



Texaco Exploration
and Production Inc

BEFORE THE
OIL CONSERVATION DIVISION
Santa Fe, New Mexico

Case No. 11650 Exhibit No. 1

December 19, 1996

Submitted by: Texaco Exploration and Production Inc.

William J. LeMay, Director
Oil Conservation Division
New Mexico Department of Energy
Minerals and Natural Resources
State Land Office Building
2040 South Pacheco St.
Santa Fe, New Mexico 87505

Hearing Date: December 19, 1996

Re: Application of Texaco Exploration and Production Inc. for Enhanced Oil Recovery Project Qualification for the Recovered Oil Tax Rate at Central Vacuum Unit, Lea County, New Mexico

Dear Mr. LeMay:

Texaco Exploration and Production Inc. (TEPI) hereby makes application to qualify a portion of the Central Vacuum Unit (CVU) for the recovered oil tax rate as authorized by the Enhanced Oil Recovery Act. TEPI plans to commence construction on delivery and gathering facilities, contract for delivery of injectants, and upgrade existing installations in a timeline which will allow initiation of a miscible CO₂ flood during the first quarter of 1997. TEPI is making application pursuant to the rules promulgated by Commission Order No. R-9708 entered on August 27, 1992.

In accordance with this Order, TEPI provides the following information:

a. Operator's name and address:

Texaco Exploration and Production Inc.
P.O. Box 3109 or 500 N. Loraine
Midland, TX 79702 Midland, TX 79701

b. Description of project area:

1. Provide a plat outlining the project area;

See Exhibit "A" for a plat of the project area.

2. Describe the project area by section, township and range;

The following Table identifies the acreage within the boundaries of the CVU.

Township & Range	Section	Description
T17S-R34E	Sec. 25	S/2, SE/4 NE/4
	Sec. 36	ALL
T17S-R35E	Sec. 30	ALL
	Sec. 31	N/2, SW/4, SW/4 SE/4
T18S-R34E	Sec. 12	N/2 NE/4
T18S-R35E	Sec. 6	ALL
	Sec. 7	NW/4, NW/4 NE/4

The proposed project will impact only 50.3% of the CVU acreage and is more accurately identified as those injection patterns highlighted on Exhibit "A", which include those wells listed in Exhibit "B".

3. Total acres; and

The CVU contains a total of 3,080 Acres (m/l).

TEPI is targeting 1,550 Acres (m/l) for the CO₂ project. This area is highlighted on Exhibit "A".

4. Provide the name of the subject pool and formation.

The CVU is within the Vacuum Field.

The CVU is unitized within portions of the Grayburg and San Andres Formations.

The type-log identified in the Unit Agreement is reproduced as Exhibit "C".

c. Status of operations in the project area:

1. Provide the name of the unit and the date and number of the Division Order approving the unit plan of operation;

The proposed CO₂ project is at the TEPI operated Central Vacuum Unit (CVU).

The Commission approved the CVU on August 9, 1977 with Order No. R-5496.

The CVU pressure maintenance project was further ruled on with Order No's. R-5530 (08-17-77); R-5530-A (06-21-78); R-5530-B (08-30-78); R-5530-C (09-23-81); and R-5530-D (03-16-83).

d. Method of recovery to be used:

1. Identify fluids to be injected; and

Recovery is to be enhanced with the introduction of Carbon Dioxide (CO₂). Produced gases will be recycled (re injected). Water will continue to be injected outside of the target area, and in the target area with alternating slugs with the CO₂ in what industry calls a WAG injection scenario.

2. If the Division has not approved the project, provide the date the application for approval was filed with the Division on Form C-108.

A supplemental C-108 is provided with this Application dated December 19, 1996.

e. Description of the project:

1. A list of producing wells;

See Exhibit "B" for a listing of the 68 existing producers within the project target area. There are currently no plans to drill additional producing wells.

2. A list of injection wells;

See Exhibit "B" for a listing of the 51 existing injectors within the project target area. There are currently no plans to drill additional injection wells.

3. Capital cost of additional facilities;

Description	Cost, \$ Million*
Field Installations/Upgrades	7.9
Well Remediation & Misc.	1.5
CO ₂ Injectant Purchase	53.2
Separation/Compression Facility	25.6
Injectant Recycle Cost	257.5

* current dollars.

4. Total project cost;

The project will cost a total of \$345.7 Million inclusive of associated injectant expenses. Of this total, \$35.0 Million will go toward facilities and well work on the CVU.

