



1935 - 1985

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800



TONEY ANAYA
GOVERNOR

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

May 27, 1986

Phillips Petroleum Company
4001 Penbrook
Odessa, Texas 79762

Attention: G. R. Smith

Re: Amendment to Order PMX-118

Dear Sir:


Reference is made to your request of May 12, 1986 for an amendment to Administrative Order PMX-118, which authorized water injection into two wells on your East Vacuum Grayburg-San Andres Unit. It is our understanding that you wish these wells to be now classified as water-alternate-CO₂ injection wells. It is also our understanding that these two wells are currently equipped for CO₂ injection.

You are therefore authorized to utilize the following wells as water-alternate-CO₂ injection wells on your East Vacuum Grayburg-San Andres Unit, previously approved by Division Order No. R-6856 for CO₂ injection.

<u>Tract - Well</u>	<u>Location</u>
3202-011	2600 FSL & 200 FEL Sec. 32, T-17S, R-35E
3229-007	2600 FSL & 2500 FWL Sec. 32, T-17S, R-35E

Both wells in Lea County, New Mexico.

Sincerely,


R. L. STAMETS
Director

RLS/DRC/et

xc: Oil Conservation Division - Hobbs
File PMX-118
Donna McDonald
Case File- 7426



PHILLIPS PETROLEUM COMPANY

ODESSA, TEXAS 79762
4001 PENBROOK

October 16, 1986

EXPLORATION AND PRODUCTION GROUP

East Vacuum Grayburg-San Andres Unit
Carbon Dioxide Injection Project
Bottom Hole Injection Pressure Limitation
Lea County, New Mexico

New Mexico Oil Conservation Division
Attn: Mr. R. L. Stamets
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Stamets:

Phillips Petroleum Company, as operator of the subject unit, requests administrative approval for an increase in the bottom hole carbon dioxide injection pressure limitation to 4000 psi for Tract 3202, Well No. 011. This well is a water-alternate-CO₂ injector, approved by your letter of May 27, 1986, an amendment to Order PMX-118. The well is currently subject to the bottom hole injection pressure limitation of 3150 psi set out in NMOCD Order No. R-6856.

A step-rate test run in this well last May identified the bottom hole parting pressure as 4300 psi. This test was submitted to Mr. Jerry Sexton by letter dated June 9, 1986. A copy is attached for your convenience. After CO₂ injection began into this well, a BHP survey was run which showed the bottom hole injection pressure to be 3302 psi. This survey was sent to Mr. Jerry Sexton by letter dated October 8, 1986. A copy is attached here for your convenience. Since running the survey, we have restricted CO₂ injection so as to bring the bottom hole injection pressure below the 3150 psi limitation. Our requested pressure limitation of 4000 psi would not exceed the formation parting pressure in this well.

