



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

April 17, 2002

Lori Wrotenbery
Director
Oil Conservation Division

ChevronTexaco
15 Smith Road
Midland, Texas 79705

Attn: Mr. Britton McQuien

Re: Injection Pressure Increase -172
Vacuum Grayburg San Andres Unit No. 133
Lea County, New Mexico

Dear Mr. McQuien:

Reference is made to your request dated April 1, 2002, to increase the surface injection pressure on the above referenced Vacuum Grayburg San Andres Unit (VGSA) CO₂ injection well. This request is based on a step rate test conducted on the well on March 7, 2002. After reviewing test results, we feel an increase in injection pressure is justified at this time.

This well is equipped with 2 3/8" coated tubing and injection packer. With size and type of tubing remaining the same, you are authorized to increase the surface injection pressure to the following:

Well and Location	Maximum Surface Injection Pressure
VGSA Unit Well No. 133 (API 30-025- 35686)	1,900 PSIG Water, 1850 PSIG CO ₂
Unit E, Section 1, Township 18 South, Range 34 East, NMPM, 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,

Lori Wrotenbery
Director

cc: Oil Conservation Division - Hobbs
Files: Case 12592; PMX-217; IPI 2002

pKRV0209238654

1 P1-172 NA

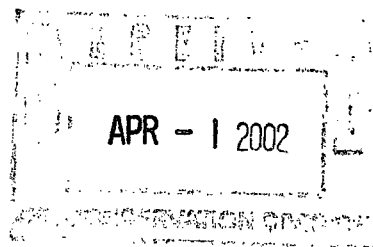
**Texaco Exploration and
Production Inc.**

Enhanced Recovery
15 Smith Road
Midland, TX 79705
Tel 915-687-7218
Fax 915-687-7187

Britton McQuien
Petroleum Engineer

ChevronTexaco

March 28, 2002



New Mexico Energy, Minerals, and Natural Resources Department
Oil Conservation Division
Attn: David Catanach
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

**Subject: Request increase in surface injection for wells Vacuum Grayburg San
Andres Unit #133.**

Dear Mr. Catanach:

Texaco Exploration and Production Inc. respectfully requests increases in injection pressure
for the following Vacuum Grayburg San Andres Unit well:

Well Number	API Number	Location	Requested Max Surface Water Injection Pressure	Requested Max Surface CO ₂ Injection Pressure
133	3002535686	Unit E, Section 1, T-18S, R-34E	1900 PSIG	1850 PSIG

The requested surface injection pressures are in accordance with Order No. R4442-A
authorizing Texaco to initiate a tertiary CO₂ flood on the Vacuum Grayburg San Andres
Unit.

Enclosed, please find step rate tests for the well listed above. For well #133, no break was
observed at pressure in excess of the requested pressure.

2 3/8 RINCE
4230 PKR

March 28, 2002
Page 2

ChevronTexaco

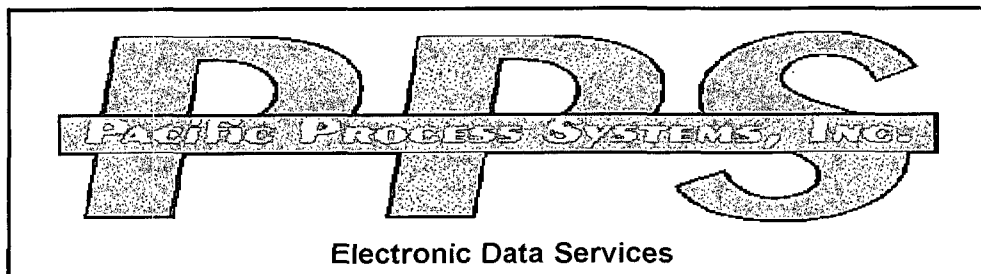
If you have any questions or comments about this request, please contact Britton M. McQuien @ (915) 687-7218.

Very Truly Yours,

A handwritten signature in cursive script that reads "Britton M. McQuien".

