

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

October 11, 1988

Texaco, Inc.
West Star Route Box 423
Lovington, NM 88260

Attention: A. Gernandt

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

Dear Mr. Gernandt:

Reference is made to your request dated June 23, 1988, to increase the surface injection pressure on seventeen wells within the Central Vacuum Unit and Vacuum Grayburg San Andres Unit. This request is based on step rate tests conducted on these wells during May & June, 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 show 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,

A handwritten signature in black ink, appearing to read 'William J. LeMay', written over a horizontal line.

William J. LeMay
Director

cc: OCD - Hobbs File: ~~PMX~~-120
D. McDonald PMX-121
D. Catanach PMX-43
Case File: 6008, PMX-74
 & 4852 PMX-111

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EXHIBIT "A"

<u>WELL & LOCATION</u>	<u>MAXIMUM SURFACE INJECTION PRESSURE</u>
Central Vacuum Unit No. 73 2630 FNL & 142 FEL (Unit H) Section 36, T-17S, R-34E	1000 PSIG
Central Vacuum Unit No. 84 1333 FSL & 151 FEL (Unit I) Section 36, T-17S, R-34E	1144 PSIG
Central Vacuum Unit No. 93 10 FSL & 1136 FWL (Unit M) Section 31, T-17S, R-35E	1200 PSIG
Central Vacuum Unit No. 99 1408 FNL & 11211 FWL (Unit E) Section 6, T-18S, R-35E	1095 PSIG
Central Vacuum Unit No. 159 1310 FNL & 100 FWL (Unit D) Section 36, T-17S, R-34E	1215 PSIG
VGSAU Well No. 18 1330 FSL & 1330 FWL (Unit K) Section 1, T-18S, R-34E	1260 PSIG
VGSAU Well No. 30 2630 FSL & 2630 FWL (Unit K) Section 2, T-18S, R-34E	1260 PSIG
VGSAU Well No. 32 2630 FSL & 30 FWL (Unit L) Section 1, T-18S, R-34E	1220 PSIG
VGSAU Well No. 34 2630 FSL & 2630 FEL (Unit J) Section 1, T-18S, R-34E	920 PSIG
VGSAU Well No. 44 1330 FNL & 1330 FWL (Unit F) Section 2, T-18S, R-34E	1435 PSIG
VGSAU Well No. 46 1405 FNL & 1230 FEL (Unit H) Section 2, T-18S, R-34E	1415 PSIG

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VGSAU Well No. 48 1330 FNL & 1330 FWL (Unit F) Section 1, T-18S, R-34E	895 PSIG
VGSAU Well No. 50 1330 FNL & 1330 FEL (Unit G) Section 1, T-18S, R-34E	925 PSIG
VGSAU Well No. 59 2500 FNL & 40 FWL (Unit E) Section 2, T-18S, R-34E	1110 PSIG
VGSAU Well No. 62 65 FNL & 1330 FWL (Unit C) Section 2, T-18S, R-34E	1240 PSIG
VGSAU Well No. 63 50 FNL & 2630 FEL (Unit B) Section 2, T-18S, R-34E	1330 PSIG
VGSAU Well No. 67 2630 FEL & 120 FWL (Unit L) Section 35, T-17S, R-34E	1380 PSIG

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 4852
Order No. R-4442

APPLICATION OF TEXACO INC FOR A
~~PRESSURE MAINTENANCE PROJECT AND~~
SPECIAL RULES THEREFOR, LEA
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 1, 1972, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 27th day of November, 1972, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Texaco Inc., seeks authority to institute a pressure maintenance project in its Vacuum Grayburg San Andres Unit Area, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico, by the injection of approximately 1,500 barrels of water per day into the Grayburg and San Andres formations through each of eight injection wells proposed to be drilled at unorthodox locations in Sections 1 and 2, Township 18 South, Range 34 East, NMPM.
- (3) That the applicant also seeks authority to drill seven additional producing wells at unorthodox locations in said Sections 1 and 2.
- (4) That the applicant further seeks the designation of a project area and the promulgation of rules for the project area, including provision for the assignment of top unit allowable to all wells in the project area, top unit allowable to each of the 15 additional injection and producing wells to be drilled in the project area, and an additional 75 percent of top unit allowable to be assigned to each well in the project area as a bonus allowable for the injection of water.

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(5) That a pressure maintenance project area comprising all of the Vacuum Grayburg San Andres Unit Area, being all of Sections 1 and 2, the NE/4 NE/4 of Section 11, and the N/2 NW/4 of Section 12, all in Township 18 South, Range 34 East, is in the interest of conservation and should result in greater ultimate recovery of oil, thereby preventing waste.

(6) That top unit allowable for the Vacuum Grayburg-San Andres Pool should be assigned to all wells in the project area upon initiation of substantial water injection, and each of the proposed 15 additional wells should also receive top unit allowable upon completion. That the project allowable should be the sum of the allowables assigned to the wells in the project area and should be permitted to be produced from any well in the project area, provided however, that any producing well in the project area which directly or diagonally offsets a well outside the project area producing from the same common source of supply should not be permitted to produce in excess of top unit allowable for the pool without a showing at public hearing that substantial response to water injection has occurred in said well.

