



January 6, 1989

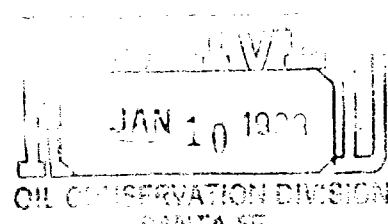
State of New Mexico
Department of Energy & Minerals
Oil Conservation Commission
310 Old Santa Fe Trail, Room 206
Santa Fe, New Mexico 87503

Attention: Mr. William Lemay
Director

Gentlemen:

In accordance with Paragraph (6) of NMOCD Order No. R-5530, Texaco Inc. respectfully requests that authorization be granted to increase surface injection pressure on seven wells in the Central Vacuum Unit, Vacuum Grayburg San Andres Field, Lea County, New Mexico. This request is based on results of individual step rate tests conducted December 15 - 22, 1988. Results of the seven attached tests are summarized below:

<u>Well</u>	<u>Location</u>	<u>Step Rate Surface Parting Pressure, PSIG</u>	<u>Current Injection Limit, PSIG</u>
CVU No. 57	B, 36-17S-34E	1247	876
CVU No. 71	G, 36-17S-34E	990	875
CVU No. 135	L, 6-18S-35E	1051	890
CVU No. 156	K, 25-17S-34E	1225	886
CVU No. 157	M, 25-17S-34E	1475	885
CVU No. 160	E, 36-17S-34E	1580+	871
CVU No. 161	M, 36-17S-34E	1479	878



Mr. William Lemay

-2-

January 6, 1989

The step rate test on Well No. 160 showed no part to 1580 psi, where the test was terminated due to wellhead pressure limitations. It is requested that the well's pressure limit be set at 1530 psi, which is 50 psi below the maximum test pressure. Adjacent wells to the west, in Phillips "M. E. Hale" Lease (Sec. 35-17S-34E), have been injecting at pressures up to 1900 psi since 1984 step rate tests. This has apparently raised reservoir pressure in No. 160, as well as in lease-line well Nos. 157 and 161 offsetting No. 160.

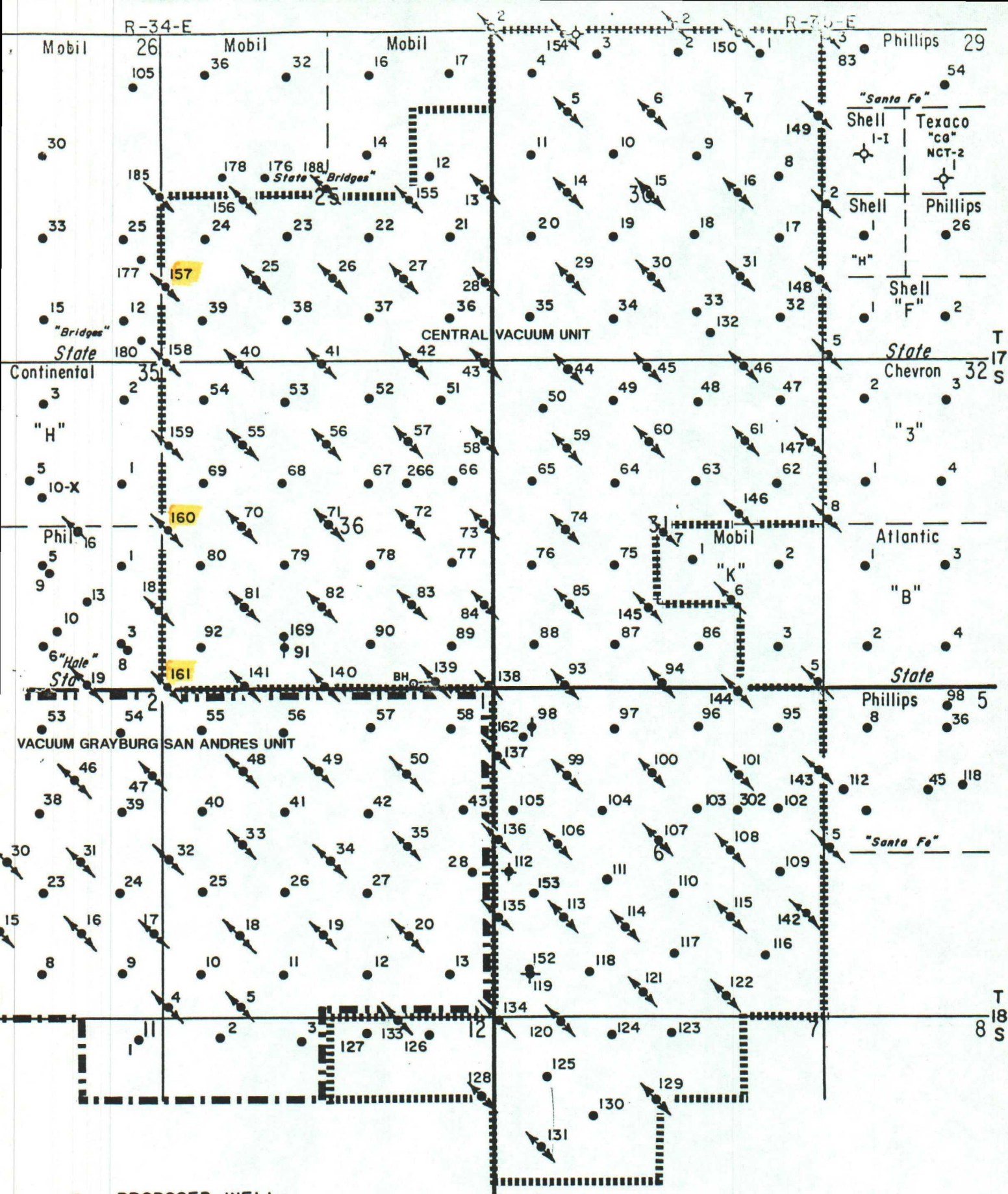
Your prompt consideration of this request is appreciated. Please advise if any further information is needed.

Yours very truly,

A handwritten signature in cursive script, appearing to read "J. A. Schaffer".

