

MINUTE ITEM

This Calendar Item No. 29
was approved as Minute Item
No. 29 by the State Lands
Commission by a vote of 3
to 0 at its 3/23/89
meeting

INFORMATIVE
CALENDAR ITEM

29

A 57, 58

S 29

03/23/89
W 17094
Naughton

FIRST EIGHT MONTHS STATUS REPORT
1988-89 PLAN OF DEVELOPMENT AND OPERATIONS AND BUDGET
LONG BEACH UNIT, WILMINGTON OIL FIELD
LOS ANGELES COUNTY

At the end of the first eight months of the 1988-89 fiscal year (February 28, 1988) the Long Beach Unit Plan of Development and Operations and Budget had a downward revised budget of \$132,354,000 including administrative overhead costs and a \$3.4 million carry-over from 1987-88. The expenditure trend for the same period indicates a total of \$122 million for the plan year, an increase of \$7 million over 1987-88. The original Budget by the City of Long Beach with carry-in was \$136.3 million and if the additional drilling rig activity added to the Plan in the Third Modification had been in the City's original Budget it would have totaled over \$142 million including carry-in.

During the first eight months, the Commission approved three modifications to the Plan and Budget. The First Modification approved the expenditure of \$286,000 (including overhead) to allow the Unit to settle with the EPA the Unit's share of the first phase of clean-up costs at a waste disposal site previously used by the Field Contractor for disposal of Unit waste material. Funds were transferred within the existing budget so no augmentation was required. The Second 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. The Third Modification added six months of drilling rig activity to the plan and transferred funds in the amount of \$6,251,000 from several accounts to the Drilling and Development Program to

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fund continued operation of a second drilling rig for the remainder of the budget year. In addition, the Third Modification reflected a budget reduction of \$10,261,000 from funding made surplus primarily by lower electrical energy costs and reduced mining rights taxes as a consequence of lower oil prices. The Third Modification resulted in a net budget reduction of \$4,010,000. Three requests by the Unit Operator (City of Long Beach) to transfer funds totalling \$585,000 between line item accounts within the existing budget were approved. Two plan supplements were approved. One was for emergency repairs to a floating dock on Pier J. The second approved the purchase and implementation of a computer software system (Unidata) for general petroleum management applications in the Unit.

Unit expenditures during the first seven months amounted to \$66,405,093 or 50.2 per cent of the adjusted budget and 48.7 per cent of the original budget plus carry-over. Preliminary figures indicate that by the end of the first eight months only 57 percent of the reduced Budget will have been expended and less than 55 percent of the original Budget. A plot of these expenditures is shown on attached Exhibit 1. Projected spending for the next four months and the expenditures to date indicates an excess of \$10,000,000 in the Budget for FY 88-89.

Oil production for the first seven months period amounted to 11.112 million barrels and gas production was 2,046.2 million cubic feet. A plot of Unit oil rates is shown on Exhibit 2 with City of Long Beach projected rates through 1989-90. At average values of \$10.60 per barrel of oil and \$2.17 per thousand cubic feet of gas, the total value of Unit production for the seven months period was \$122.2 million. This was \$3.4 million less than the \$125.6 million revenue projected at the beginning of the budget year. The original projection was based on \$11.00 per barrel oil and \$2.25 per MCF gas. A plot of Unit oil prices is shown on Exhibit 3. The lower prices were partially off set by slightly higher oil production rates. Net income from Unit operations during the seven months period amounted to \$55.8 million. This is approximately \$6.8 million more than projected at the beginning of the budget year and is due to the fact that expenditures for the period were \$10.2 million less than originally projected. The relationship

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between oil prices and revenues to costs is shown on Exhibits 3 and 4. Oil prices have increased over 30 per cent in the last four months and are now firm at or above the price in effect at the first of 1988. Net income for the year should be above that projected due to higher oil prices and lower expenditures than budgeted.

Significant activities and accomplishments in each plan and budget program during the first eight months of the fiscal year were:

A. DRILLING AND DEVELOPMENT PROGRAM

Two drilling rigs were operated during the first eight months. Activity was on Islands Grissom, White, Chaffee and Pier J. Eight new producing wells were drilled, 4 producers and 6 injectors were redrilled, two producers were converted to injection, one injector was converted to production and two injectors and one producer were permanently abandoned. Drilling activity was in the Ranger, Terminal East, Upper Terminal and Lower Terminal Zones. Oil production of 1750 B/D was obtained from this work which reduced the rate of the production decline in the unit. Day to day operating problems in the drilling and redrilling of wells have been partially resolved.

The adjusted budget for the Drilling and Development Program on January 31, 1989 was \$18,590,000. Funds expended were \$8,217,800 (44.2%). A plot of monthly expenditures is shown on Exhibit 5.

B. OIL AND GAS PRODUCTION PROGRAM

The Unit produced 11.112 million barrels of oil and 2,046.23 million cubic feet of gas during the first seven months. Average production rates were 51,684 barrels of oil per day and 9,517 thousand cubic feet of gas per day versus projected rates of 50,865 B/D oil and 9,766 MCF/D gas. Expenditures for the seven months period plotted as \$ per barrel of oil produced are shown on Exhibit 6.

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The principal function of this program is the production of fluids. Gross production for the period was 101.05 million barrels for an average of 470,000 B/D. The City projected rate was 471,000 B/D. The gross rates and program expenditures plotted as \$ per barrel of gross fluids are shown on Exhibit 7. The trend of that curve is upward following a period of reduced costs. The continuing decline in active producing wells (623 on June 30, 1988 and 607 on January 31) is shown on Exhibit 8 and is following a trend established over the last 15 months. The future trend will depend on oil prices, well failure rate and water cut increase. The City of Long Beach is projecting a change in the trend during the 1989-90 period, anticipating an average of 610 active wells during the year.

Major non-routine projects in progress include the construction of two 30,000 barrel oil storage tanks at the Pier J-6 site, replacement of deteriorated electrical solenoid cables to well cellars on Islands Grissom and Freeman, rebuilding of high voltage switchgear circuit breakers on all islands, replacement of the auxiliary motor control center which operates the decorative waterfall on Island Grissom, and repair of cracked well cellar walls on Pier J.

The adjusted budget for the Oil and Gas Production Program was reduced \$4,338,000 by the Third Modification to \$57,794,000 of which \$28,549,419 (49.4%) were expended at the end of the first seven months. A plot of monthly expenditures is shown on attached Exhibit 9.

C. ENHANCED RECOVERY AND STIMULATION PROGRAM

No funds were budgeted for 1988-89 and no activity took place in this program.

D. WATER INJECTION PROGRAM

A total of 107.95 million barrels of water were injected during the first seven months. The average rate was 502,093 barrels per day which was lower than the 506,566 B/D projected. Gross produced fluids amounted to 101.05

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million barrels so the injection/production fluids volume ratio averaged 106.8 percent for the seven months period. A plot of water injection rates and program expenditures as \$ per barrel of water injected are shown on Exhibit 10. This cost trend is upward following a long period of decline.

Major non-routine projects in progress included the purchase of three high efficiency water injection pump motors and twelve replacement injection pump motor controllers. The installation of covers on all skim basins for compliance with regional air quality regulations was completed.

The adjusted budget for the Water Injection Program amounted \$23,907,000 of which \$12,615,125 (52.8%) were expended at the end of the first seven months. A plot of monthly expenditures is shown on attached 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 and consultant services, data processing equipment purchases and operating costs, office expenses including rental, supplies and services, and the Unit Operator's billable costs. Other significant items include Unit equity expense, special management projects, townlot participation administration and special studies related to Unit waste management and disposal. A plot of the Management Program expenditures expressed as \$ per barrel of oil is shown on Exhibit 12. The cost trend is upward.

Projects in progress during the first seven months included the purchases of computer equipment and software for reservoir modeling studies and the purchase and installation of a computerized maintenance system for the field contractor. Also, the Unit made a first phase

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settlement for site clean up at a waste disposal site previously used by the Field Contractor for Unit waste disposal. This was provided for in the First Modification.

The adjusted budget on January 31, 1989 was \$18,281,000 for the Management Program of which \$9,533,916 (52.2%) were expended during the first seven months. 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 January 31, 1988 amounted to \$13,782,000 of which \$7,488,711 (54.3%) were expended. The major cash outflow in this program occurs with mining rights tax payments in December and April of the budget year. Expenditures for the fiscal year in this program are currently projected to be slightly above 100% of the amount currently budgeted. A plot of program expenditures is shown on Exhibit 14.

A summary of Long Beach Unit 1988-89 Plan and Budget activity during the first seven months ending January 31, 1989 (in thousands of dollars) is:

<u>Program</u>	<u>Original Budget**</u>	<u>Adjusted Budget**</u>	<u>Expenditures* To 1/31/89 (58.3%)</u>
A. Drilling and Development	\$ 12,339	\$ 18,590	\$ 8,217.9 (44.2%)
B. Oil and Gas Production	62,132	57,794	28,549.4 - (49.4%)
C. Enhanced Recovery and Stimulation	-0-	-0-	-0-
D. Water Injection	26,582	23,907	12,615.11 (52.8)
E. Management	18,843	18,281	9,533.9 (52.2%)
F. Taxes, Permits and Land Rentals	16,458	13,782	7,488.89 (54.3%)
Totals	<u>\$136,364</u>	<u>\$132,354</u>	<u>\$66,405.1 (50.2%)</u>

*Includes Administrative Overhead Costs

**Includes Administrative Overhead Costs and \$3,394,000 1987-88 Carry-Over

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The 1988-89 Plan and Budget provides for electrical energy billings of \$25,318,000 for the plan year. This amount was based on predicted use of 410,610,000 kilowatt hours (kwh) at an average cost of 6.120 cents/kwh. Actual billings for the first seven months amounted to \$12,503,000 (49.4%) for 232,272,000 kwh usage (56.6%), for an average cost of 5.383 cents per kwh. The lower than predicted rate resulted from PUC restructured rates which dropped winter rates to as low as 4.062 cents per kwh. The energy consumed will be less than proposed because of lower produced and injected volumes of fluid than originally projected. Four budget line item activities are major users of electrical energy. They are Hydraulic Lift surface, Submersible Lift Surface, Water Injection System and Produced Water Handling. Together, these four items account for about 80 percent of the Unit's total electrical energy costs. Plots of monthly expenditures on these activities are shown on attached Exhibits 15, 16, 17 and 18. Exhibit 19 shows a comparison between total Unit fluids (gross production plus water injection) and total electrical energy consumed in the Unit (Islands and Pier J). Exhibit 20 compares total fluids produced and injected fluids with electrical energy consumed on the Islands per barrel of total fluids produced and injected. This trend indicates increasing energy usage per barrel of fluid. Exhibit 21 also shows the same islands energy consumption compared with the Islands gross produced fluids and injected water on a daily basis. This also shows an increasing trend in daily use with flat or reduced volumes. Exhibit 22 shows a plot of actual electrical energy Unit costs in cents per kwh to February 1, 1989 and includes a projection of such costs for the remainder of the 1988-89 budget year. Exhibit 23 is a plot of the total expenditures of the Oil and Gas Production, Water Injection and Management programs as a \$ per barrel of oil cost. This trend is increasing.

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 \$ Per Barrel Oil.
7. Program B Costs \$ Per Barrel Gross Fluid.

