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July 27, 1993



### HAND-DELIVERED

William J. LeMay, Director
Oil Conservation Division
New Mexico Department of Energy, Minerals and Natural Resources
State Land Office Building
Santa Fe, New Mexico 87503

Case :0798

Re: Application of Texaco Exploration and Production, Inc. to Authorize Expansion of a Portion of its Cooper Jal Unit Waterflood Project and Qualify Said Expansion for the Recovered Oil Tax Rate Pursuant to the New Mexico Enhanced Oil Recovery Act, Lea County, New Mexico

Dear Mr. LeMay:

Enclosed in triplicate is the Application of Texaco Exploration and Production, Inc. in the above-referenced matter. This case has been included on the Examiner hearing docket for August 12, 1993.

Very truly yours, willing A. Fur

WILLIAM F. CARR

WFC:mlh Enclosures cc: Mr. Jim Ohlms (w/enclosure) Hobbs District Office (w/enclosure)



July 23, 1993

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William J. LeMay, Director Oil Conservation Division New Mexico Department of Energy, Minerals and Natural Resources State Land Office Building Post Office Box 2088 Santa Fe, New Mexico 87504

Case 10798

Re: Application of Texaco Exploration and Production Inc. for Enhanced Oil Recovery Project Qualification for the Recovered Oil Tax Rate for a Portion of the Cooper Jal Unit, Jalmat and Langlie-Mattix Pools, Lea County, New Mexico

Dear Mr. LeMay:

Texaco Exploration and Production Inc. [TEPI] hereby makes application to qualify a portion of the Cooper Jal Unit for the recovered oil tax rate as authorized by the Enhanced Oil Recovery Act. TEPI plans to commence infill drilling, recompletions, and conversions to redesign the waterflood pattern and is making application pursuant to the rules promulgated by Commission Order No. R-9708 entered on August 27, 1992.

In accordance with Order No. R-9789, TEPI provides the following information:

### a. Operator's name and address:

Texaco Exploration and Production Inc. Post Office Box 3109 Midland, Texas 79702

### b. Description of project area:

1. A plat outlining the project area is attached hereto as Exhibit "A".

William J. LeMay, Director Application of TEPI July 23, 1993

### Page 2

2. Description of project area:

### TOWNSHIP 24 SOUTH, RANGE 36 EAST, NMPM

Section 13:S/2Section 18:SW/4 SW/4Section 23SE/4 S/2Section 24:AllSection 25:N/2Section 26:NE/4 NE/4

### **TOWNSHIP 24 SOUTH, RANGE 37 EAST, NMPM**

Section 19: W/2 Section 30: NW/4

- 3. Total acres in project area: 1920 acres, more or less
- 4. Name of the subject Pool and formation:

Jalmat Pool [Tansill, Yates, and Seven Rivers formations] Langlie-Mattix Pool [bottom 250' of Seven Rivers, and Queen formations]

### c. Status of operations in the project area:

The Cooper Jal Unit was approved by Oil Conservation Division Order No. R-4018 dated August 25, 1970, and the Unit became effective October 1, 1970.

### d. Method of recovery to be used:

- 1. Injection fluids: water
- 2. The Langlie-Mattix and Jalmat Pool waterfloods were approved by Oil Conservation Division Orders No. R-4019 and R-4020 dated August 25, 1970.

### e. Description of project:

- 1. List of producing wells: Exhibit "B" attached hereto
- 2. List of injection wells: Exhibit "B" attached hereto

William J. LeMay, Director Application of TEPI July 23, 1993 Page 3

- 3. Capital cost of additional facilities: \$8,800,000
- 4. Total project costs: \$19,000,000
- 5. Estimated total value of the additional production that will be recovered as a result of the Expanded Use Area: An additional 3.2 million barrels valued at \$60,000,000.
- 6. Anticipated dated for commencement of injection: October 1, 1993
- 7. Type of fluid to be injected and the anticipated volumes: Water will be injected at an anticipated daily rate of 15,000 barrels in the project area.
- 8. Explanation of changes in technology and additional geographic area:

The project entails a redevelopment of the Jalmat and Langlie-Mattix Pools to 20 acre well spacing with 40 acre, 5-spot waterflood patterns. The patterns are redesigned in the project area to maximize wellbore usage through dual completions. The current Jalmat and Langlie-Mattix 80 acre, 5-spot patterns are not concurrent [the Jalmat has a pattern and the Langlie-Mattix has a different pattern]. The two patterns will come into alignment with a single pattern through the implementation of infill drilling, wellbore recompletions, conversions to producers, and conversions to injectors. Reserves, which would not be economic to recover through separate development, will be recovered through the new, concurrent pattern.

