

MINUTE ITEM

This Calendar Item No. 26
was approved as Minute Item
No. 26 by the State Lands
Commission by a vote of 3
to 0 at its 4/25/85
meeting.

CALENDAR ITEM

A 57, 58

26

04/25/85

W 17084

Lammers

S 37

1985-86 PLAN OF DEVELOPMENT
AND OPERATIONS AND BUDGET, LONG BEACH UNIT
WILMINGTON OIL FIELD, LOS ANGELES COUNTY

Section 5, Chapter 138, Statutes of 1964, 1st E.S., (Exhibit "A"), and Article 4 of the Long Beach Unit Agreement require adoption by the City of Long Beach of an annual Plan of Development and Operations and Budget for the Long Beach Unit. The Plan and Budget is then to be submitted to the State Lands Commission at least 100 days prior to submission to the participants of the Long Beach Unit.

The City Council of the City of Long Beach, at its meeting of March 12, 1985, adopted this proposed Plan of Development and Operations and Budget for 1985-86, and authorized its submittal to the State Lands Commission for consideration and approval. The Plan and Budget was submitted to the State by the City on March 13, 1985.

Under Section 5(b), the Commission has 45 days after submittal to take action. If no action is taken, the Plan and Budget is deemed to be approved as submitted. The Commission may affirmatively approve the Plan and Budget or modify it after holding a formal hearing. Under Section 5(g) the Plan and Budget as submitted may be modified without a hearing upon mutual agreement by the City and the Commission.

The Plan was changed in the 1983-84 year to a programmatic format with comparable Budget funding. Because of the relatively short period the new format has been in effect and with activity level changes affecting expenditure levels, comparison of past and proposed funding in several programs is difficult. This has been further aggravated by past changes in the accounting procedures of allocations of expenditures between programs for multiple program Budget Item accounts. Additional changes appear in the 1985-86 budget. The City has

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| CALENDAR PAGE | 87 |
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CALENDAR ITEM NO. 26 (CONT'D)

approved the Field Contractor's request for the 1985-1986 year to redistribute or relocate to different accounts significant funding for both field labor and engineering salaries in the Drilling and Development and Oil and Gas Production programs' expense. For this reason, comparisons of current and past expenditures with proposed funding continue to be made by the Commission staff on unallocated Budget Items and historical Budget Item groupings.

The proposed Plan provides for continued development of the Long Beach Unit and the operation and maintenance of necessary facilities in six programs. These programs combine the investment and expense expenditures included in the scope of the program as well as the administrative overhead costs related to those expenditures. Allocation between programs is required for some budget items as mentioned above.

To accomplish the development and facility additions that are proposed in the 1985-86 Plan and to manage, operate and maintain the various existing facilities, a 1985-86 Budget totaling \$214,201,000 has been submitted by the City of Long Beach. This provides funding in the six budget programs as follows:

| | | |
|------------------------------------|-------------------|--------------|
| A. Drilling and Development | \$56,711,000 | 26.5% |
| B. Oil and Gas Production | 75,449,000 | 35.2% |
| C. Enhanced Recovery & Stimulation | 2,105,000 | 1.0% |
| D. Water Injection | 37,563,000 | 17.5% |
| E. Management | 19,182,000 | 9.0% |
| F. Taxes, Permits & Land Rental | <u>23,191,000</u> | <u>10.8%</u> |
| | \$214,201,000 | 100.0% |

Past Unit expenditures and proposed Budget are shown on Attachments 1 and 2. The expenditures to date and proposed budget for each program are shown on Attachments 3-8. Expenditures for years prior to 1983-84 were calculated using the same percentage split for allocated budget items as the 1983-84 Budget. However, since then allocation factors have been changed and for the proposed Budget additional allocation changes of certain labor and salary expenditures to different budget items have been made.

The proposed plan provides for a reduction in drilling rig usage from the eight drilling rigs in operation most of 1984-85. Funding is provided for approximately six and one half rig years, for new wells and redrills in the Drilling and Development program and workovers and production work in the Oil and Gas Production program. Considerable emphasis will be

placed on detailed reservoir analysis to assure optimum field development. It is now recognized that there will be a continuing decline in drilling rig activity over the next few years. The Unit five year plan will be revised to reflect this change from the continued eight rig activity previously projected.

A. DRILLING AND DEVELOPMENT PROGRAM

Funding of \$56,711,000 is proposed for this program, 26.5 percent of the Budget. Investment funding is \$35,330,000 including administrative overhead, all of which is for the drilling of new wells. The expense funding of \$21,381,000, including administrative overhead has the major components of \$7,415,000 for redrilling of existing wells, \$8,560,000 for drilling support, and \$2,337,000 for waste disposal. The total administrative overhead for the program is \$2,181,000.

The estimated expenditure in the Drilling and Development Program for the current year, 1984-85, is \$64 million. Comparison with past years is shown on Attachment 3 and shows the expenditure trend reduction for new facilities and wells. The investment portion is \$42 million with the drilling of new wells accounting for \$41 million. The expense expenditure is estimated at \$22 million with the major components \$5.3 million for redrilling of wells, \$10.5 million for drilling support and \$4.6 million for waste disposal.

Attachment 3A is a plot of the calculated program monthly expenditures prior to July 1983 and actual expenditures since that time. Also shown is the reduced expenditure trend for cellars and drilling equipment. Attachment 3B is a plot of the monthly investment expenditures in the program and the lower curve shows the decline in expenditures for new facilities from \$13 million in 1983-84; and \$640,000 in 1984-85; to \$0 in 1985-86. Attachment 3C shows program monthly expense expenditures. Attachment 3D shows the total producing wells in the Unit, the active producing wells, the down time of the active wells and the resulting full time equivalent active wells. The number of inactive wells continues to increase. An evaluation of how to utilize these idle wells must be part of the revision of the Unit five year plan.

B. OIL AND GAS PRODUCTION PROGRAM

Funds for new oil well surface equipment, oil well maintenance and operation and oil and gas gathering, metering, processing and shipping are provided by this program. Total proposed funding is \$75,449,000, 35.2 percent of the total budget. Comparison with previous year is shown on Attachment 4. The

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investment funding is \$1.4 million, expense costs are \$71.1 million and Administrative Overhead is \$1.9 million. The main sub programs are Oil Well Repairs, \$23,757,000, Fluid Lifting, \$26,670,000, and Production Maintenance, \$18,281,000, including administrative overhead. These are ongoing expenditures effected by inflation, the increasing number of active wells, increasing gross fluid rate, and ageing of existing facilities and producing wells.

The estimated program expenditures, including administrative overhead, for the current year are \$73.2 million total and for the main Sub Programs: Oil Well Repairs, \$21.8 million; Fluid Lifting and Handling, \$28.0 million; and Production Maintenance, \$22.1 million. Attachment 4A is a plot of the monthly program expenditures and attachments 4B-4F are similar plots for the subprograms.

C. ENHANCED RECOVERY AND STIMULATION PROGRAM

This program was designed to administer the costs associated with enhanced recovery and stimulation projects and specifically to identify the costs related to the caustic flood and the deep steam drive tertiary oil recovery projects to aid in determining project economics. Proposed funding is \$2,105,000, 1.0 percent of the Budget. The major part of this funding \$1,637,000, a large increase from previous years, is for individual well stimulation by cyclic steam injection and acidization. The balance is for the steam drive project. Attachments 5-5C are plots of past expenditure and proposed budget funding.