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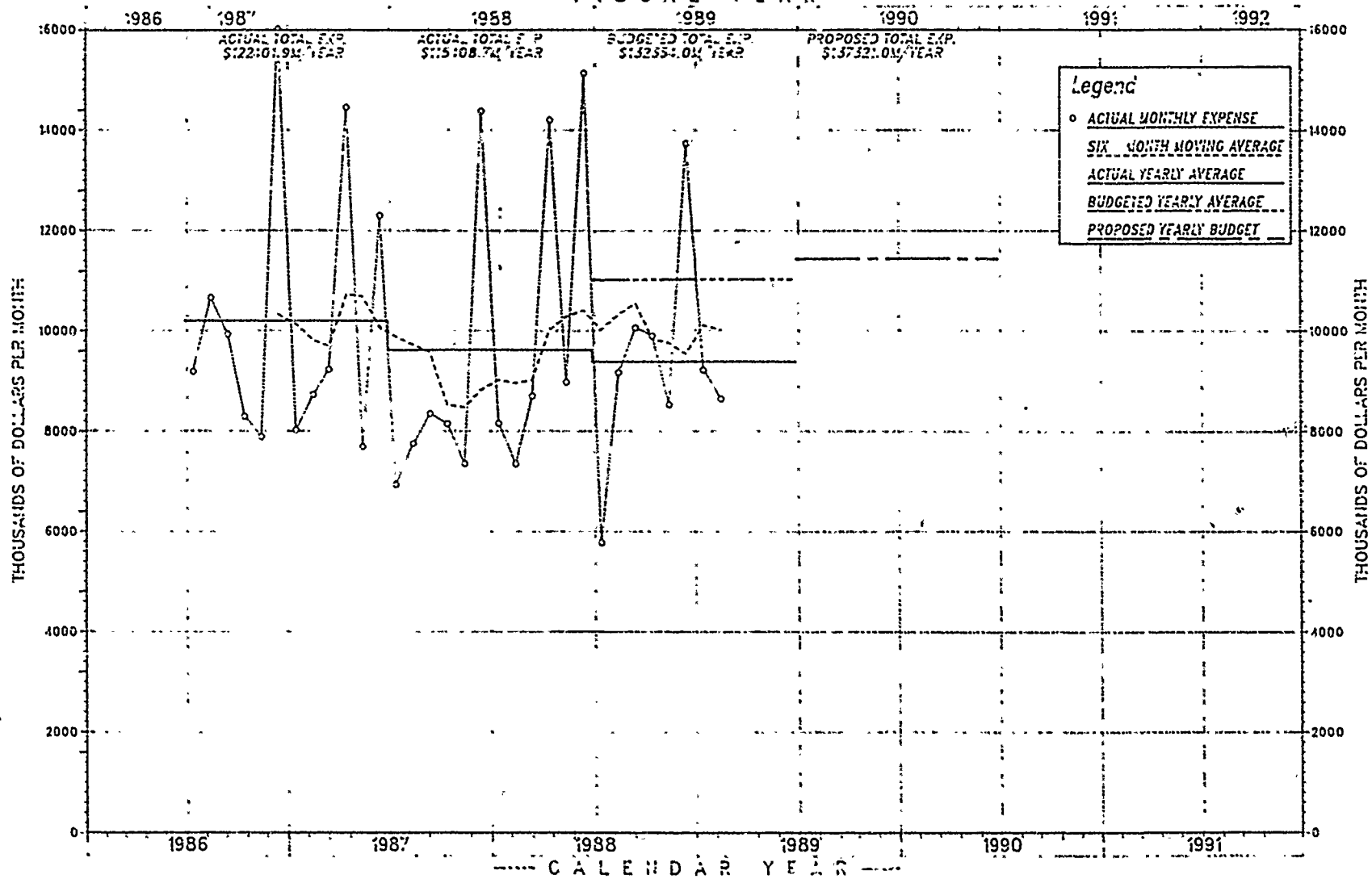
EXHIBITS (cont'd)

8. Producing Well Count.
9. Oil and Gas Production Program Expenditures (Program B).
10. Program D Costs \$ Per Barrel Injected Water.
11. Water Injection Program Expenditures (Program D).
12. Program E Costs \$ Per Barrel Oil.
13. Management Program Expenditures (Program E).
14. Taxes, Permits and Land Rental Program Expenditures (Program F).
15. Hydraulic Lift - Surface Expenditures.
16. Submersible Lift - Surface Expenditures.
17. Produced Water Handling Expenditures.
18. Water Injection System Expenditures.
19. Comparison of Total Fluids and Energy Consumed (L.B. Unit Total).
20. Comparison of Total Fluids and Energy Consumed (L.B. Unit Islands).
21. Comparison of Gross Production, Water Injection and Energy Consumed (L.B. Unit Islands).
22. Electrical Energy Costs.
23. Programs B, D & E Costs Per Barrel Oil.

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

EXHIBIT 1

TOTAL BUDGET ---- INCLUDING ADMIN. OVERHEAD
 ----- FISCAL YEAR -----

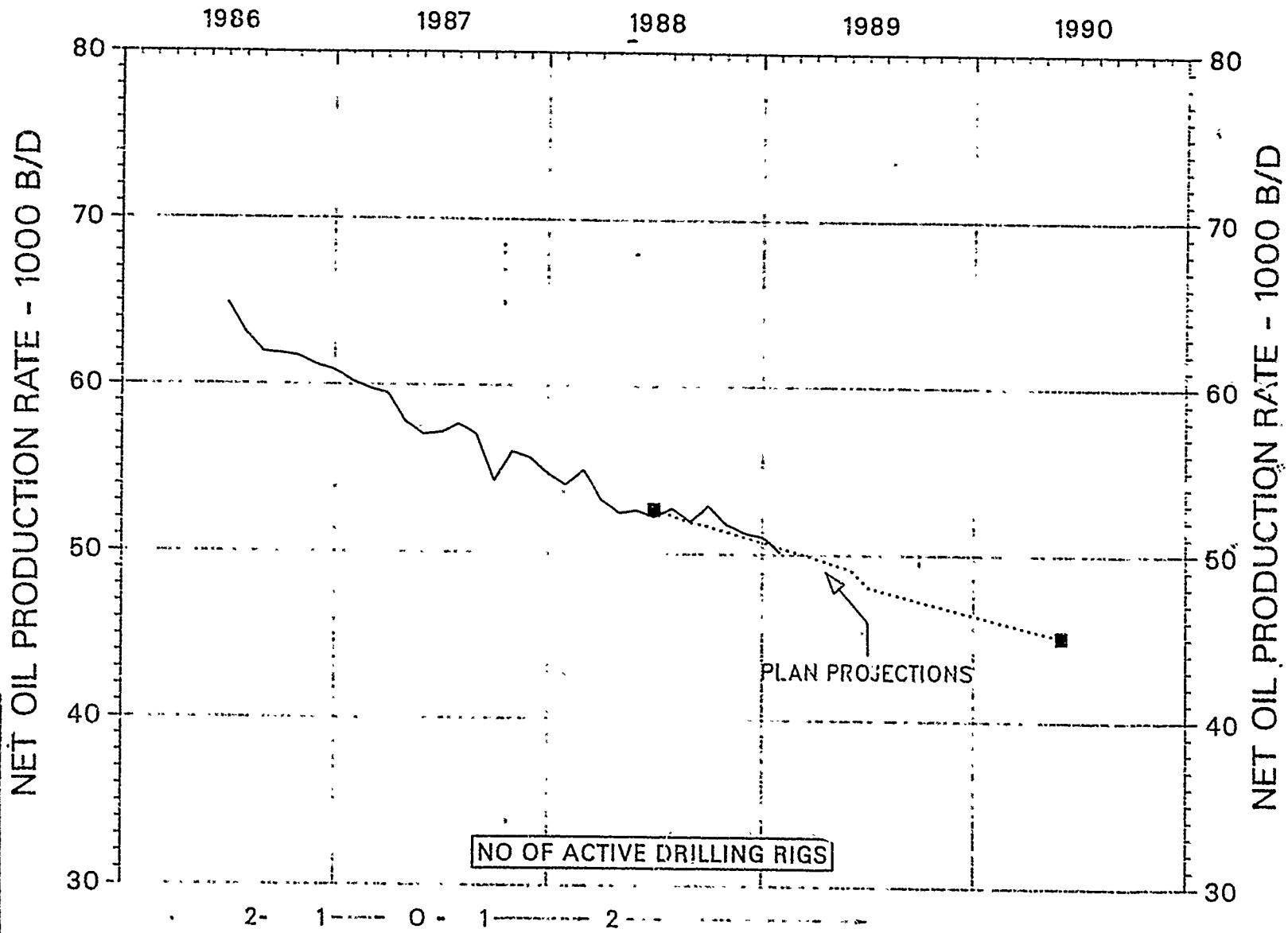


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LONG BEACH UNIT OIL PRODUCTION RATE

EXHIBIT 2



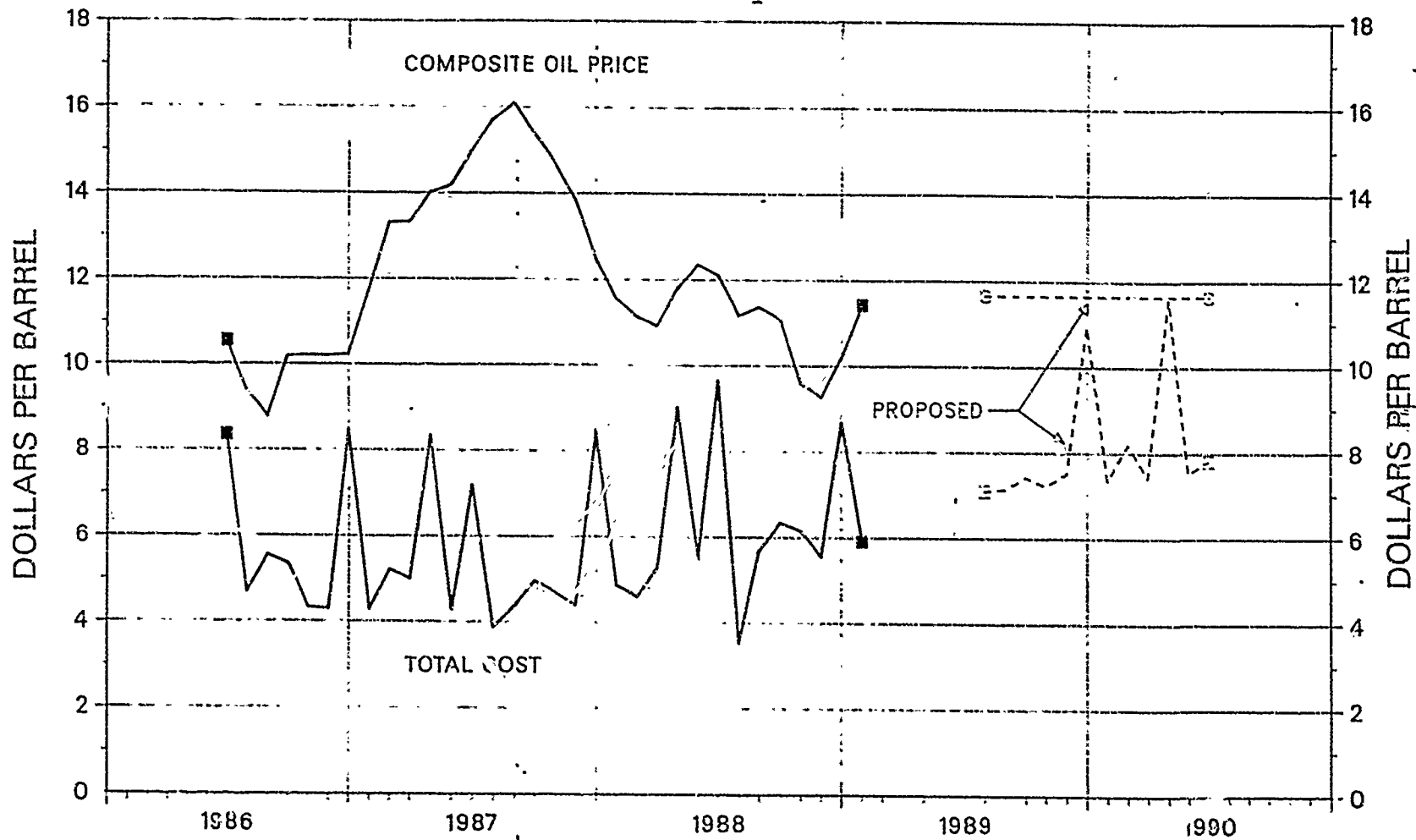
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0.1003

