Post Waterflood C02 Miscible Flood in Light Oil Fluvial - Dominated Deltaic Reservoirs

**Quarterly Report
January 1 - March 31, 1998**

**By:
Tim Tipton**

Work Performed Under Contract No.: DE-FC22-93BC14960

For
U.S. Department of Energy
Office of Fossil Energy
Federal Energy Technology Center
P.O. Box 880
Morgantown, West Virginia 26507-0880

By
Texaco Exploration and Production Inc.
Midland, Texas

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1st Quarter, Fiscal Year 1998

**Post Waterflood CO₂ Miscible Flood in Light Oil
Fluvial - Dominated Deltaic Reservoirs.**

DE - FC22 - 93BC14960--21

Texaco Exploration & Production Inc.

May 13, 1998

**Award Date: June 1, 1993
Completion Date: December 31, 1997**

Government Award for Current Fiscal Year

\$523,000.00

**Project Manager (Texaco) : Tim Tipton
COR (DOE) : Chandra Nautiyal
Contract specialist (DOE) : Keith Miles**

Reporting Period: October 1 through December 31, 1997

US. DOE patent Clearance is not required prior to the publication of this document

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Post Waterflood CO₂ Miscible Flood in Light Oil
Fluvial-Dominated Deltaic Reservoirs

“DE - FC22 - 93BC14960”
Technical Progress Report

First Quarter, 1998

Executive Summary.

The only remaining active well, Kuhn #14, in the Port Neches CO₂ project went off production in October 1997. Production from this project is reached economic limit and the project termination began in the last quarter of 1997.

First* Quarter 1998, Objectives.

* Terminate the project; salvage all useable equipment and plug and abandon all wellbores.

Discussion of Results - Field Operations.

Cumulative oil production for 1997 is 11,134 barrels.

Producer: Kuhn #14, Off production in October in preparation for project termination.

Injection: No produced gas is being reinjected during project termination.

The Financial Status Report, Management Summary, Milestone Schedule and Federal Transaction Report are included in this report.

Discussion of Results - Technology Transfer.

No technology transfer activities is taking place during this period.

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First Quarter 1998, Objectives.

* Project termination.

PORT NECHES CO2 PROJECT **ALLOCATED PRODUCTION**

1. IDENTIFICATION NUMBER DE - FC22 - 93BC14960		2. PROGRAM/PROJECT TITLE CLASS I		3. REPORTING PERIOD 10/1/97 through 12/31/97													
4. PARTICIPANT NAME AND ADDRESS Texaco Exploration & Production Inc 400 Poydras St. New Orleans, LA 70130														5. START DATE: 6/1/93			
7. FY														8. MONTHS		6. COMPLETION DATE: 12/31/97	
9. COST STATUS		10. LABOR STATUS														11. MILESTONES	
a. \$ Expressed in: THOUSANDS		a. Labor Expressed in: THOUSANDS														g. Planned	
b. Budget and Reporting No. AC1510100		b. Labor Plan Date: N/A DIRECT LABOR														h. Actual	
c. Cost Plan Date 6/23/93		c. Planned Labor Prior Fiscal Years														i. Variance	
d. Actual Costs Prior Years		d. Actual Labor Prior Fiscal Years														j. Cumulative Variance	
e. Planned Costs Prior Years		e. Total Estimated Labor for Contract															
f. Total Estimated Costs for Contract		f. Total Contract Labor															
g. Total Contract Value		LEGEND															
h. Estimated Subsequent Reporting Period		Planned: ----- Actual: ----- Projected: -----															
		g. Planned															
		h. Actual															
		i. Variance															
		j. Cumulative Variance															
		STATUS														COMMENTS	
		a.															
		b.															
		c.															
		d.															
		e.															
		f.															
		g.															

U.S. DEPARTMENT OF ENERGY
MILESTONE SCHEDULE [] PLAN [X] STATUS REPORT

DOE F1332.3
(11-94)

FORM APPROVED
OMB NO. 1901-1400

1. TITLE Post Waterflood CO2 Miscible Flood in a Light Oil Fluvial Dominated Deltaic Reservoir										2. REPORTING PERIOD Oct 1, 1997 - Dec 31, 1997				3. IDENTIFICATION NUMBER DE-FC22-93BC14960																	
4. PARTICIPANT NAME AND ADDRESS Texaco Exploration and Production Inc. 400 Poydras St. New Orleans, LA 70130										5. START DATE June 1, 1993																					
7. ELEMENT CODE										6. COMPLETION DATE December 31, 1997																					
8. REPORTING DURATION										CURRENT FISCAL YEAR 1997																					
9. ELEMENT										1993				1994				1995				1996				1997				10. PERCENT COMPLETE	
										1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	a. Plan	b. Actual				
1.1	Geologic & Engineering												1											100%	100%						
1.2	Extraction Technology												2											100%	100%						
2.1	Recording Daily Production												3											100%	100%						
2.2	Reservoir Characterization												4											100%	100%						
2.3	Site Operation & Field Work												D											100%	100%						
2.4	CO2												6											100%	100%						
2.5	EH&S Monitoring & Compliance												G											100%	100%						
3.1	CO2 Screening Model												J											100%	100%						
3.2	Environmental Analysis												9											100%	100%						
3.3	FDD Database & Model												K											100%	100%						
3.4	Technical Publications												L											100%	100%						
11. SIGNATURE OF PARTICIPANT'S PROJECT MANAGER AND DATE																															

