

Mobil Exploration & Producing U.S. Inc.

September 25, 1989
P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

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

RECEIVED

SEP 28 1989

Attention: Mr. W. J. LeMay

OIL CONSERVATION DIV.
SANTA FE

**INJECTION PRESSURE INCREASE REQUEST
NORTH VACUUM ABO FIELD
NORTH VACUUM ABO UNIT
WELL NO'S. 137, 138, & 211
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, 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. 137 UNIT B, SEC. 26 T-17-S, R-34-E Order No. PMX-138	8458-8580'	3870 psig	3975 psig
WELL NO. 138 UNIT I, SEC. 26 T-17-S, R-34-E ORDER NO. PMX-138	8506-8600'	4020 psig	4110 psig

WELL NO. 211

UNIT J, SEC. 24

8458-8518'

3775 psig

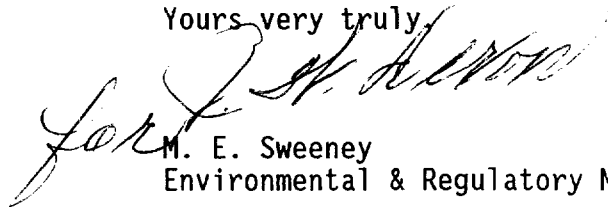
3875

2054' FSL & 2162' FEL

ORDER NO. PMX-138

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

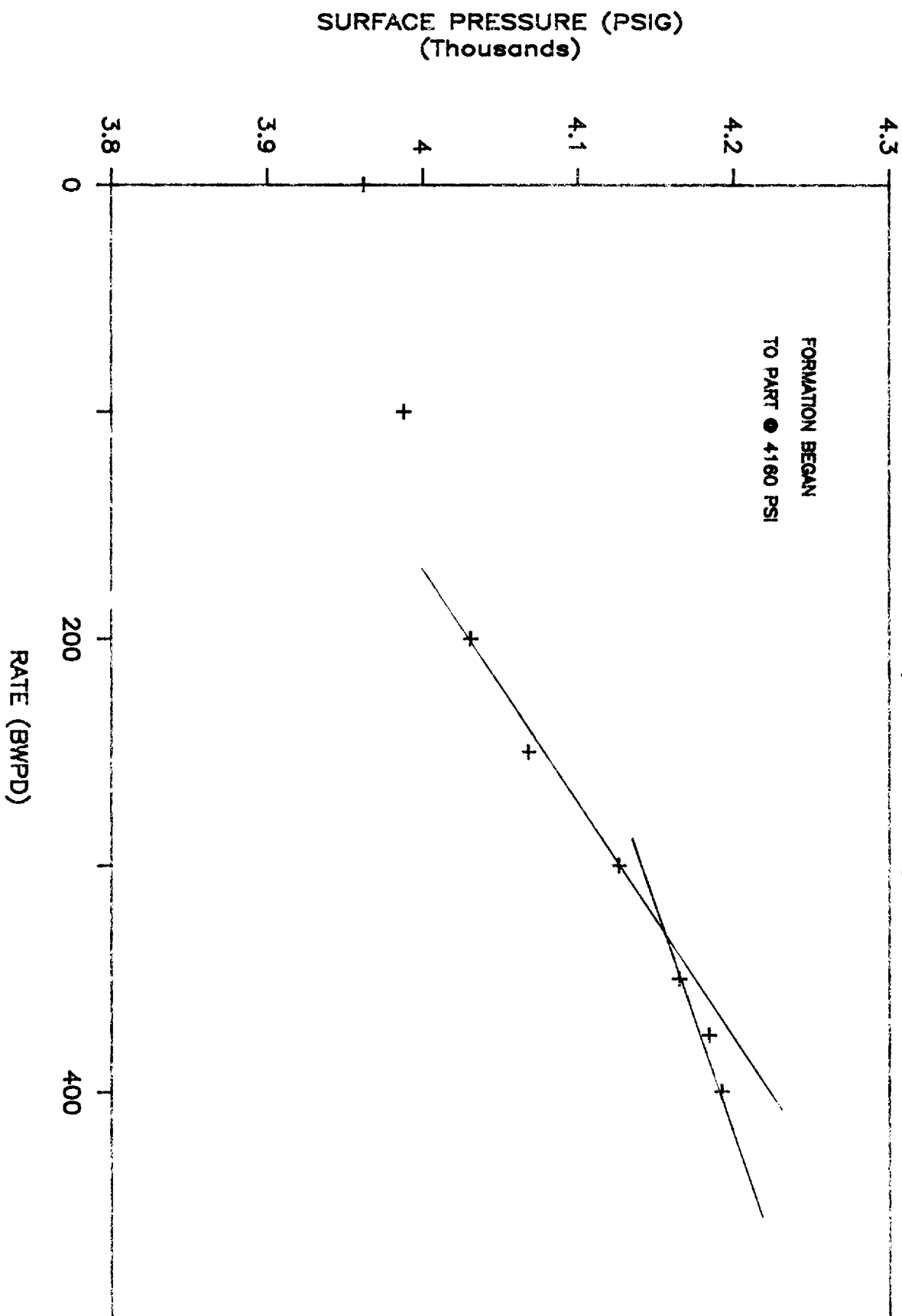
Attachments

cc: District Director OCD - Hobbs

1 CENTRAL FILES
1 REGULATORY FILES
1 PRORATION ACCT.