LONG BEACH UNIT

EXHIBIT 3

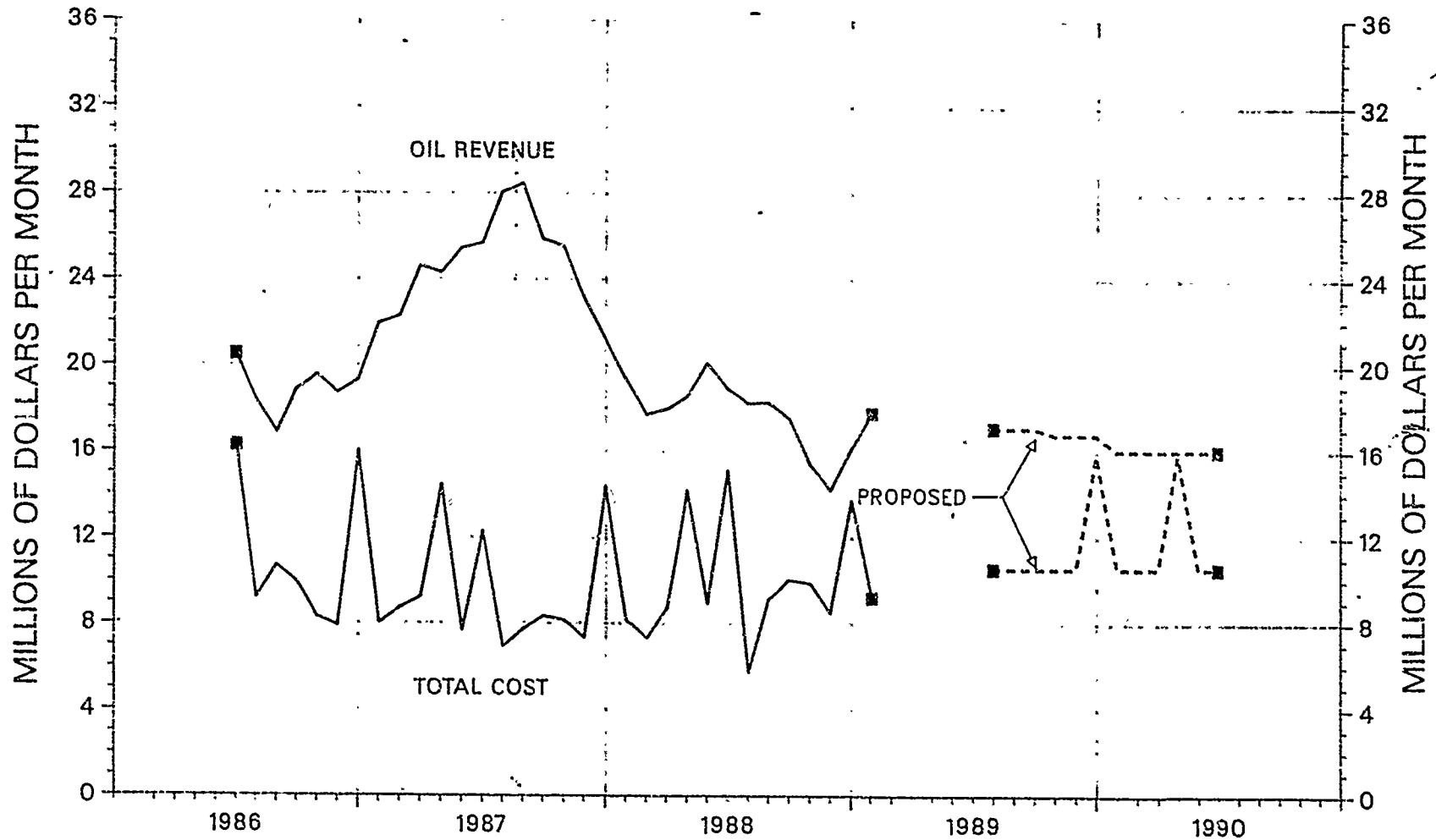


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LONG BEACH UNIT

EXHIBIT 4



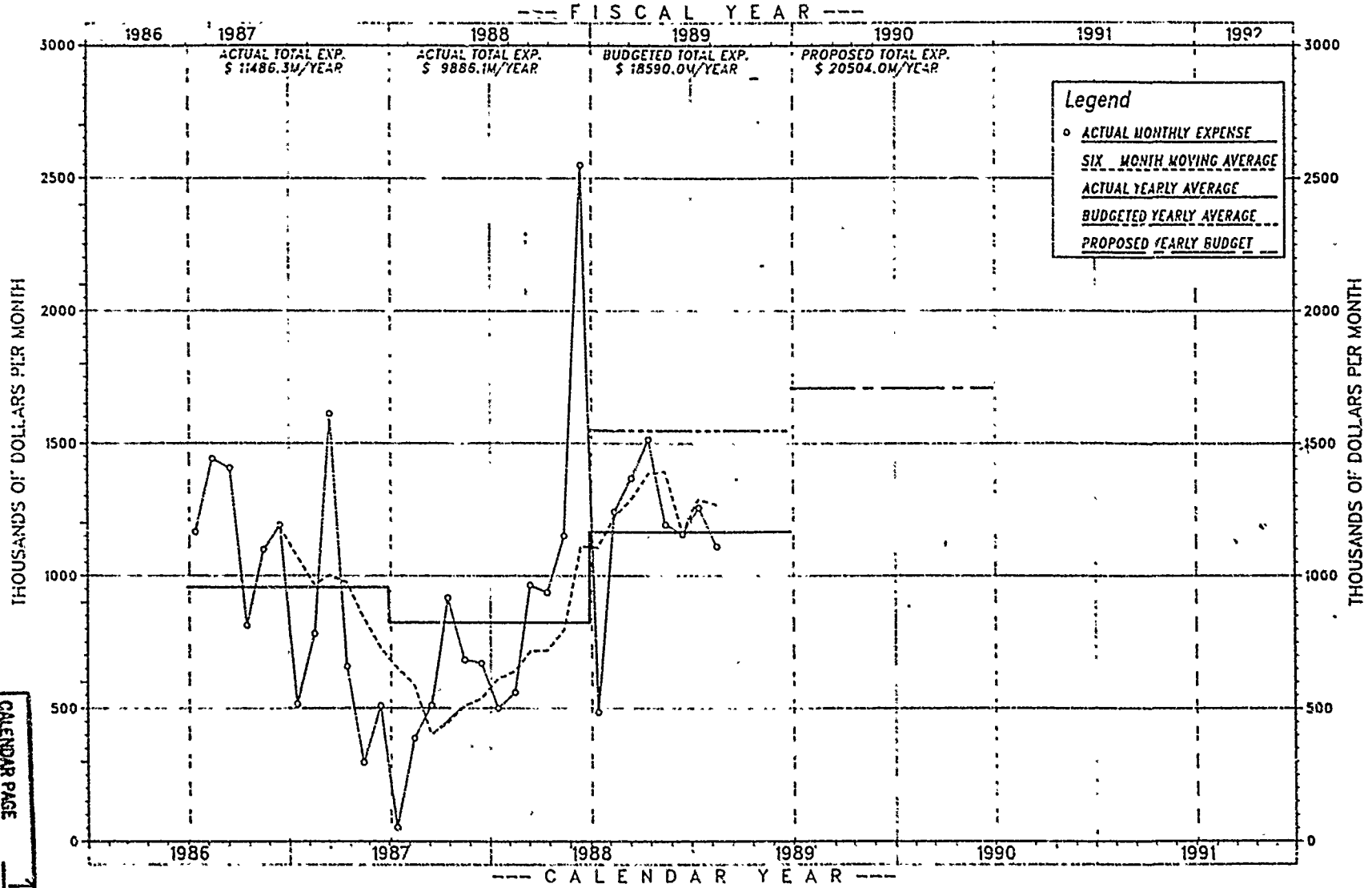
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LONG BEACH UNIT
 DRILLING & DEVELOPMENT PROGRAM

EXHIBIT 5

PROGRAM A



Legend

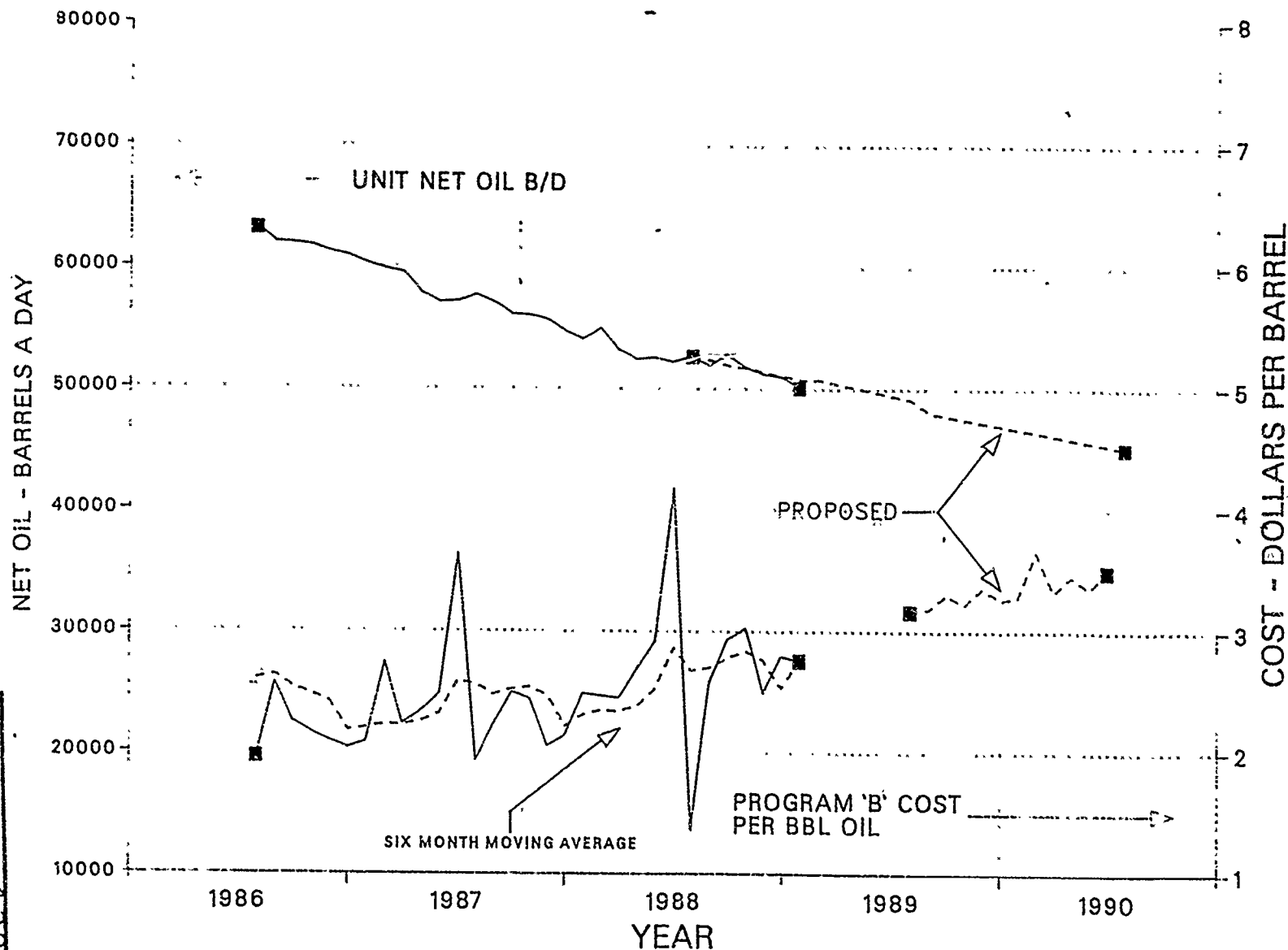
- ACTUAL MONTHLY EXPENSE
- SIX MONTH MOVING AVERAGE
- ACTUAL YEARLY AVERAGE
- BUDGETED YEARLY AVERAGE
- PROPOSED YEARLY BUDGET