Estimated expenditures for 1984-85 are \$2.9 million of which \$2.4 million will be for the caustic flood, and \$0.5 million for the steam drive project. The injection of caustic was terminated in December 1983 and the fresh water post flush in June 1984. There was never a positive response to the caustic flood and as the injected chemicals reached the producing wells, maintenance costs became excessive because of scale formation. With the start of the 1985-86 budget year separate charges for this project will no longer be maintained. The steam drive project continues to be included in the 1985-86 Plan, however, this enhanced oil recovery project will be reviewed during the year as to continuation or modification.

There are no firm plans for any tertiary oil recovery field demonstration projects during the next 2-3 years. Therefore, there will be no field-wide applications during the next 5-10 year period. The Unit will have to utilize a conventional water flood with existing injection patterns as the oil recovery plan through the 1980s. Any changes involving a water flood with modified injection patterns or one that considers

the injection of some other substance will be for the 1990's period. This issue will be addressed by the City in their revision of the Unit Five-Year Plan which is to be submitted to the State Lands Commission in November, 1985.

D. WATER INJECTION PROGRAM

The pressure maintenance and waterflood operations in this program are required by the Unit Agreements. The funding is for the necessary work on injection wells; operation of the surface installations used for filtering produced water and pressuring water for injection; and the purchase of pressured water for additional injection water. Proposed funding for 1985-86 is \$37,563,000, 17.5 percent of the Budget. Comparison with past years is shown on Attachment 6. The estimated expenditure for 1984-85 is \$32 million. The calculated monthly expenditures prior to July, 1983 and actual expenditures after that time are shown on Attachment 6A-C.

The increased funding for this program is primarily a result of the anticipated increase in fluid volume to be injected and increased injection well repairs. The City estimates a water injection volume of 244 million barrels of water in 1985-86.

E. MANAGEMENT PROGRAM

This program covers the cost of the Field Contractor management staff's salaries and office expense, the cost of Unit accounting and the City of Long Beach Unit Operator's billable costs. Monthly expenditures are shown on Attachments 7A-C. The 1984-85 expenditures are estimated at \$15.6 million excluding prior year adjustments.

The proposed 1985-86 funding of \$19,182,000, is 9 percent of the Budget. Previous years expenditures and proposed budget funds are shown on Attachment 7 and 7A. Starting in the 1985-86 Budget year approximately \$4 million of the Field Contractor's engineering staff's salaries and related expenses previously charged to other programs will be a part of this program. Funding for Management Projects has been increased significantly for 1985-86 to \$1.4 million primarily to provide for reservoir related studies and water quality and treatment studies. Also included are the continuing additional costs to establish a data base management system.

F. TAXES, PERMITS AND LAND RENTAL PROGRAM

This program contains \$23,191,000 or 10.8 percent of the 1985-86 budget to fund the various taxes, licenses and fees paid to the counties of Los Angeles, the City of Long Beach and other

governmental agencies. The 1984-85 personal property and mining rights taxes and the Long Beach oil production license taxes will be \$17.5 million and \$3 million. The annual expenditures are shown on Attachment 8.

Expenditures for electrical energy are in four of the six programs with estimated expenditures in the current year of \$34 million and over \$37 million in 1985-86. Electrical energy is used primarily for lifting oil and water to the surface and for the injection of the produced and makeup water. It is estimated that almost 460 million barrels of fluid will be handled in 1985-86. Electrical energy expenditures and rates are shown on Attachments 9 and 10. Large rate increases due to fuel costs are not anticipated and future costs increases will depend upon fuel oil costs and the availability of hydroelectric power. In 1985-86 expenditures for electrical energy will be higher than the 1984-85 level primary due to a 5 percent increase in fluid volumes and small energy rate increases.

Exhibits C-3 and C-4 of the Plan and Budget estimate the 1985-86 net income for the Unit, without consideration of windfall profit tax, will be \$411 million. This is based on flat oil and gas prices and a continuation of the oil rate reached in the first part of 1985 through June 1986. The Unit oil and gross fluid production, water injection and water cut history is shown on Attachments 11 and 12.

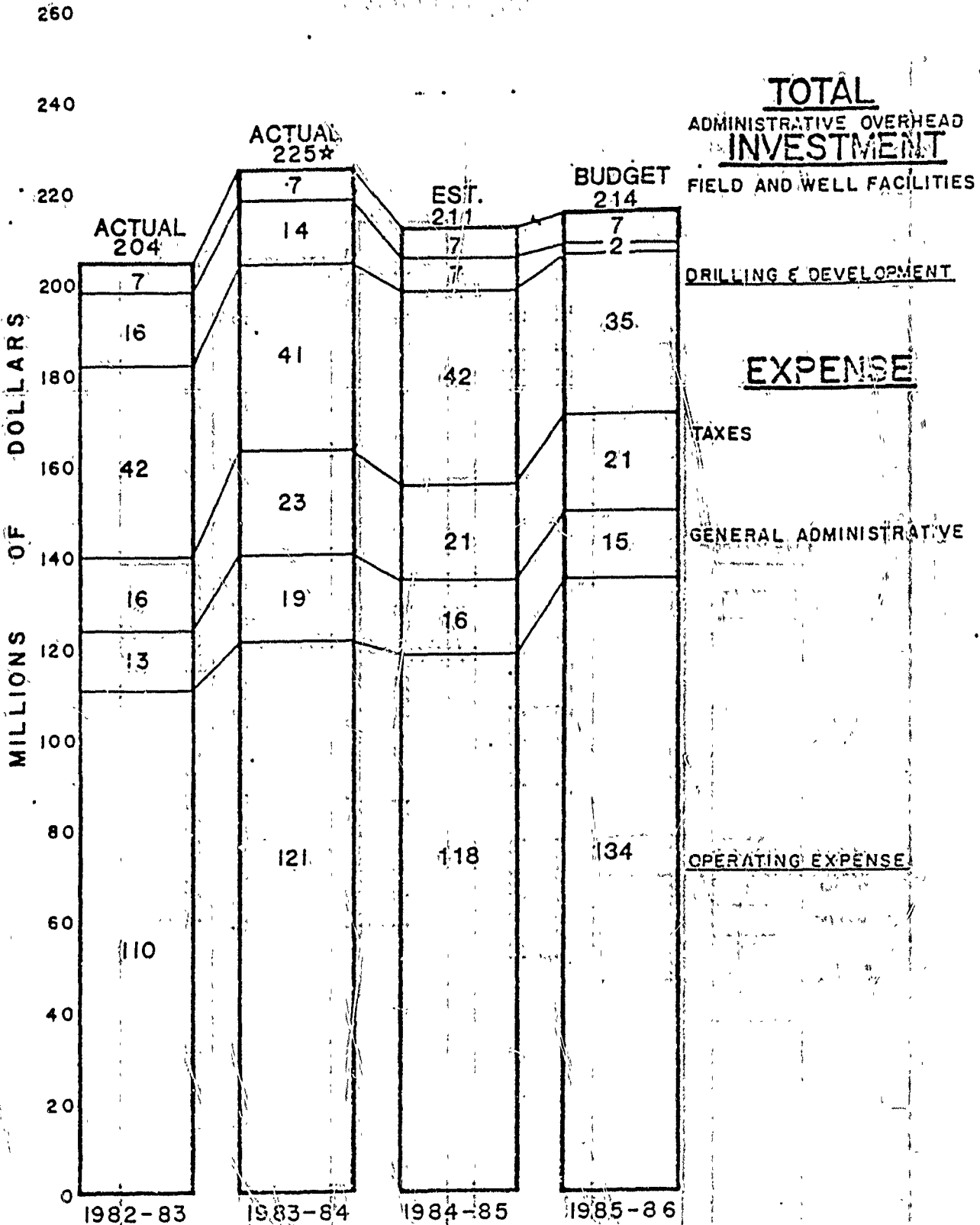
AB 884: N/A.