1 RESERVOIR ENGR. MGR.
1 DIST. OP. MGR. *Hobbs*
~~1 AREA PROD. SUPV.~~
1 REGULATORY ACCT.

STEP RATE TEST

NVAU 138 (RUN 09-07-89)



STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
 LEASE: NORTH VACUUM ABO UNIT
 WELL NO. 138
 LOCATION: L26-T17S-R34E
 TEST DATE: 09-07-89
 PERFORATIONS: 8506' - 8600'
 TOTAL DEPTH: 8700'
 PLUG BACK TD: 8651'
 PACKER SET AT: 8420'

TIME	SURFACE PRESSURE	RATE (BWPD)
08:28:33	13	0
08:29:33	13	0
08:30:33	12	0
08:31:33	12	0
08:32:33	12	0
08:33:33	12	0
08:34:33	12	0
08:35:33	12	0
08:36:33	12	0
08:37:33	12	0
08:38:33	12	0
08:39:33	13	0
08:40:33	13	0
08:41:33	12	0
08:42:33	12	0
08:43:33	12	0
08:44:33	12	0
08:45:33	13	0
08:46:33	3982	0
08:47:33	3976	0
08:48:33	3974	0
08:49:33	3972	0
08:50:33	3969	0
08:51:33	3968	0
08:52:33	3966	0
08:53:33	3965	0
08:54:33	3963	0
08:55:33	3962	0
08:56:33	3968	100
08:57:33	3972	100
08:58:33	3974	100
08:59:33	3977	100
09:00:33	3978	100
09:01:33	3980	100
09:02:33	3980	100
09:03:33	3982	100
09:04:33	3983	100