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

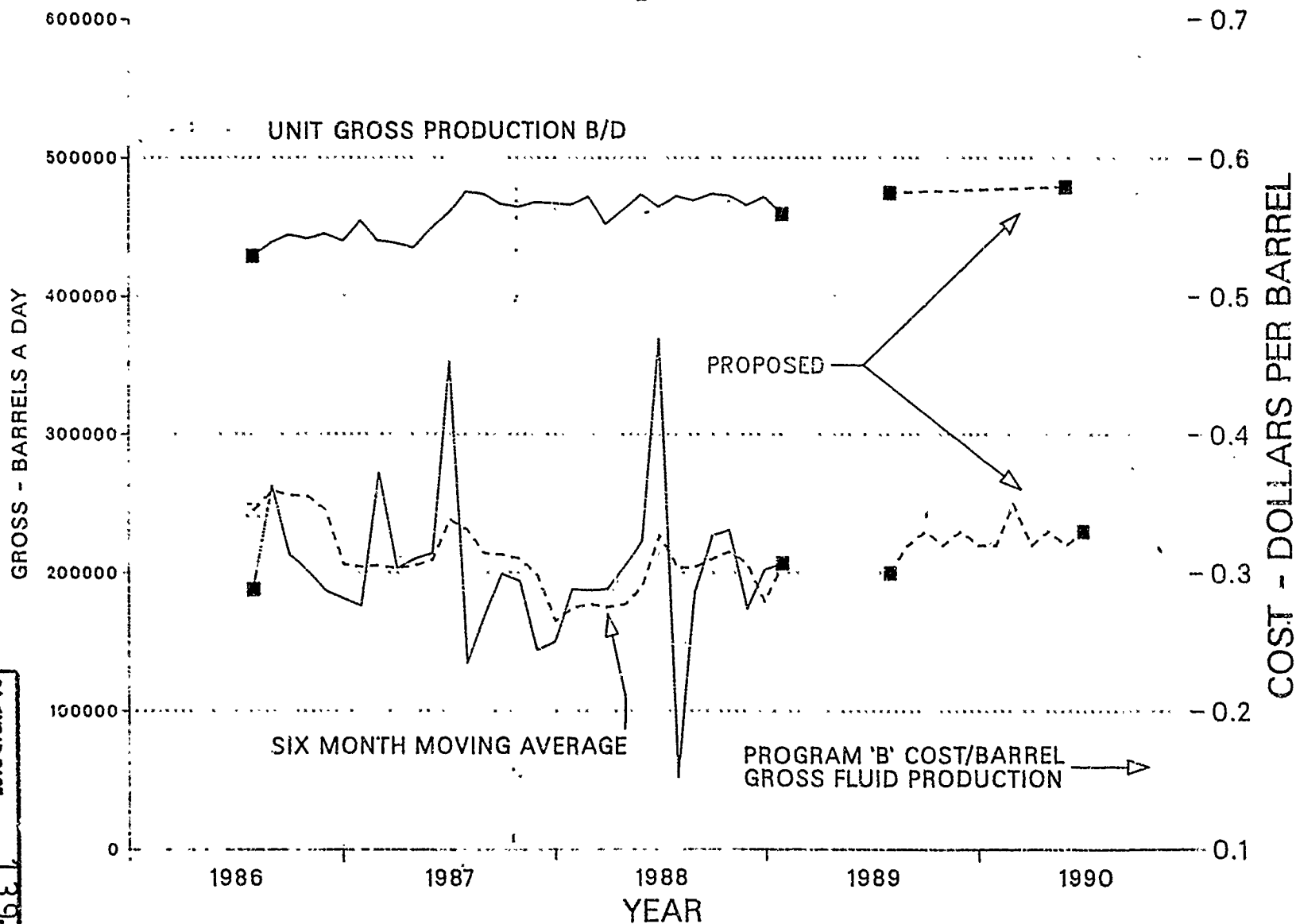
EXHIBIT 6
LONG BEACH UNIT



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

EXHIBIT 7
LONG BEACH UNIT

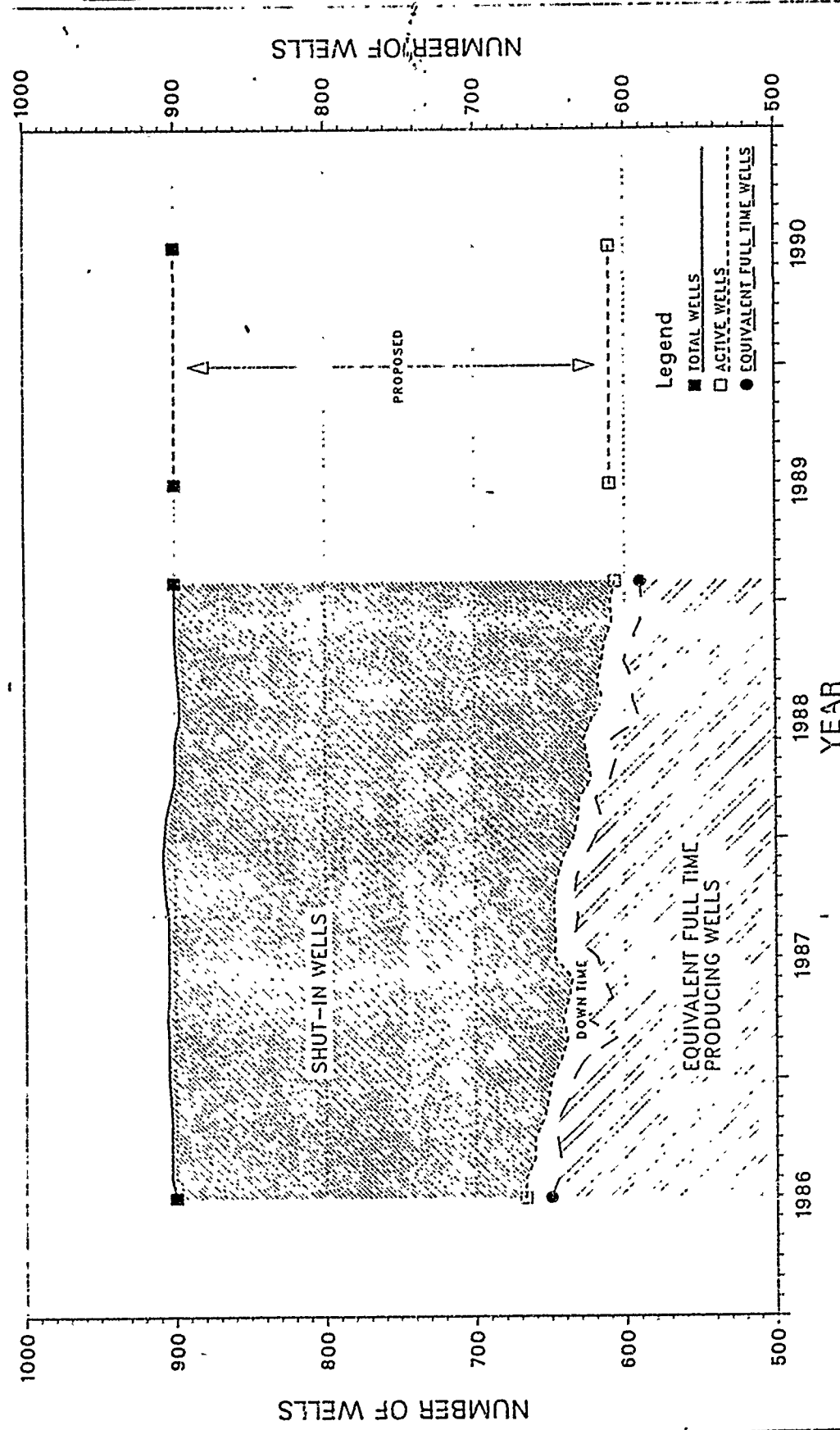


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LONG BEACH UNIT PRODUCING WELLS

EXHIBIT 8



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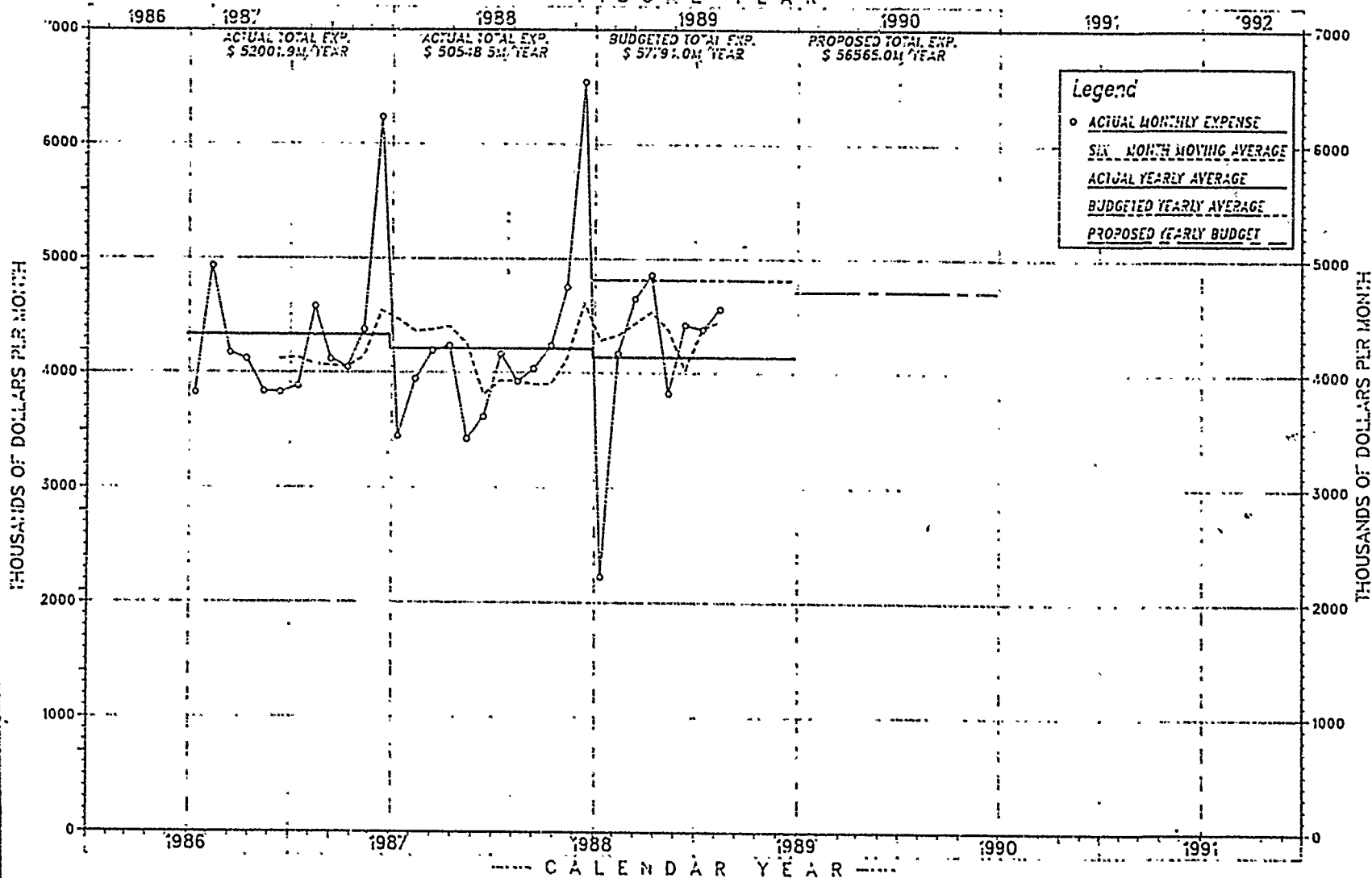
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LONG BEACH UNIT
OIL & GAS PRODUCTION PROGRAM

