PMX-170

PDEV0020700170

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

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

August 10, 1993

Phillips Petroleum Company
4001 Penbrook
Odessa, TX 79762

Attention: D.R. Weir

RE: Injection Pressure Increase M.E. Hale Unit Well Nos. 12 & 13, Lea County, New Mexico

Dear Mr. Weir:

Reference is made to your request dated July 22, 1993 to increase the surface injection pressure on the above-referenced wells. This request is based on step rate tests conducted on these wells between June 17 and 21, 1993. 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:

Well and Location	Maximum Injection Surface Pressure
M.E. Hale Well No. 12 1260' FSL - 2630' FEL Unit O, Section 35, Township 17 South, Range 34 East	2200 PSIG
M.E. Hale Well No. 13 1360' FSL - 1210' FEL Unit P, Section 35, Township 17 South, Range 34 East	2200 PSIG
Both wells located 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,

William J. LeMay
Director

WJL/BES/amg

cc: Oil Conservation Division - Hobbs
D. Catanach
File: PMX-170

NO WAITING PERIOD

COMPANY: **PHILLIPS PETROLEUM COMPANY**

ADDRESS: **4001 Penbrook**

CITY, STATE, ZIP: **Odessa, Texas 79762**

ATTENTION: **D.R. Wier**

RE: Injection Pressure Increase
M.E. Hale Unit Well No.12 & 13
Section 35-T17S-R34E
Lea County, New Mexico

Dear Sir:

Reference is made to your request dated **July 22, 1993,** to increase the surface injection pressure on **the above referenced wells.** This request is based on step rate tests conducted on these wells **June 17 and 21, 1993.** 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:

Well & Location	Maximum Injection Surface Pressure
M.E. Hale Well No.12 **1260' FSL & 2630' FEL** **Unit Letter "O"**	**2200 psig**
M.E. Hale Well No.13 **1360'FSL & 1210'FEL** **Unit Letter "P"**	**2200 psig**

Both Wells in Section 35, Township 17 South, Range 34 East, 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,

William J. LeMay
Director

WJL/BES/

xc: D. CATANACH FILE - **PMX-170** OCD - **Hobbs**

N/R

OIL CONSERVATION DIVISION
RECEIVED
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PHILLIPS PETROLEUM COMPANY
ODESSA, TEXAS 79762
4001 PENBROOK

EXPLORATION AND PRODUCTION GROUP
Permian Basin Region

July 22, 1993

M.E. Hale Waterflood Project
Administrative Order No. PMX-170
Lea County, New Mexico

New Mexico Dept. of Energy and Minerals
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504

Attention: Mr. David Catanach

Dear Mr. Catanach:

Phillips Petroleum Company, as operator of the subject project, requests administrative approval of an increase in permitted wellhead injection pressure for the recently converted M.E. Hale #12 and M.E. Hale #13 water injection wells.

These two former producers were converted to water injection per NMOCD Administrative Order No. PMX-170 dated August 13, 1992. Order No. PMX-170 limits surface injection pressure on both wells to a maximum .2 psi/ft of depth to the uppermost perforation, which equates to 871 psig for the #12 well, and 873 psig for the #13 well.

In accordance with Order No. PMX-170, an increase in permitted injection pressure may be authorized upon a proper showing by the operator that an increase in pressure will not result in migration of injected fluid from the Grayburg and San Andres formations. In order to satisfy this requirement, injectivity step rate tests have been conducted on both wells in an attempt to identify a minimum formation parting pressure.

Attached please find injection step rate data for each well in tabular form and plotted format. For Hale #12, it appears that parting pressure occurs at 2500 psig and 4 BPM, and for the Hale #13, parting pressure was not obtained at 2300 psig and 4 BPM.

It is requested that the permitted injection wellhead pressure limitation be increased to 2200 psig for both the M.E. Hale #12 and M.E. Hale #13 wells. This requested increase in injection pressure limitation will allow for more efficient operation of the subject waterflood project.

If you have any questions regarding this request or require additional information, please contact D.G. Harms at (915) 368-1453.