J. A. Schaffer
District Operations Manager

MAS/LDR:JRB



TEXACO Inc.
CENTRAL VACUUM UNIT
VACUUM G-SA FIELD
LEA COUNTY, NEW MEXICO

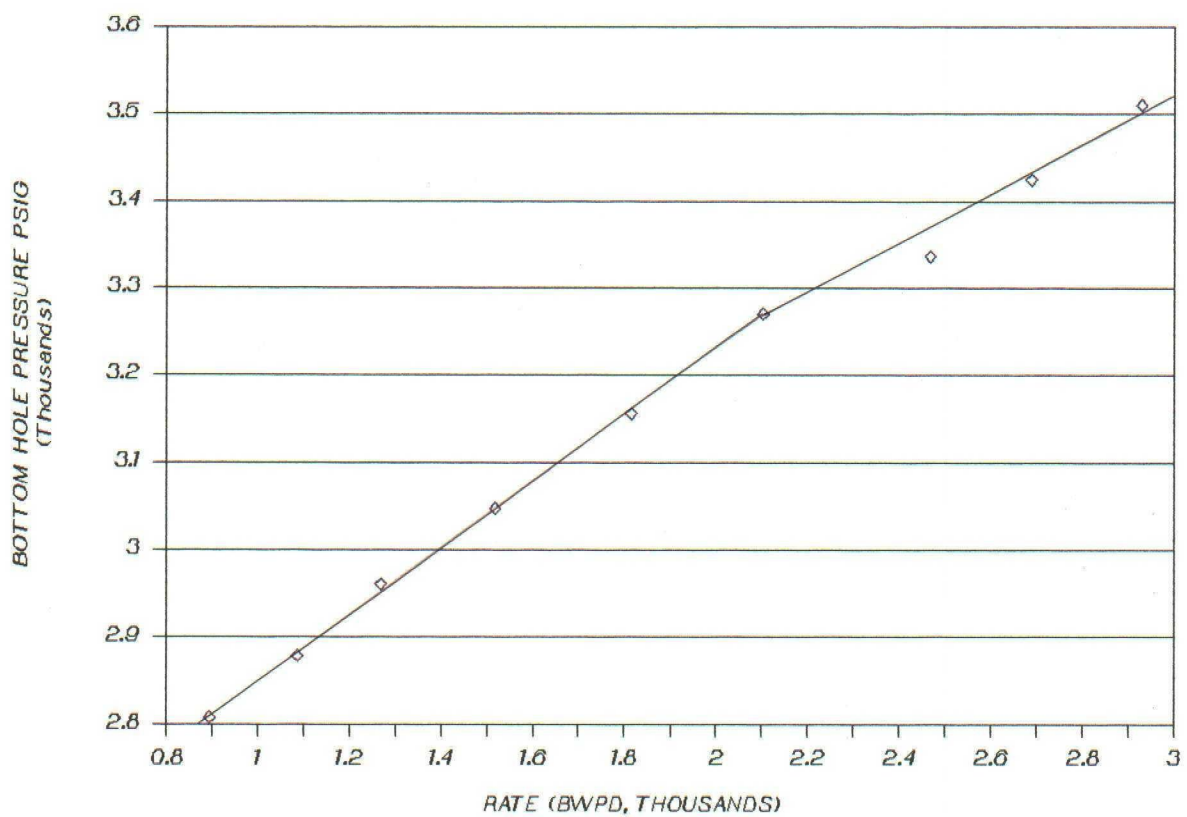
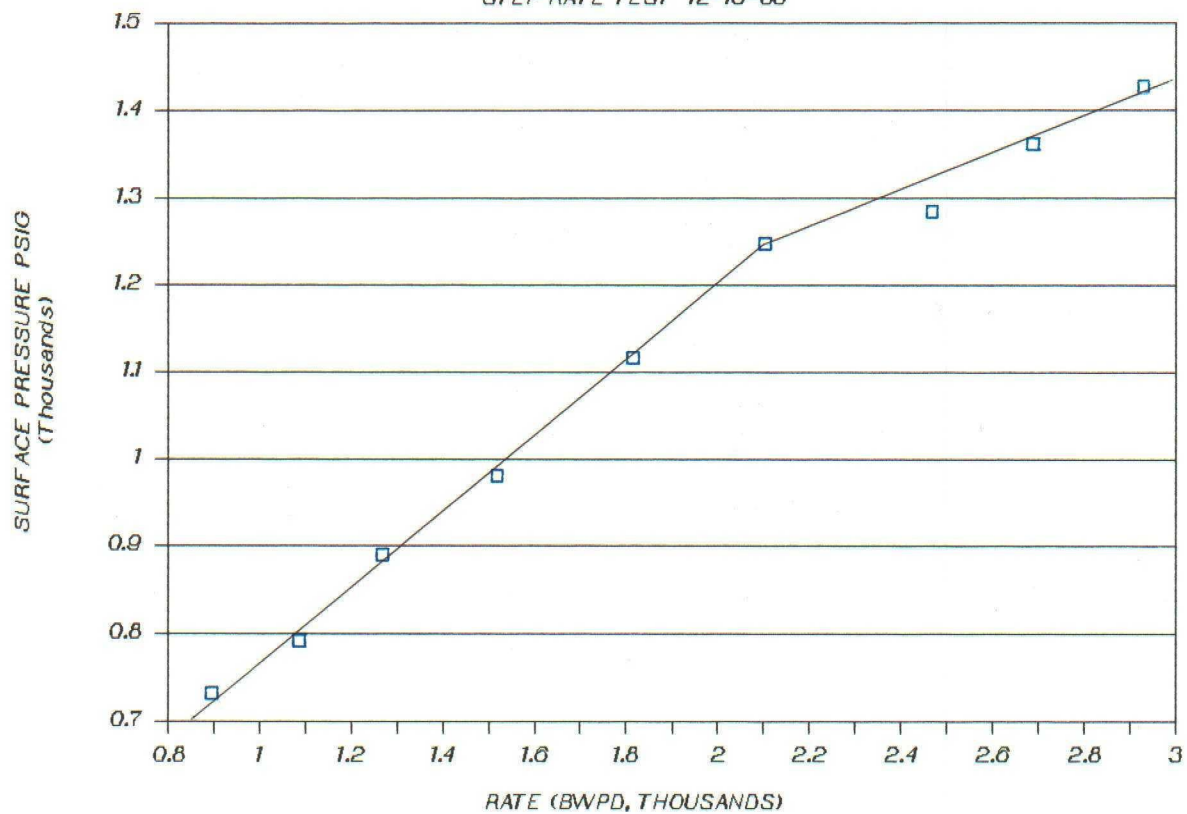
STEP RATE TEST

TEXACO PRODUCING INC.
CENTRAL VACUUM UNIT NO. 57
UNIT B, SEC. 36-17S-34E
LEA CO., NEW MEXICO
12-16-88

RATE (BWPD)	SURFACE PRESSURE CORRECTED FOR FRICTION (PSIG)	BOTTOM HOLE PRESSURE, MIDPERF (PSIG)
893	732	2807
1085	792	2878
1267	890	2961
1517	981	3047
1814	1117	3156
2102	1247	3270
2467	1284	3337
2688	1361	3425
2928	1427	3510

