

MINUTE ITEM

This Calendar Item No. C11
was submitted for information
only, no action thereon
being necessary.

INFORMATIONAL
CALENDAR ITEM

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02/05/92

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FIRST SIX MONTHS STATUS REPORT
1991-92 PLAN OF DEVELOPMENT AND OPERATIONS AND BUDGET
LONG BEACH UNIT, WILMINGTON OIL FIELD
LOS ANGELES COUNTY

At the end of the first six months of the 1991-92 fiscal year (December 31, 1991), the latest approved Long Beach Unit Plan of Development and Operations and Budget remains unchanged at \$169,372,000, including administrative overhead costs and \$4.957 million carry-over from 1990-91. Eighty-three million dollars (\$83,000,000) were spent through December 1991, and the estimated expenditures, including the "Waterflood Management Plan" as proposed by ARCO for their "Optimized Waterflood Program", could exceed \$178 million for the Plan Year. This proposed increased budget would include a five-rig drilling schedule as well as special productivity activities.

During the first six months, the Commission approved three modifications (nos. 1, 2, and 4) to the Plan and Budget. The fourth Modification revised Plan and Budget Exhibits C-3 and C-4 to reflect updated economic and production projections for the year as of the end of the first quarter.

Four requests by the City of Long Beach to transfer funds totaling \$2,515,000 between line item accounts within the existing budget were approved. Three other plan supplements were approved. One was to correct deficiencies in the areas of test stations, casings, interference problems and pipeline cathodic protection bonding on transmission lines as required by the Department of Transportation regulations.

The Long Beach Unit has experienced a reduced oil rate and revenue generation than that originally forecast for this period of the fiscal year in the Plan and Budget as prepared by the City of Long Beach. Oil production was estimated to average 46,600 barrels per day for a total of 8,577,00 barrels during the first six months of the year. The actual oil production was 45,180

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barrels per day for a total of 8,312,947 barrels. The forecasted oil price was \$16 per barrel. The estimated oil price during this period was approximately \$13.55 per barrel. A net income of \$55,902,000 was forecasted in the original Plan and Budget for the first six months. Net income through December 31, 1991 is approximately \$32,740,000, a decrease of \$23,162,000 from the Plan and Budget. The net income would have been even lower without the joint involvement of the State Lands Commission and City of Long Beach Reservoir Engineering and Operations staffs. These staff have been very aggressive in their involvement, which has resulted in improved production performance in the final three months of the 1991 calendar year. The production rate dropped to a low of 44,315 BOPD in September 1991 but then rebounded, and increased to an average 45,725 BOPD for the final three months, as a result of staff involvement.

Drilling and workover candidates were selected at locations of higher remaining oil saturation. Establishment of inzone pattern flooding along with vertical selection of the production and injection intervals for an improved vertical sweep efficiency have shown substantial recovery improvement in those areas. Other areas of improved performance included increased production rates from wells with high fluid levels, reduced downtime as related to voidage problems, increased injection water as required at all locations.

To increase the net profits the Operator has pursued several cost reduction programs. Operating expenses and trends are being closely tracked so we can accurately anticipate the need to accommodate fund transfers or augmentations within the budget.

During the first six months of the 1991-92 fiscal year, the Long Beach Unit experienced two planned island shut downs for scheduled maintenance and three unplanned island shut downs due to main line leaking. These occurred in August and September resulting in a reduction of the Unit oil production an average of 750 BOPD for both months. The drilling activity through December of this fiscal year has added 3,800 BOPD production to the Long Beach Unit which helped maintain the oil production for the six-month period.

Significant activities and accomplishments in each Plan and Budget Program during the six month period were:

A. DRILLING & DEVELOPMENT PROGRAM

Three drilling rigs were operated during the first six months. Activity was on Islands Grissom, Chaffee, Freeman and Pier J. Eleven new producers and four new water injection wells were drilled, nine producers and three injectors were redrilled, two producers were recompleted in the UP Ford and the Ranger 8A. Twelve injectors and eight producers were worked over to convert to dual injection, to install an inner liner, to repair casing or to exclude water. Thirty producers and injectors were abandoned by the end of this six months period. Drilling activity was in the Ranger, UP Ford, Upper Terminal and Lower Terminal Zones. The City of Long Beach and the State Lands Commission Reservoir Engineering staff have identified other drilling opportunities.

The adjusted budget for the Drilling and Development Program for the entire 1991-92 fiscal year is \$33.68 million. Funds expended through the first six months were \$20.3 million. The proposed optimized Waterflood Plan and Budget for the period January, 1992 through June 1992 anticipates the activation of a fourth, and possibly a fifth, drilling rig, and development drilling expenditures for the next six-month period are estimated to be \$22.3 million.

B. OIL AND GAS PRODUCTION PROGRAM

The Unit produced 8.31 million barrels of oil and 1.6 billion cubic feet of gas during the six-month period. Average production rates were 45,180 barrels of oil per day and 8,880 MCF/D of gas versus projected rates of 46,612 BOPD oil and 8,400 MCF/D gas. Expenditures for the six-month period plotted as dollars per barrel of oil produced are shown on Exhibit 6.

The principal function of this program is to fund the production of fluids. Gross production for the period averaged 490,200 barrels per day. The original budget projected rate was 511,000 barrels per day. The actual and proposed gross rates and program expenditures plotted as dollars per barrel of gross fluids are shown on Exhibit 7. The number of active producing wells is shown on Exhibit 8 and is increasing slightly after a downward trend

experienced during the 1986 through 1988 period. The trend through the next six months is expected to increase with the activation of the fourth drilling rig. Scheduled island shut downs for complete electrical maintenance have been done on Islands Freeman and Chaffee.

The adjusted budget for the Oil and Gas Production Program is \$72,356,000 of which \$35.1 million (49%) were expended at the end of the six-month period. A plot of monthly expenditures is shown on Exhibit 9.

C. ENHANCED RECOVERY AND STIMULATION PROGRAM

No funds were budgeted for 1991-92 and no activity took place in this program.

D. WATER-INJECTION PROGRAM

A total of 97 million barrels of water were injected during the six-month period. The average rate was 528,000 BWPD per day, which is less than the 554,000 BWPD forecasted. Produced fluids amounted to 92 million barrels which resulted in an Injection/Production volume ratio of 105 percent for the six-month period. A plot of water injection rates and program expenditures in dollars per barrel of water injected are shown on Exhibit 10.

The State and the City Reservoir and Operation Engineering staffs are jointly discussing possible alternative sources for make-up injection water for future Long Beach Unit operations. A variety of alternatives are being studied jointly at this time.

The adjusted budget for the Water Injection Program amounted to \$26.1 million of which \$12.6 million (48%) were expended at the end of the six-months. A plot of monthly expenditures is shown on Exhibit 11.

E. MANAGEMENT PROGRAM

The major portion of this program consists of expenditures for salaries, benefits and expenses of the Field Contractor, management and administrative personnel, engineering consultant services, data processing equipment purchases and operating costs, office expenses including rental, supplies and services, and the Unit Operator's billable costs. The computer reservoir modeling program initiated in 1985 is

continuing and has resulted in the identification of many opportunities for field development and contributed significantly to a successful drilling and development program over the last two years.

Other significant items include special management projects, townlot participation administration and special studies related to Unit waste management and disposal. A plot of the Management Program expenditure expressed as dollars per barrels of oil is shown on Exhibit 12. The trend of dollars per barrels of oil for this program is upward.

The adjusted budget at the end of December, 1991 amounted to \$24.183 million for the Management Program of which \$9.7 million (40%) was expended. A plot of monthly expenditures is shown on Exhibit 13.

F. TAXES, PERMITS AND LAND RENTAL PROGRAM

Adjusted budget funds for the Taxes, Permits and Land Rental Program on December 31, 1991, amounted to \$13.1 million of which \$5.45 million (40%) were expended. The major cash outflow in this program occurs with mining rights tax payments in December and April of the budget year. A plot of program expenditures is shown on Exhibit 14.