IT IS RECOMMENDED THAT THE COMMISSION:

1. DETERMINE THAT NO SEPARATE ENVIRONMENTAL DOCUMENT IS NECESSARY FOR THIS ACTIVITY BECAUSE IT IS PART OF THE CONTINUING PROJECT ADDRESSED IN THE ENVIRONMENTAL IMPACT REPORT FOR THE LONG BEACH UNIT OIL AND GAS OPERATIONS APPROVED BY THE COMMISSION IN APRIL 1973 AND ARE THEREFORE ONGOING PROJECTS WITHIN THE MEANING OF 14 C.M.S. ADM. CODE 15007(B), AND DO NOT REQUIRE THE PREPARATION OF EITHER AN EIR OR A NEGATIVE DECLARATION.
2. APPROVE THE "PLAN OF DEVELOPMENT AND OPERATIONS AND BUDGET, LONG BEACH UNIT, JULY 1, 1985 THROUGH JUNE 30, 1986, AS ADOPTED BY THE CITY OF LONG BEACH CITY COUNCIL ON MARCH 12, 1984.

(REVISED 04/22/85)

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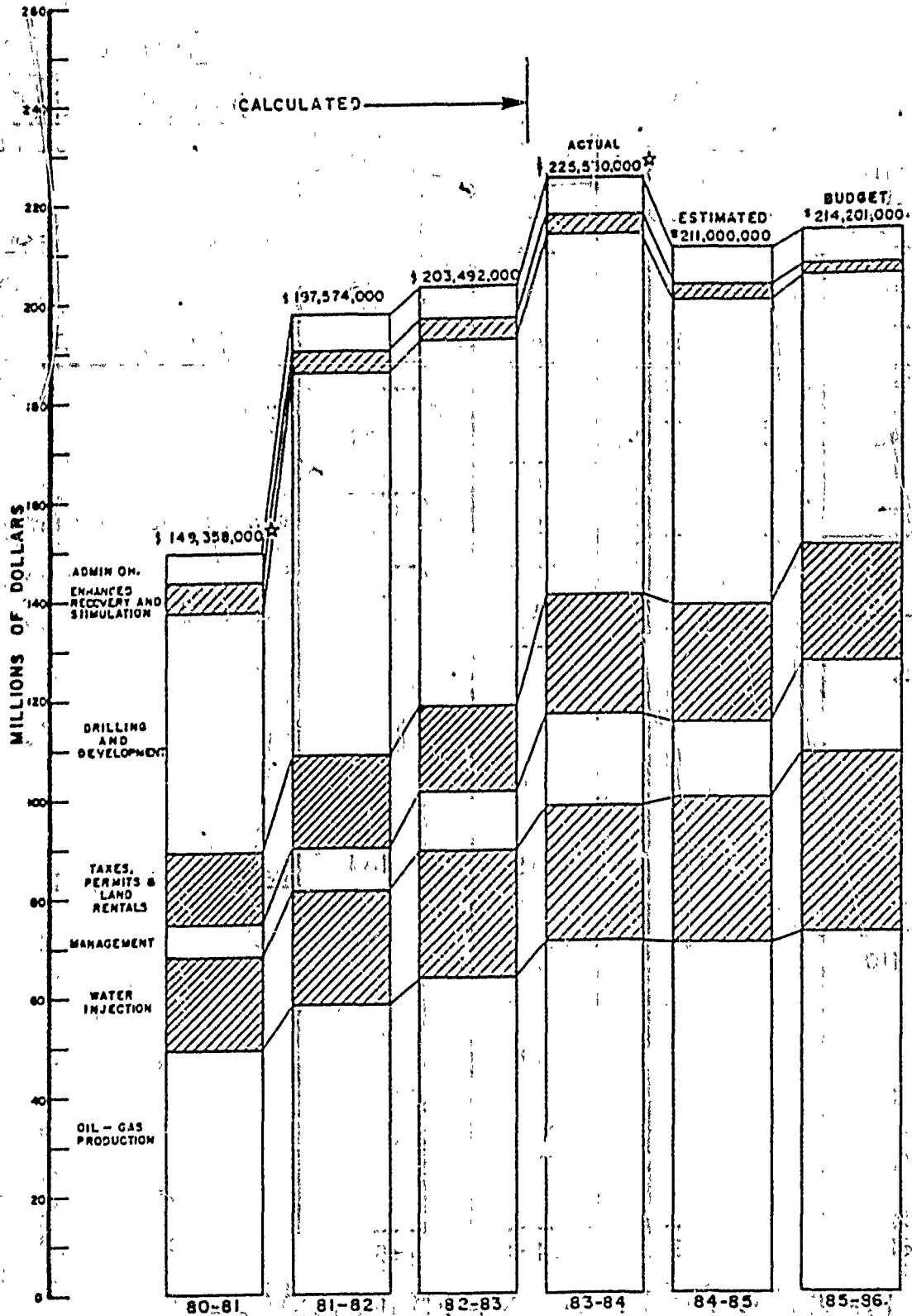
LONG BEACH UNIT EXPENDITURES