U.S. DEPARTMENT OF ENERGY
MILESTONE SCHEDULE [J] PLAN [X] SCHEDULE
(ATTACHMENT)

DOE F1332.3 ATTACHMENT

1. TITLE (11-84)	2. REPORTING PERIOD Oct 1, 1997 - Dec 31, 1997	3. IDENTIFICATION NUMBER DE-FC22-93BC14960
Post Waterflood CO2 Miscible Flood in a Light Oil Fluvial Dominated Deltaic Reservoir		
4. PARTICIPANT NAME AND ADDRESS Texaco Exploration and Production Inc. 400 Poydras St. New Orleans, LA 70130	5. START DATE June 1, 1993	6. COMPLETION DATE December 31, 1997

MAJOR EVENTS DATE	DESCRIPTION	STATUS
1 10/15/92	TASK 1.1 - GEOLOGICAL RESERVOIR DESCRIPTION AND LAB TESTS	COMPLETED
2 10/15/92	TASK 1.2 - PHASE 1 RESERVOIR SIMULATION	COMPLETED
3 08/01/93	TASK 2.1 - RECEIVE DOE APPROVAL TO INJECT CO2	COMPLETED
4 08/01/93	TASK 2.2 - RESERVOIR PRESSURE IS RAISED TO 2700 PSI BY WATER INJECTION	COMPLETED
5 08/15/93	TASK 2.3 - CO2 INJECTION AND PRODUCTION FACILITY IS COMPLETED	COMPLETED
6 08/15/93	TASK 2.4 - CO2 PIPELINE IS INSTALLED	COMPLETED
7 08/15/93	TASK 2.5 - NEPA CATEGORICAL EXCLUSION IS RECEIVED	COMPLETED
8 12/31/95	TASK 3.1 - SPE PAPER AND RELEASE OF CO2 SCREENING MODEL	COMPLETED
9 12/31/94	TASK 3.2 - TOPICAL REPORT ON ENVIRONMENTAL CONSTRAINTS	COMPLETED
10 12/31/95	TASK 3.3 - TOPICAL REPORT ON FDD DATABASE	COMPLETED
11 12/31/97	TASK 3.4 - SPE PAPER ON RESERVOIR CHARACTERIZATION	CANCELLED

INTERMEDIATE EVENTS	DATE	DESCRIPTION	STATUS
A	12/31/97	TASK 2.1 - FINAL PROJECT REPORT	COMPLETED
B	12/31/93	TASK 2.2 - UPDATED RESERVOIR MODEL COMPLETED	COMPLETED
C	12/01/94	TASK 2.2 - CONVENTIONAL CORE ANALYZED IN POLK "B" #39 WELL	DEFERRED
D	04/30/93	TASK 2.3 - 10 WELL WORKOVER PROGRAM COMPLETED	COMPLETED
E	10/01/93	TASK 2.3 - HORIZONTAL CO2 INJECTION WELL DRILLED, POLK "B" #2 W/O PERFORMED	HORIZ. WELL COMPLETE, POLK "B" W/O CANCELLED
F	12/01/94	TASK 2.3 - VERTICAL CO2 INJECTION WELL DRILLED (POLK "B" #39)	CANCELLED
G	06/10/93	TASK 2.5 - PERMIT FOR CO2 PIPELINE RECEIVED FROM ARMY CORPS OF ENGINEERS	COMPLETED
H	06/30/93	TASK 2.5 - HAZARDOUS SUBSTANCE PLAN SUBMITTED TO DOE	COMPLETED
I	12/31/97	TASK 2.5 - FINAL HAZARDOUS SUBSTANCE PLAN SUBMITTED TO DOE	COMPLETED
J	12/31/94	TASK 3.1 - CO2 SCREENING MODEL FINAL REPORT SUBMITTED TO DOE	COMPLETED
K	12/31/94	TASK 3.3 - FDD DATABASE STUDY IS COMPLETED BY LSU	COMPLETED
L	04/18/94	TASK 3.5-1ST SPE PAPER PRESENTED-PROJECT IMPLEMENTATION	COMPLETED

11. SIGNATURE OF PARTICIPANT'S PROJECT MANAGER AND DATE

5/15/98

FINANCIAL STATUS REPORT

(Short Form)