A summary of Long Beach Unit 1991-92 Plan and Budget activity during the first six months ending December 31, 1991 (in thousands of dollars) is:

<u>Program</u>	<u>Original Budget</u>	<u>Adjusted Budget*</u>	<u>Expenditures to 12/31/91</u>
A. Drilling and Development	\$ 33,616	\$33,680	\$20,316
B. Oil & Gas Production	70,498	72,356	35,124
C. Enhanced Recovery & Stimulation	-0-	-0-	-0-
D. Water Injection	26,344	26,098	12,586
E. Management	24,102	24,183	9,703
F. Taxes, Permits & Land Rental	<u>14,885</u>	<u>13,055</u>	<u>5,454</u>
Total	\$169,415	\$169,372	\$83,184

* Including \$4.957 million in 1990-1991 carryover

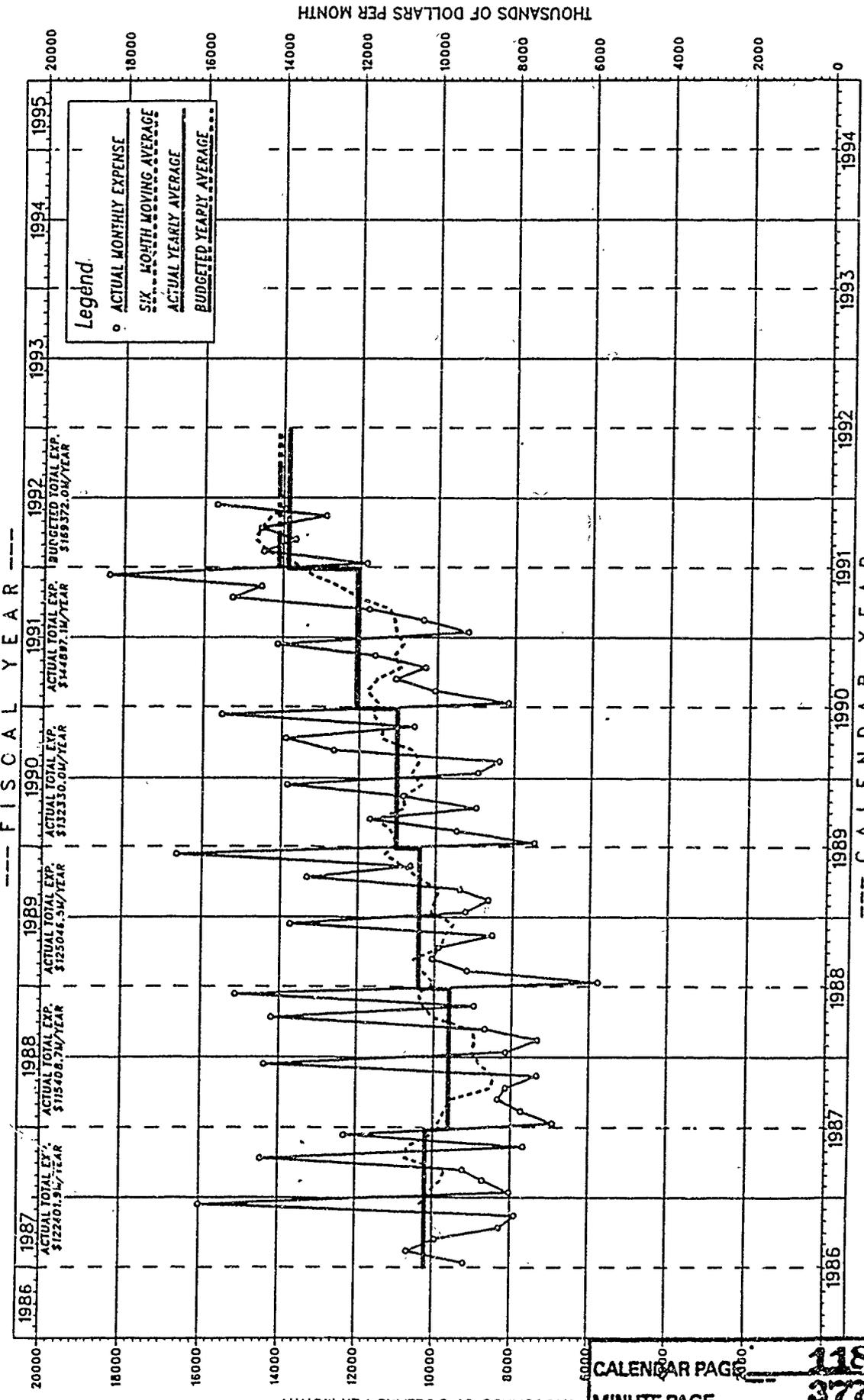
AB 884: N/A.

EXHIBITS:

1. Total Budget Expenditures.
2. Oil Production Rate.
3. Oil Price and Costs.
4. Oil Revenue and Costs.
5. Drilling and Development Program Expenditures (Program A).
6. Program B Costs Dollar Per Barrel Oil.
7. Program B Costs Dollar Per Barrel Gross Fluid.
8. Producing Well Count.
9. Oil and Gas Production Program Expenditures (Program B).
10. Program D Costs Dollar Per Barrel Injected Water.
11. Water Injection Program Expenditures (Program D).
12. Program E Costs Dollar Per Barrel Oil.
13. Management Program Expenditures (Program E).
14. Taxes, Permits and Land Rental Program Expenditures (Program F).

L O N G B E A C H U N I T

TOTAL BUDGET -- INCLUDING ADMIN. OVERHEAD

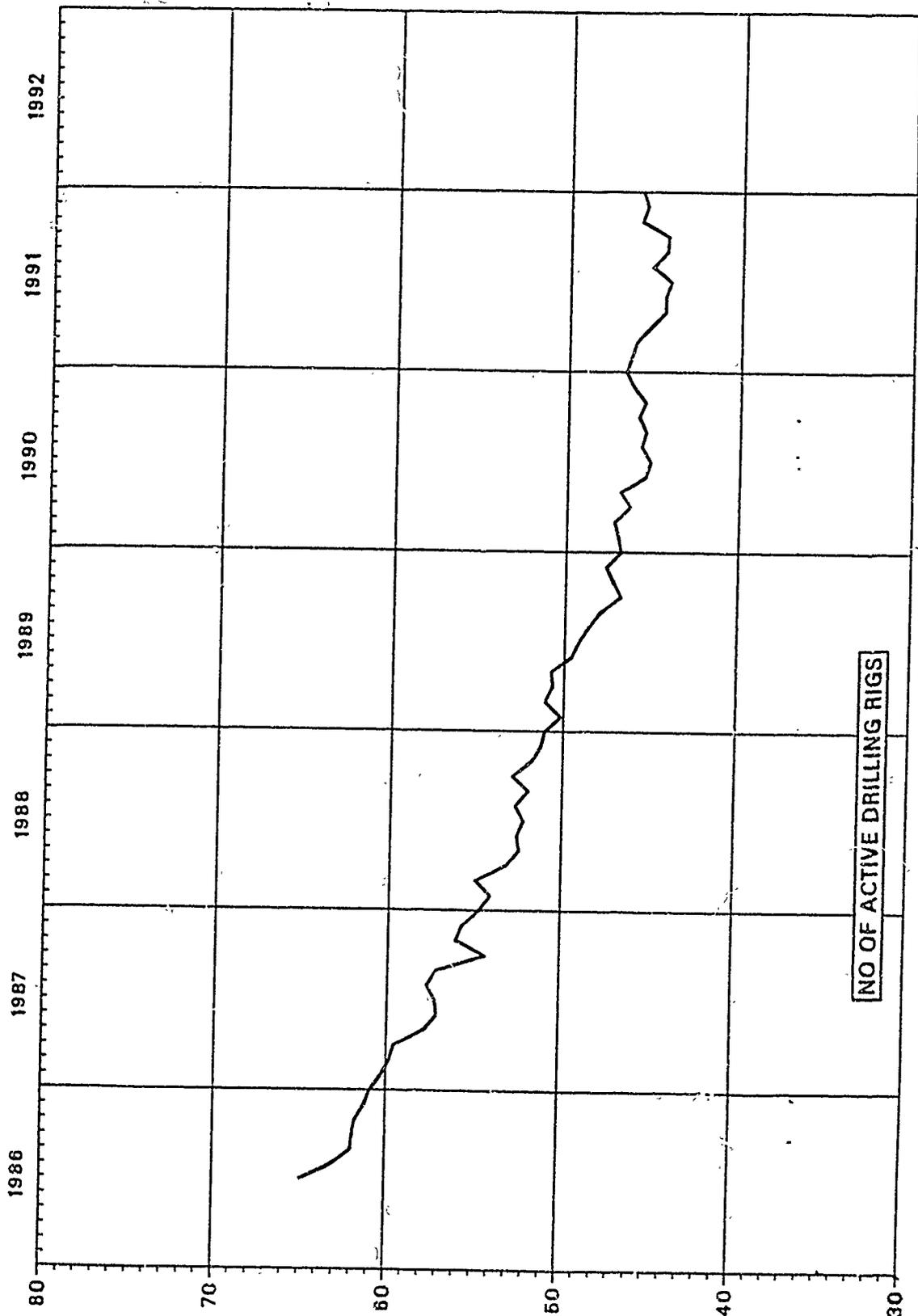


Legend:
 ○ ACTUAL MONTHLY EXPENSE
 - - - SIX-MONTH MOVING AVERAGE
 . . . ACTUAL YEARLY AVERAGE
 - · - · - BUDGETED YEARLY AVERAGE