Review of the Jalmat and Langlie-Mattix Pools indicates that the productive sands are vertically isolated within the project area. A compartmentalized reservoir exists because of the discontinuity of pay intervals. Additional reservoir compartments will be contacted through 20 acre well spacing. The project's sweep efficiency will also improve as water injection is initiated in previously unswept compartments. William J. LeMay, Director Application of TEPI July 23, 1993 Page 4

### f. Production history and forecast:

See Exhibits "C" and "D" which display a production history and a forecast, respectively, for the project area.

TEPI requests that this application be set for hearing.

Very truly yours,

Ja Hea

James A. Head Reservoir Manager

JHO:s

Attachments

SED STATUS	<u>JR</u>	DR	CER	DR	CER	OR	28	CER	<u>JR</u>	CER	JR	CER	JR SR	CER	cer	CER	CER	OR	JR	ЛR	OR OR	CER	CER	CER	CER	CER	CER	OR	OR	ЭR	CER	CER	JR	CER	<u>JR</u>	CER	JR SR	CER	<u>JR</u>
PROPO	INJECT		PRODU	INJECT	PRODU	INJECT	INJECT	PRODU	INJECT	PRODU		PRODU	INJECT	PRODU	PRODU	PRODU	PRODU	INJECT	INJECT	INJECT	INJECT	PRODU	PRODU	PRODU	PRODU	PRODU	PRODU	INJECT	INJECT	INJECT	PRODU	PRODU	INJECT	PRODU	INJECT	PRODU	INJECT	PRODU	TOECT
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POOL	ATTIX	ATTIX	ATTIX	ATTIX	ANGLIE-M	ΑΤΤΙΧ	ATTIX	ANGLIE-M	ATTIX	ANGLIE-M	ATTIX	ANGLIE-M	ANGLIE-M	ΛΑΤΤΙΧ	NUGLIE-M	ANGLIE-M	ATTIX	ΑΤΤΙΧ	AATTIX	ANGLIE-M	ANGLIE-M	ΛΑΤΤΙΧ	ATTIX	ANGLIE-M	ATTIX	ANGLIE-M	AATTIX	ΑΤΤΙΧ	ATTIX	ΑΤΤΙΧ	ATTIX	<b>ANGLIE-M</b>	ATTIX	ΛΑΤΤΙΧ	ANGLIE-M	ΑΤΤΙΧ			
CURRENT	ANGLIE-N	-ANGLIE-N	ANGLIE-N	ANGLIE-N	<b>JALMATIL</b>	-ANGLIE-N	ANGLIE-N	JALMATIL	ANGLIE-N	JALMATIL/	<b>ANGLIE-N</b>	JALMATIL	JALMATU	ANGLIE-N	JALMATIL	<b>JALMATIL</b>	<b>ANGLIE-N</b>	ANGLIE-N	ANGLIE-N	JALMATIL	JALMATUL	-ANGLIE-N	ANGLIE-N	<b>JALMATIL</b>	<b>ANGLIE-N</b>	<b>JALMATIL</b>	<b>ANGLIE-N</b>	-ANGLIE-N	<b>ANGLIE-N</b>	ANGLIE-N	ANGLIE-N	<b>JALMATIL</b>	ANGLIE-N	ANGLIE-N	JALMATIL	<b>ANGLIE-N</b>	JALMAT	JALMAT	IAI WAT
ION-T-R	IS-36E	IS-36E	IS-36E	IS-36E	IS-36E	S-37E 1	IS-36E	IS-36E	IS-36E	S-37E	IS-37E	IS-36E	IS-36E	S-36E	IS-37E .	4S-37E	4S-36E	4S-36E	4S-37E	4S-36E \	4S-36E	4S-36E	4S-36E	4S-36E	4S-36E	4S-36E (	4S-37E	4S-36E	4S-36E	4S-37E	4S-36E	4S-37E	4S-36E	4S-36E	4S-37E	4S-36E	4S-36E	4S-37E	4S.36F
SECT	13-24	13-24	13-24	13-24	13-24	18-24	24-24	24-24	24-24	19-24	19-24	24-24	24-24	24-24	19-27	19-2	24-2	24-2	19-2	24-2	24-2	24-2	25-2	25-2	25-2	25-2	30-2	25-2	13-2	19-2	24-2	19-2	24-2	24-2	19-2	24-2	24-2	19-2	24-2
	50' FEL	FWL	170' FEL	0' FEL	· FEL	, FWL	O' FWL	0' FWL	' FEL	' FWL	7° FWL	10' FWL	10' FEL	0' FEL	0. FWL	87' FWL	50' FWL	)' FSL	17' FWL	0' FWL	0' FEL	. FEL	, FWIL	0' FWL	0. FNL	· FEL	· FWL	50' FWL	o' FEL	0' FWL	10' FEL	0' FWL	, FNL	' FWL	90' FSL	00' FEL	, FEL	' FWL	O' FWL
CATION	80' FWL, 16	0. FSL, 990	50' FNL, 21	0' FSL, 231	0. FSL, 990	0' FSL, 660	0' FNL, 198	0' FNL, 165	01 FNL, 990	0' FNL, 990	0' FNL, 191	50' FNL, 23	50' FNL, 23	50' FNL, 99	50' FEL. 33	50' FNL, 15	50' FSL, 16	0' FEL,2310	80' FSL, 19	0' FSL, 165	0. FSL, 198	0' FSL, 990	0. FNL, 330	0' FNL, 165	10' FEL, 33	0. FNL, 990	0: FNL, 330	10' FNL, 16	50' FSL, 99	10' FNL, 33	10' FSL, 23	50' FSL, 99	0' FEL, 771	0. FNL, 660	0' FWL, 14(	50' FNL, 24	0. FNL, 330	0' FNL, 330	80' FNL. 76
Lo	113	33	46	33	<b> </b> 06	99	99	66	33	33	99	16.	16	16.	16	16	9	66	19	33	66	66	66	84	23	66	33	23	16	23	23	16	17	99	28	15	88	66	19
WELL	107	112	113	114	115	116	120	121	122	123	124	125	126	127	128	129	130	132	133	134	135	136	137	138	139	140	141	143	146	147	148	150	151	152	153	154	201	202	203