Very truly yours,

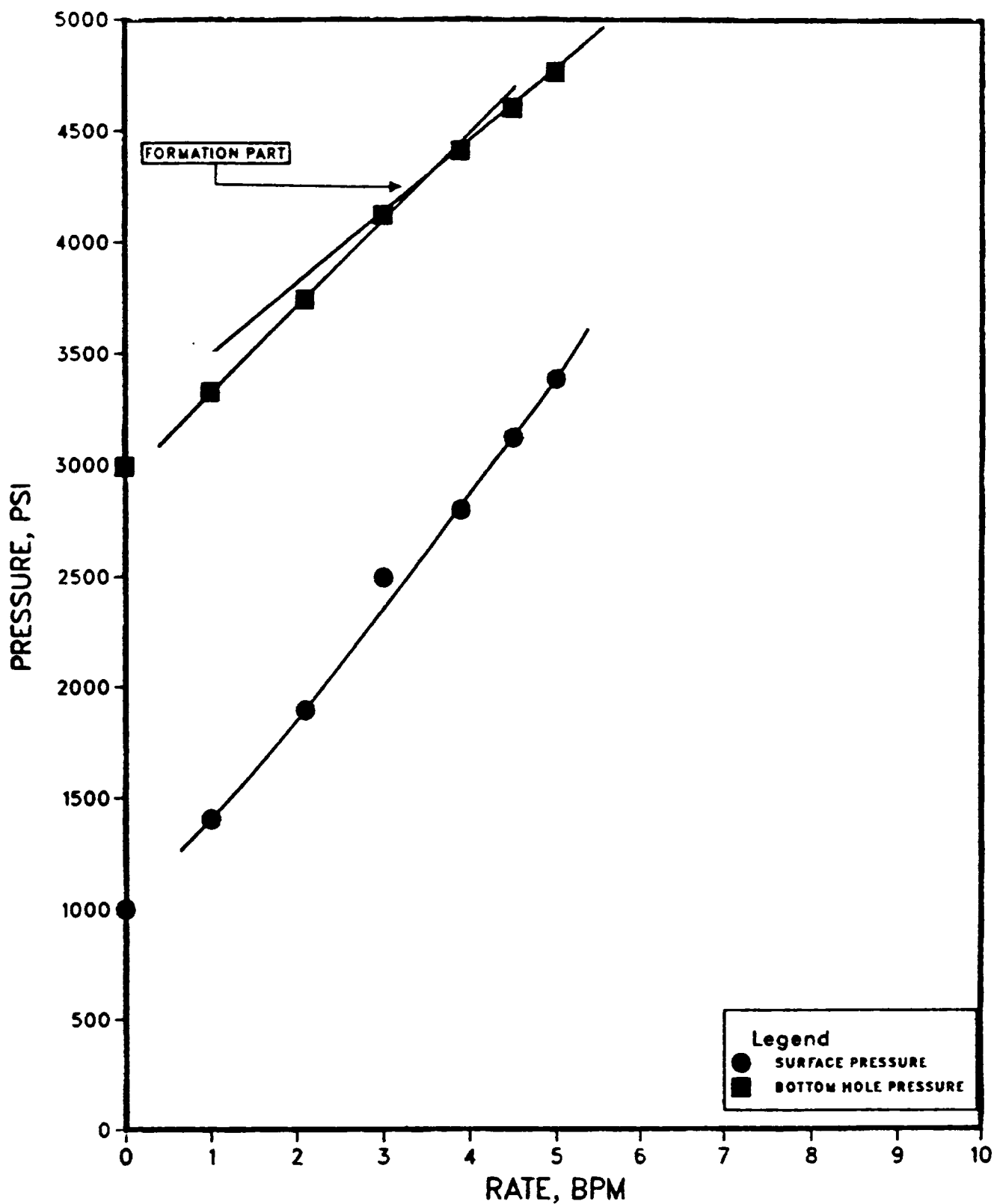
G. R. Smith, Director
Reservoir Engineering

MHB:jj

Attachments

cc: New Mexico Oil Conservation Division
Attn: Mr. Jerry Sexton
P. O. Box 1980
Hobbs, New Mexico 88240