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LONG BEACH UNIT OIL PRODUCTION RATE

EXHIBIT 2



NO OF ACTIVE DRILLING RIGS

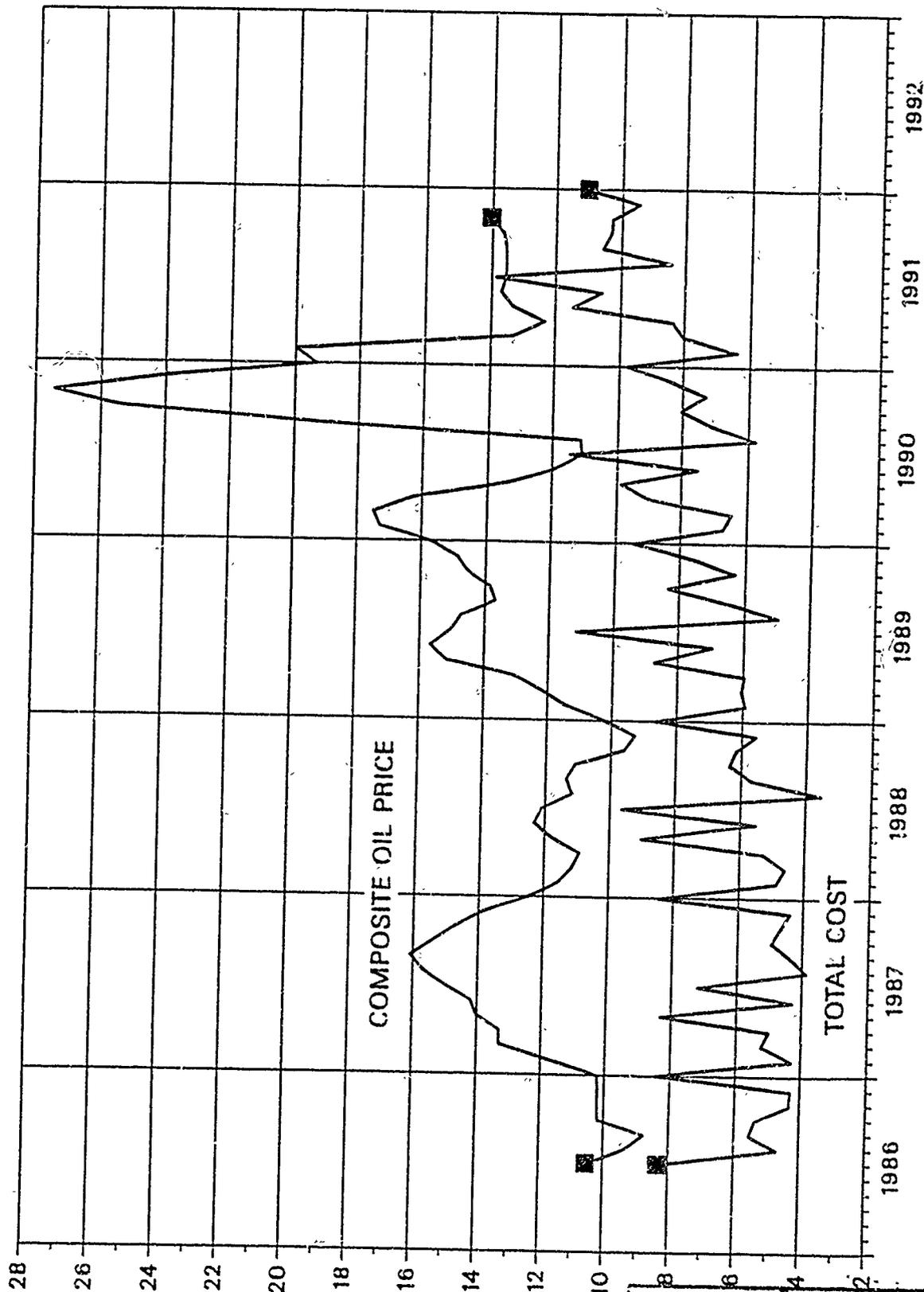
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OIL PRODUCTION RATE - 1000 B/D

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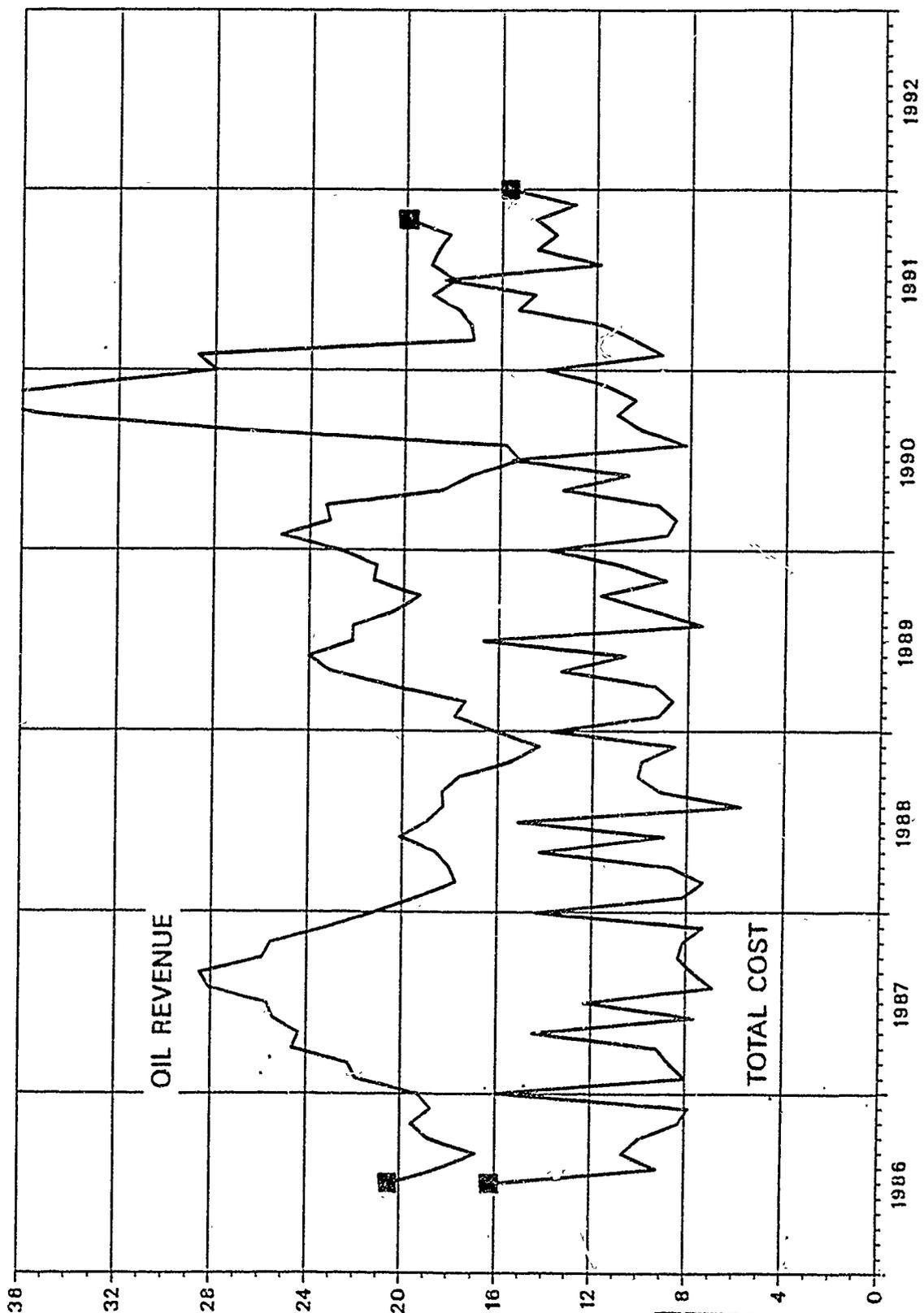
LONG BEACH UNIT