PAGE B.1

# EXHIBIT "B"

### COOPER JAL UNIT CURRENT AND PROPOSED WELL STATUS ENHANCED RECOVERY PROJECT AREA

\$2000

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WELL	LOCATION	SECTION-T-R	CURRENT POOL	CURRENT STATUS	PROPOSED POOL	PROPOSED STATUS
205	1980' FNL, 1650' FEL	24-24S-36E	JALMAT	INJECTOR	JALMATILANGLIE-MATTIX	INJECTOR
206	1980' FNL, 330' FEL	24-24S-36E	JALMAT	PRODUCER	JALMATILANGLIE-MATTIX	PRODUCER
207	2310' FNL, 330' FWL	19-24S-37E	JALMAT	INJECTOR	JALMAT	INJECTOR
208	2310' FNL, 1650' FEL	19-24S-37E	JALMAT	PRODUCER	JALMATILANGLIE-MATTIX	PRODUCER
209	660' FWL, 2080' FSL	24-24S-36E	JALMATUANGLIE-MATTIX	INACTIVE PRODUCER	JALMATILANGLIE-MATTIX	PRODUCER
210	1980' FSL, 660' FWL	24-24S-36E	JALMAT	PRODUCER	JALMAT	INACTIVE PRODUCER
211	2310' FSL, 2310' FWL	24-24S-36E	JALMAT	INJECTOR	Jalmatilangle:mattix	INJECTOR
213	1980' FSL, 660' FEL	24-24S-36E	JALMAT	INJECTOR	JALMAT	INJECTOR
215	660' FSL, 660' FEL	23-24S-36E	JALMAT	PRODUCER	JALMATUANGLIE-MATTIX	PRODUCER
216	4620' FNL, 4620' FEL	24-24S-36E	JALMAT	INJECTOR	JALMAT/LANGLIE-MATTIX	INJECTOR
217	990' FSL, 2310' FWL	24-24S-36E	JALMAT	PRODUCER	JAE MATTEANGLE-MATTIX	PRODUCER
218	330' FSL, 1650' FEL	24-24S-36E	JALMAT	INJECTOR	JALMAT/LANGLIE-MATTIX	INJECTOR
219	330' FSL, 660' FEL	24-24S-36E	JALMAT	PRODUCER	JALMATILANGLIE-MATTIX	PRODUCER
220	628' FWL, 660' FSL	19-24S-37E	JALMAT	INJECTOR	JALMATILANGLIE-MATTIX	INJECTOR
221	660' FSL, 1917' FWL	19-24S-37E	JAL MATTLANGLE-MATTLY	PRODUCER	JALMATILANGLIE-MATTIX	PRODUCER
222	330' FNL, 330' FEL	26-24S-36E	JALMAT	INJECTOR	JALMATILANGLIE-MATTIX	INJECTOR
223	330' FNL, 990' FWL	25-24S-36E	JALMAT	PRODUCER	JALMATUANGLIE-MATTIX	PRODUCER
224	330' FNL, 2310' FWL	Z5-24S-36E	JALMAT	INJECTOR	JALMATILANGLIE-MATTIX	INJECTOR
225	660' FNL, 1650' FEL	25-24S-36E	JALMAT	PRODUCER	JALMATULANGLIE-MATTIX	PRODUCER