CENTRAL VACUUM UNIT NO. 57

STEP RATE TEST 12-10-88



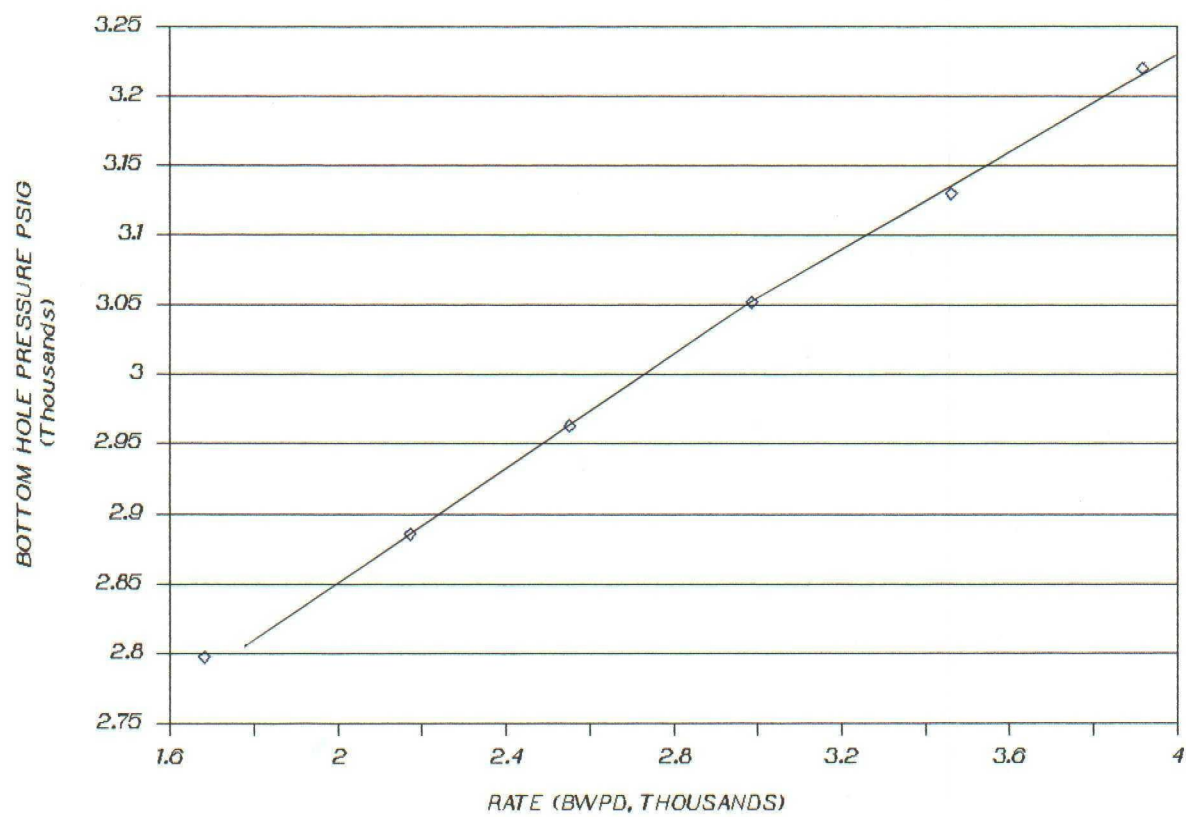
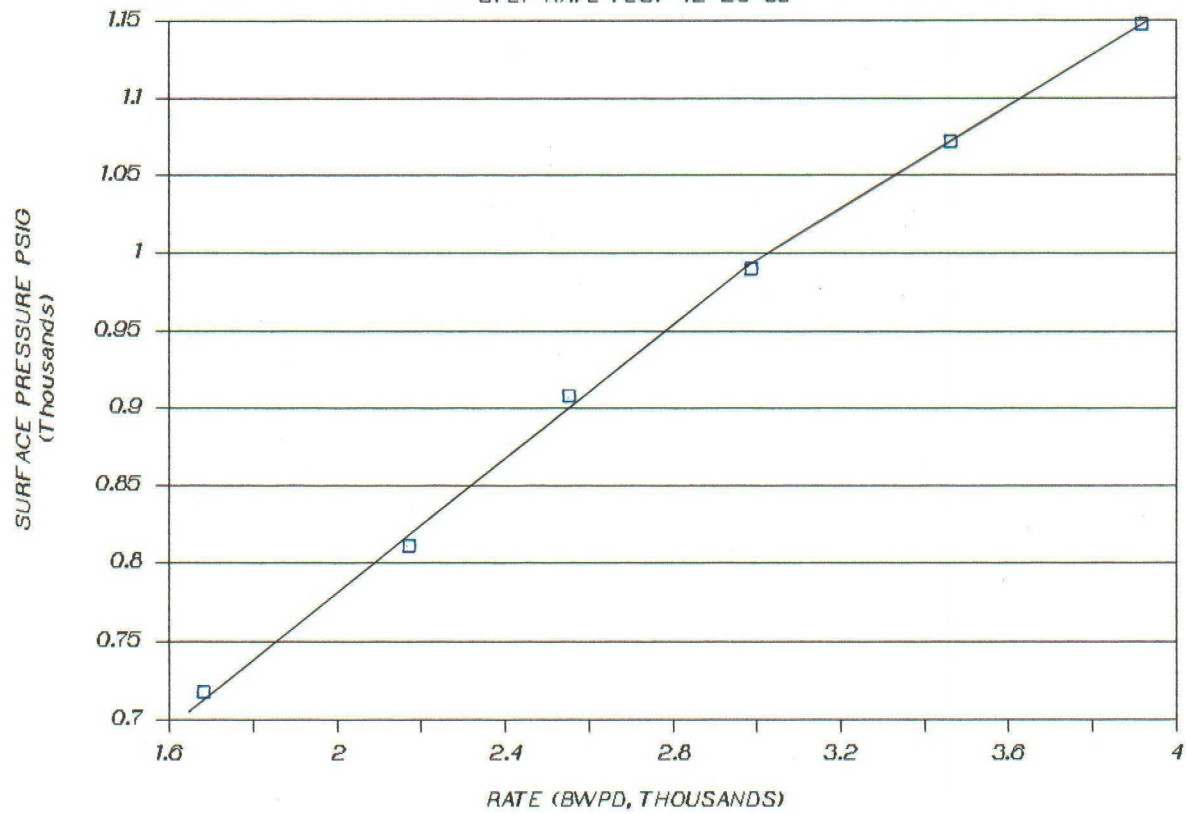
STEP RATE TEST

TEXACO PRODUCING INC.
CENTRAL VACUUM UNIT NO. 71
UNIT G, SEC. 36-17S-34E
LEA CO., NEW MEXICO
12-20-88

RATE (BWPd)	SURFACE PRESSURE CORRECTED FOR FRICTION (PSIG)	BOTTOM HOLE PRESSURE, MIDPERF (PSIG)
1680	718	2798
2170	811	2886
2550	908	2963
2985	990	3052
3460	1072	3130
3915	1148	3220