* EXCLUDES CREDIT FOR CAUSTIC

| | |
|---------------|------|
| CALENDAR PAGE | 93 |
| MINUTE PAGE | 1349 |

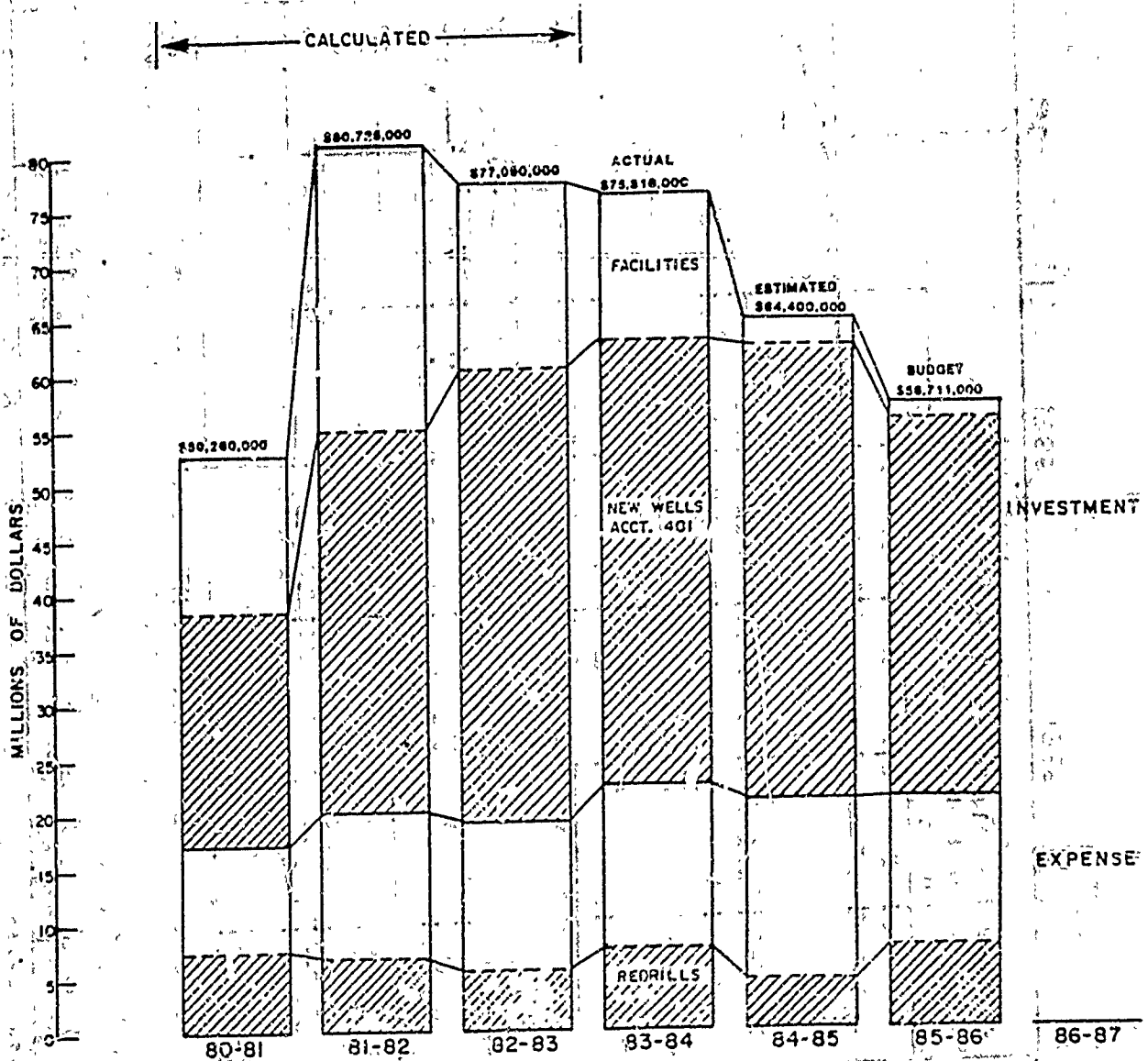
LONG BEACH UNIT BUDGET

ALL PROGRAMS



★ CAUSTIC NOT INCLUDED

LONG REACH UNIT
DRILLING AND DEVELOPMENT
PROGRAM



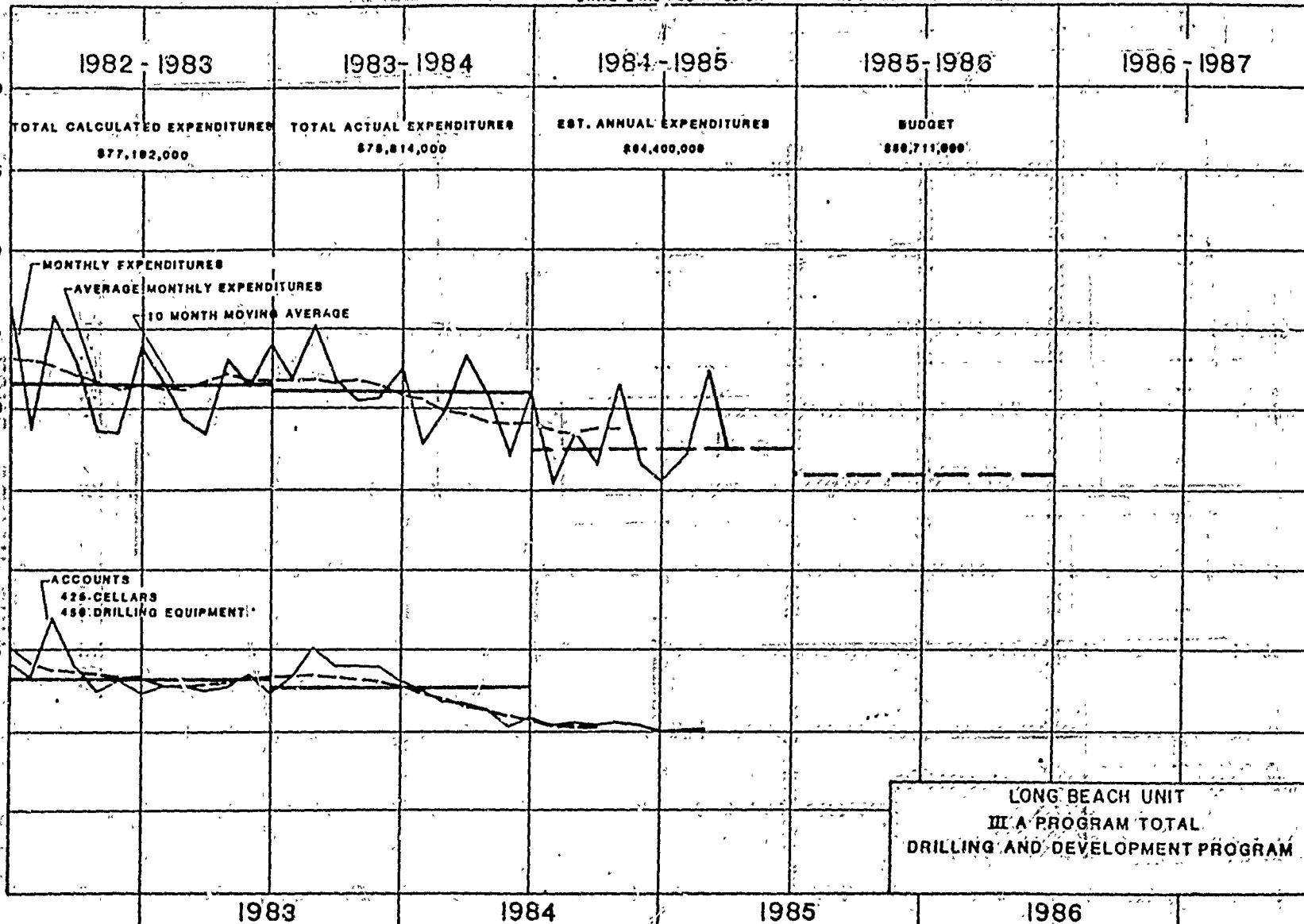
STATE OF CALIFORNIA
STATE LAND COMMISSION