226	330' FNL, 330' FEL	25-24S-36E	JALMAT	INJECTOR	JALMATILANGLIE-MATTIX	INJECTOR
227	660' FNL, 660' FWL	30-24S-37E	JALMAT	PRODUCER	JALMATRLANGLIE-MATTIX	PRODUCER
228	660' FNL, 1917' FWL	30-24S-37E	JALMAT	INJECTOR	JALMATILANGLIE-MATTIX	INJECTOR
229	990° FWL, 1650° FNL	25-24S-36E	JALMAT	PRODUCER	JALMATILANGLIE-MATTIX	PRODUCER
230	1650' FNL, 2310' FWL	25-24S-36E	JALMAT	PRODUCER	JALMATILANGLIE-MATTIX	PRODUCER
231	1650' FNL, 330' FEL	25-24S-36E	JALMAT	PRODUCER	JALMATUANGLIE-MATTIX	PRODUCER
232	1980' FNL, 1896' FWL	30-24S-37E	JALMAT	PRODUCER	JAL MATILANGLIE-MATTIX	PRODUCER
233	1650' FSL, 990' FEL	13-24S-36E	JALMAT	INJECTOR	JALMAT	INJECTOR
234	330' FSL, 1650' FEL	13-24S-36E	JALMAT	INJECTOR	JALMAT	INJECTOR
235	660' FSL, 660' FWL	18-24S-37E	JALMAT	INJECTOR	JALMAT	INJECTOR
236	660' FNL, 1980' FWL	24-24S-36E	JALMAT	INJECTOR	JALMAT	INJECTOR
237	660' FSL, 1980' FEL	23-24S-36E	JALMAT	INJECTOR	JALMATILANGLIE-MATTIX	INJECTOR
238	1980' FNL, 330' FWL	25-24S-36E	JALMAT	INJECTOR	JALMAT'LANGLIE-MATTIX	INJECTOR
239	1980' FNL, 660' FWL	30-24S-37E	JALMAT	INJECTOR	JALMATU ANGLIE-MATTIX	INJECTOR
240	1980' FSL, 1917' FWL	19-24S-37E	JALMAT	INJECTOR	JALMAT	INJECTOR
241	[1650' FNL, 1650' FEL	25-24S-36E	JALMAT	INJECTOR	JALMATINLANGLIE-MATTIX	INJECTOR
242	990' FNL, 1587' FWL	19-24S-37E	JALMAT	INJECTOR	JALMAT	INJECTOR
245	1980' FSL, 1980' FEL	24-24S-36E	JALMAT	PRODUCER	JALMATILANGLIE-MATTIX	PRODUCER
303	2310' FSL, 2310' FWL	13-24S-36E	JALMAT	INACTIVE PRODUCER	JALMAT	PRODUCER
304	1650' FSL, 1650' FEL	13-24S-36E	JALMAT	INACTIVE PRODUCER	JALMAT	PRODUCER



## EXHIBIT "C"

### 2005 -----1 i 2003 į 1..... 11111 2001 1999 🗌 PHASE I 📷 PHASE II 🔳 PHASE III 1997 **PRODUCTION FORECAST** 1995 1993 ------...... 1991 BASE 1989 \*\*\*\*\* 1987 i į 1 i 1985 10000 BOPD 1983 8 1000

EXHIBIT "D"

**COOPER JAL UNIT PROJECT AREA**