CENTRAL VACUUM UNIT NO. 71

STEP RATE TEST 12-20-88



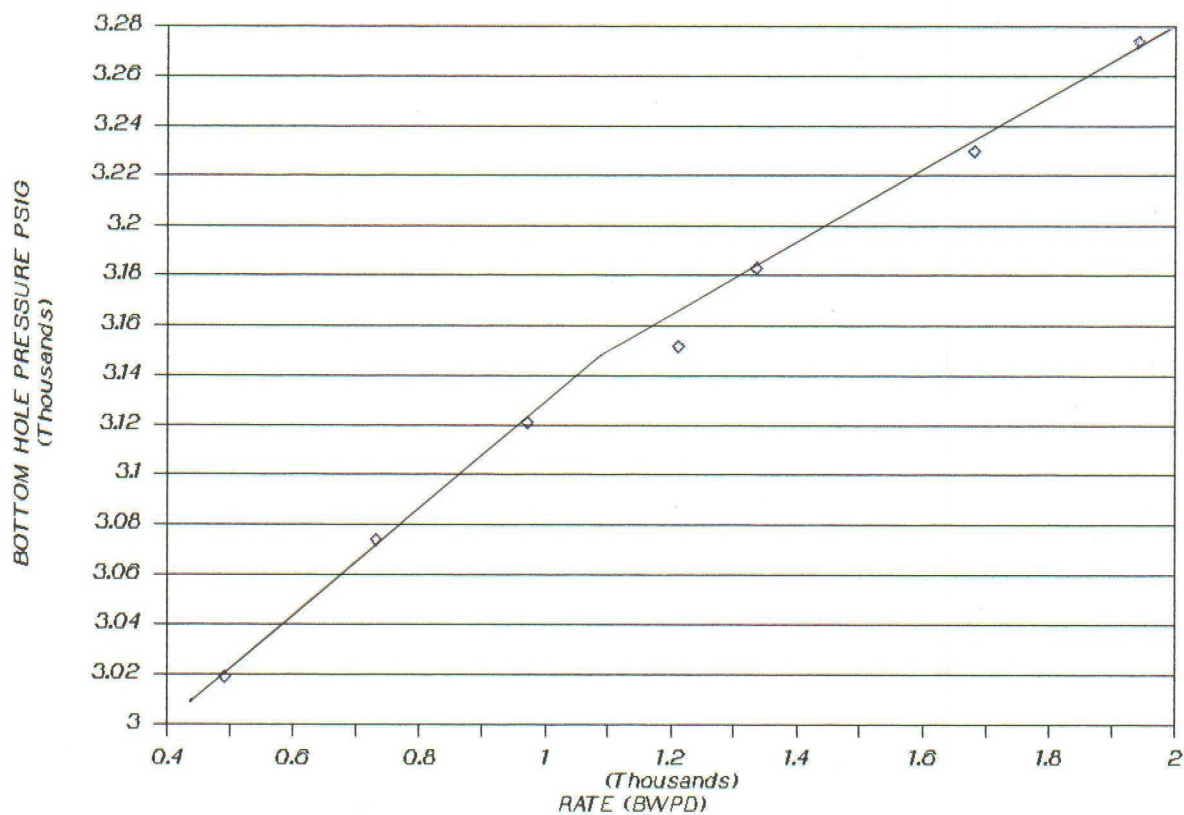
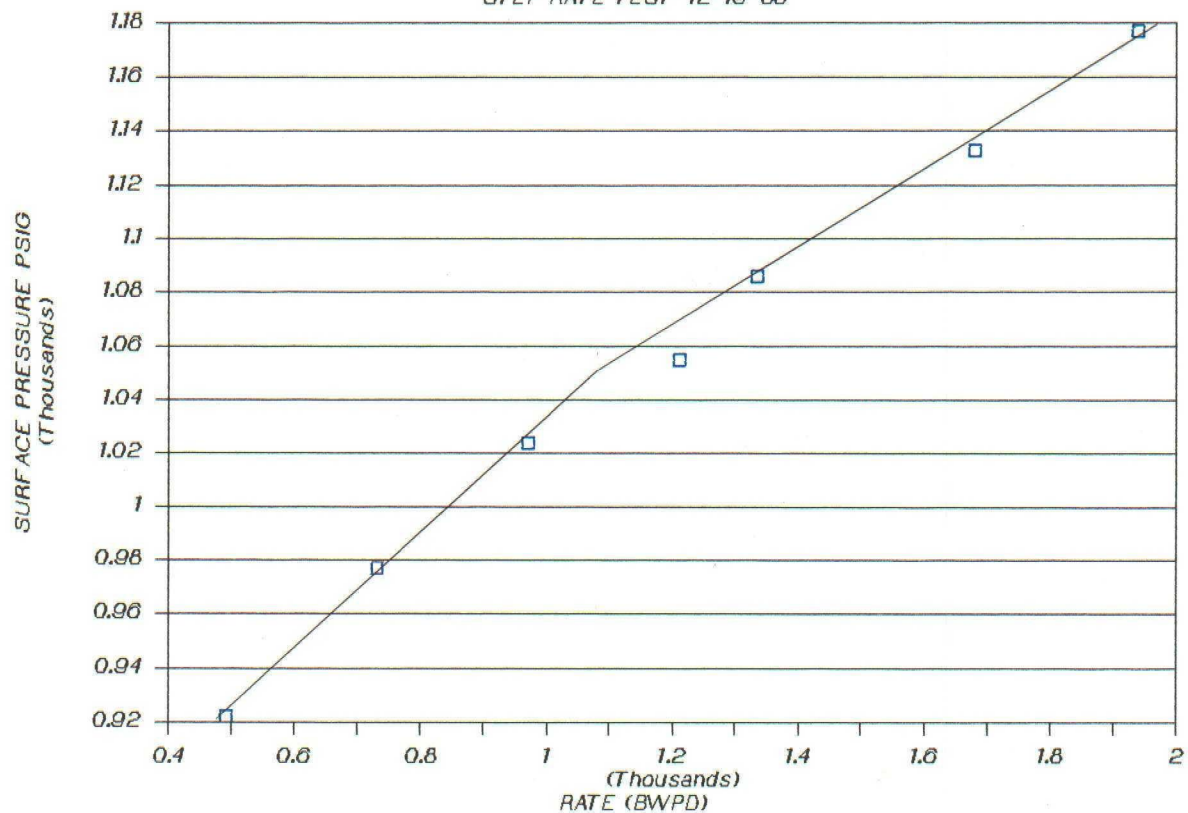
STEP RATE TEST

TEXACO PRODUCING INC.
CENTRAL VACUUM UNIT NO. 135
UNIT L, SEC. 6-18S-35E
LEA CO., NEW MEXICO
12-19-88

RATE (BWPD)	SURFACE PRESSURE CORRECTED FOR FRICTION (PSIG)	BOTTOM HOLE PRESSURE, MIDPERF (PSIG)
490	922	3019
730	977	3074
970	1024	3121
1210	1055	3152
1334	1086	3183
1680	1133	3230
1939	1177	3274