D. R. Wier
Director, Reservoir Engineering

DRW:dgh

Attachments

cc: T.J. Bogan
(r) D.G. Williamson
L.M. Sanders
R.K. McCoy
(r) K.E. Snow
(r) D.G. Harms

Mr. Jerry Sexton
c/o New Mexico Dept. of Energy & Minerals
Oil Conservation Division
P.O. Box 1980
Hobbs, New Mexico 88240

PHILLIPS PETROLEUM COMPANY
M. E. HALE LEASE
WATER INJECTION STEP RATE TEST RESULTS

M.E. HALE #12

RATE (BPM)	SURFACE INJECTION PRESSURE (PSIG)	ISIP PRESSURE (PSIG)
0.0	0	0
1.0	950	920
1.5	1120	1050
2.0	1390	1270
2.5	1720	1550
3.0	1950	1750
3.5	2250	1940
4.0	2500	2140
4.5	2670	2250

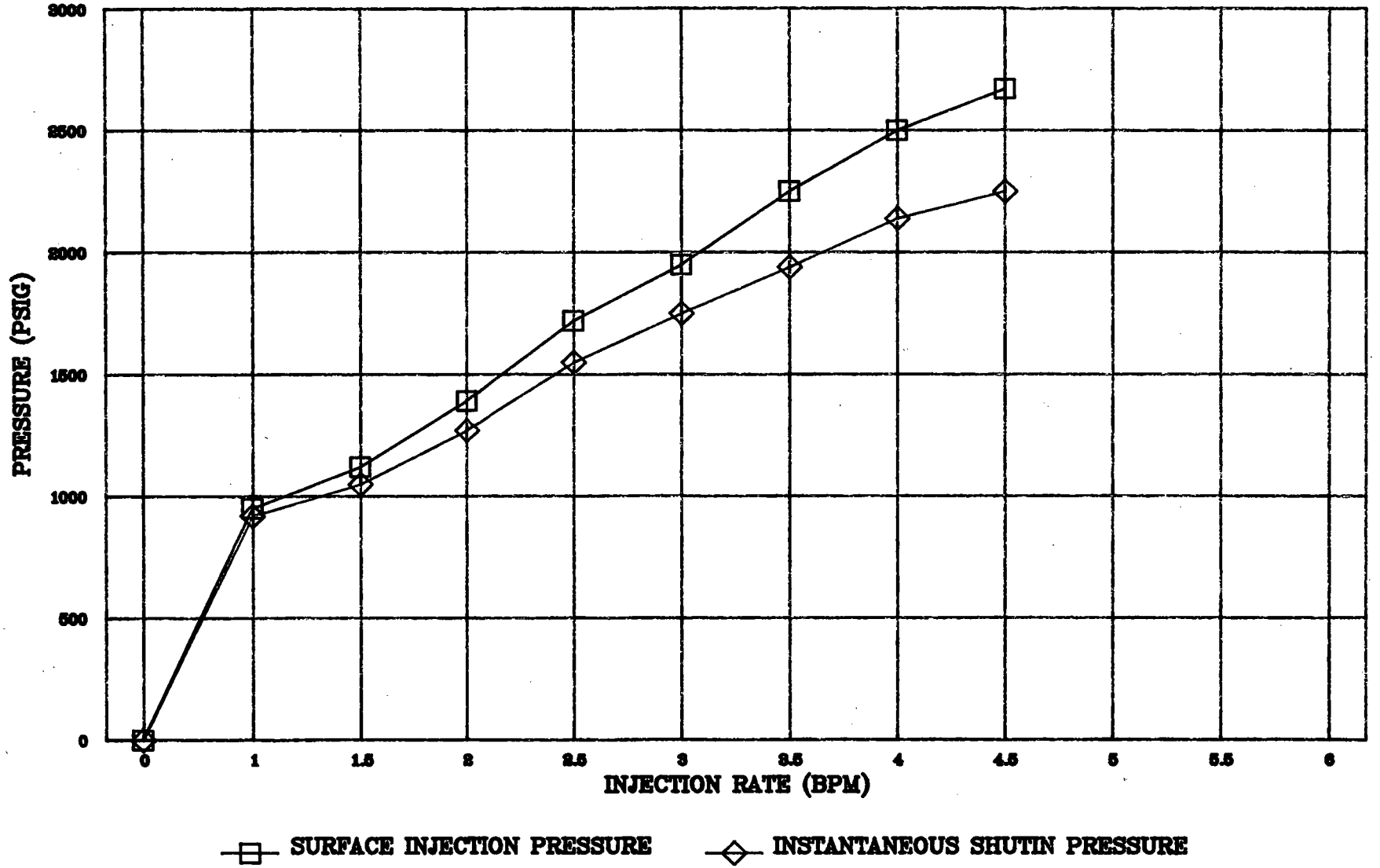
M.E. HALE #13

RATE (BPM)	SURFACE INJECTION PRESSURE (PSIG)	ISIP PRESSURE (PSIG)
0.0	0	0
1.0	1010	950
1.5	1240	1150
2.0	1400	1250
3.0	1800	1560
3.5	2050	1750
4.0	2300	1950