DOLLARS PER BARREL

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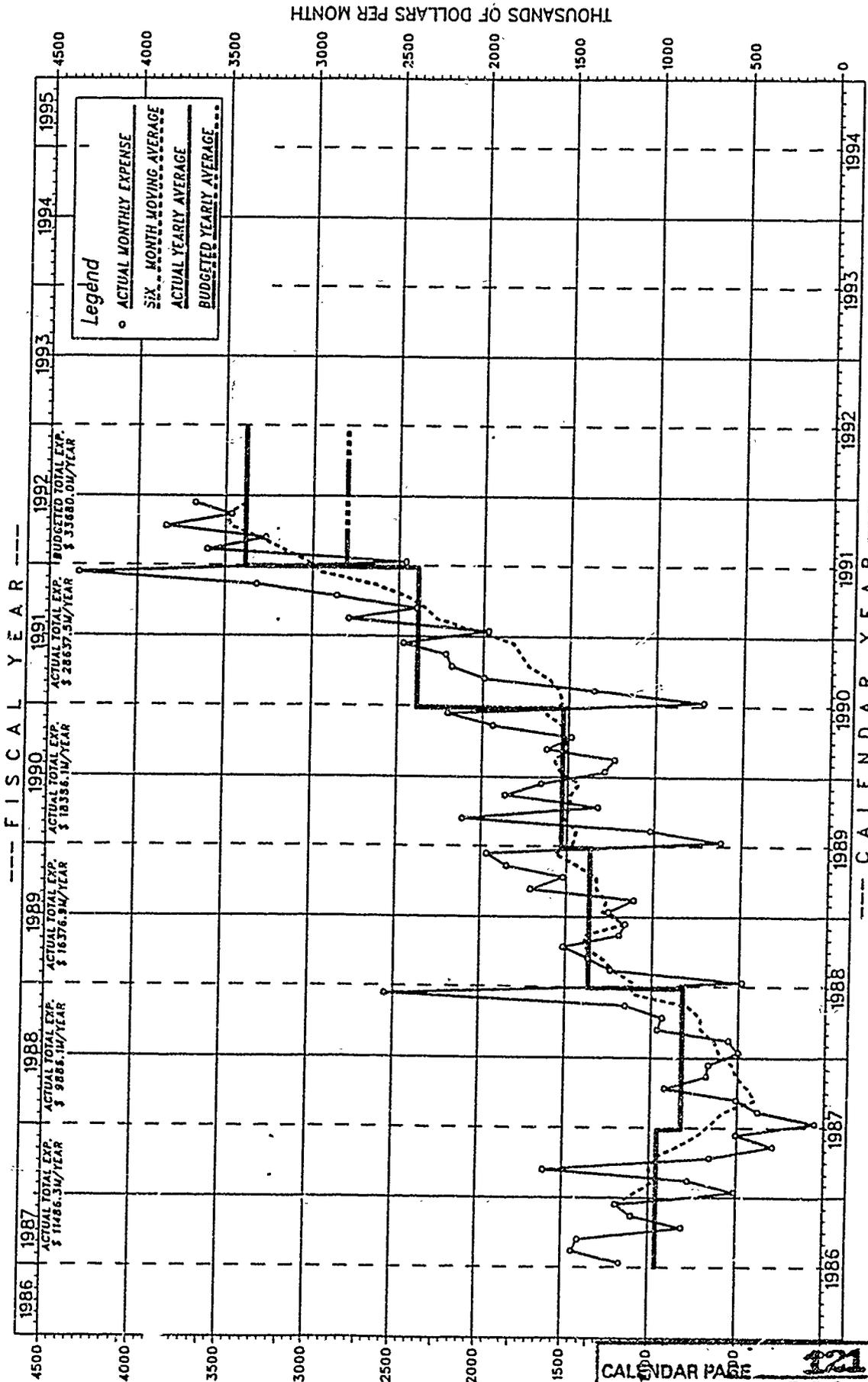
LONG BEACH UNIT