EXHIBIT 9

PROGRAM B

FISCAL YEAR

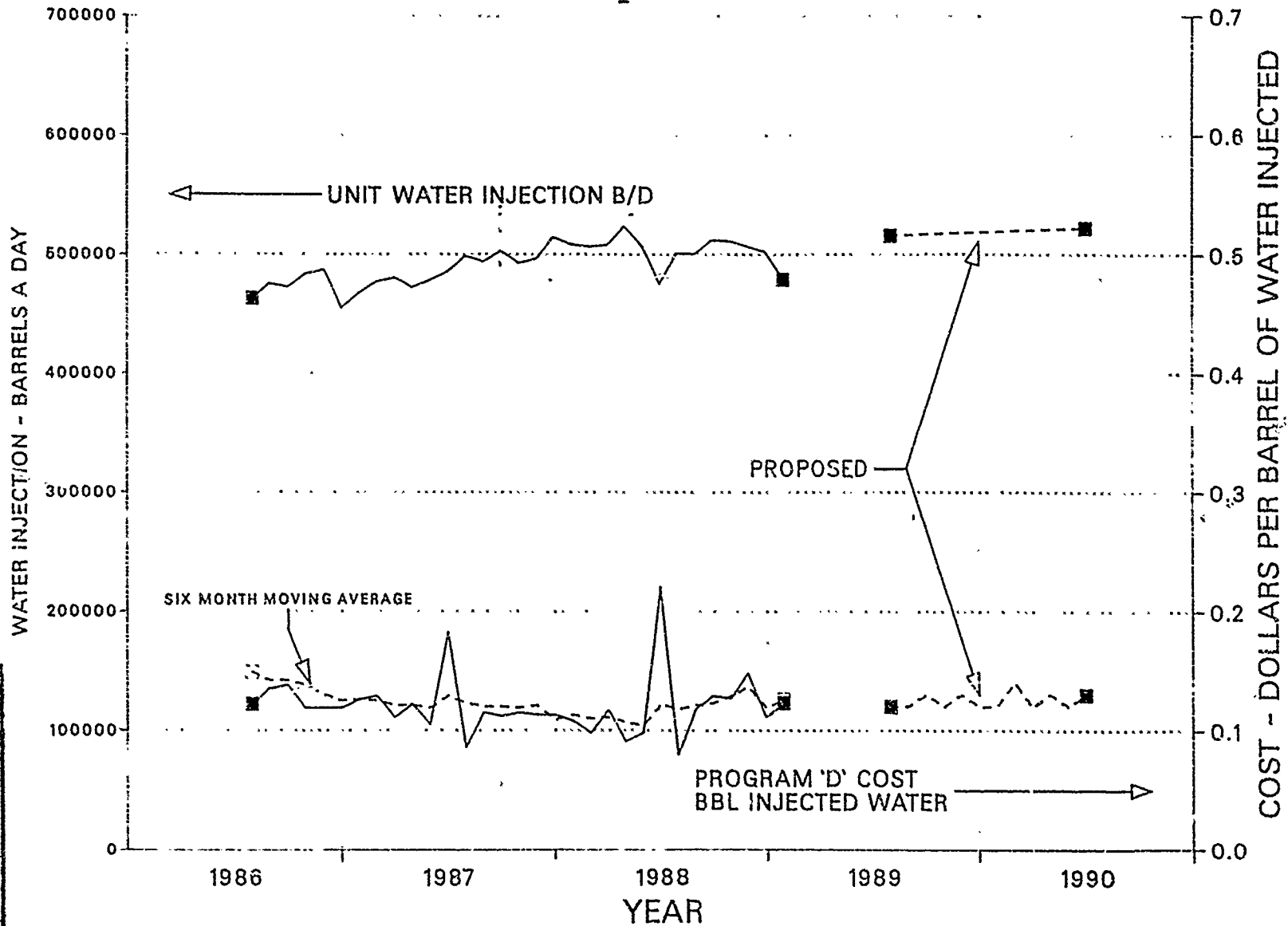


March 24 1988

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

EXHIBIT 10
LONG BEACH UNIT



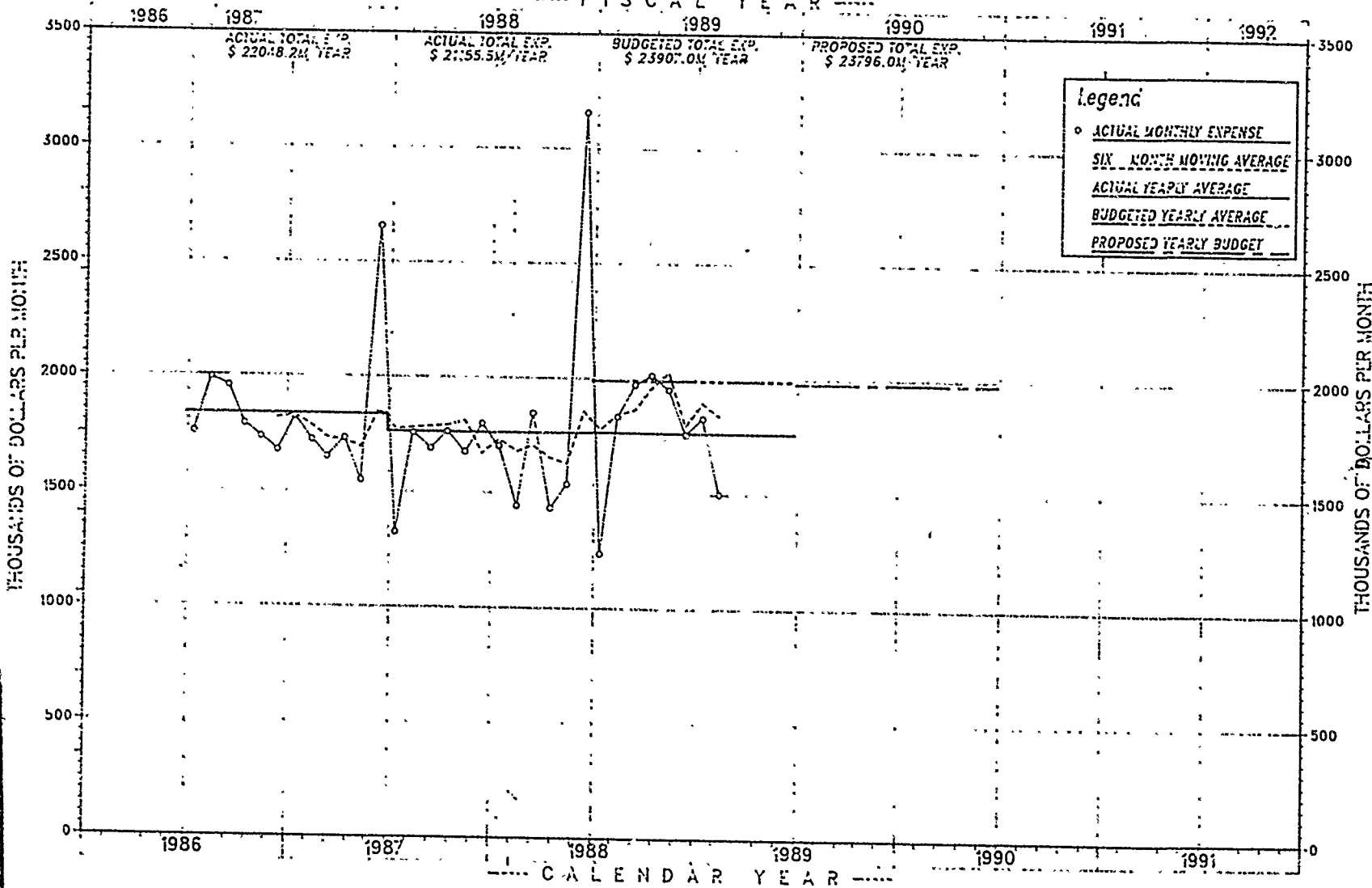
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LONG BEACH UNIT
WATER INJECTION PROGRAM

EXHIBIT 11

PROGRAM D

FISCAL YEAR



March 14 1989

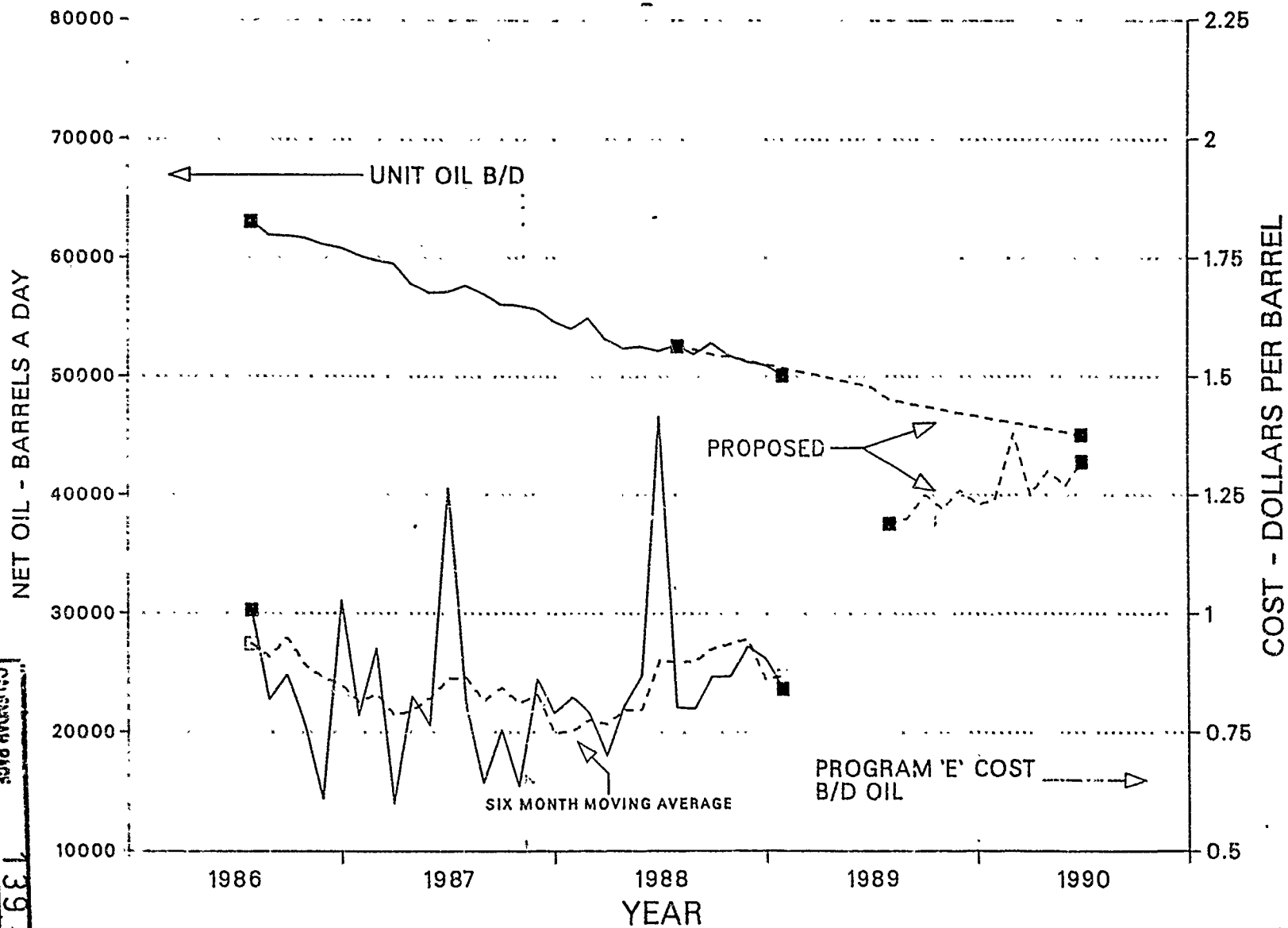
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MANAGEMENT PROGRAM COSTS EXPRESSED AS \$/BBL OIL

EXHIBIT 12

LONG BEACH UNIT



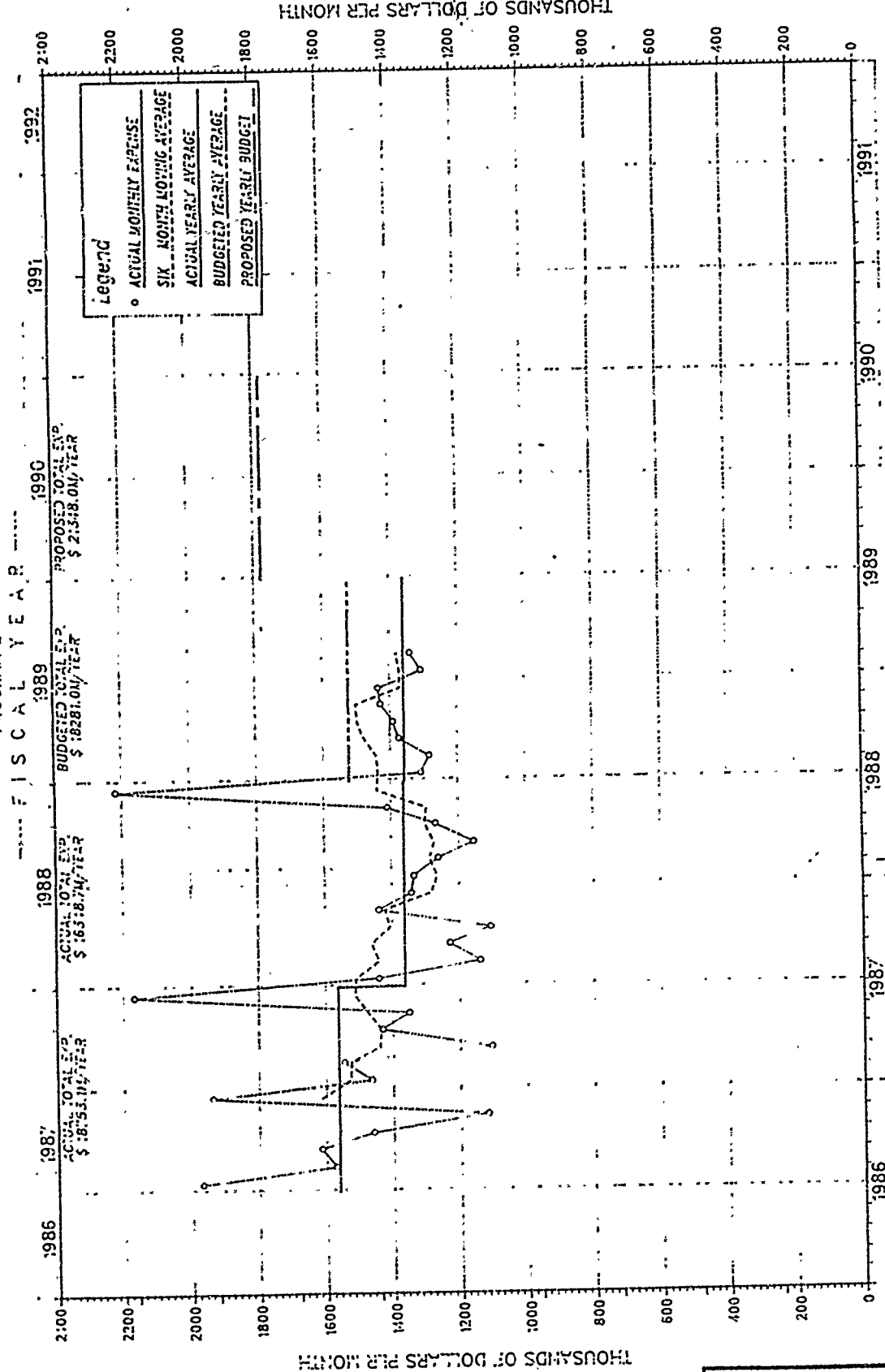
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LONG BEACH UNIT
TOTAL