CENTRAL VACUUM UNIT NO. 135

STEP RATE TEST 12-19-88



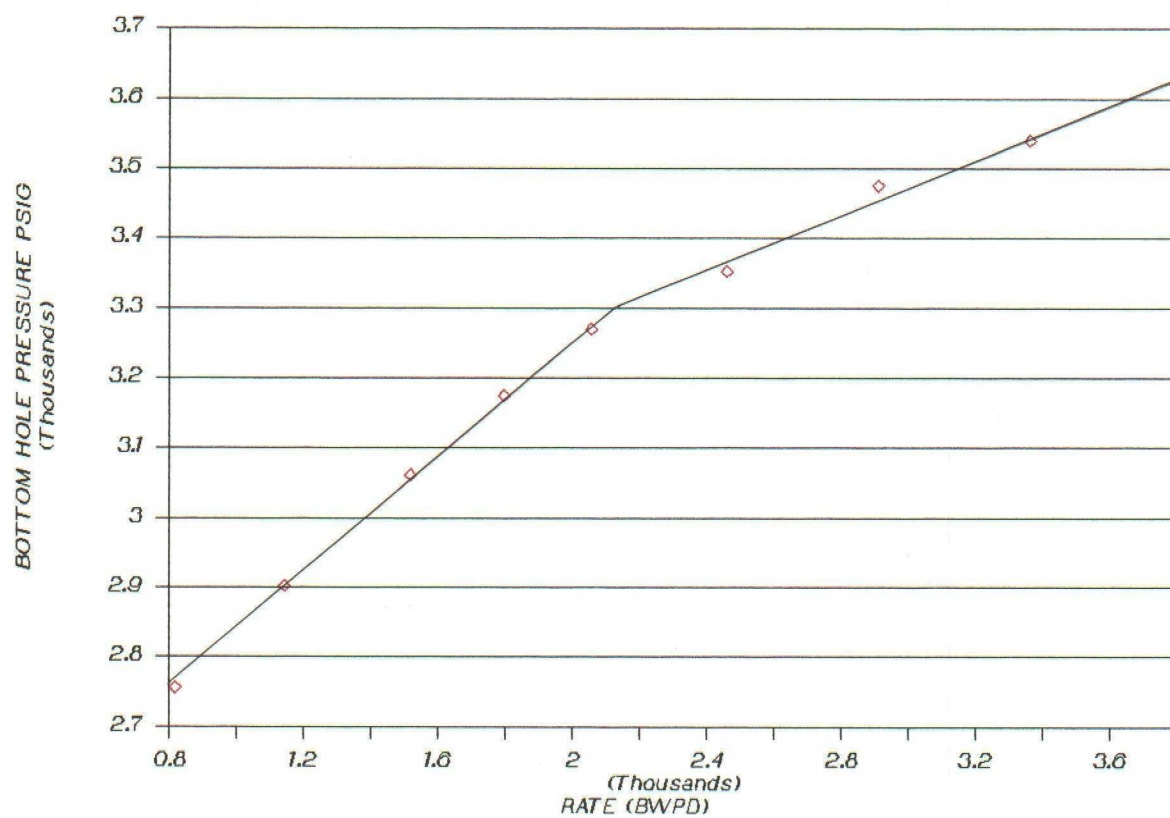
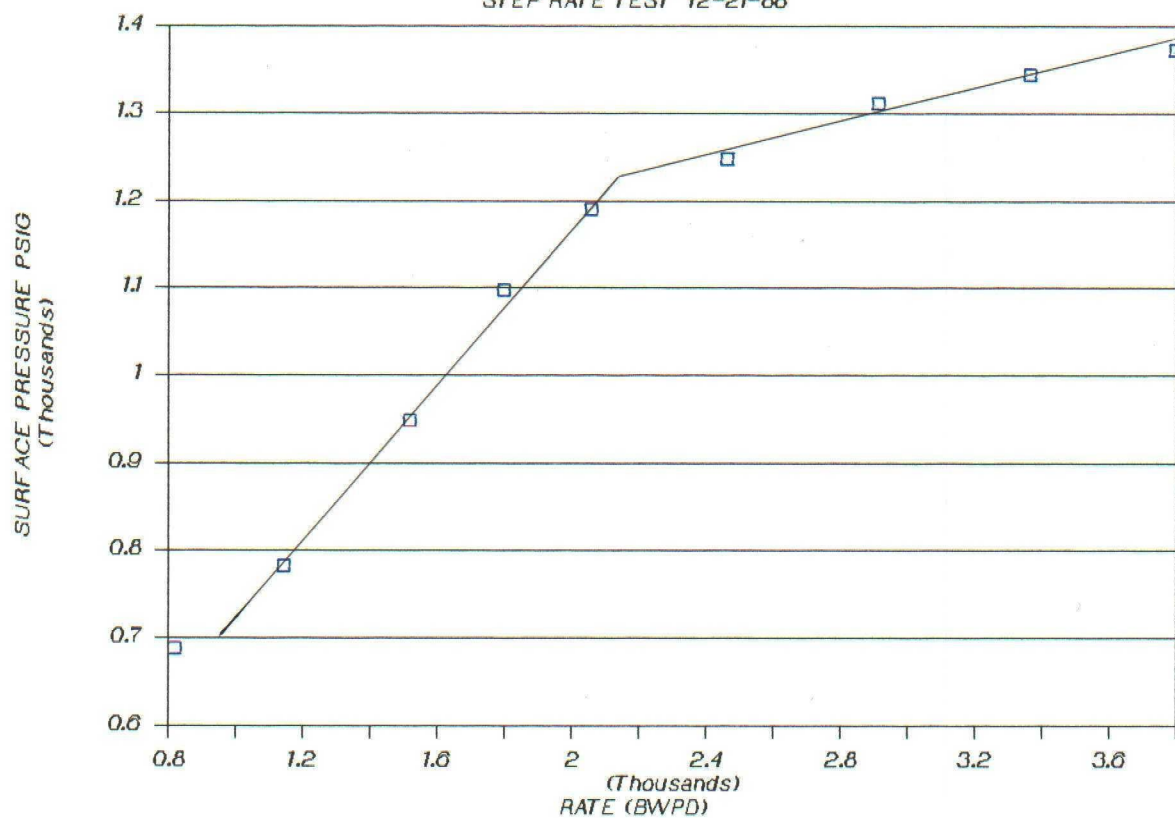
STEP RATE TEST

TEXACO PRODUCING INC.
CENTRAL VACUUM UNIT NO. 156
UNIT K, SEC. 25-17S-34E
LEA CO., NEW MEXICO
12-21-88

RATE (BWPD)	SURFACE PRESSURE CORRECTED FOR FRICTION (PSIG)	BOTTOM HOLE PRESSURE, MIDPERF (PSIG)
816	688	2756
1142	783	2902
1517	948	3061
1795	1097	3174
2054	1190	3269
2458	1248	3352
2909	1312	3475
3360	1345	3540
3792	1373	3621