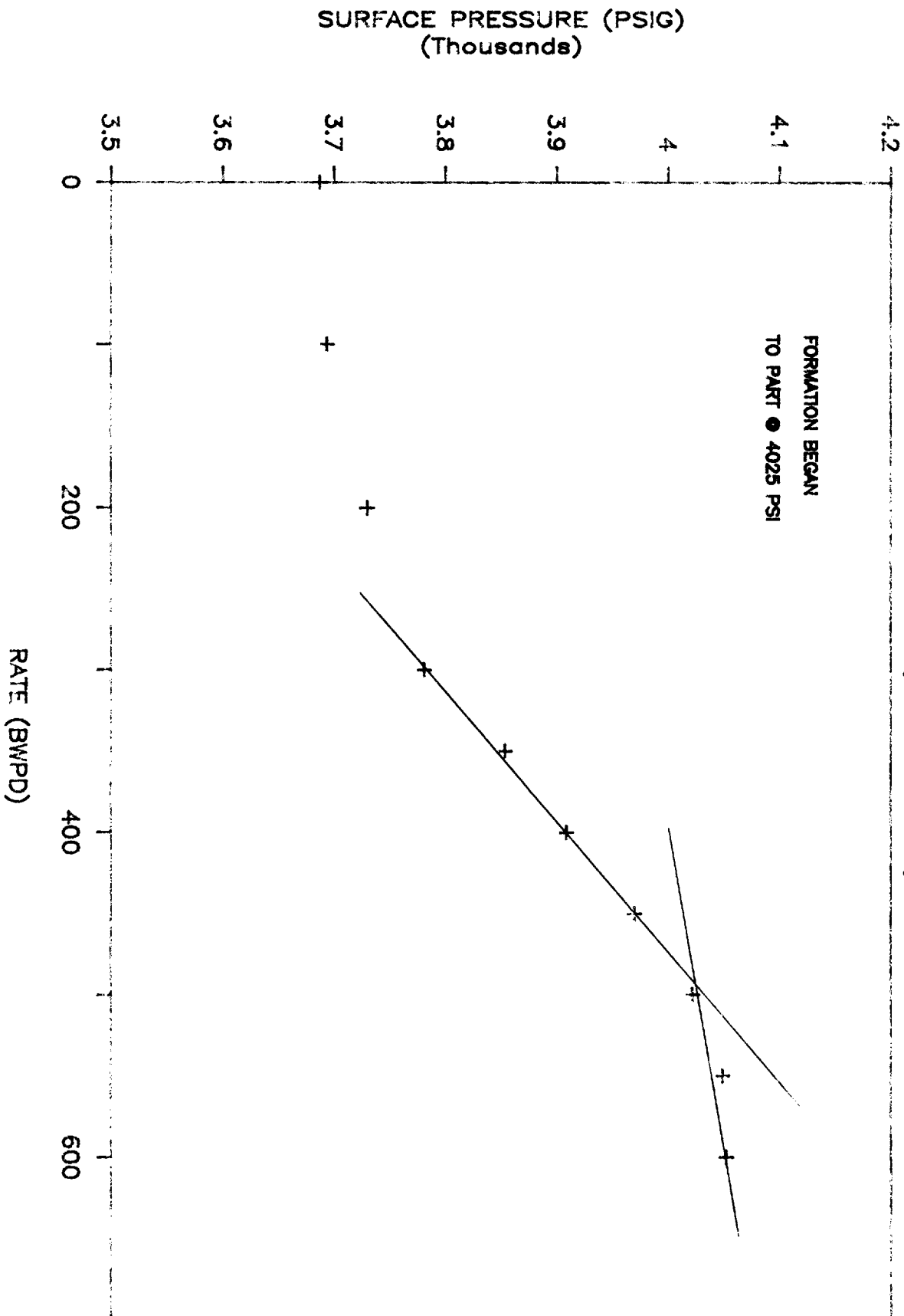
09:05:33	3983	100
09:06:33	3985	100
09:07:33	3985	100
09:08:33	3986	100
09:09:33	3987	100
09:10:33	3988	100
09:11:33	3988	200
09:12:33	3999	200
09:13:33	4004	200
09:14:33	4007	200
09:15:33	4010	200
09:16:33	4012	200
09:17:33	4014	200
09:18:33	4018	200
09:19:33	4020	200
09:20:33	4022	200
09:21:33	4023	200
09:22:33	4025	200
09:23:33	4027	200
09:24:33	4029	200
09:25:33	4031	200
09:26:33	4032	250
09:27:33	4034	250
09:28:33	4035	250
09:29:33	4037	250
09:30:33	4038	250
09:31:33	4048	250
09:32:33	4050	250
09:33:33	4054	250
09:34:33	4056	250
09:35:33	4058	250
09:36:33	4060	250
09:37:33	4062	250
09:38:33	4066	250
09:39:33	4066	250
09:40:33	4068	250
09:41:33	4080	300
09:42:33	4084	300
09:43:33	4087	300
09:44:33	4090	300
09:45:33	4092	300
09:46:33	4094	300
09:47:33	4097	300
09:48:33	4099	300
09:49:33	4103	300
09:50:33	4106	300
09:51:33	4108	300
09:52:33	4110	300
09:53:33	4112	300
09:54:33	4114	300
09:55:33	4126	300
09:56:33	4132	350
09:57:33	4136	350
09:58:33	4139	350
09:59:33	4141	350
10:00:33	4144	350