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DRILLING & DEVELOPMENT PROGRAM
 L O N G B E A C H U N I T
 TOTAL

PROGRAM A



Legend
 ○ ACTUAL MONTHLY EXPENSE
 SIX MONTH MOVING AVERAGE
 ——— ACTUAL YEARLY AVERAGE
 - - - - BUDGETED YEARLY AVERAGE

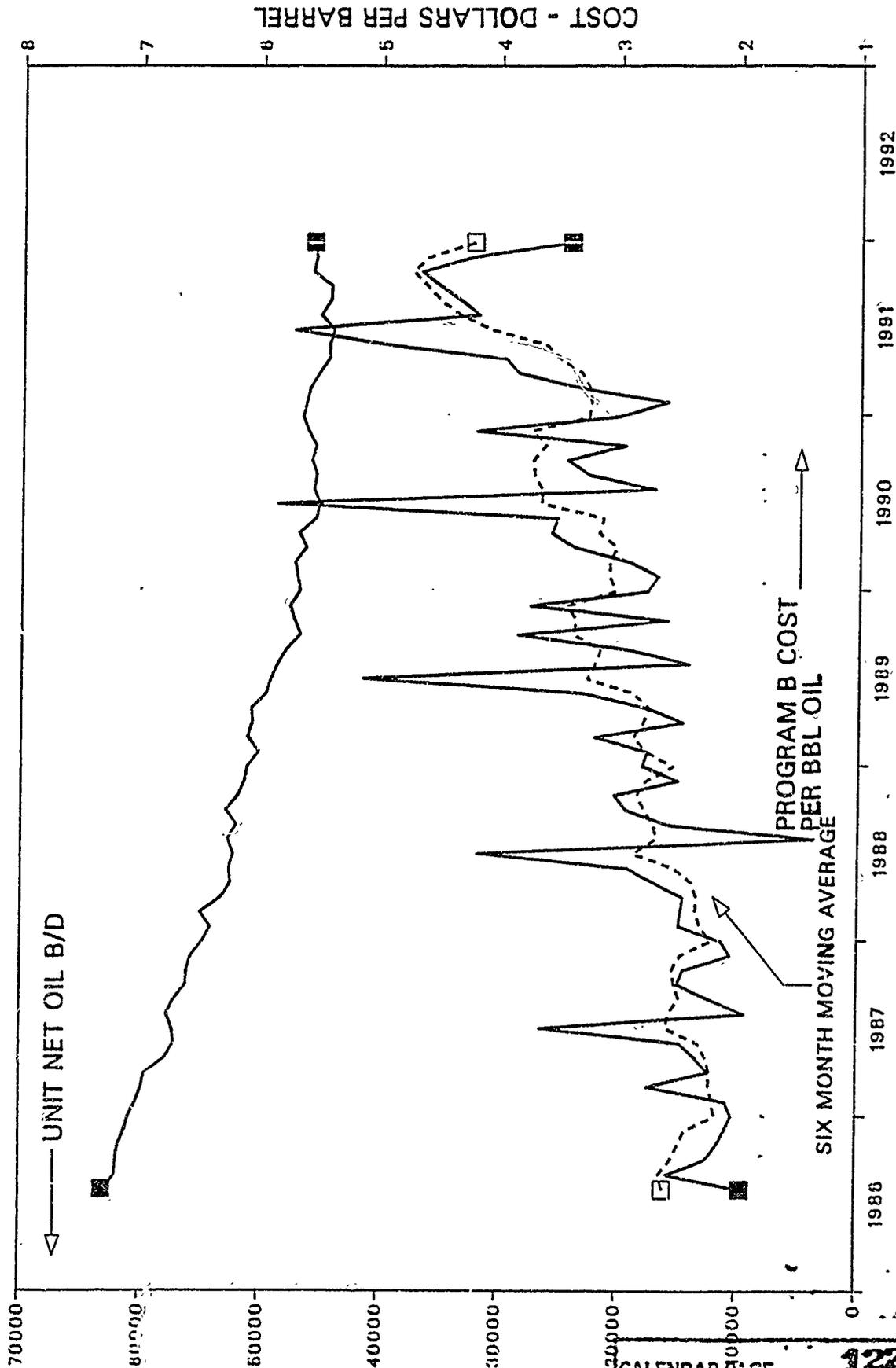
THOUSANDS OF DOLLARS PER MONTH

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OIL & GAS PRODUCTION PROGRAM COSTS EXPRESSED AS \$/BBL OIL

EXHIBIT 6

LONG BEACH UNIT



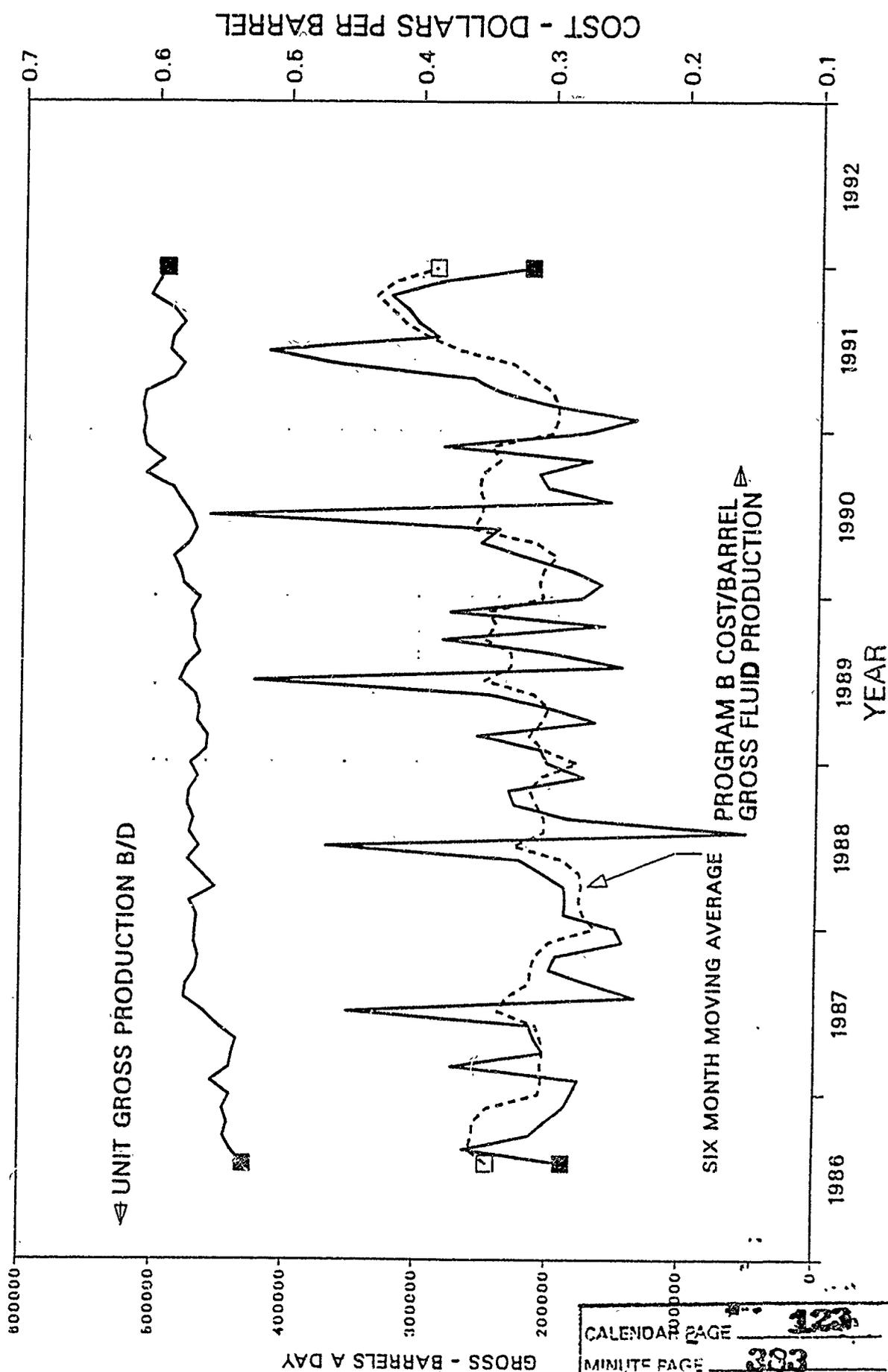
NET OIL - BARRELS A DAY
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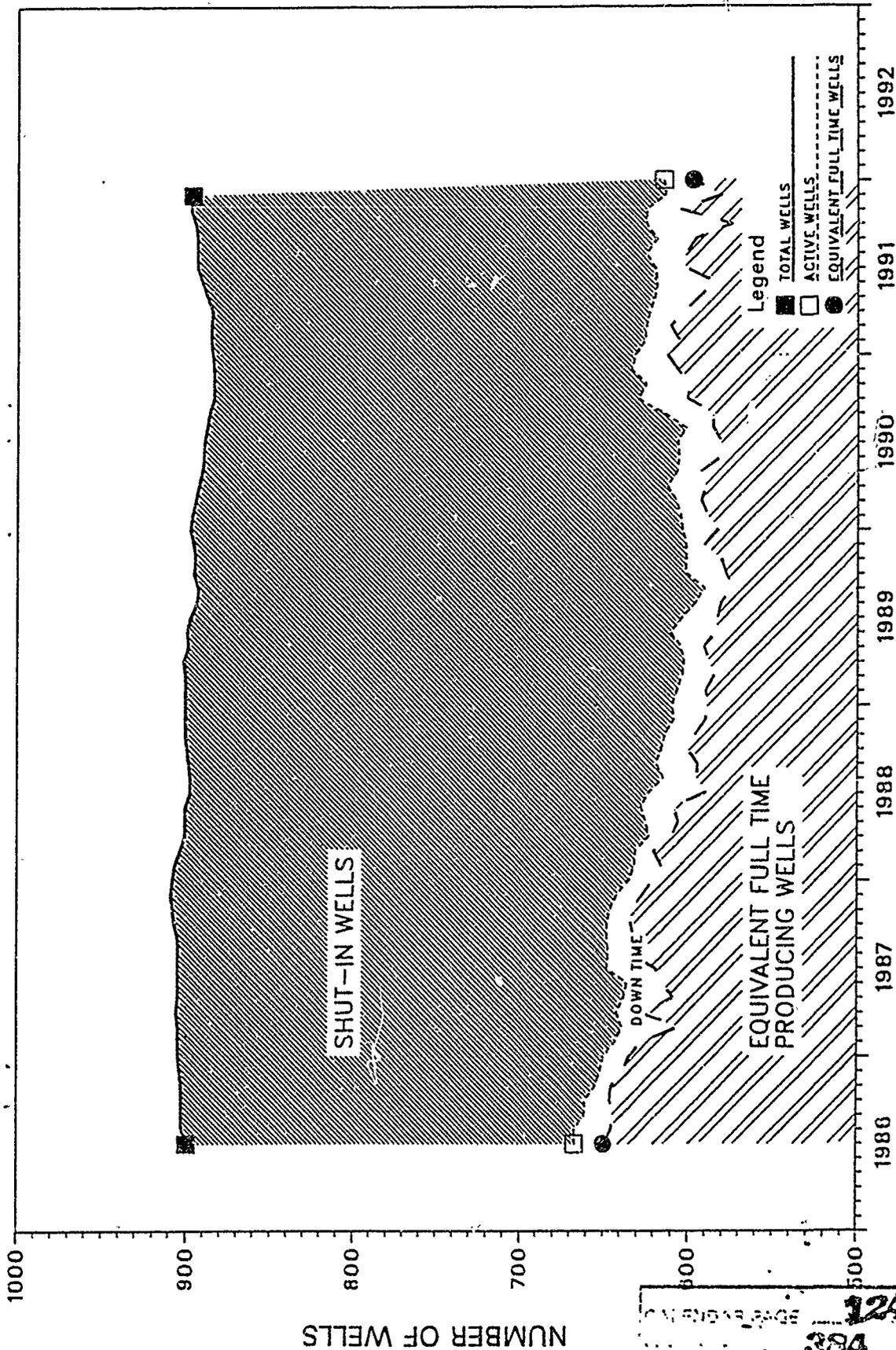
OIL & GAS PRODUCTION PROGRAM COSTS EXPRESSED AS \$/BBL GROSS FLUID