MANAGEMENT PROGRAM

PROGRAM FISCAL YEAR



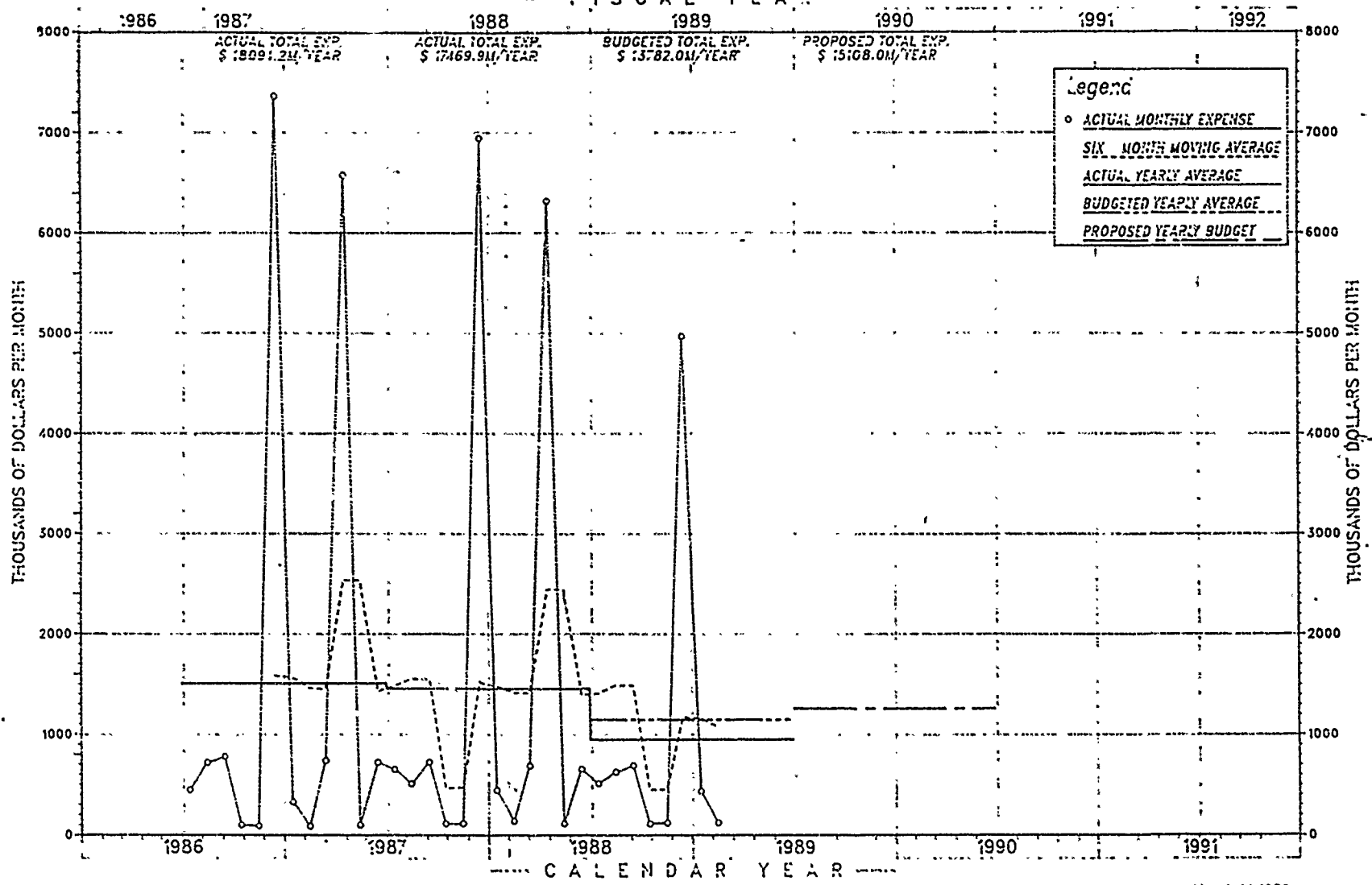
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L O N G B E A C H U N I T
 TAXES, PRINTS, & RENTAL PROGRAM TOTAL

EXHIBIT 14

PROGRAM F

----- FISCAL YEAR -----



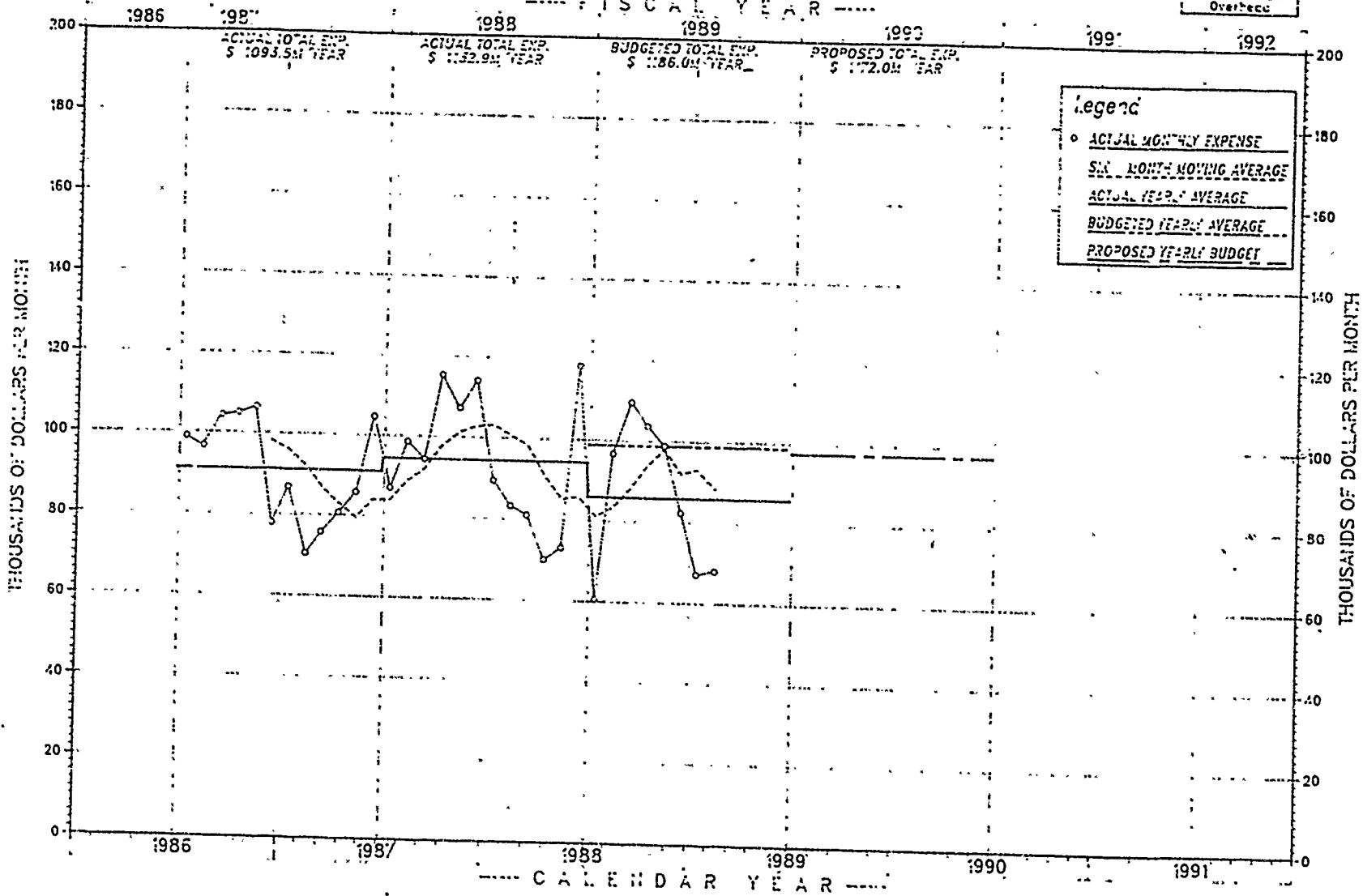
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L O N G B E A C H U N I T
 OIL & GAS PRODUCTION PROGRAM FLUID LIFTING HYDRAULIC LIFT -- SURFACE
 BUDGET CODE 22 --- ACCOUNT CODE 911
 --- FISCAL YEAR ---

EXHIBIT 15

Please Note
 DOES NOT include
 Administrative
 Overhead



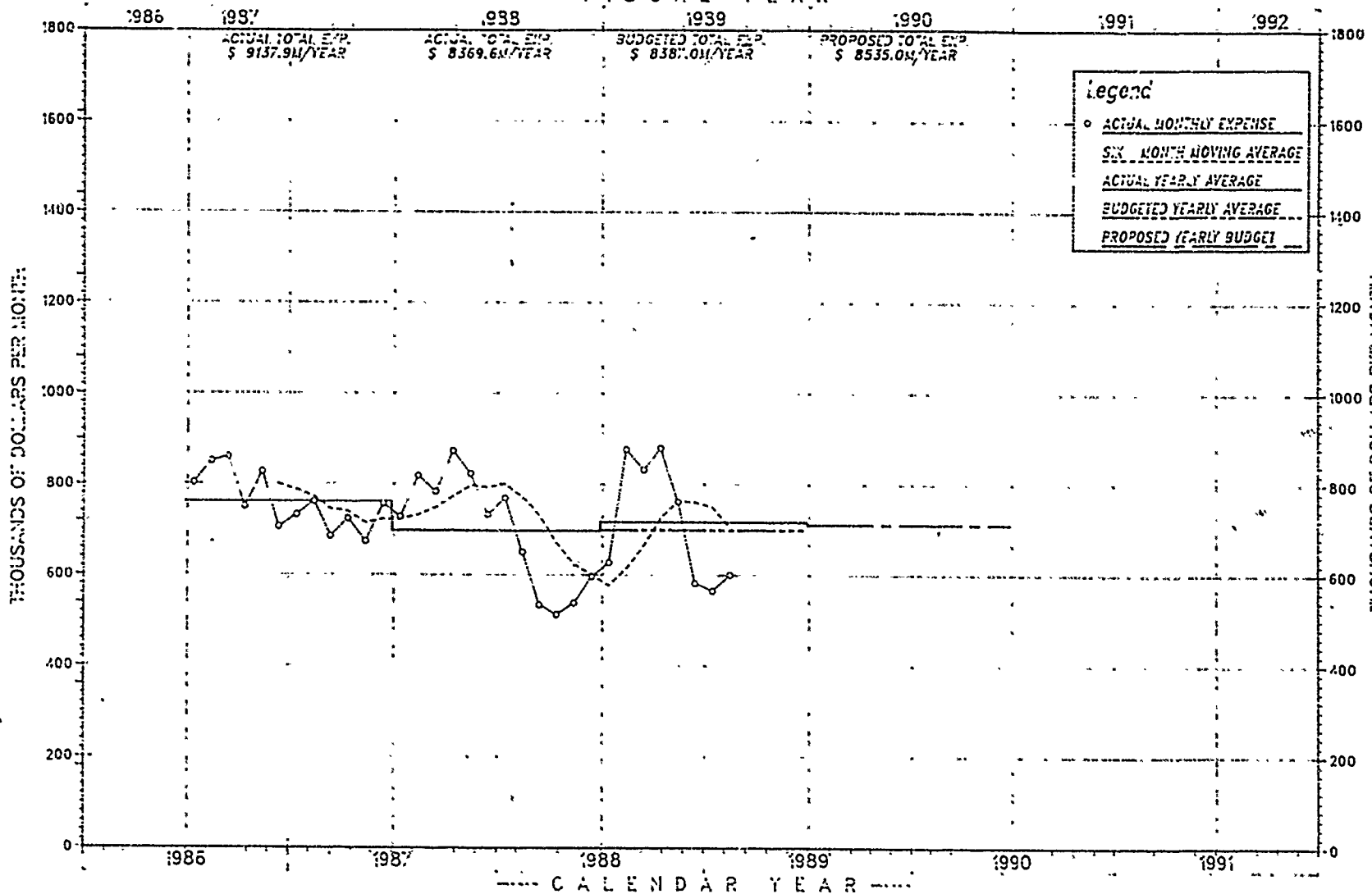
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L O N G B E A C H U N I T
 OIL & GAS PRODUCTION PROGRAM FLUID LIFTING SUBMERSIBLE LIFT - SURFACE
 BUDGET CODE 22 ACCO. IT CODE 918
 ----- FISCAL YEAR -----

EXHIBIT 16

Plotted Data
DOES NOT include
Administrative
Overhead



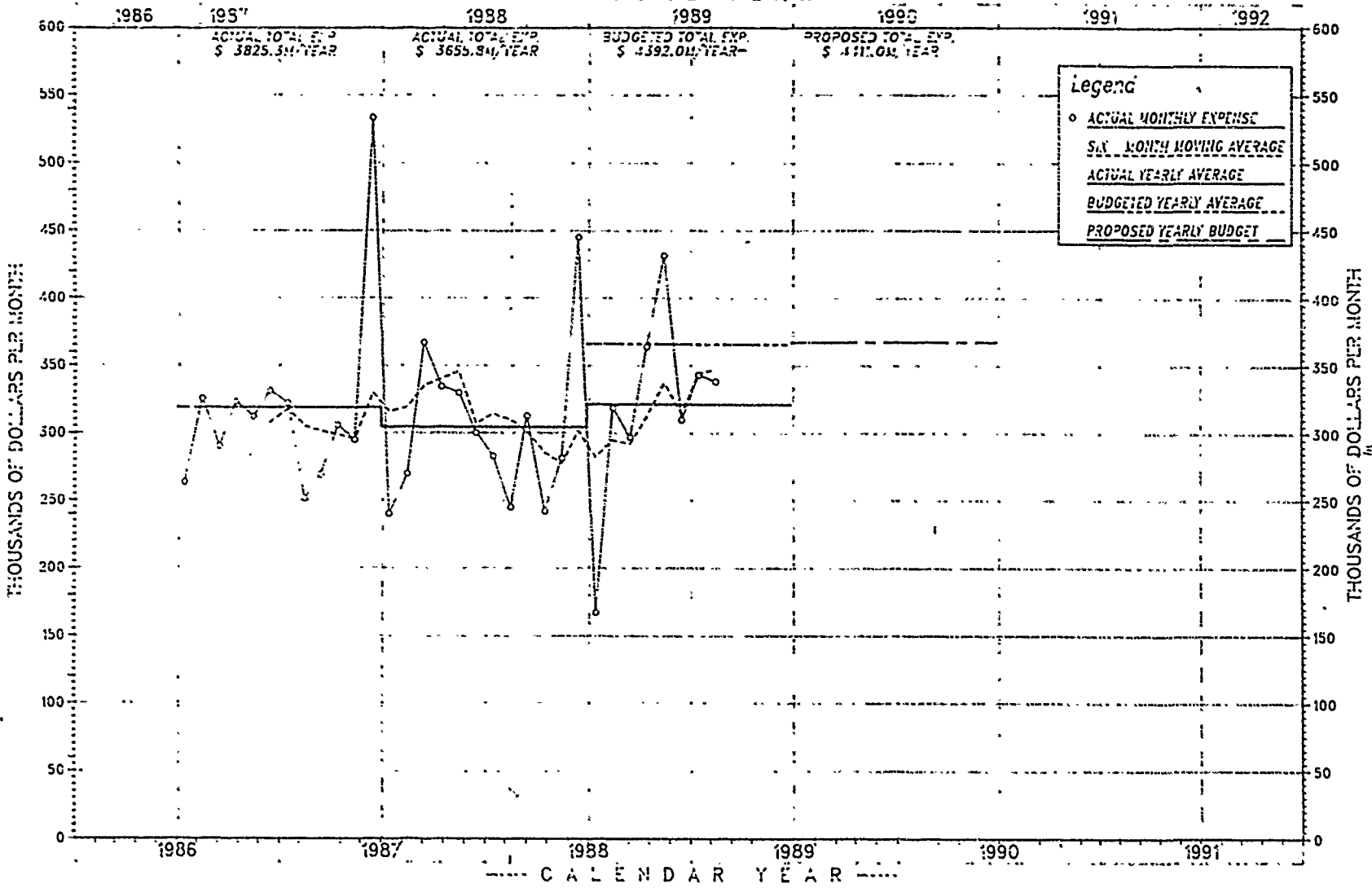
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L O N G B E A C H U N I T
 WATER INJECTION PROGRAM WATER INJECTION SYSTEMS PRODUCED WATER HANDLING
 BUDGET CODE 42 --- ACCOUNT CODE 911
 --- FISCAL YEAR ---