CENTRAL VACUUM UNIT NO. 156

STEP RATE TEST 12-21-88



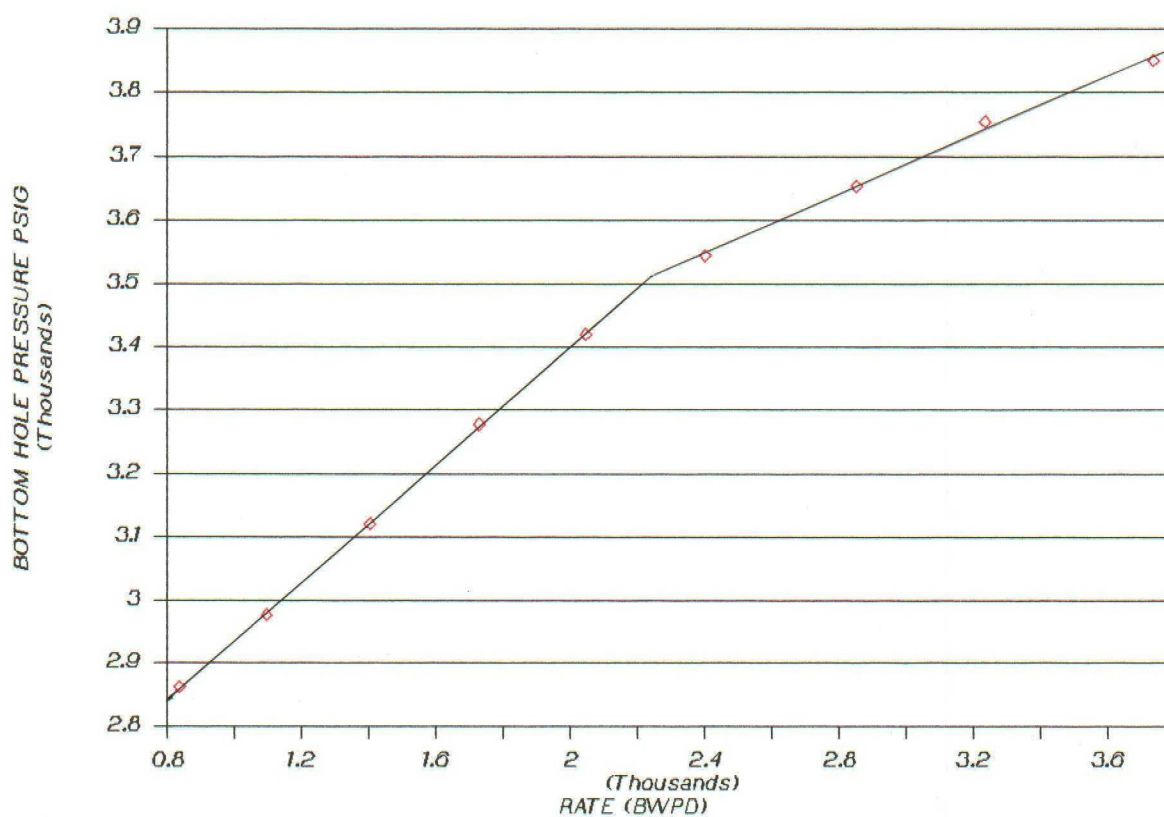
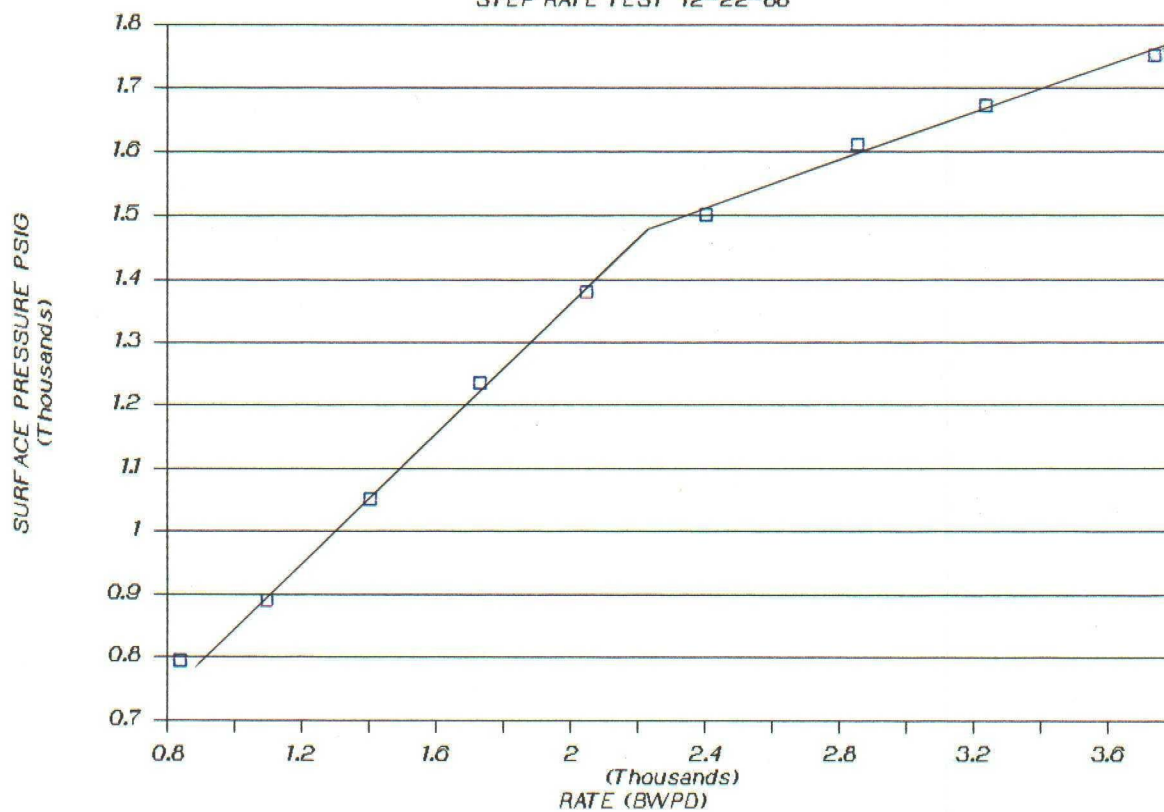
STEP RATE TEST

TEXACO PRODUCING INC.
CENTRAL VACUUM UNIT NO. 157
UNIT M, SEC. 25-17S-34E
LEA CO., NEW MEXICO
12-22-88

RATE (BHPD)	SURFACE PRESSURE CORRECTED FOR FRICTION (PSIG)	BOTTOM HOLE PRESSURE, MIDPERF (PSIG)
835	795	2861
1094	891	2977
1402	1052	3122
1728	1235	3278
2045	1380	3420
2400	1502	3545
2851	1610	3654
3235	1673	3755
3734	1752	3850