1. Federal Agency and Organizational Element to Which Report is submitted U. S. Department of Energy		2. Federal Grant or Other Identifying Number Assigned By Federal Agency DE-FC22-93BC14960		OMB Approval No. 0348-0039	Page 1	of 1 pages
3. Recipient Organization (Name and complete address, including ZIP code) Texaco Exploration and Production Inc. 400 Poydras St. New Orleans, LA 70130						
4. Employer Identification Number 51-0265713		5. Recipient Account Number or Identifying Number 323037151		6. Final Report [] Yes [X] No		7. Basis [X] Cash [X] Accrual
8. Funding/Grant Period (See Instructions) From: (Month, Day, Year) January 1, 1995		To: (Month, Day, Year) December 31, 1997		9. Period Covered by this Report From: (Month, Day, Year) 10-01-97		To: (Month, Day, Year) 12-31-97
10 Transactions		I Previously Reported	II This Period	III Cumulative		
a. Total outlays		\$4,325,825.21	\$59,193.22	\$4,385,018.43		
b. Recipient share of outlays (64.39%)		\$2,785,398.85	\$38,114.51	\$2,823,513.37		
c. Federal share of outlays (35.61%)		\$1,540,426.36	\$21,078.71	\$1,561,505.06		
d. Total unliquidated obligations		0.00	0.00	0.00		
e. Recipient share of unliquidated obligations		0.00	0.00	0.00		
f. Federal share of unliquidated obligations		0.00	0.00	0.00		
g. Total Federal share (Sum of lines c and f)		\$1,540,426.36	\$21,078.71	\$1,561,505.06		
h. Total Federal funds authorized for this funding period		\$2,984,599.00	\$0.00	\$2,984,599.00		
i. Unobligated balance of Federal funds (Line h minus line g)		\$1,444,172.64	(\$21,078.71)	\$1,423,093.94		
11. Indirect Expense (Labor)		a. Type of Rate (Place "X" in appropriate box) ☒ Provisional ☐ Predetermined ☐ Final ☐ Fixed				
b. Rate 78.62%		c. Base \$14,262.42	d. Total Amount \$11,213.11	e. Federal Share \$3,992.99		
12. Remarks: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation						
13. Certification: I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.						
Typed or Printed Name and Title Timothy L. Tipton - Project Manager			Telephone (Area code, number and extension) (504) 680-1728			
Signature of Authorized Certifying Official			Date Report Submitted			

Previous Editions not Usable

Standard Form 269A (REV 4-88)
Prescribed by OMB Circulars A-102 and A-110

123/RPT396.WK4

FEDERAL CASH TRANSACTIONS REPORT <small>(See instructions on the back. If report is for more than one grant or assistance agreement, attach completed Standard Form 272-A.)</small>		Approved by Office of Management and Budget No 80-80182 1. Federal sponsoring agency and organizational element to which this report is submitted <div style="text-align: center; font-weight: bold;">U. S. Department of Energy</div>	
2. RECIPIENT ORGANIZATION Name Texaco Exploration and Production Inc. Number 00 Poydras St. and Street New Orleans, Louisiana 70130 City, State and Zip Code:		4. Federal grant or other identification number DE-FC22-93BC14960	5. Recipient's account number or identifying number 323037151
		6. Letter of credit number <div style="text-align: center; font-weight: bold;">NA</div>	7. Last payment voucher number <div style="text-align: center; font-weight: bold;">-</div>
		Give total number for this period	
		8. Payment Vouchers credited to your account <div style="text-align: center; font-weight: bold;">-</div>	9. Treasury checks received (whether or not deposited) <div style="text-align: center; font-weight: bold;">0</div>
3. FEDERAL EMPLOYER IDENTIFICATION NO> 51-0265713		10. PERIOD COVERED BY THIS REPORT FROM (month,day,year) 10/01/97 TO (month,day,year) 12/31/97	
11. STATUS OF FEDERAL CASH	a. Cash on hand beginning of reporting period		\$0.00
	b. Letter of credit withdrawals		\$0.00
	c. Treasury check payments		\$0.00
	d. Total receipts (Sum of lines b and c)		\$0.00
	e. Total cash available (Sum of lines a and d)		\$0.00
	f. Gross disbursements		\$0.00
	g. Federal share of program income		\$0.00
	h. Net disbursements (Line f minus line g)		\$0.00
	i. Adjustments of prior periods		\$0.00
	j. Cash on hand end of period		\$0.00
12. THE AMOUNT ON LINE j. REPRESENTING	13. OTHER INFORMATION		
	k. Interest income		\$0.00
	l. Advances to subgrantees or subcontractors		\$0.00
14. REMARKS			
15. CERTIFICATION			
AUTHORIZED CERTIFYING OFFICIAL		SIGNATURE	DATE REPORT SUBMITTED
		TYPED OR PRINTED NAME AND TITLE <div style="text-align: center; font-weight: bold;">Timothy L. Tipton - Project Manager</div>	TELEPHONE (Area Code, Number, Extension) <div style="text-align: center; font-weight: bold;">(504) 680-1728</div>
THIS SPACE FOR PRIVATE USE			