ATTACHMENT

33.3
1352
CROSS SECTION NO. 1352
MINUTE 6-32

MILLIONS OF DOLLARS PER MONTH

MILLIONS OF DOLLARS PER MONTH



1983

1984

1985

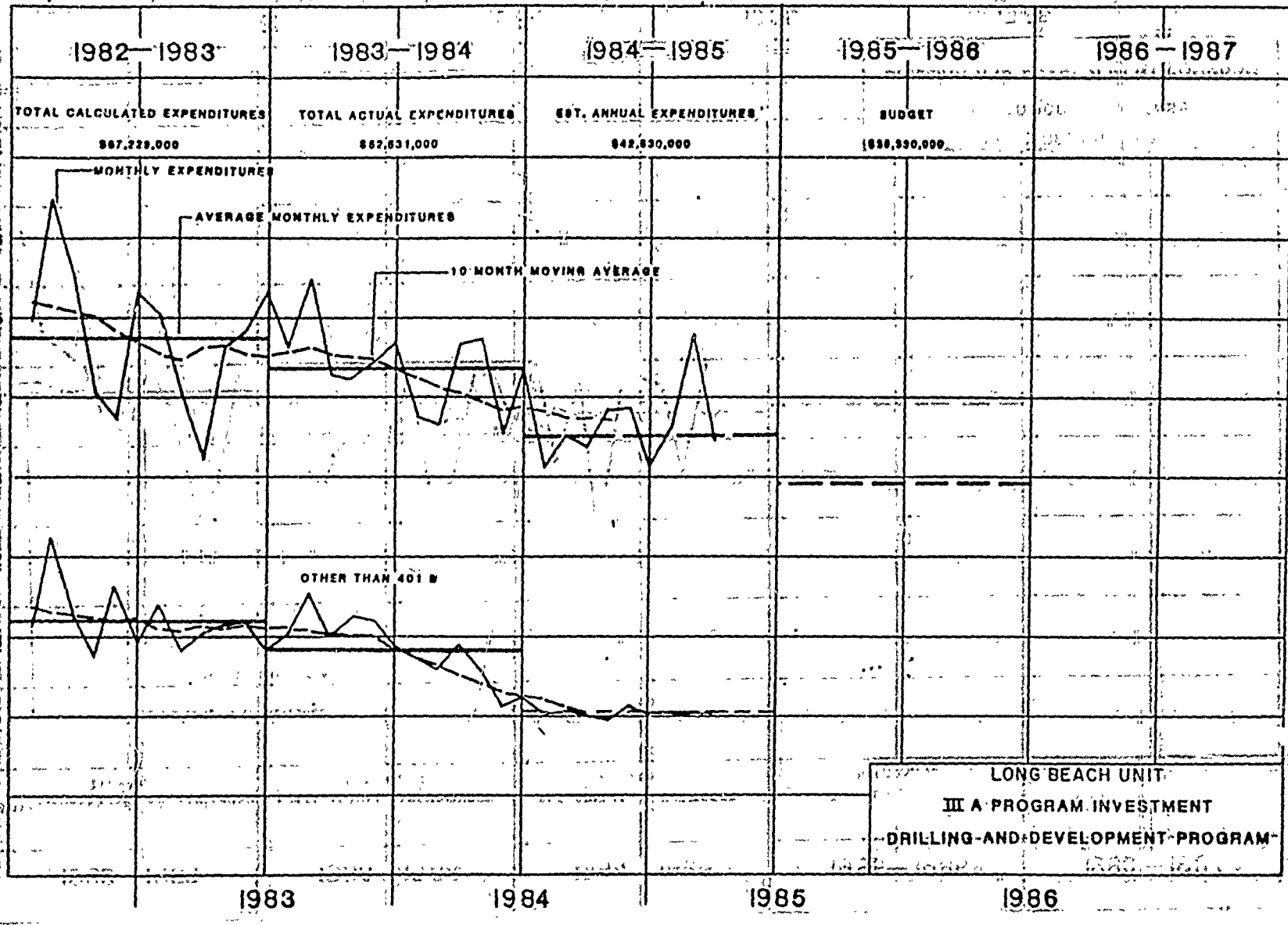
1986

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STATE OF CALIFORNIA
STATE LANDS COMMISSION

ATTACHMENT 3B

CALENDAR PAGE 93.4
MINUTE PAGE 1353



MILLIONS OF DOLLARS PER MONTH

MILLIONS OF DOLLARS PER MONTH

1983

1984