10:01:33	4146	350
10:02:33	4147	350
10:03:33	4152	350
10:04:33	4154	350
10:05:33	4156	350
10:06:33	4158	350
10:07:33	4160	350
10:08:33	4161	350
10:09:33	4163	350
10:10:33	4165	350
10:11:33	4173	375
10:12:33	4174	375
10:13:33	4175	375
10:14:33	4176	375
10:15:33	4177	375
10:16:33	4178	375
10:17:33	4179	375
10:18:33	4180	375
10:19:33	4180	375
10:20:33	4181	375
10:21:33	4182	375
10:22:33	4183	375
10:23:33	4183	375
10:24:33	4184	375
10:25:33	4184	375
10:26:33	4185	400
10:27:33	4185	400
10:28:33	4186	400
10:29:33	4186	400
10:30:33	4186	400
10:31:33	4187	400
10:32:33	4187	400
10:33:33	4188	400
10:34:33	4189	400
10:35:33	4189	400
10:36:33	4190	400
10:37:33	4190	400
10:38:33	4191	400
10:39:33	4191	400
10:40:33	4192	400
10:41:33	4190	0
10:42:33	4180	0
10:43:33	4173	0
10:44:33	4166	0
10:45:33	4144	0
10:46:33	4134	0
10:47:33	4128	0
10:48:33	4123	0
10:49:33	4117	0
10:50:33	4112	0
10:51:33	4107	0
10:52:33	4103	0
10:53:33	4099	0
10:54:33	4095	0
10:55:33	23	0
10:56:33	17	0

10:57:33	18	0
10:58:33	13	0
10:59:33	13	0
11:00:33	13	0
11:01:33	13	0
11:02:33	13	0
11:03:33	13	0
11:04:33	13	0
11:05:33	13	0
11:06:33	13	0
11:07:33	12	0
11:08:33	12	0
11:09:33	12	0
11:10:33	12	0
11:11:33	12	0
11:12:33	12	0

STEP RATE TEST

NVAU 137 (RUN 09-07-89)



STEP RATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
LEASE: NORTH VACUUM ABO UNIT
WELL NO. 137
LOCATION: B26-T17S-R34E
TEST DATE: 09-07-89
PERFORATIONS: 8458' - 8580'
TOTAL DEPTH: 8700'
PLUG BACK TD: 8600'
PACKER SET AT: 8377'

TIME	SURFACE PRESSURE	RATE (BWPD)
11:55:33	12	0
11:56:33	12	0
11:57:33	12	0
11:58:33	12	0
11:59:33	12	0
12:00:33	12	0
12:01:33	12	0
12:02:33	12	0
12:03:33	12	0
12:04:33	12	0
12:05:33	12	0
12:06:33	12	0
12:07:33	12	0
12:08:33	12	0
12:09:33	12	0
12:10:33	12	0
12:11:33	12	0
12:12:33	12	0
12:13:33	12	0
12:14:33	13	0
12:15:33	12	0
12:16:33	3713	0
12:17:33	3710	0
12:18:33	3707	0
12:19:33	3704	0
12:20:33	3701	0
12:21:33	3698	0
12:22:33	3695	0
12:23:33	3692	0
12:24:33	3689	0
12:25:33	3687	0
12:26:33	3693	100
12:27:33	3694	100
12:28:33	3695	100
12:29:33	3695	100

12:30:33	3696	100
12:31:33	3696	100
12:32:33	3696	100
12:33:33	3696	100
12:34:33	3695	100
12:35:33	3695	100
12:36:33	3695	100
12:37:33	3695	100
12:38:33	3695	100
12:39:33	3694	100
12:40:33	3694	100
12:41:33	3705	200
12:42:33	3709	200
12:43:33	3712	200
12:44:33	3714	200
12:45:33	3716	200
12:46:33	3718	200
12:47:33	3720	200
12:48:33	3721	200
12:49:33	3723	200
12:50:33	3724	200
12:51:33	3725	200
12:52:33	3727	200
12:53:33	3728	200
12:54:33	3729	200
12:55:33	3730	200
12:56:33	3731	300
12:57:33	3732	300
12:58:33	3733	300
12:59:33	3734	300
13:00:33	3735	300
13:01:33	3736	300
13:02:33	3755	300
13:03:33	3760	300
13:04:33	3764	300
13:05:33	3768	300
13:06:33	3771	300
13:07:33	3773	300
13:08:33	3776	300
13:09:33	3779	300
13:10:33	3781	300
13:11:33	3806	350
13:12:33	3800	350
13:13:33	3804	350
13:14:33	3807	350
13:15:33	3810	350
13:16:33	3813	350
13:17:33	3821	350
13:18:33	3824	350
13:19:33	3827	350
13:20:33	3829	350
13:21:33	3832	350
13:22:33	3835	350
13:23:33	3837	350
13:24:33	3840	350
13:25:33	3854	350