5. Provide the estimated total value of the additional production that will be recovered as a result of this project;

An additional 20.3 Million STB of Oil are anticipated to be recovered, along with 23.2 Bscf of hydrocarbon gas as a result of the project. Based on the average posted price (three weeks immediately prior to 11/13/96) of \$19.62/STB for West Texas intermediate sour crude oil, and an equivalent barrel basis of 6 Mscf/STB oil, the estimated value of the hydrocarbons produced from the proposed project is \$474.2 Million.

6. Provide anticipated date for commencement of injection; and

The anticipated initial CO₂ injection date is April 1, 1997.

7. What type of fluid will be injected and what are the anticipated volumes?

A total of 95 Bscf of CO₂ will be purchased for the project. Produced gases will be recycled back to the reservoir resulting in an ultimate injection of 259 Bscf of gas during a 25 year period. The recycled gas would consist of CO₂, certain hydrocarbons that cannot be economically marketed, and associated non-hydrocarbon gases. The injection scheme to be employed is known as a WAG, or water-alternating-gas injection. Alternating slugs of gas and slugs of water would be introduced in varying volumes with the length of injection (time) dependent upon reservoir response.

f. Production data: Provide graphs, charts and other supporting data to show the production history and production forecast of oil, gas, casinghead gas and water from the project area.

Exhibit "D" provides the CVU production and injection history along with the forecast of enhanced recovery due to the introduction of CO₂.

TEPI requests that this application be set for hearing, and with no objections, be approved.