Britton M. McQuien
Texaco Exploration and Production, Inc.
15 Smith Road
Midland, Texas 79705

cc: Chris Williams



Step Rate Injection Test Report

for

Chevron / Texaco

CVGSAU #133

0

Sec.1 - T18S - R34E

03-07-02

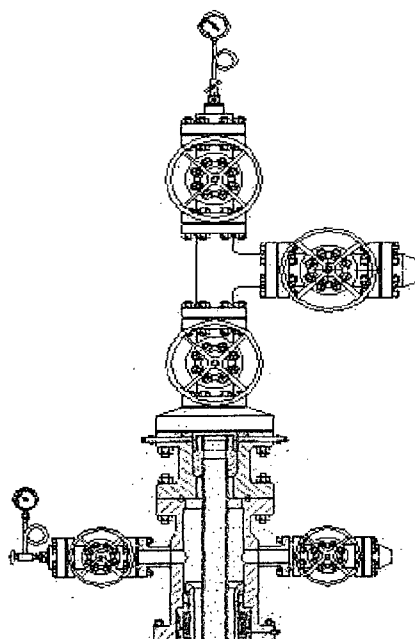
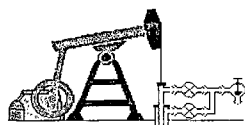
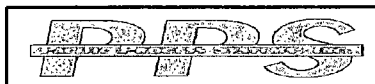


TABLE OF CONTENTS

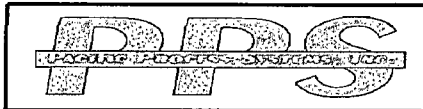
SECTION I	CONTENTS
SECTION II	SEQUENCE OF EVENTS
SECTION III	DATA REPORT
SECTION IV	CHART



COMPANY : Chevron / Texaco
WELL: CVGSAU #133
COMPANY REP: Britton McQuien
PERFORATIONS: N/A

SERVICE DATES : 03-07-02
TEST TYPE : Step Rate
PPS TECHNICIANS : Joe Brown

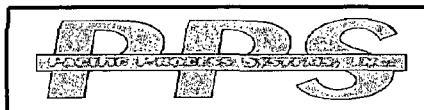
DATE	TIME	REMARKS
3/7/02	14:50	Open up well with 963# at surface. Start pumping at 776 Bbls/day.
03/07/02	16:00	Rate #1.
03/07/02	16:05	
03/07/02	16:10	
03/07/02	16:15	Rate #2.
03/07/02	16:20	
03/07/02	16:25	
03/07/02	16:30	Rate #3.
03/07/02	16:35	
03/07/02	16:40	
03/07/02	16:45	Rate #4.
03/07/02	16:50	
03/07/02	16:55	
03/07/02	17:00	Rate #5.
03/07/02	17:05	
03/07/02	17:10	
03/07/02	17:15	Rate #6.
03/07/02	17:20	
03/07/02	17:25	
03/07/02	17:30	Rate #7.
03/07/02	17:35	
03/07/02	17:40	
03/07/02	17:45	Rate #8.
03/07/02	17:50	
03/07/02	17:55	
03/07/02	18:00	Rate #9.
03/07/02	18:05	
03/07/02	18:10	
03/07/02	18:15	Rate #10.
03/07/02	18:20	
03/07/02	18:25	
03/07/02	18:30	Rate #11.
03/07/02	18:35	
03/07/02	18:40	
03/07/02	18:45	Rate #12.
03/07/02	18:50	



COMPANY : Chevron / Texaco
 WELL: CVGSAU #133
 COMPANY REP: Britton McQuien
 PERFORATIONS: N/A