June 28, 1993

HALE #12

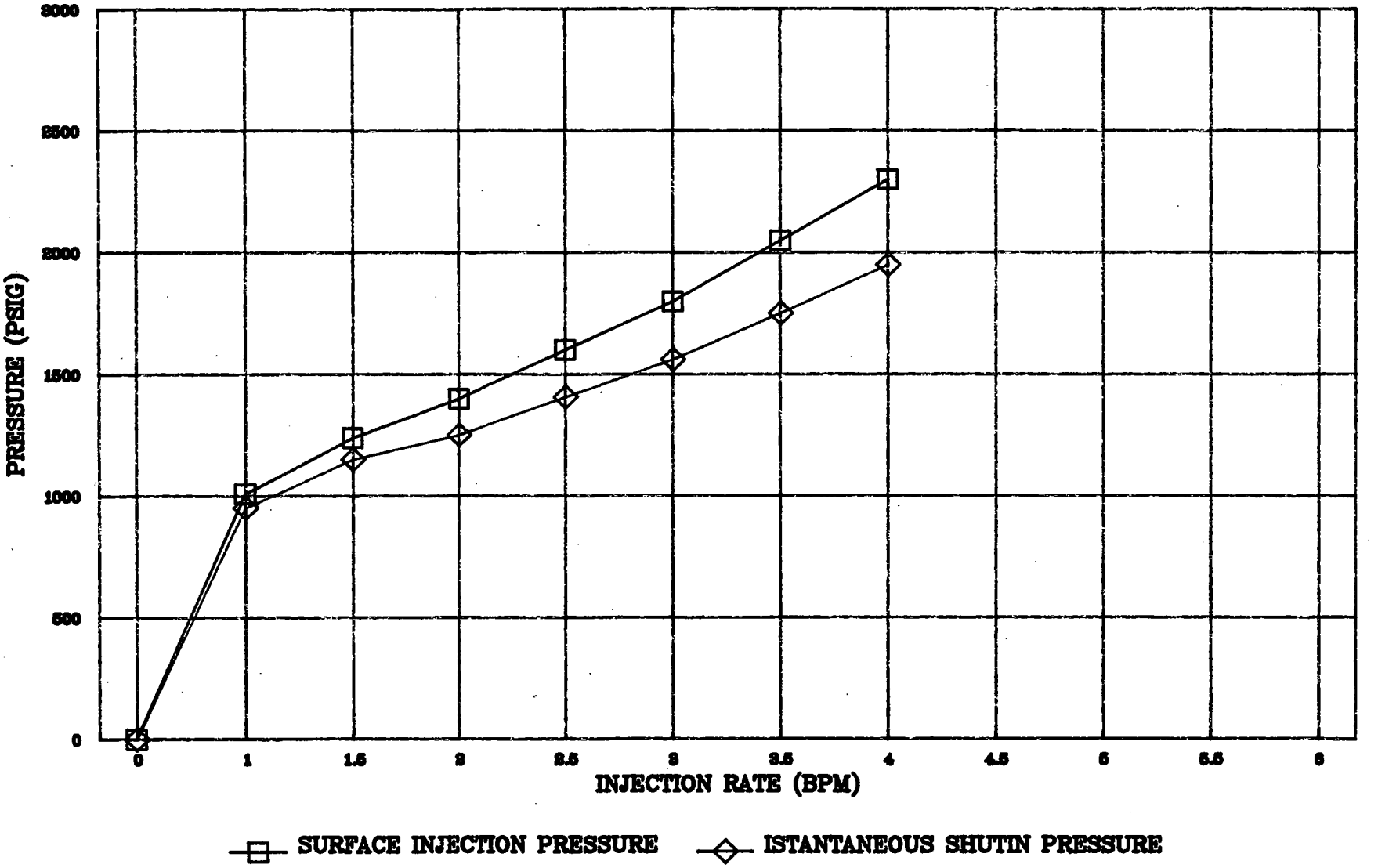
STEP RATE TEST – 6/21/93



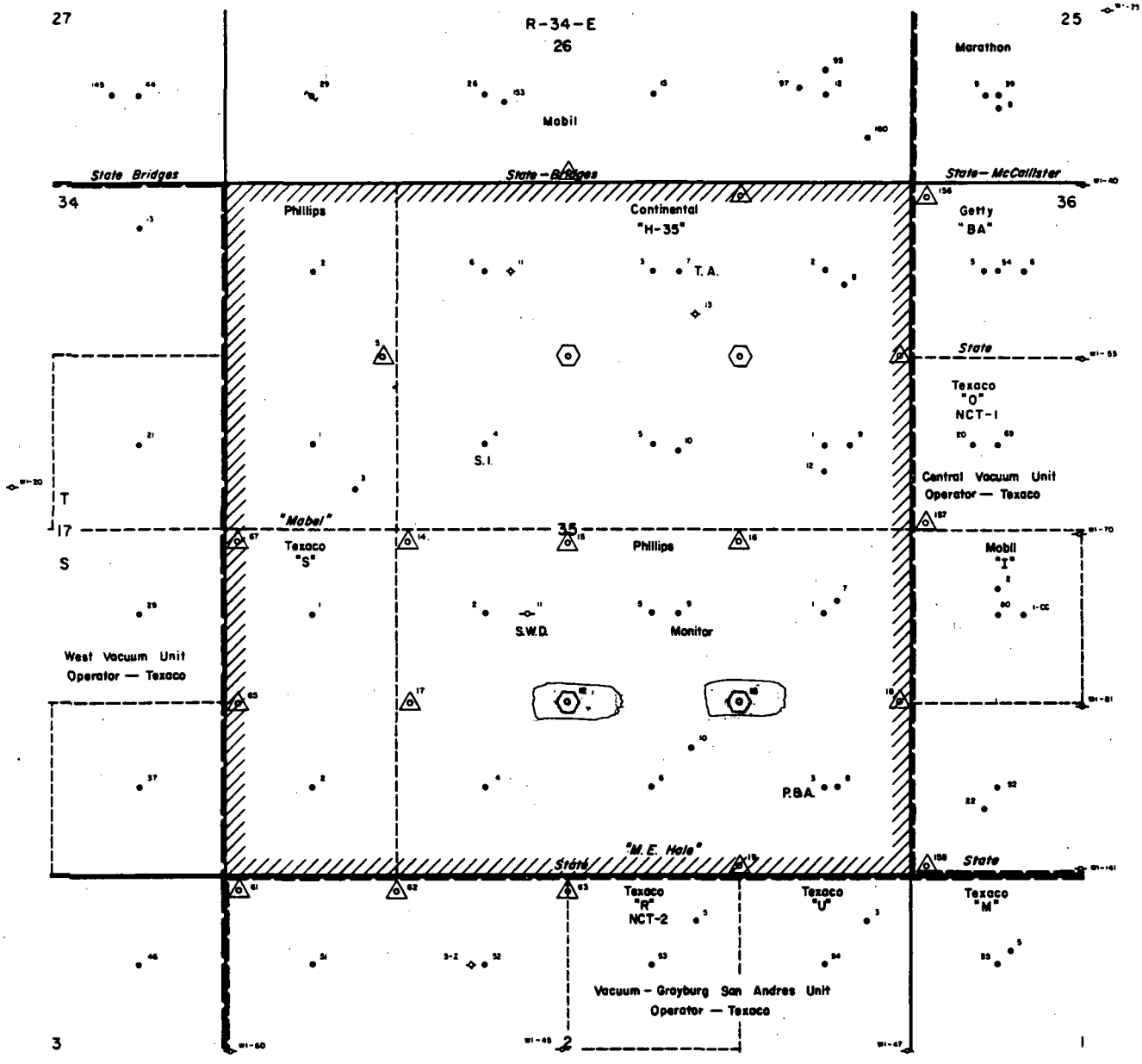
D.G. HARMS
June 28, 1993

HALE #13

STEP RATE TEST – 6/17/93



D.G. HARMS
JUNE 28, 1993



SECTION 35 WATER INJECTION COOP PROPOSAL
LEA COUNTY, NEW MEXICO

SCALE

0' 500' 1000' 1500' 2000'

Proposed Injector

Proposed Injector Or Producer