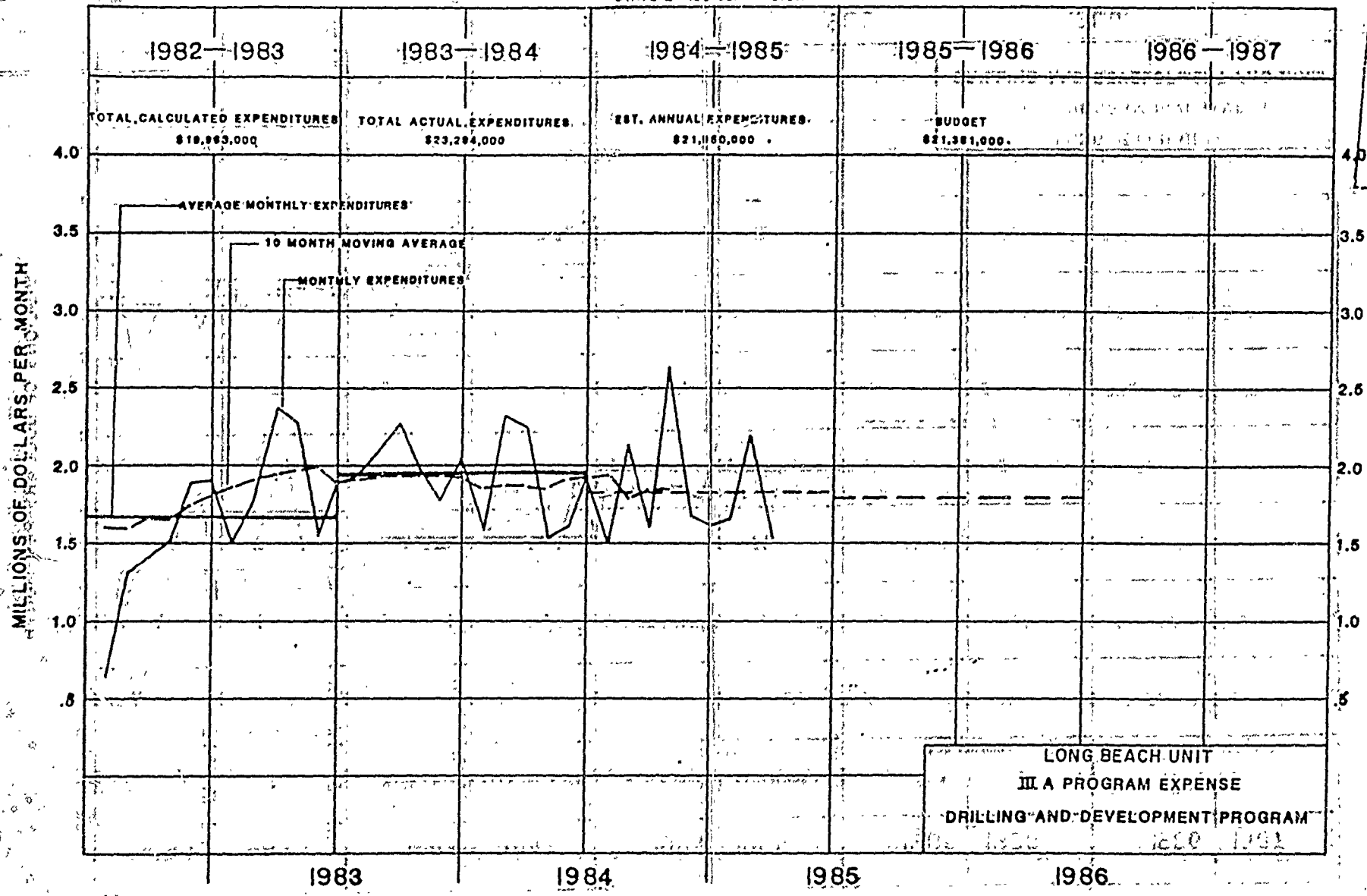
1985

1986

STATE OF CALIFORNIA
STATE LANDS COMMISSION

ATTACHMENT 3C

CALENDAR PAGE 93.5
MINUTE PAGE 1354



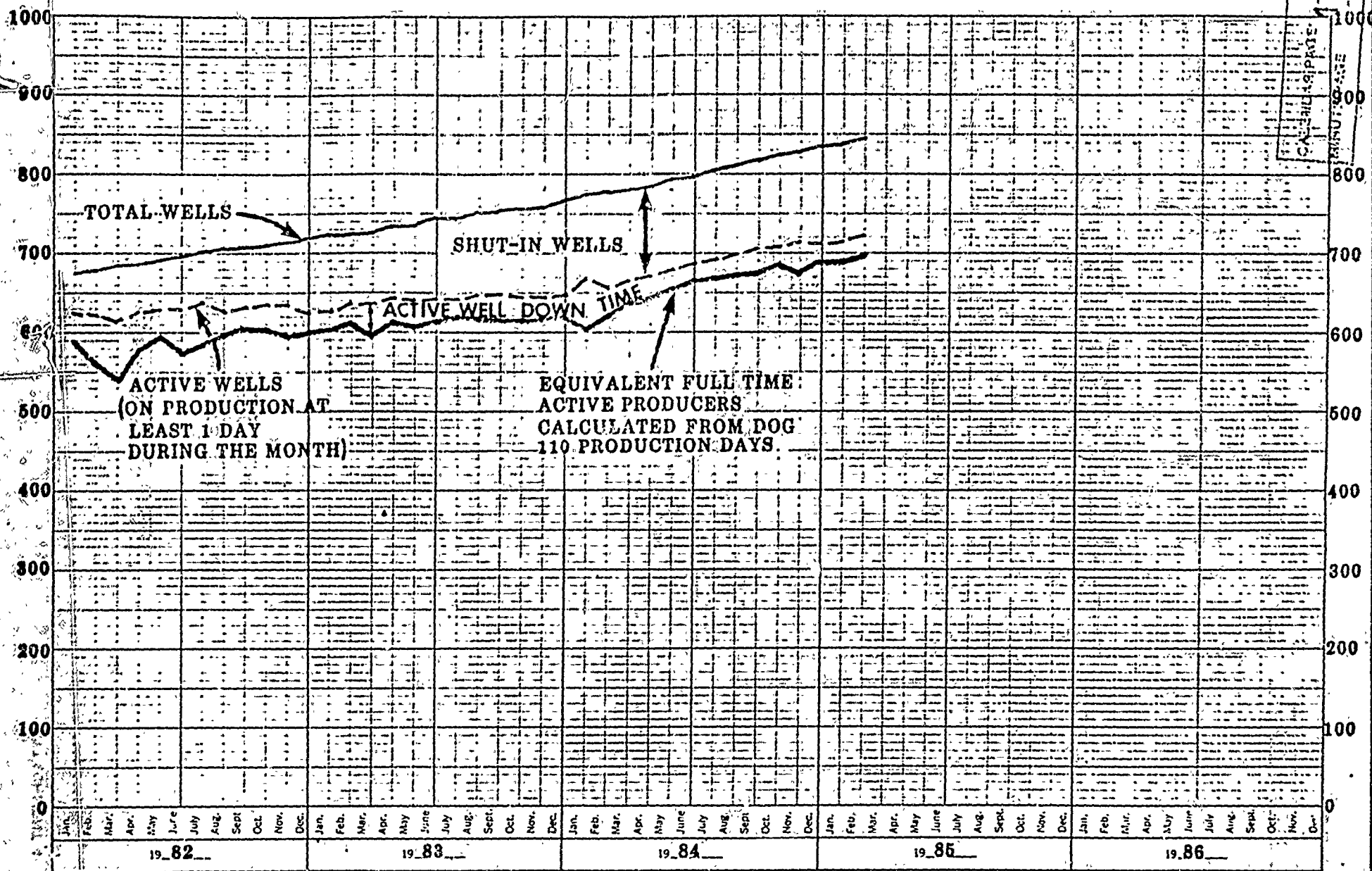
MILLIONS OF DOLLARS PER MONTH

MILLIONS OF DOLLARS PER MONTH

LONG BEACH UNIT PRODUCING WELLS

ATTACHMENT 3

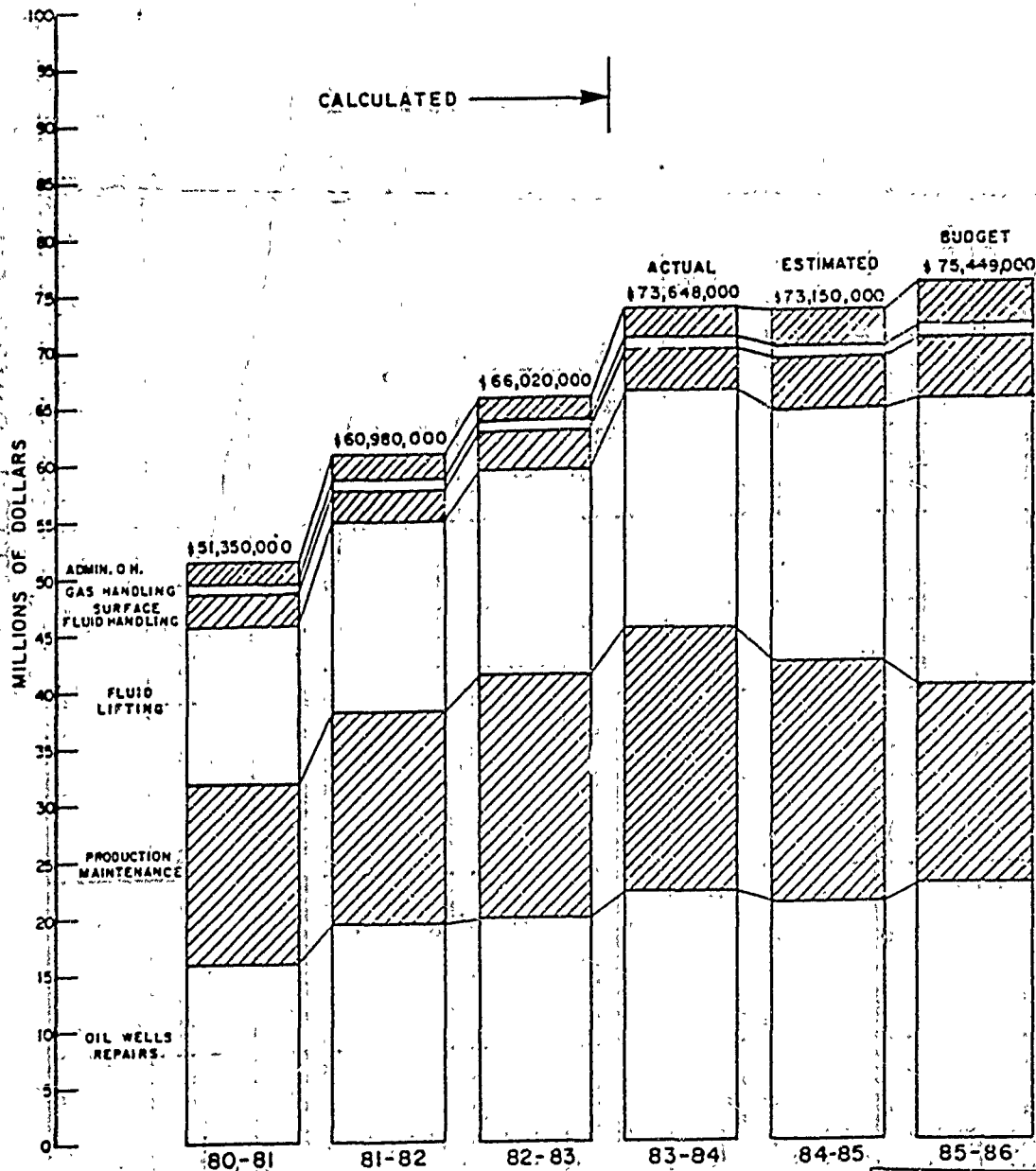
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LONG BEACH UNIT