SERVICE DATES : 03-07-02
 TEST TYPE : Step Rate
 PPS TECHNICIANS : Joe Brown

STEP NO.	TIME	SURFACE TUBING PRESS. (psig)	CUMULATIVE VOL INJECTED (bbls)	INJECTION RATE (bbls/day)	INJECTION RATE (gpm) (3)/34.2857	MEASURED BHP (psi)
	16:00	1188.5				
	16:05	1182.3	2.7	766.7	22.36	
	16:10	1204.6	5.3	761.3	22.20	
1	16:15	1282.3	8.0	765.1	22.31	
	16:20	1311.9	11.5	1028.0	29.98	
	16:25	1312.4	15.5	1139.3	33.23	
2	16:30	1372.6	19.4	1140.1	33.25	
	16:35	1362.6	24.6	1497.3	43.67	
	16:40	1384.8	29.7	1463.0	42.67	
3	16:45	1379.8	34.8	1463.9	42.70	
	16:50	1427.1	41.5	1918.9	55.97	
	16:55	1459.1	48.2	1945.6	56.75	
4	17:00	1433.8	55.0	1946.9	56.79	
	17:05	1477.5	63.1	2346.3	68.43	
	17:10	1472.1	71.2	2334.8	68.10	
5	17:15	1505.9	79.4	2336.1	68.13	
	17:20	1529.1	89.1	2794.8	81.51	
	17:25	1539.4	99.3	2946.0	85.92	
6	17:30	1546.2	109.5	2932.7	85.54	
	17:35	1561.5	120.5	3175.1	92.61	
	17:40	1566.4	131.5	3169.6	92.45	
7	17:45	1583.2	142.5	3167.1	92.37	
	17:50	1600.0	154.9	3575.9	104.30	
	17:55	1624.8	167.4	3598.3	104.95	
8	18:00	1640.6	179.8	3578.9	104.38	
	18:05	1669.7	193.7	4005.5	116.83	
	18:10	1672.2	207.7	4012.1	117.02	
9	18:15	1695.0	221.6	4013.9	117.07	
	18:20	1723.6	237.1	4457.8	130.02	
	18:25	1732.8	252.6	4457.6	130.01	
10	18:30	1732.7	267.6	4322.3	126.07	
	18:35	1725.8	283.1	4474.7	130.51	
	18:40	1751.4	298.6	4474.9	130.52	



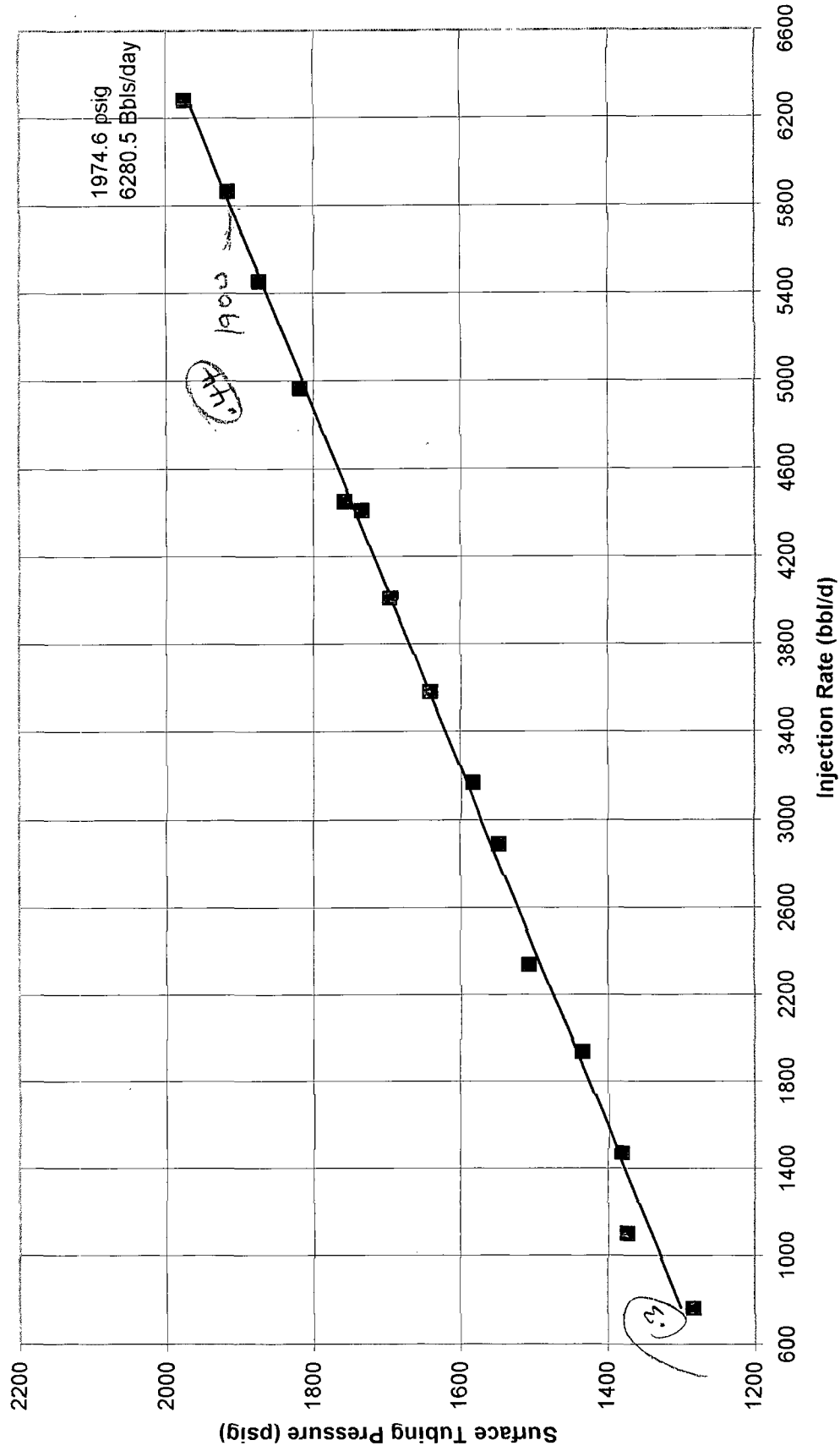
COMPANY : Chevron / Texaco
 WELL: CVGSAU #133
 COMPANY REP: Britton McQuien
 PERFORATIONS: N/A