EVGSAU FORMATION PARTING PRESSURE TEST TRACT 3202, WELL NO. W011



EAST VACUUM GRAYBURG - SAN ANDRES UNIT

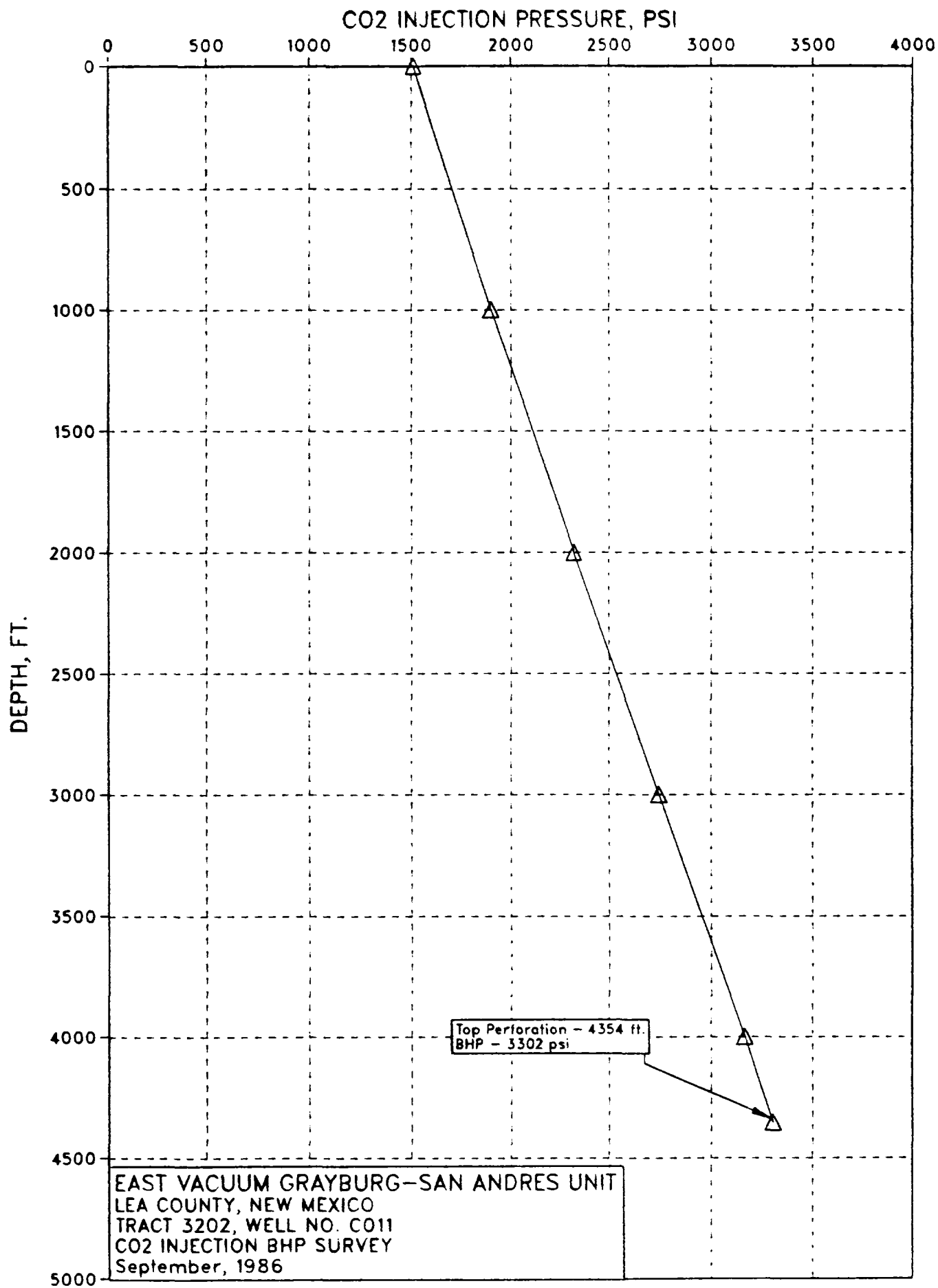
Tract 3202, Well No. W011

FORMATION PARTING PRESSURE TEST DATA

INJECTION RATE (BPM)	INJECTION RATE (BPD)	PRESSURE (PSI)	
		<u>SURFACE</u>	<u>BOTTOM HOLE *</u>
0.0	0	1000	2991
1.0	1440	1405	3326
2.1	3024	1895	3744
3.0	4320	2495	4125
3.9	5616	2800	4415
4.5	6480	3120	4604
5.0	7200	3385	4765

*Measured at top perforation.

RE6.2/evgsau.t10



EAST VACUUM GRAYBURG-SAN ANDRES UNIT
Tract 3202, Well No. C011

CO₂ Injection BHP Survey Data

<u>Depth, ft.</u>	<u>CO₂ Injection Pressure, psi</u>	<u>Gradient, psi/ft</u>
0	1,508	
1,000	1,898	0.391
2,000	2,322	0.424
3,000	2,747	0.425
4,000	3,162	0.415
4,354 (Top Perf)	3,302	0.408

CO₂ Injection Rate = 848 MSCF/D



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONEY ANAYA
GOVERNOR

November 12, 1986

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

Phillips Petroleum Company
4001 Penbrook
Odessa, Texas 79762

Attn: G. R. Smith

Re: Injection Pressure Increase
East Vacuum G-SA Unit
Lea County, New Mexico

Dear Sir:

Reference is made to your request of October 16, 1986 to increase the Bottom-hole injection pressure on your East Vacuum Grayburg San Andres Unit Tract 3202 Well No. 011. This request is based on a step rate test conducted on the well during May, 1986. The results of the test have been reviewed by my staff and we feel an increase in injection pressure on this well is justified at this time.

You are therefore authorized to increase your bottom-hole injection pressure on the following well:

<u>Well & Location</u>	<u>Maximum Injection Bottom-Hole Pressure</u>
E. Vacuum G-SA Ut. Tract 3202 No. 011 2600 FSL & 200 FEL, Sec. 32, T-17S, R-35E, NMPM, Lea County New Mexico	4000 PSI

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water or CO₂ is not being confined to the injection zone or it is endangering any fresh water aquifers.

Sincerely,

A handwritten signature in dark ink, appearing to read 'R. L. Stamets', with a stylized flourish at the end.

R. L. STAMETS
Director

RLS/DRC/et

cc: } Oil Conservation Division - Hobbs
File PMX - 118
D. McDonald
D. Catanach