OIL AND GAS PRODUCTION
PROGRAM

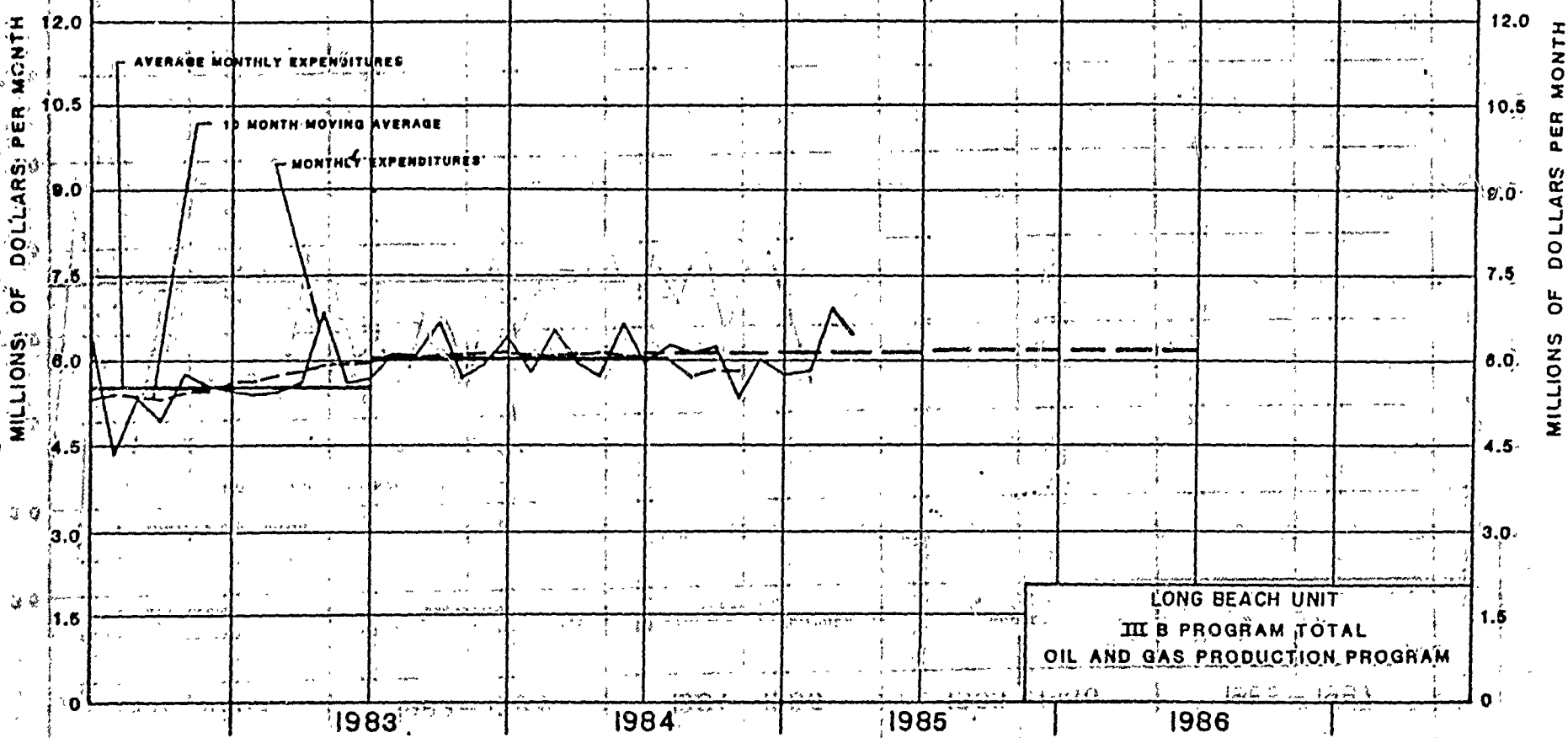


STATE OF CALIFORNIA
STATE LANDS COMMISSION

ATTACHMENT 4A

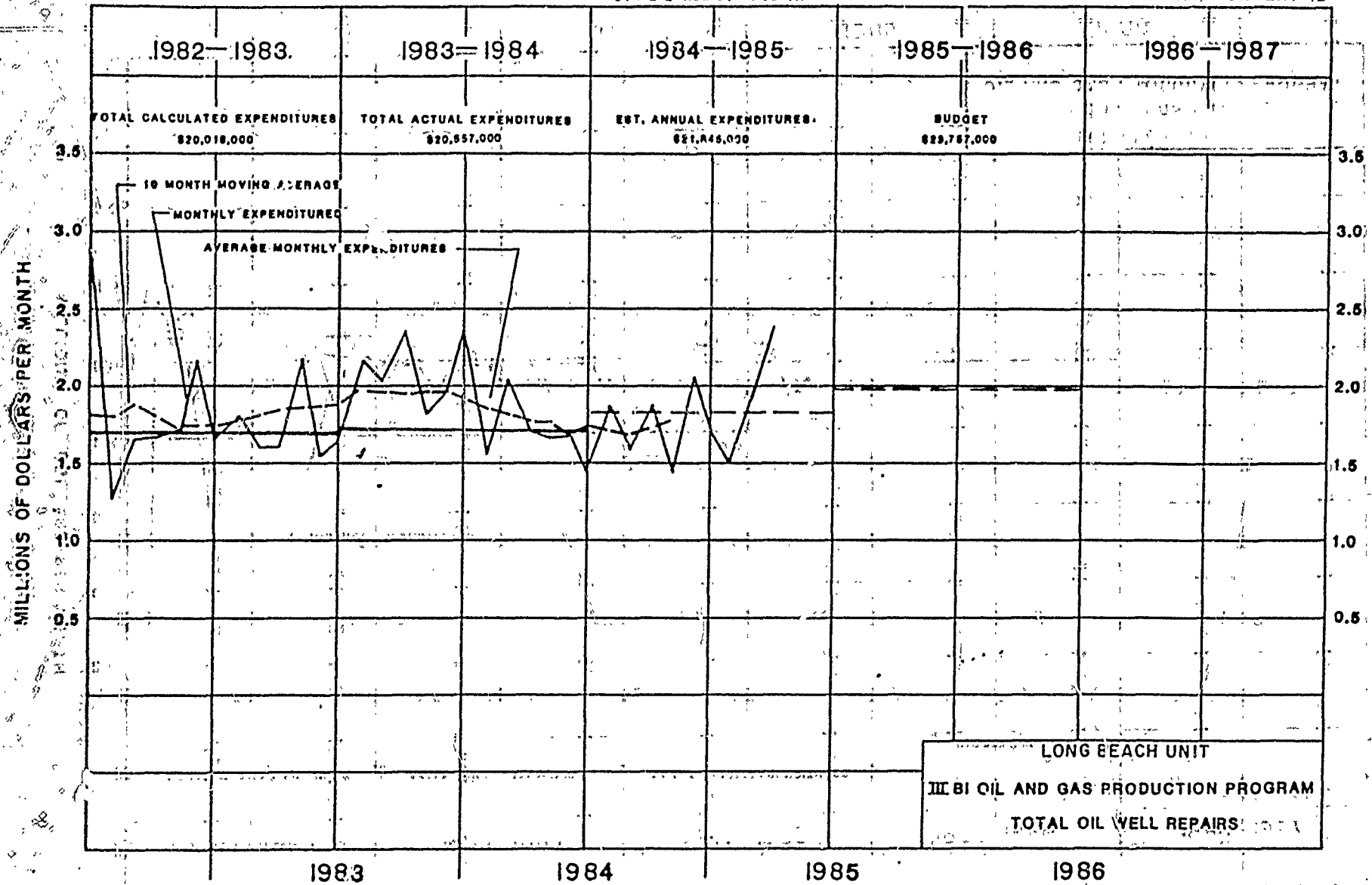
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CALENDAR PAGE 1357
MINUTE PAGE

| 1982-1983 | 1983-1984 | 1984-1985 | 1985-1986 | 1986-1987 |
|---|---|--|------------------------|-----------|
| TOTAL CALCULATED EXPENDITURES \$88,221,000 | TOTAL ACTUAL EXPENDITURES \$73,641,000 | EST. ANNUAL EXPENDITURES \$79,180,000 | BUDGET \$78,449,000 | |