CENTRAL VACUUM UNIT NO. 157

STEP RATE TEST 12-22-88



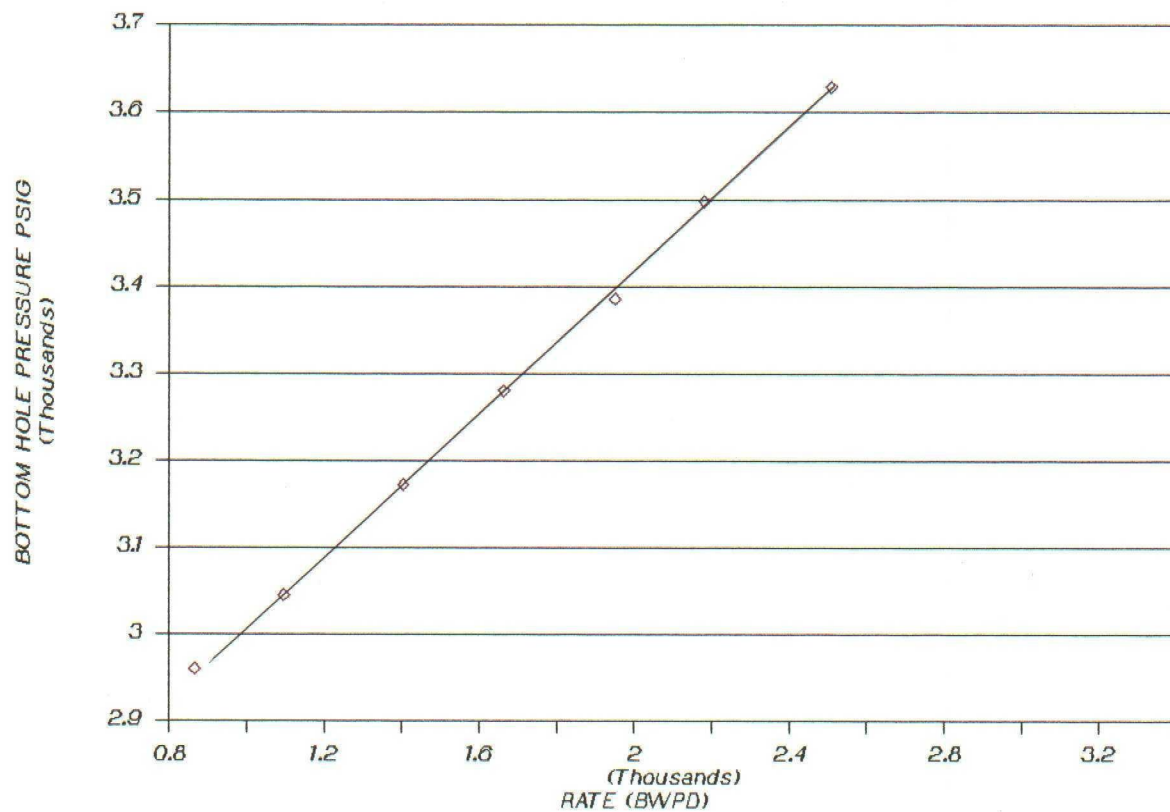
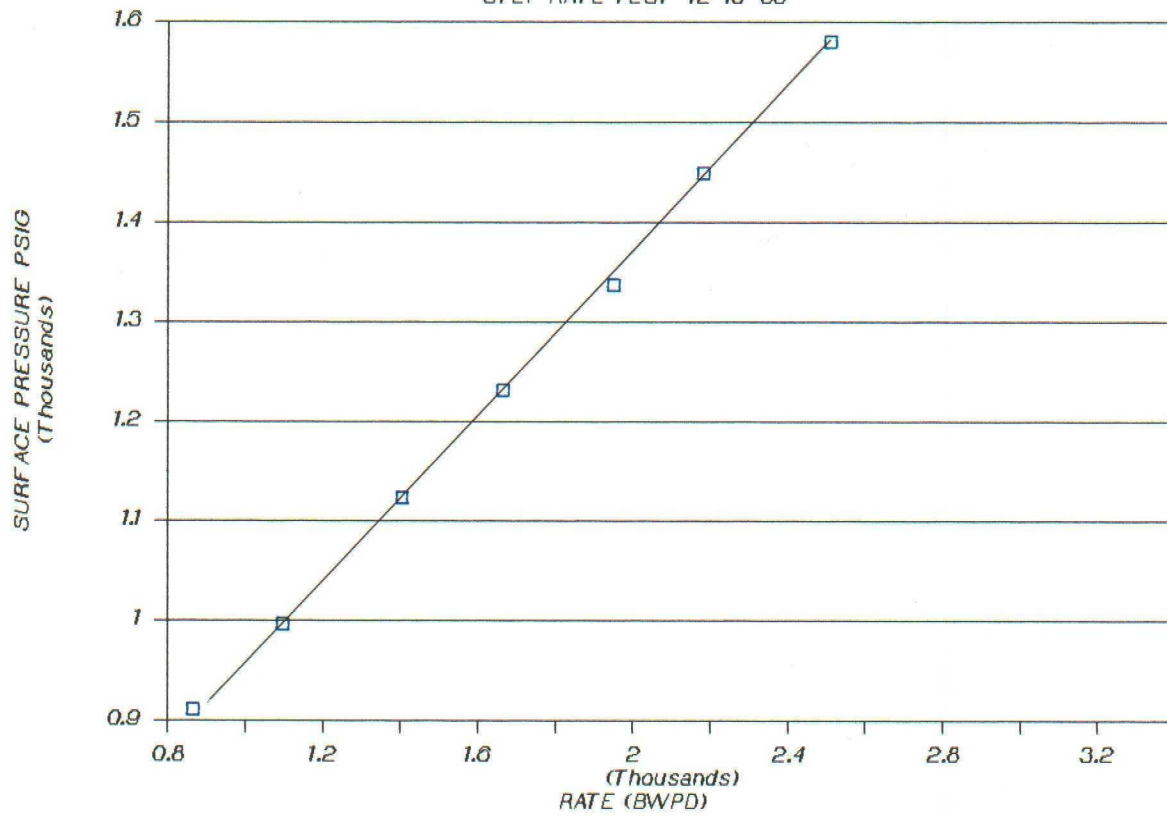
STEP RATE TEST

TEXACO PRODUCING INC.
CENTRAL VACUUM UNIT NO. 160
UNIT E, SEC. 36-17S-34E
LEA CO., NEW MEXICO
12-15-88

RATE (BWPD)	SURFACE PRESSURE CORRECTED FOR FRICTION (PSIG)	BOTTOM HOLE PRESSURE, MIDPERF (PSIG)
864	911	2960
1094	997	3046
1402	1123	3172
1661	1231	3280
1949	1337	3386
2179	1449	3498
2506	1580	3629