(7) That approval of the proposed eight injection wells and seven producing wells, all at unorthodox locations, and the proposed pressure maintenance project, subject to the provisions of Finding No. (6) above, will not cause but will prevent waste and will protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Texaco Inc, is hereby authorized to operate a pressure maintenance project in its Vacuum Grayburg San Andres Unit Area, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico, to be designated the Texaco Vacuum Grayburg-San Andres Pressure Maintenance Project, by the injection of water into the Grayburg and San Andres formations through eight injection wells to be drilled at the following unorthodox locations in Township 18 South, Range 34 East, NMPM:

<u>LEASE NAME</u>	<u>WELL NO</u>	<u>LOCATION</u>	<u>SECTION</u>
New Mexico "M" State	11	2630' FNL & 1310' FWL	1
New Mexico "M" State	12	1330' FNL & 2630' FWL	1
New Mexico "AC" NCT-1 State	11	2630' FSL & 1330' FEL	2
New Mexico "AC" NCT-1 State	14	1400' FSL & 2550' FEL	2
New Mexico "AC" NCT-1 State	16	1400' FSL & 10' FEL	2
New Mexico "R" NCT-3 State	20	1310' FSL & 2630' FEL	1
New Mexico "R" NCT-3 State	23	100' FSL & 1420' FWL	1
New Mexico "Z" NCT-1 State	8	2630' FNL & 1310' FWL	2

(2) That the applicant is hereby authorized to drill seven additional producing wells in its Vacuum Grayburg San Andres

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Pressure Maintenance Project at the following unorthodox locations in Township 18 South, Range 34 East, NMPM:

<u>LEASE NAME</u>	<u>WELL NO</u>	<u>LOCATION</u>	<u>SECTION</u>
New Mexico "M" State	10	1330' FNL & 1330' FWL	1
New Mexico "AC" NCT-1 State	12	2630' FSL & 2630' FWL	2
New Mexico "AC" NCT-1 State	15	1400' FSL & 1300' FEL	2
New Mexico "R" NCT-3 State	17	2630' FSL & 2630' FEL	1
New Mexico "R" NCT-3 State	18	2630' FSL & 10' FWL	1
New Mexico "R" NCT-3 State	19	1330' FSL & 1330' FWL	1
New Mexico "R" NCT-3 State	22	100' FSL & 100' FWL	1

(3) That Special Rules and Regulations governing the operation of the Texaco Vacuum Grayburg-San Andres Pressure Maintenance Project are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
TEXACO INC. VACUUM GRAYBURG-SAN ANDRES
PRESSURE MAINTENANCE PROJECT

RULE 1. The project area of the Texaco Inc. Vacuum Grayburg-San Andres Pressure Maintenance Project, hereinafter referred to as the Project, shall comprise the area described as follows:

LEA COUNTY, NEW MEXICO
TOWNSHIP 18 SOUTH, RANGE 35 EAST, NMPM
Sections 1 and 2: All
Section 11: NE/4 NE/4
Section 12: N/2 NW/4

RULE 2. The allowable for the project area shall be known as the project allowable and shall be equal to top unit allowable for the Vacuum Grayburg-San Andres Pool times the number of wells in the project area completed in the Grayburg and/or San Andres formations for production from, or injection into, said formations.

RULE 3. The project allowable may be produced from any well or wells completed in the Vacuum Grayburg-San Andres Pool in the project area, provided however, that any well in the project area which directly or diagonally offsets a well outside the project area producing from the same common source of supply shall not be permitted to produce in excess of top unit

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allowable for the Vacuum Grayburg-San Andres Pool until it has been established after notice and hearing that such well has experienced a substantial response to water injection.

RULE 4. Each producing well in the project area shall be subject to the limiting gas-oil ratio (2500 to one) for the Vacuum Grayburg-San Andres Pool.

RULE 5. Each month the project operator shall, by the 15th day of the month, submit to the Hobbs district office of the Commission a report for the previous month showing average daily water injection into each injection well, total water injected into each well, and total cumulative water injected into each well. The report shall also list each producing well, and average daily and total monthly production from same, together with a nomination of proposed daily allowable for each of said wells for the following month. The aforesaid report shall be filed in lieu of Form C-120 for the project.

RULE 6. The Commission shall, upon review of the report and after any adjustments deemed necessary in accordance with Rules 3 and 4 of these rules, assign an allowable to each of the various producing wells in the project area for the next succeeding month.

RULE 7. The conversion of producing wells to injection, or the drilling of additional wells for injection purposes shall be accomplished only after approval of the same by the Secretary-Director of the Commission. To obtain such approval, the Project operator shall file application with the Commission, which application, if it seeks authorization to convert additional wells to injection or to drill additional injection wells shall include the following:

(1) A plat showing the location of proposed injection well, all wells within the project area, and offset operators, locating wells which offset the project area.

(2) A schematic drawing of the proposed injection well which fully describes the casing, tubing, perforated interval, and depth showing that the injection of water will be confined to the Grayburg and San Andres formations.

(3) A letter stating that all offset operators within one-half mile of the proposed injection well have been furnished a complete copy of the application and the date of notification.

The Secretary-Director may approve the proposed injection well, if within 20 days after receiving the application, no objection to the proposal is received. The Secretary-Director may grant immediate approval, provided waivers of objection are received from all offset operators.

Expansion of the project area may be approved by the Secretary-Director of the Commission administratively when good cause is shown therefor.

RULE 8. Additional producing wells may also be drilled at unorthodox locations anywhere within the project area not closer than 1320 feet of the outer boundaries of the project area. The Secretary-Director of the Commission shall have authority to grant permission to drill any well within the provisions of this rule without notice and hearing.

(4) That the effective date of the allowable provisions of this order shall be the date that actual water injection operations commence in a minimum of four of the eight authorized injection wells.

(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

BRUCE KING, Chairman

ALEX J. ARMIJO, Member

A. L. PORTER, Jr., Member & Secretary

S E A L

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