	4211	550
10:54:29	4215	550
10:55:29	4218	550
10:56:29	4220	550
10:57:29	4224	550
10:58:29	4227	550
10:59:29	4229	550
11:00:29	4231	550
11:01:29	4234	550
11:02:29	4248	550
11:03:29	4253	550
11:04:29	4258	600
11:05:29	4260	600
11:06:29	4265	600
11:07:29	4267	600
11:08:29	4271	600
11:09:29	4274	600
11:10:29	4276	600
11:11:29	4279	600
11:12:29	4281	600
11:13:29	4284	600
11:14:29	4286	600
11:15:29	4288	0

11:16:29	4239	0
11:17:29	4242	0
11:18:29	4235	0
11:19:29	4226	0
11:20:29	4216	0
11:21:29	4207	0
11:22:29	109	0
11:23:29	13	0
11:24:29	14	0
11:25:29	14	0
11:26:29	14	0
11:27:29	14	0
11:28:29	13	0
11:29:29	13	0



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE
April 19, 1989

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 #229-L	10-17-34
Operator	Lease & Well No.	Unit S-T-R

and my recommendations are as follows:

?

Very truly yours

Jerry Sexton
Supervisor, District I

/bp



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE
April 19, 1989

GARREY CARRUTHERS
GOVERNOR

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

RECEIVED

APR 27 1989

OIL CONSERVATION DIV.
SANTA FE

OIL CONSERVATION DIVISON
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 #201-J	10-17-34
Operator	Lease & Well No.	Unit	S-T-R

and my recommendations are as follows:

CH

Very truly yours

Jerry Sexton
Supervisor, District I

/bp



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

April 19, 1989

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	#205-B	24-1'-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

April 19, 1989

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 #162-J	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