EXHIBIT 17

Plotted Data
DOES NOT include
Administrative
Overhead



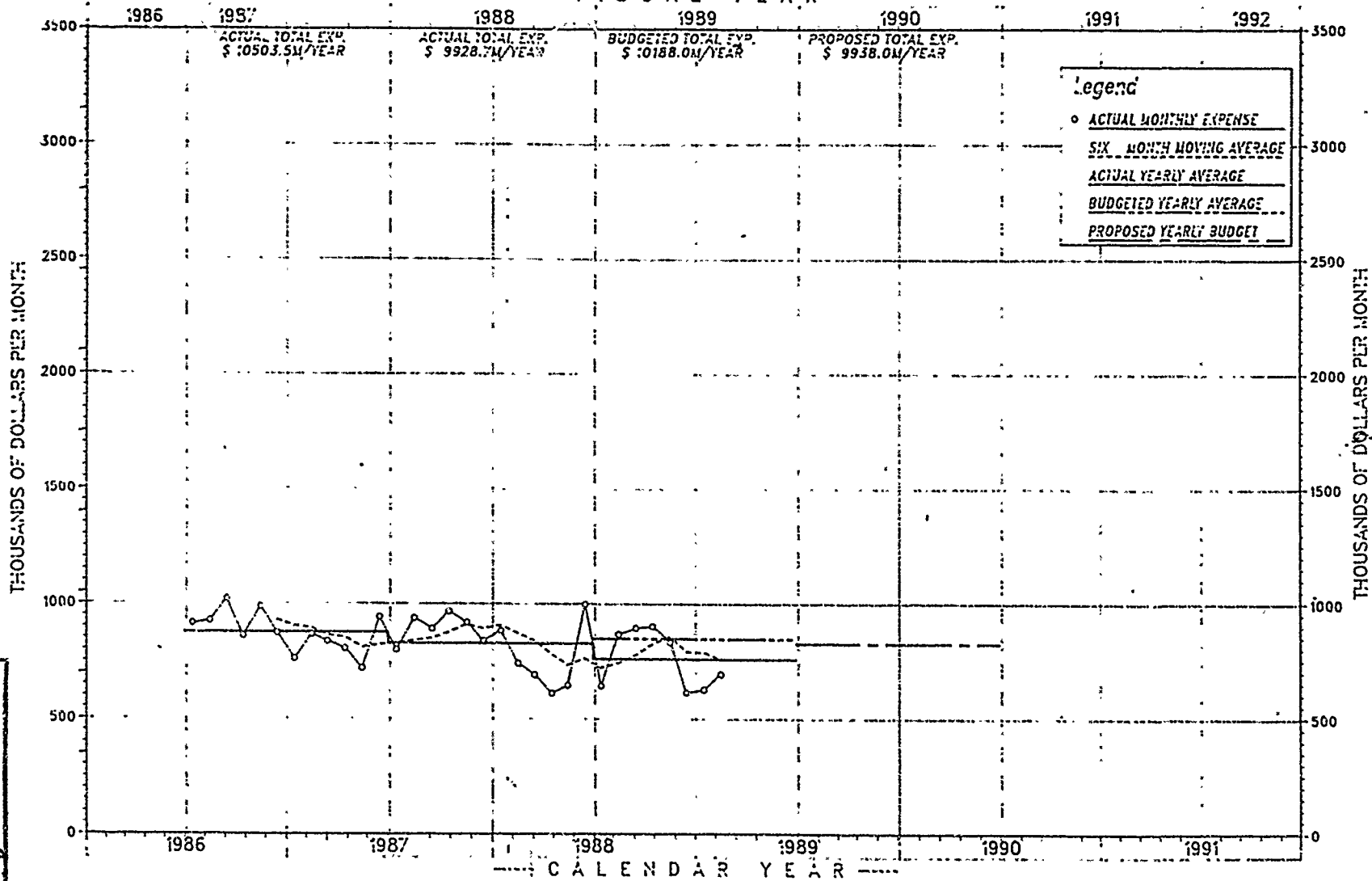
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LONG BEACH UNIT
 WATER INJECTION PROGRAM WATER INJECTION SYSTEMS WATER INJECTION SYSTEM
 BUDGET CODE 42 --- ACCOUNT CODE 925
 ----- FISCAL YEAR -----