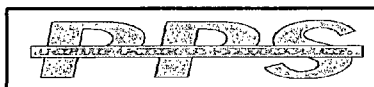
SERVICE DATES : 03-07-02
 TEST TYPE : Step Rate
 PPS TECHNICIANS : Joe Brown

STEP NO.	TIME	SURFACE TUBING PRESS. (psig)	CUMULATIVE VOL INJECTED (bbls)	INJECTION RATE (bbls/day)	INJECTION RATE (gpm) (3)/34/2857	MEASURED BHP (psi)
11	18:45	1756.5	314.0	4413.7	128.73	
	18:50	1823.9	330.8	4858.6	141.71	
	18:55	1813.4	348.3	5038.0	146.94	
12	19:00	1817.8	365.7	5006.5	146.02	
	19:05	1861.9	384.4	5383.9	157.03	
	19:10	1871.5	403.3	5445.0	158.81	
13	19:15	1873.0	422.5	5534.9	161.44	
	19:20	1917.6	443.0	5885.9	171.67	
	19:25	1917.4	463.3	5844.9	170.48	
14	19:30	1915.5	483.7	5873.9	171.32	
	19:35	1977.3	505.4	6255.1	182.44	
	19:40	1975.4	527.2	6285.7	183.33	
Falloff	19:45	1974.6	549.1	6300.7	183.77	
	19:46	1533.3				
	19:47	1529.4				
	19:48	1526.4				
	19:49	1522.5				
	19:50	1519.3				
	19:55	1505.7				
	20:00	1493.3				

Pacific Process Systems, Inc.

Step Rate Injection Test





COMPANY : Chevron / Texaco
WELL: CVGSAU #133
COMPANY REP: Britton McQuien
PERFORATIONS: N/A

SERVICE DATES : 03-07-02
TEST TYPE : Step Rate
PPS TECHNICIANS : Joe Brown

DATE	TIME	REMARKS
3/7/02	14:50	Open up well with 963# at surface. Start pumping at 776 Bbls/day.
03/07/02	16:00	Rate #1.
03/07/02	18:55	
03/07/02	19:00	Rate #13.
03/07/02	19:05	
03/07/02	19:10	
03/07/02	19:15	Rate #14.
03/07/02	19:20	
03/07/02	19:25	
03/07/02	19:30	Rate #15.
03/07/02	19:35	
03/07/02	19:40	
03/07/02	19:45	Start Fall off.
03/07/02	19:46	
03/07/02	19:47	
03/07/02	19:48	
03/07/02	19:49	
03/07/02	19:50	
03/07/02	19:55	
03/07/02	20:00	End Test.