Very truly yours,



Scott C. Wehner
Project Engineer

SCW/
Attachments

LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE

*** EXHIBIT "B" ***

Central Vacuum Unit

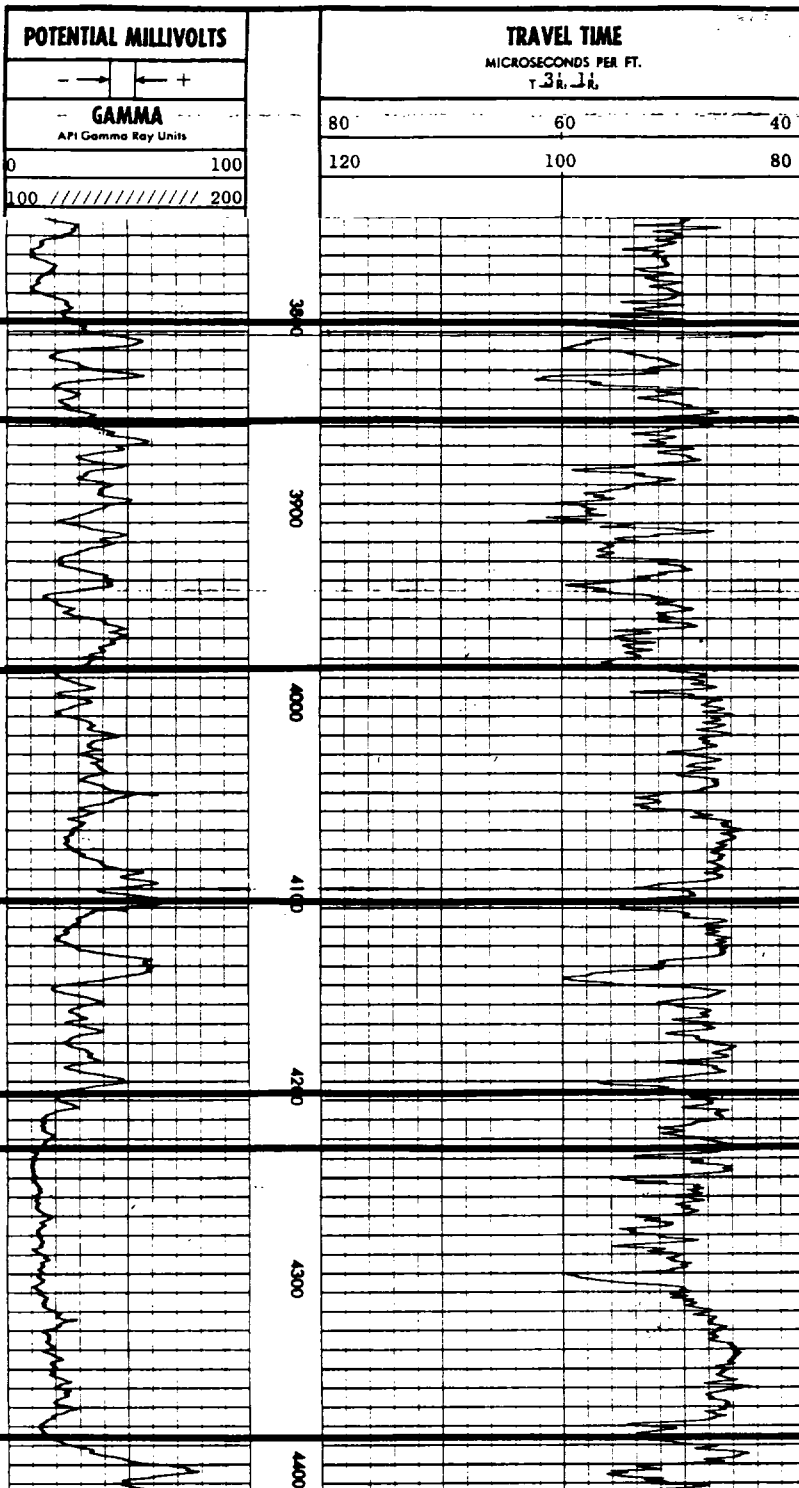
Wells within Proposed CO₂ Target Area

PRODUCERS			INJECTORS	
CVU Well No.	API Well No.	Count	CVU Well No.	API Well No.
32	30025029440001	1	40	30025257030001
33	30025085450001	2	41	30025257040001
34	30025029410001	3	42	30025257050001
35	30025029450001	4	43	30025257060001
36	30025021110001	5	44	30025257190001
37	30025021120001	6	45	30025257190001
38	30025021070001	7	46	30025258180001
39	30025021090001	8	55	30025257210001
47	30025085320001	9	56	30025257220001
48	30025085340001	10	57	30025257230001
49	30025029580001	11	58	30025257240001
50	30025029590001	12	59	30025257250001
51	30025022300001	13	60	30025257070001
52	30025022310001	14	61	30025258190001
53	30025022330001	15	70	30025257260001
54	30025022320001	16	71	30025257270001
62	30025085310001	17	72	30025256970001
63	30025085330001	18	73	30025257280001
64	30025029530001	19	74	30025257290001
65	30025029550001	20	81	30025257080001
66	30025022360001	21	82	30025257300001
67	30025022370001	22	83	30025257310001
68	30025022390001	23	84	30025257320001
69	30025022350001	24	85	30025257090001
75	30025029540001	25	93	30025257330001
76	30025029570001	26	94	30025257340001
77	30025022380001	27	99	30025257100001
78	30025022400001	28	100	30025257110001
79	30025022290001	29	101	30025257120001
80	30025022340001	30	106	30025257960001
86	30025029560001	31	136	30025259970001
87	30025085360001	32	137	30025259980001
88	30025085350001	33	138	30025259990001
89	30025022410001	34	139	30025260780001
90	30025022440001	35	140	30025260000001
92	30025022420001	36	141	30025260010001
95	30025030880001	37	144	30025267880001
96	30025030890001	38	145	30025267890001
97	30025030760001	39	146	30025267900001
102	30025030900001	40	147	30025267900001
103	30025030910001	41	159	30025279690001

104	30025030780001	42	160	30025279700001
105	30025030770001	43	161	30025279710001
111	30025247540001	44	193	30025328000001
132	30025238010001	45	194	30025328010001
153	30025271940001	46	199	30025328040001
162	30025281820001	47	200	30025328050001
168	30025333350001	48	201	30025328060001
169	30025297650001	49	206	30025328080001
176	30025333310001	50	207	30025328090001
178	30025333320001	51	244	30025328100001
179	30025333330001	52		
186	30025327990001	53		
187	30025333290001	54		
188	30025333300001	55		
189	30025333340001	56		
195	30025328020001	57		
196	30025328030001	58		
197	30025327910001	59		
203	30025328070001	60		
204	30025327920001	61		
242	30025301040001	62		
253	30025301030001	63		
266	30025300220001	64		
290	30025311970001	65		
291	30025311950001	66		
302	30025300230001	67		
345	30025312040001	68		

Exhibit "C"

Central Vacuum Unit Type Log



I V a c u u m U n i t

Exhibit "D"

Central Vacuum Unit