EXHIBIT 18

Potted Data
 DOES NOT Include
 Administrative
 Overhead

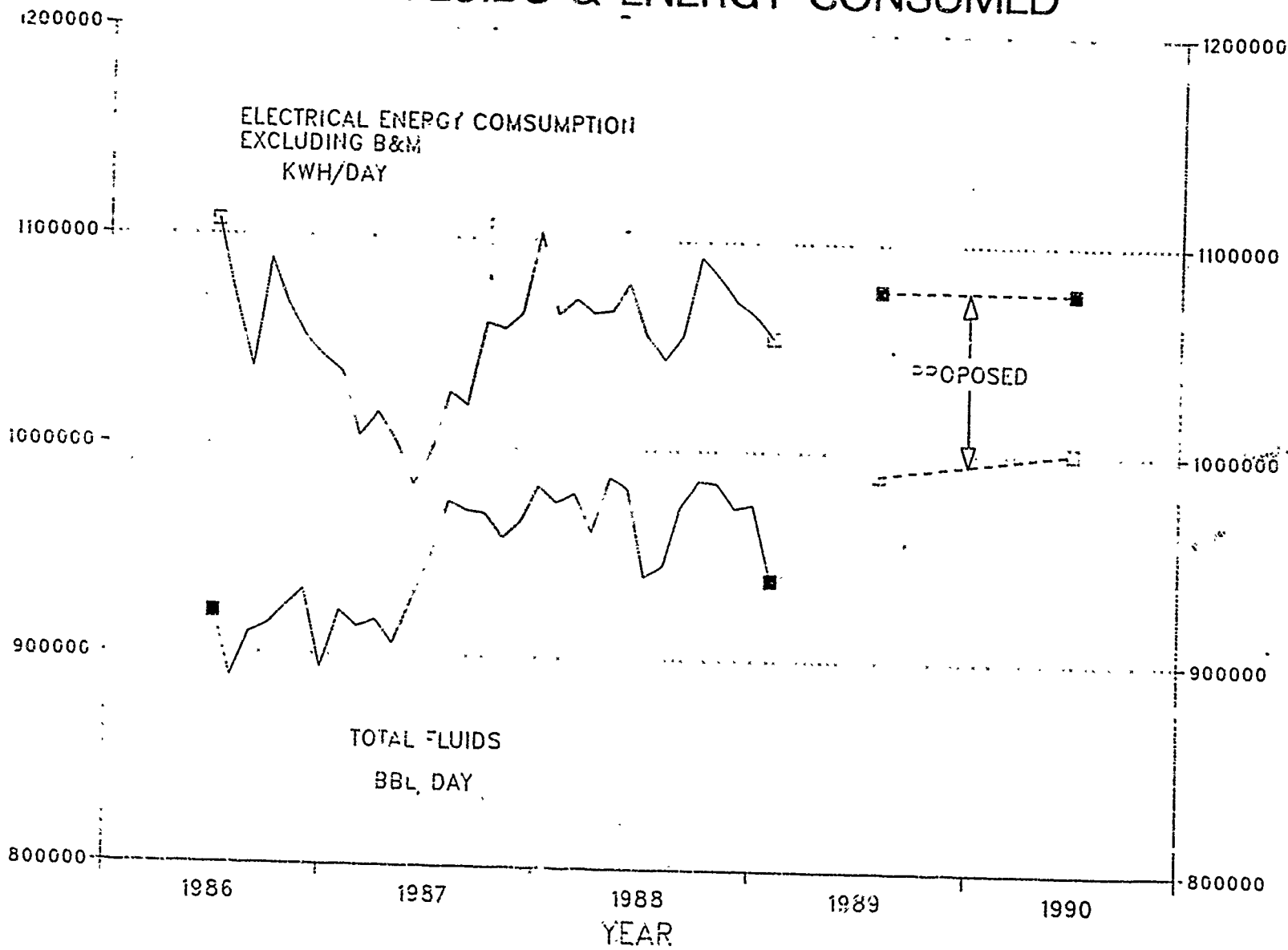


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LONG BEACH UNIT COMPARISON OF TOTAL FLUIDS & ENERGY CONSUMED

EXHIBIT 19

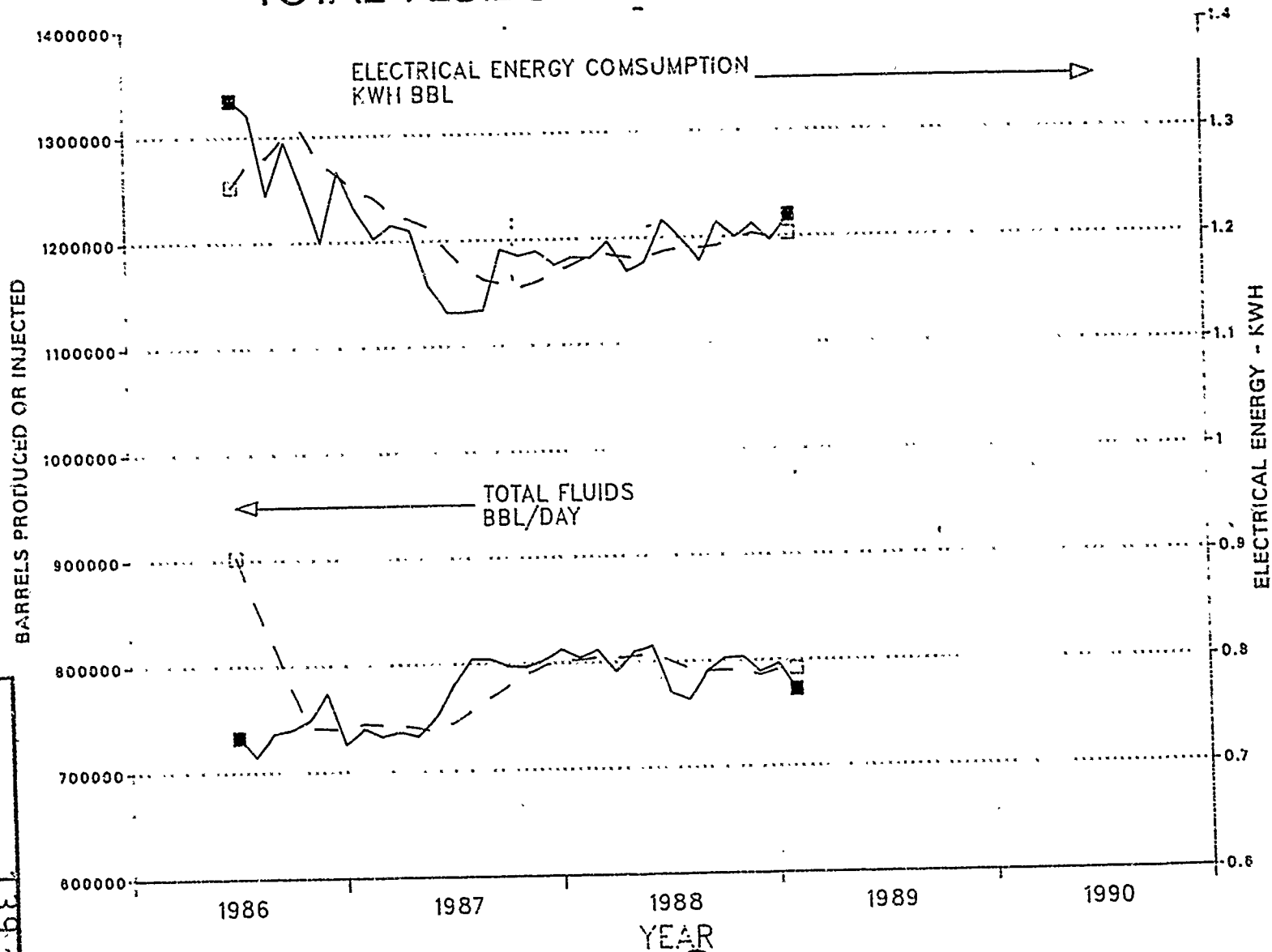


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LBU ISLANDS COMPARISON OF TOTAL FLUIDS & ENERGY CONSUMED

EXHIBIT 20

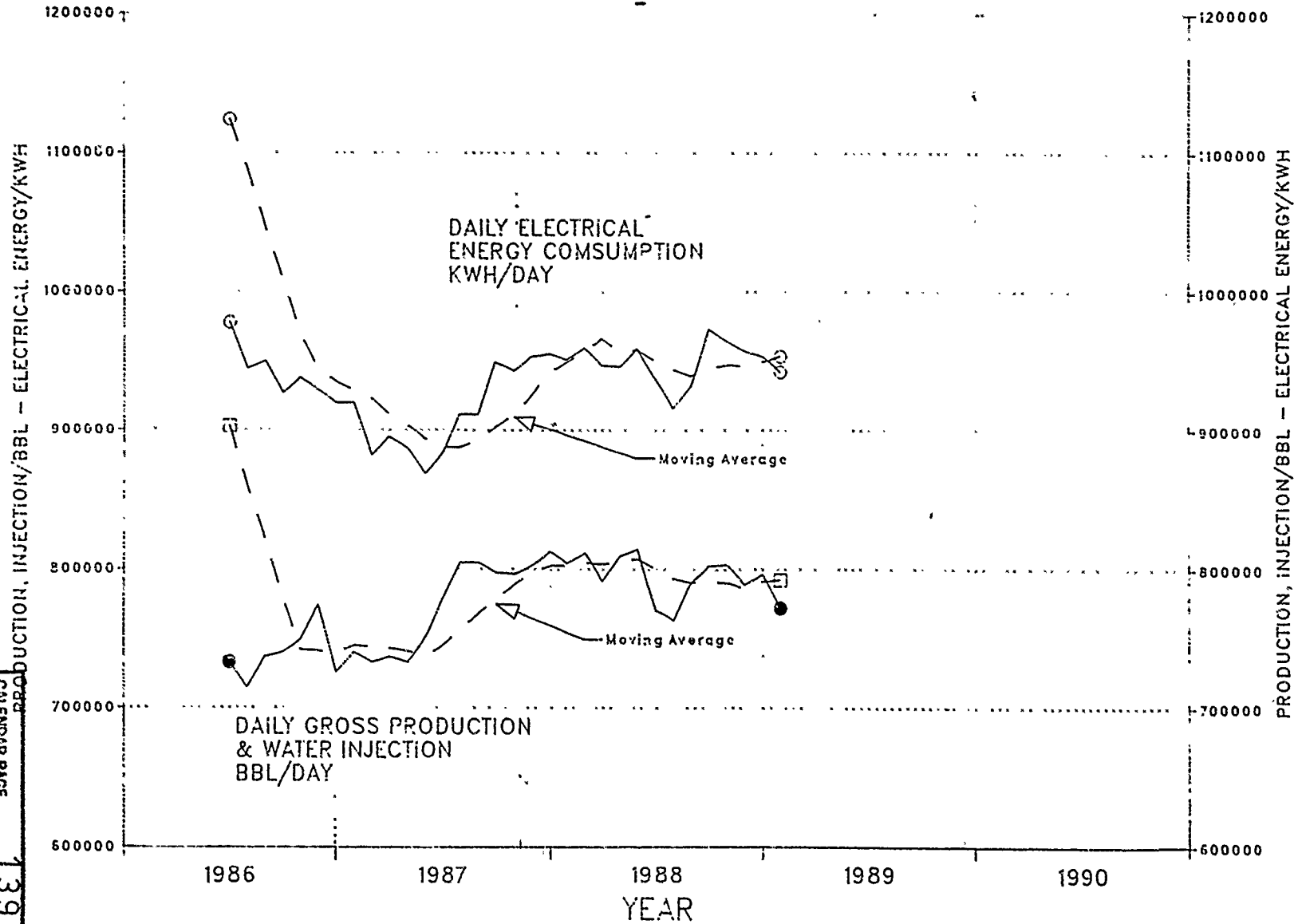


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LBU ISLANDS COMPARISON OF GROSS PROD, WATER INJ, & ENERGY CONSUMED

EXHIBIT 21

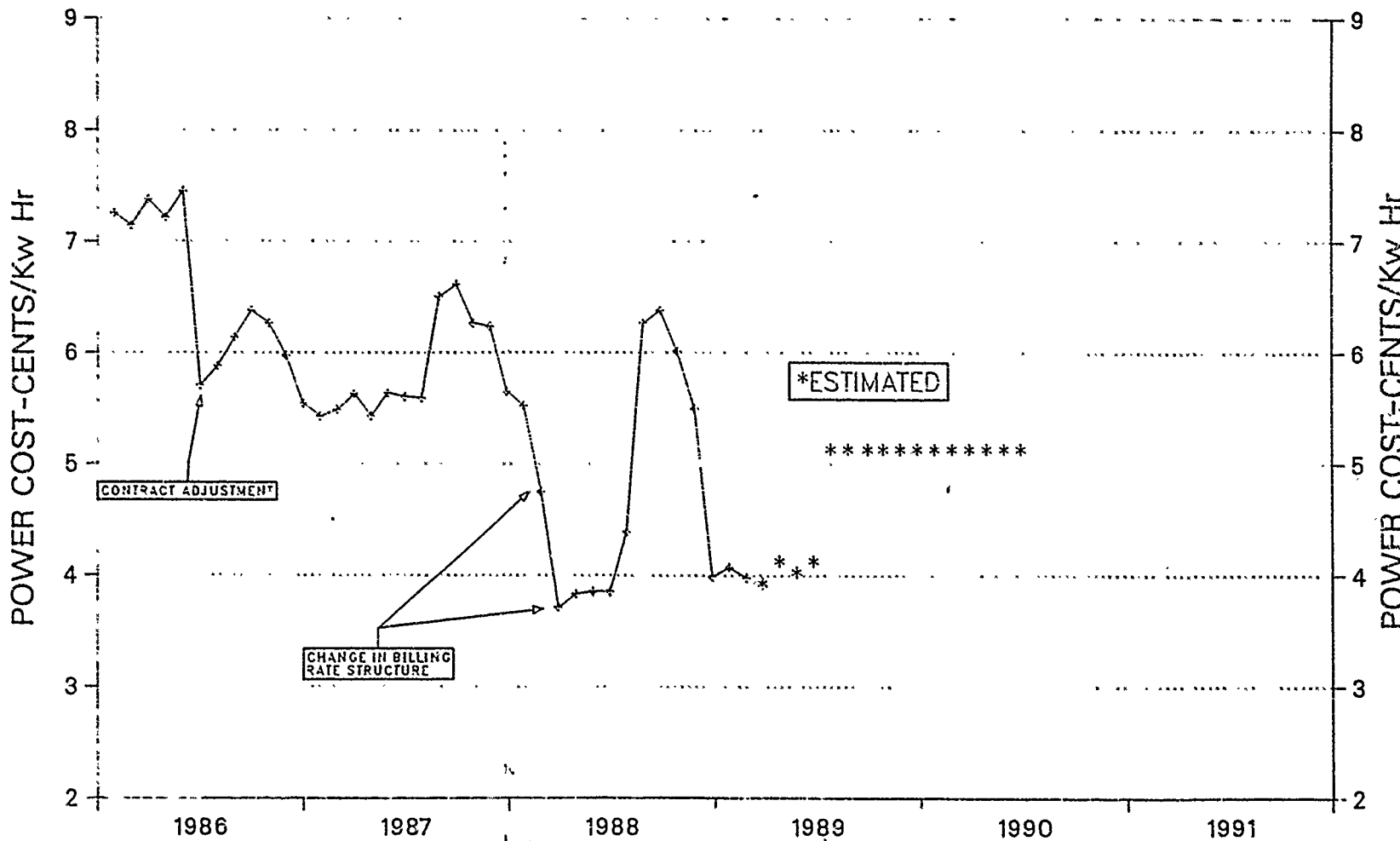


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LONG BEACH UNIT ELECTRICAL ENERGY COSTS

EXHIBIT 22

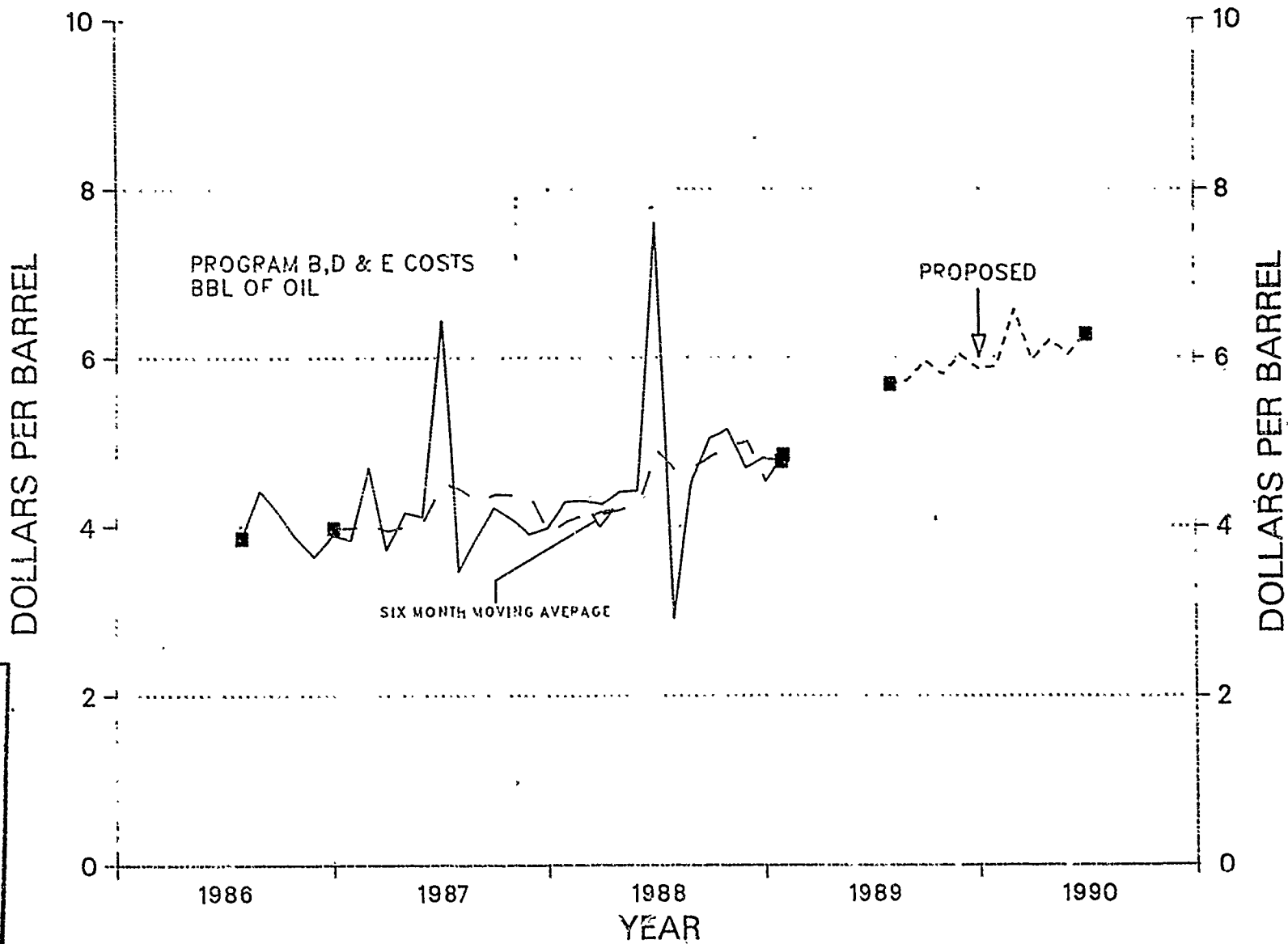


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OIL & GAS, WATER INJECTION AND MANAGEMENT PROGRAMS COSTS EXPRESSED AS \$/BBL. OF OIL

EXHIBIT 23



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