EXHIBIT 7

LONG BEACH UNIT



LONG BEACH UNIT PRODUCING WELLS



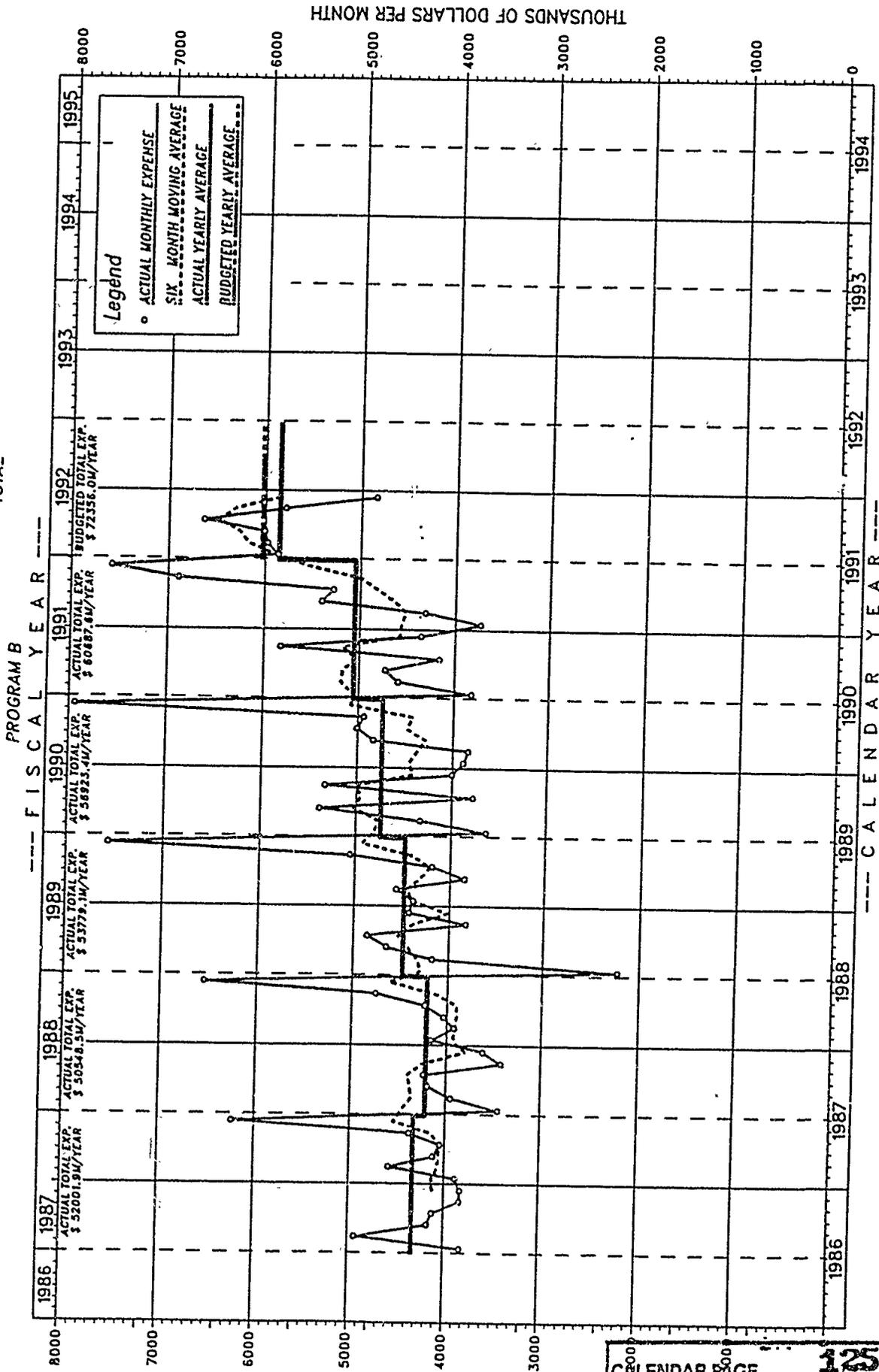
NUMBER OF WELLS

YEAR

384 124

EXHIBIT 9

OIL & GAS PRODUCTION PROGRAM
 LONG BEACH UNIT
 TOTAL

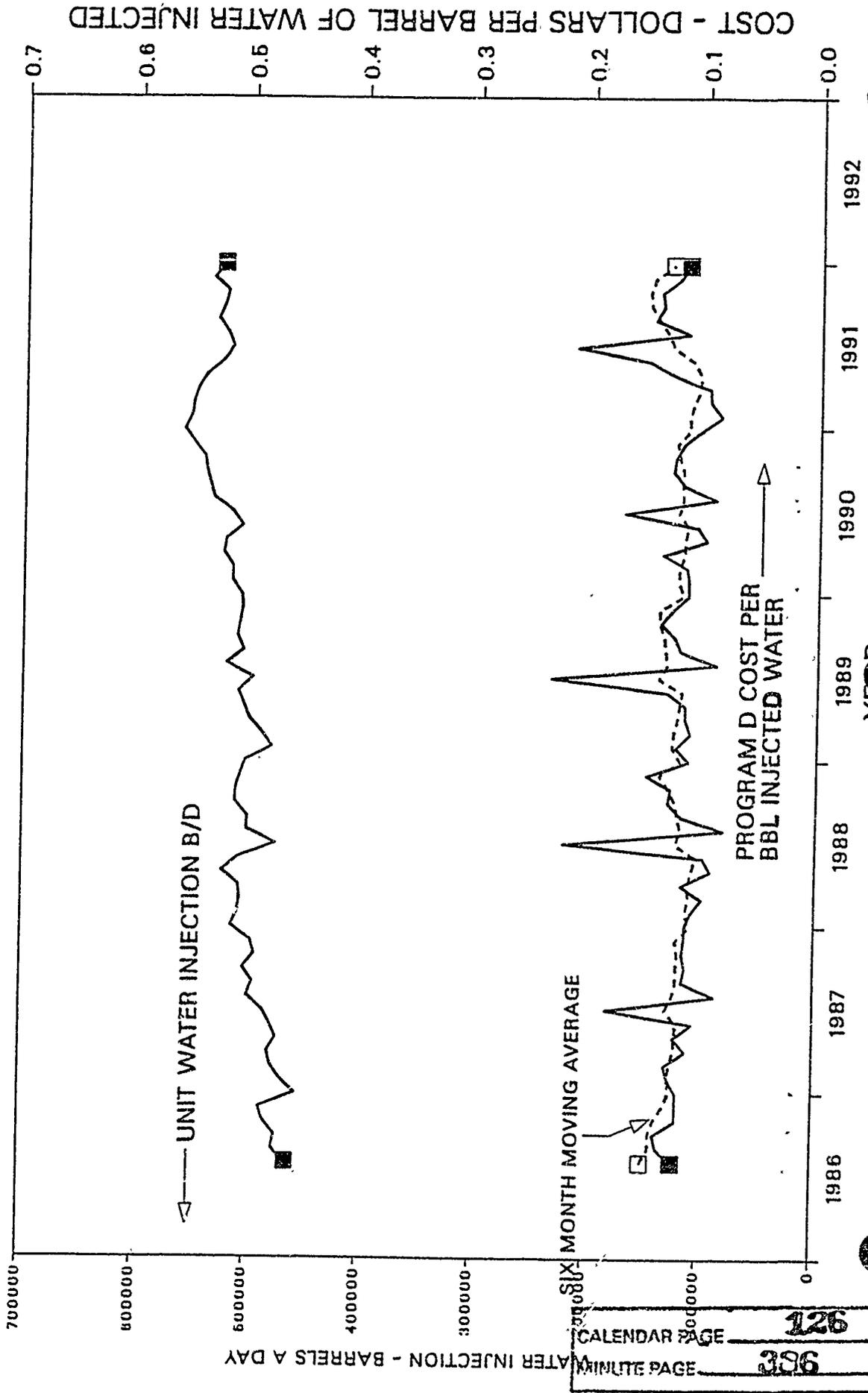


THOUSANDS OF DOLLARS PER MONTH

WATER INJECTION PROGRAM COSTS EXPRESSED AS \$/BBL OF INJECTED WATER INJECTION

EXHIBIT 10

LONG BEACH UNIT



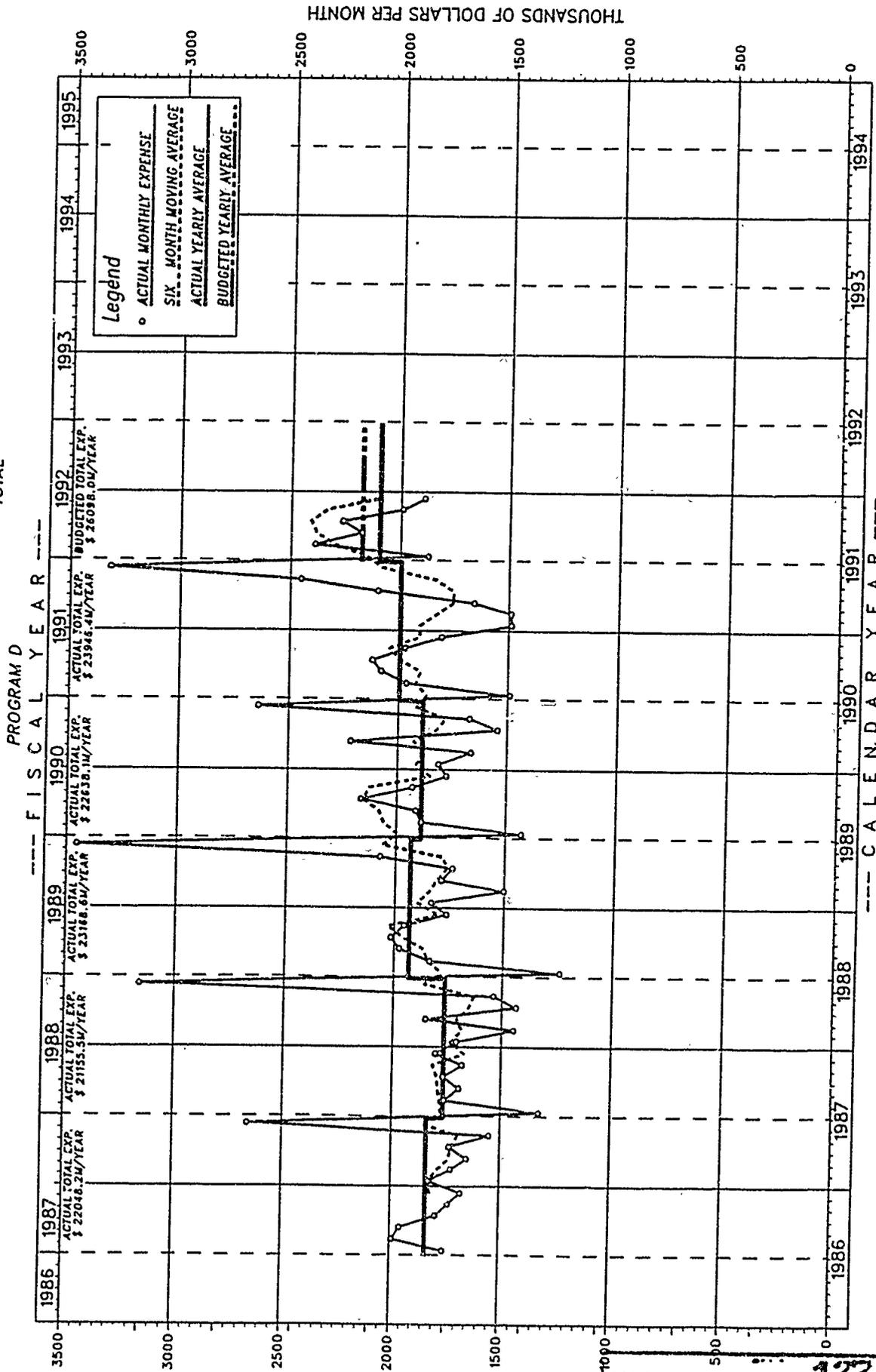
WATER INJECTION - BARRELS A DAY