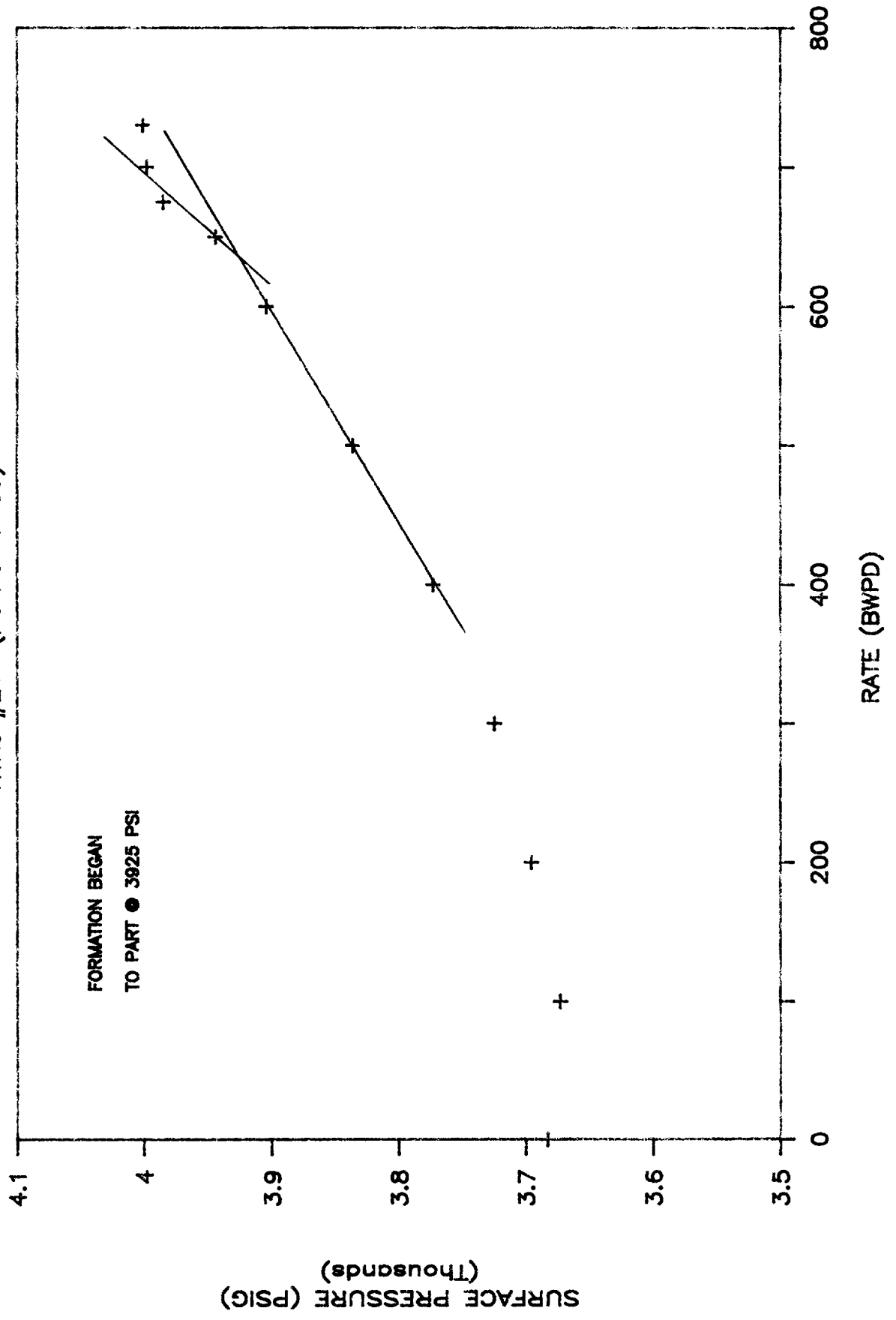
13:26:33	3857	400
13:27:33	3861	400
13:28:33	3863	400
13:29:33	3865	400
13:30:33	3868	400
13:31:33	3870	400
13:32:33	3873	400
13:33:33	3874	400
13:34:33	3877	400
13:35:33	3879	400
13:36:33	3897	400
13:37:33	3900	400
13:38:33	3904	400
13:39:33	3907	400
13:40:33	3909	400
13:41:33	3912	450
13:42:33	3915	450
13:43:33	3917	450
13:44:33	3920	450
13:45:33	3922	450
13:46:33	3924	450
13:47:33	3926	450
13:48:33	3944	450
13:49:33	3947	450
13:50:33	3956	450
13:51:33	3960	450
13:52:33	3962	450
13:53:33	3965	450
13:54:33	3967	450
13:55:33	3970	450
13:56:33	3972	500
13:57:33	3974	500
13:58:33	3976	500
13:59:33	3978	500
14:00:33	3980	500
14:01:33	3982	500
14:02:33	3984	500
14:03:33	3986	500
14:04:33	3998	500
14:05:33	4001	500
14:06:33	4003	500
14:07:33	4005	500
14:08:33	4007	500
14:09:33	4020	500
14:10:33	4022	500
14:11:33	4024	550
14:12:33	4026	550
14:13:33	4028	550
14:14:33	4030	550
14:15:33	4031	550
14:16:33	4033	550
14:17:33	4034	550
14:18:33	4035	550
14:19:33	4037	550
14:20:33	4038	550
14:21:33	4043	550