CENTRAL VACUUM UNIT NO. 160

STEP RATE TEST 12-15-88



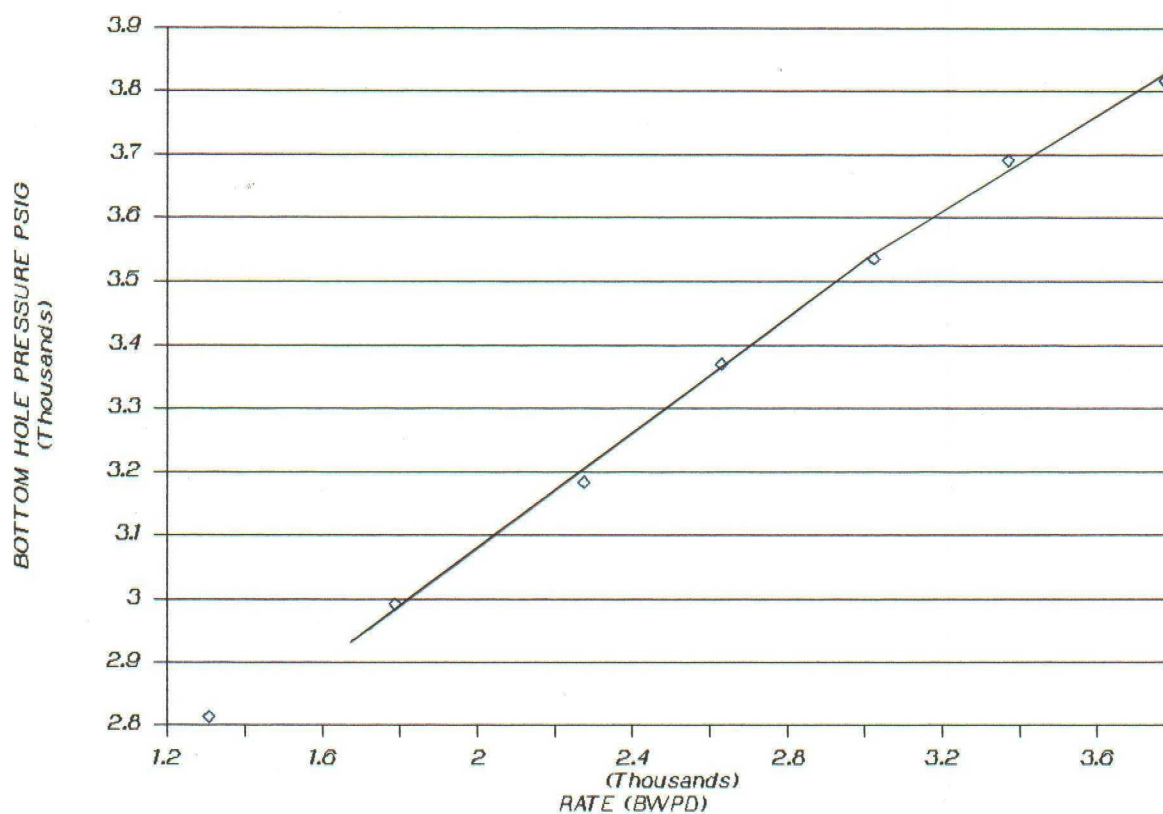
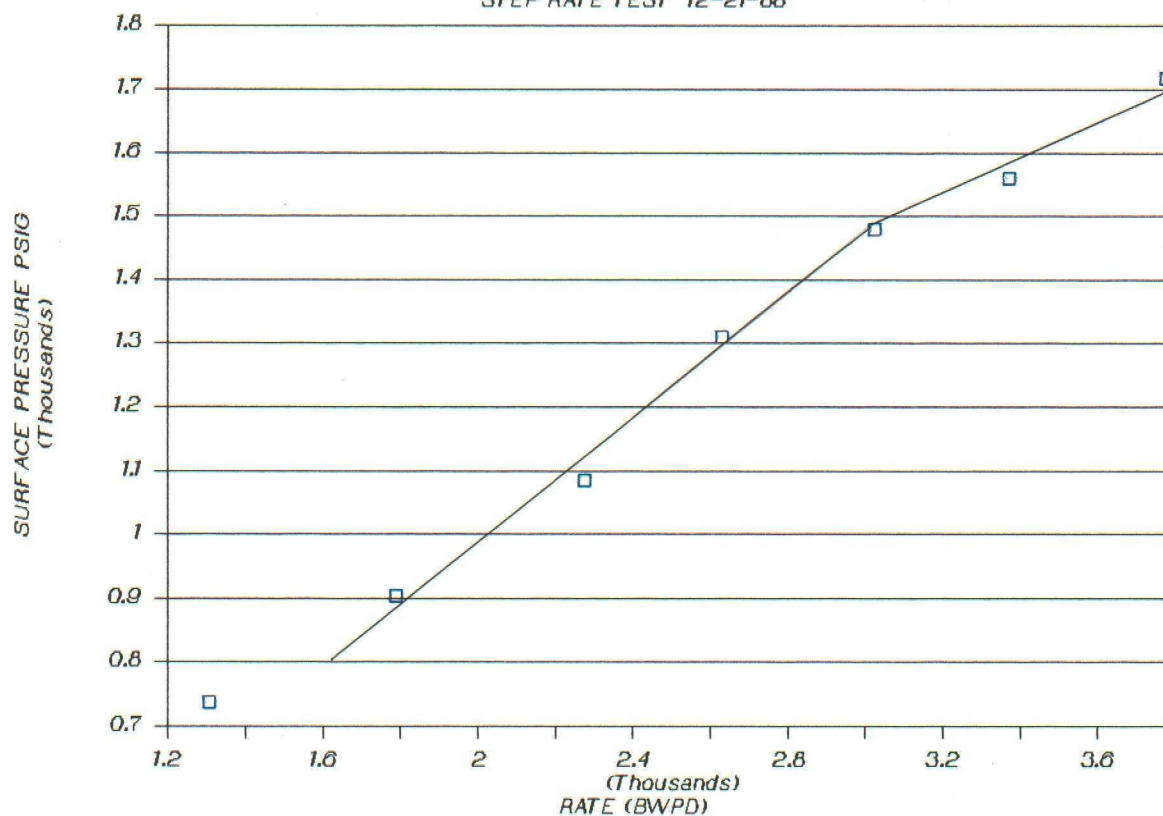
STEP RATE TEST

TEXACO PRODUCING INC.
CENTRAL VACUUM UNIT NO. 161
UNIT M, SEC. 36-17S-34E
LEA CO., NEW MEXICO
12-21-88

RATE (BWPd)	SURFACE PRESSURE CORRECTED FOR FRICTION (PSIG)	BOTTOM HOLE PRESSURE, MIDPERF (PSIG)
1306	737	2813
1786	904	2993
2275	1086	3184
2630	1310	3371
3024	1479	3536
3370	1561	3691
3773	1719	3818

CENTRAL VACUUM UNIT NO. 161

STEP RATE TEST 12-21-88





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

January 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:

<u>Texaco Producing Inc.</u>	<u>Central Vacuum Unit 57-B</u>	<u>36-17-34</u>
Operator	Lease & Well No.	Unit S-T-R

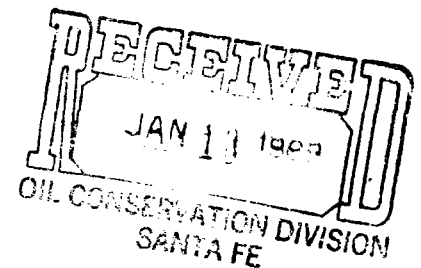
and my recommendations are as follows:

OK

Very truly yours

Jerry Sexton
Supervisor, District I

/bp





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

January 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:

<u>Texaco Producing Inc.</u>	<u>Central Vacuum Unit 71-G</u>	<u>36-17-34</u>
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

January 9, 1989

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:

<u>Texaco Producing Inc.</u>	<u>Central Vacuum Unit</u>	<u>135-L</u>	<u>6-18-35</u>
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
January 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:

<u>Texaco Producing Inc.</u>	<u>Central Vacuum Unit</u>	<u>156-K</u>	<u>25-17-34</u>
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

January 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:

<u>Texaco Producing Inc.</u>	<u>Central Vacuum Unit</u>	<u>157-M</u>	<u>25-17-34</u>
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

January 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:

<u>Texaco Producing Inc.</u>	<u>Central Vacuum Unit</u>	<u>160-E</u>	<u>36-17-34</u>
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

January 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:

<u>Texaco Producing Inc.</u>	<u>Central Vacuum Unit</u>	<u>161-M</u>	<u>36-17-34</u>
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, 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

January 24, 1989

Texaco Producing, Inc.
P.O. Box 728
Hobbs, NM 88240

Attention: J. A. Schaffer

RE: Injection Pressure Increase
Central Vacuum Unit
Vacuum Grayburg/San Andres Pool
Lea County, New Mexico

Dear Mr. Schaffer:

Reference is made to your request dated January 6, 1989, to increase the surface injection pressure on seven injection wells within the Central Vacuum Unit Waterflood Project. This request is based on step rate tests conducted on these wells during December 15-22, 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 shown 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,


for William J. LeMay
Director

cc: OCD - Hobbs
Tim Gallegos
D. Catanach
File: Case Files 6008, 6256
PMX-121

EXHIBIT "A"

<u>WELL & LOCATION</u>	<u>MAXIMUM SURFACE INJECTION PRESSURE</u>
CVU Well No. 57 Unit B, Section 36, T-17S, R-34E	1197 PSIG
CVU Well No. 71 Unit G, Section 36, T-17S, R-34E	940 PSIG
CVU Well No. 135 Unit L, Section 6, T-18S, R-35E	1000 PSIG
CVU Well No. 156 Unit K, Section 25, T-17S, R-34E	1175 PSIG
CVU Well No. 157 Unit M, Section 25, T-17S, R-34E	1425 PSIG
CVU Well No. 160 Unit E, Section 36, T-17S, R-34E	1530 PSIG
CVU Well No. 161 Unit M, Section 36, T-17S, R-34E	1429 PSIG