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YEAR

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WATER INJECTION PROGRAM
 L O N G B E A C H U N I T
 TOTAL



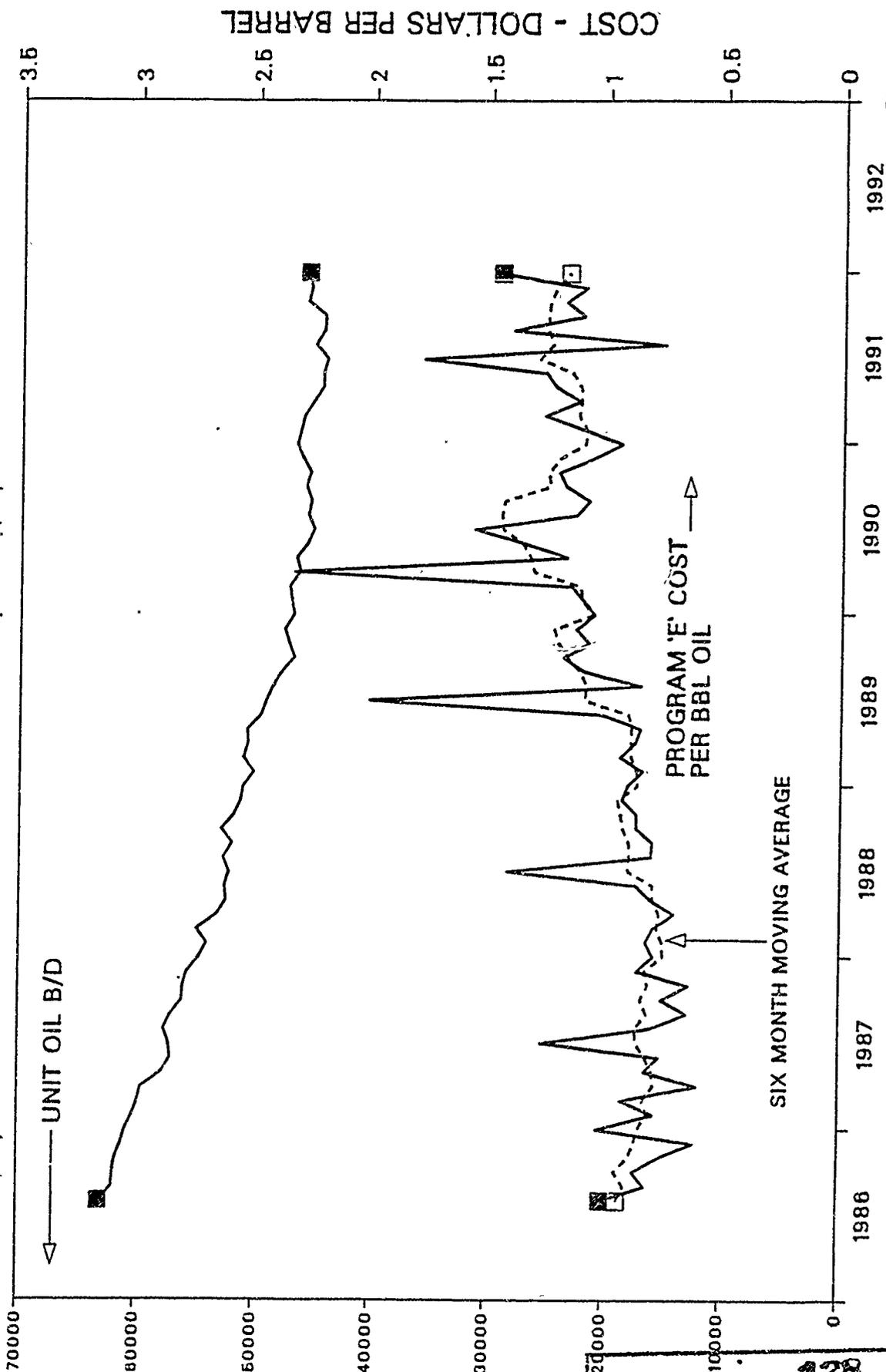
THOUSANDS OF DOLLARS PER MONTH

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MANAGEMENT PROGRAM COSTS EXPRESSED AS \$/BBL OIL

EXHIBIT 12

LONG BEACH UNIT



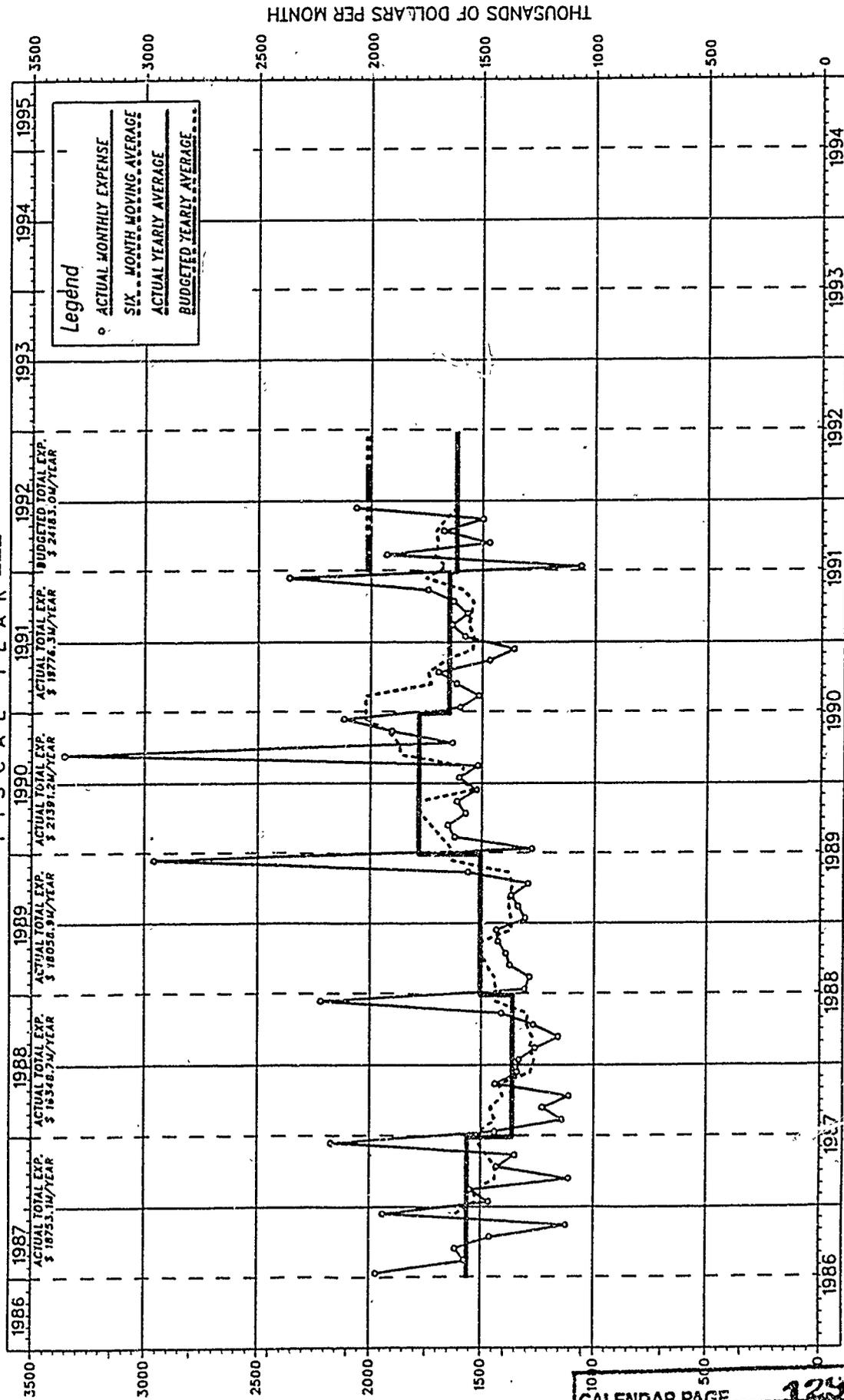
NET OIL - BARRELS A DAY