14:22:33	4045	550
14:23:33	4046	550
14:24:33	4048	550
14:25:33	4049	550
14:26:33	4050	600
14:27:33	4051	600
14:28:33	4052	600
14:29:33	3971	0
14:30:33	3961	0
14:31:33	3949	0
14:32:33	3939	0
14:33:33	3930	0
14:34:33	3922	0
14:35:33	3914	0
14:36:33	3907	0
14:37:33	3900	0
14:38:33	3894	0
14:39:33	3887	0
14:40:33	3882	0
14:41:33	3876	0
14:42:33	24	0
14:43:33	16	0
14:44:33	14	0
14:45:33	14	0
14:46:33	14	0
14:47:33	14	0
14:48:33	14	0
14:49:33	14	0
14:50:33	14	0
14:51:33	14	0
14:52:33	14	0
14:53:33	14	0
14:54:33	14	0
14:55:33	14	0
14:56:33	14	0
14:57:33	14	0
14:58:33	14	0
14:59:33	14	0
15:00:33	14	0
15:01:33	14	0
15:02:33	14	0
15:03:33	14	0
15:04:33	14	0
15:05:33	14	0
15:06:33	14	0
15:07:33	14	0
15:08:33	14	0
15:09:33	14	0
15:10:33	14	0
15:11:33	14	0
15:12:33	14	0
15:13:33	14	0
15:14:33	14	0
15:15:33	14	0
15:16:33	14	0
15:17:33	14	0

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

STEP RATE TEST

NVAU #211 (RUN 9-6-89)



STEPRATE TEST

COMPANY: MOBIL EXPLORATION & PRODUCING U.S. INC.
LEASE: NORTH VACUUM ABO UNIT
WELL NO. 211
LOCATION: J24-T17S-R34E
TEST DATE: 09-06-89
PERFORATIONS: 8458' - 8518'
TOTAL DEPTH: 10200'
PLUG BACK TD: 8700' CIBP: 8735'
PACKER SET AT: 8330'

TIME	SURFACE PRESSURE	RATE (BWPD)