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MANAGEMENT PROGRAM
 LONG BEACH UNIT
 TOTAL

PROGRAM E
 FISCAL YEAR

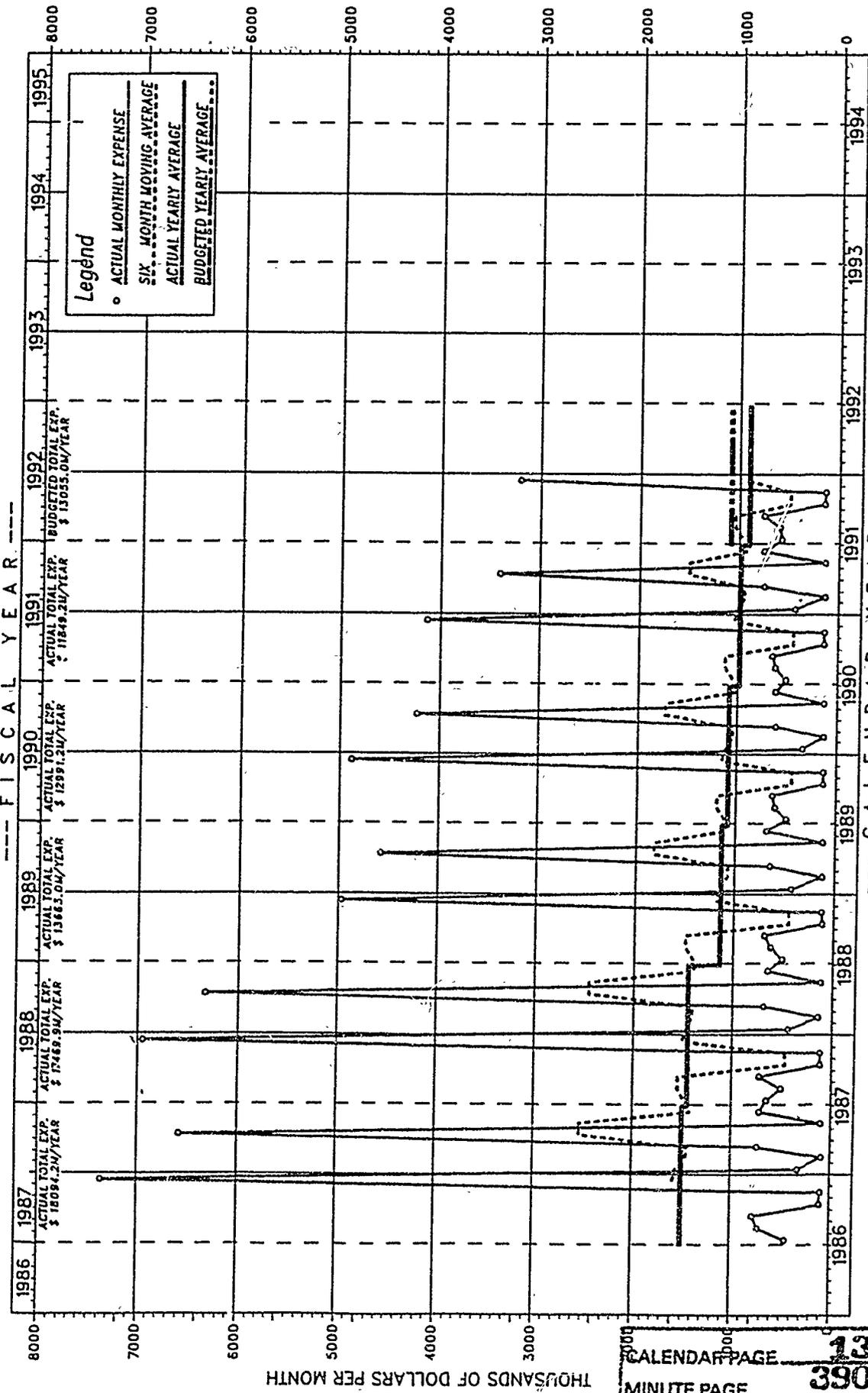


THOUSANDS OF DOLLARS PER MONTH

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LONG BEACH UNIT
TAXES, PERMITS, & RENTAL PROGRAM

PROGRAM F



Legend
 ○ ACTUAL MONTHLY EXPENSE
 - - - SIX MONTH MOVING AVERAGE
 . . . ACTUAL YEARLY AVERAGE
 - . - . BUDGETED YEARLY AVERAGE

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