08:35:19	25	0
08:36:19	25	0
08:27:19	24	0
08:38:19	24	0
08:39:19	3715	0
08:40:19	3721	0
08:41:19	3698	0
08:42:19	3695	0
08:43:19	3690	0
08:44:19	3686	0
08:45:19	3683	0
08:46:19	3679	100
08:47:19	3682	100
08:48:19	3681	100
08:49:19	3680	100
08:50:19	3680	100
08:51:19	3679	100
08:52:19	3679	100
08:53:19	3678	100
08:54:19	3677	100
08:55:19	3677	100
08:56:19	3676	100
08:57:19	3675	100
08:58:19	3674	100
08:59:19	3674	100
09:00:19	3673	100
09:01:19	3679	200
09:02:19	3682	200
09:03:19	3684	200
09:04:19	3685	200
09:05:19	3686	200
09:06:19	3686	200
09:07:19	3687	200
09:08:19	3687	200
09:09:19	3687	200
09:10:19	3688	200
09:11:19	3688	200
09:12:19	3688	200
09:13:19	3688	200

09:14:19	3689	200
09:15:19	3696	200
09:16:19	3700	300
09:17:19	3703	300
09:18:19	3706	300
09:19:19	3708	300
09:20:19	3710	300
09:21:19	3712	300
09:22:19	3713	300
09:23:19	3715	300
09:24:19	3716	300
09:25:19	3718	300
09:26:19	3719	300
09:27:19	3720	300
09:28:19	3722	300
09:29:19	3723	300
09:30:19	3725	300
09:31:19	3737	400
09:32:19	3742	400
09:33:19	3746	400
09:34:19	3749	400
09:35:19	3752	400
09:36:19	3754	400
09:27:19	3757	400
09:38:19	3759	400
09:39:19	3761	400
09:40:19	3763	400
09:41:19	3765	400
09:42:19	3767	400
09:43:19	3769	400
09:44:19	3771	400
09:45:19	3773	400
09:46:19	3775	500
09:47:19	3784	500
09:48:19	3794	500
09:49:19	3798	500
09:50:19	3802	500
09:51:19	3805	500
09:52:19	3808	500
09:53:19	3811	500
09:54:19	3814	500
09:55:19	3817	500
09:56:19	3819	500
09:57:19	3823	500
09:58:19	3826	500
09:59:19	3829	500
10:00:19	3836	500
10:01:19	3844	600
10:02:19	3858	600
10:03:19	3857	600
10:04:19	3861	600
10:05:19	3864	600
10:06:19	3867	600
10:07:19	3870	600
10:08:19	3873	600
10:09:19	3876	600

10:10:19	3879	600
10:11:19	3881	600
10:12:19	3883	600
10:13:19	3886	600
10:14:19	3898	600
10:15:19	3904	600
10:16:19	3907	650
10:17:19	3911	650
10:18:19	3914	650
10:19:19	3917	650
10:20:19	3920	650
10:21:19	3923	650
10:22:19	3925	650
10:23:19	3928	650
10:24:19	3931	650
10:25:19	3934	650
10:26:19	3935	650
10:27:19	3937	650
10:28:19	3940	650
10:29:19	3942	650
10:30:19	3944	650
10:31:19	3946	675
10:32:19	3947	675
10:33:19	3948	675
10:34:19	3951	675
10:35:19	3953	675
10:36:19	3960	675
10:27:19	3964	675
10:38:19	3967	675
10:39:19	3970	675
10:40:19	3973	675
10:41:19	3976	675
10:42:19	3978	675
10:43:19	3981	675
10:44:19	3983	675
10:45:19	3985	675
10:46:19	3985	700
10:47:19	3986	700
10:48:19	3987	700
10:49:19	3988	700
10:50:19	3989	700
10:51:19	3990	700
10:52:19	3990	700
10:53:19	3991	700
10:54:19	3993	700
10:55:19	3996	700
10:56:19	3996	700
10:57:19	3997	700
10:58:19	3998	700
10:59:19	3999	700
11:00:19	3999	700
11:01:19	4001	730
11:02:19	3991	0
11:03:19	3940	0
11:04:19	3935	0
11:05:19	3920	0

11:06:19	3911	0
11:07:19	3902	0
11:08:19	3874	0
11:09:19	29	0
11:10:19	26	0
11:11:19	13	0
11:12:19	13	0
11:13:19	13	0
11:14:19	13	0
11:15:19	13	0
11:16:19	14	0
11:17:19	14	0
11:18:19	13	0
11:19:19	13	0
11:20:19	12	0
11:21:19	12	0
11:21:19	12	0