STATE OF CALIFORNIA
STATE LANDS COMMISSION

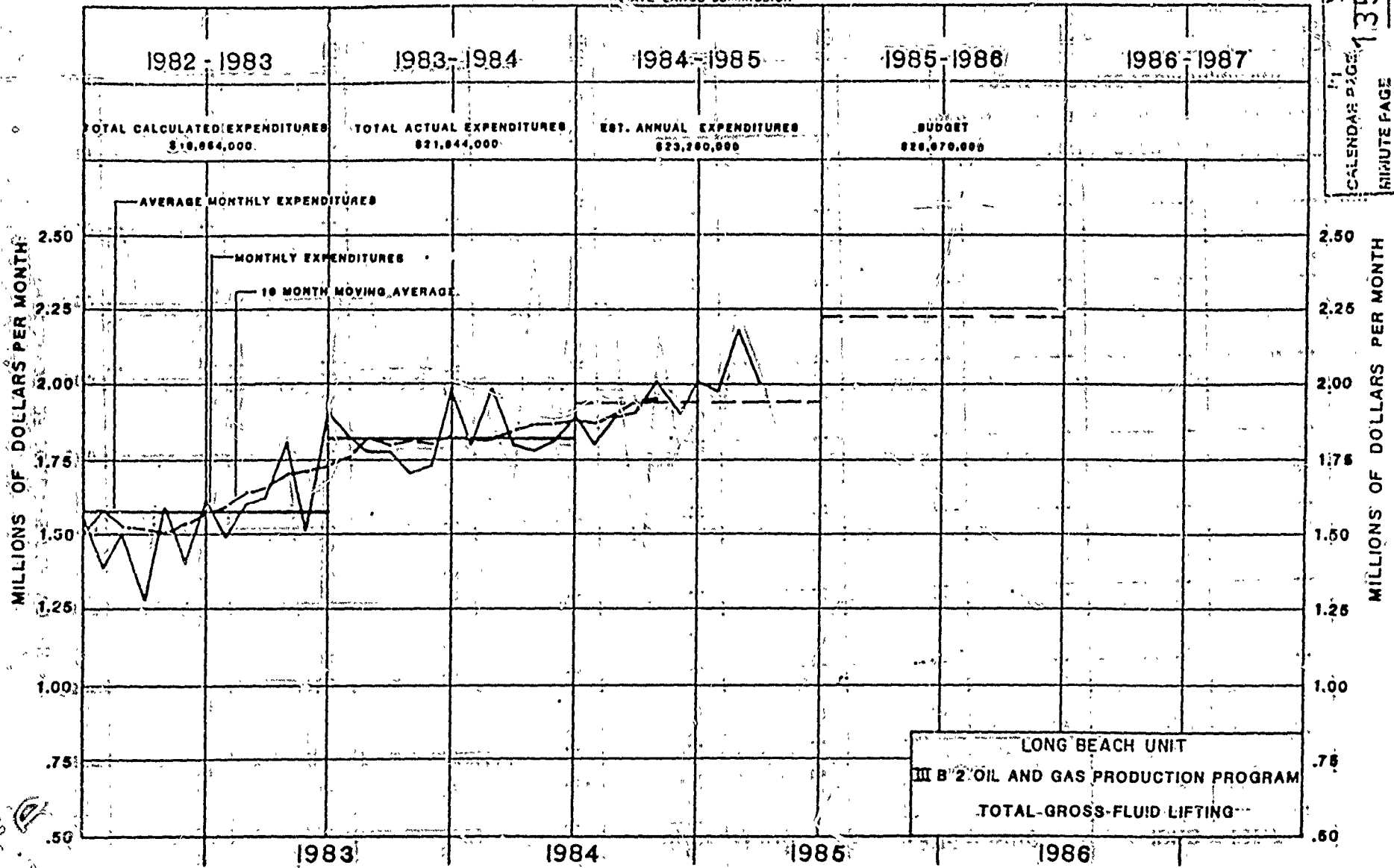
ATTACHMENT 4B



CALENDAR PAGE 93.9
 MINUTE PAGE 1358

MILLIONS OF DOLLARS PER MONTH

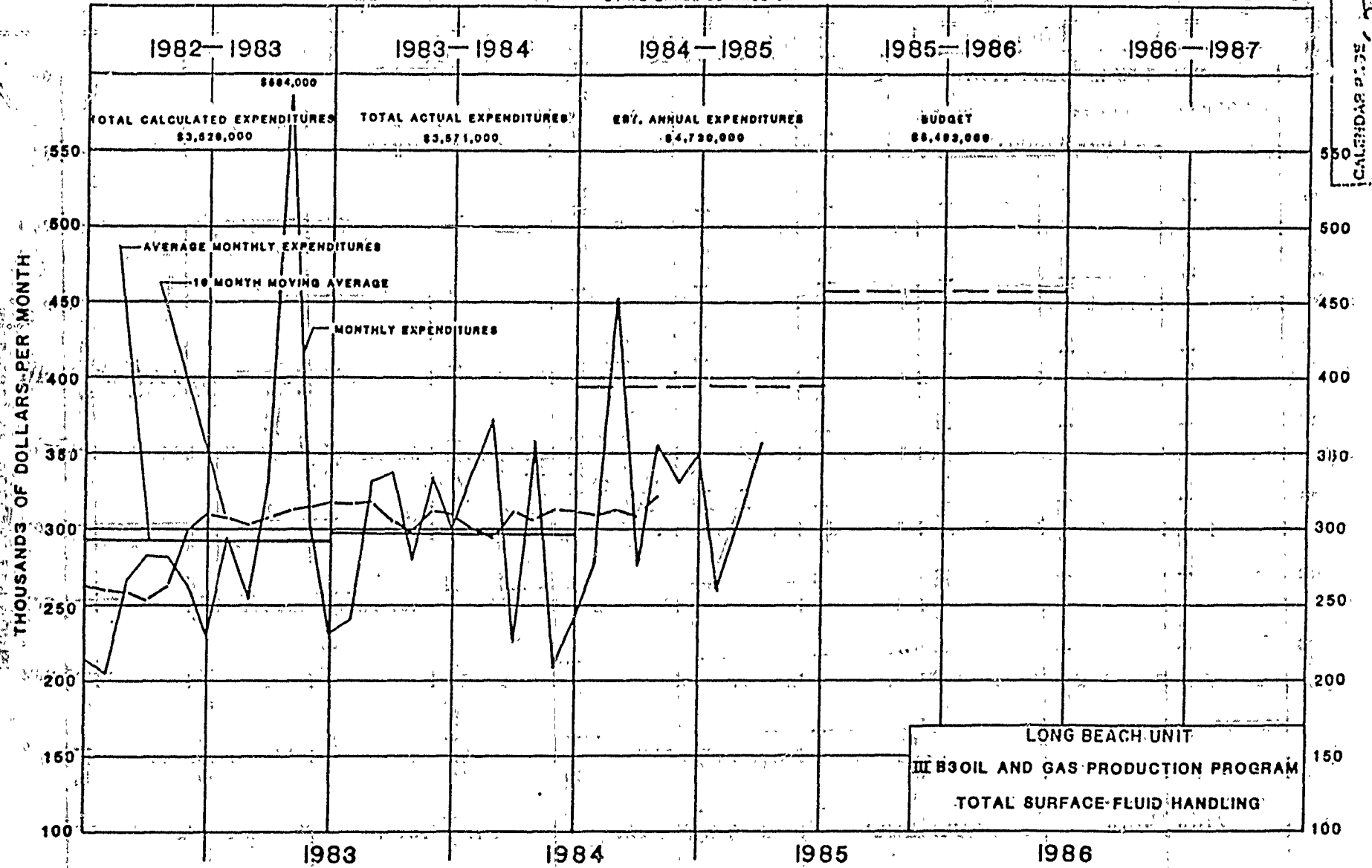
93.10
CALENDAR PAGE 1359
MINUTE PAGE



STATE OF CALIFORNIA
STATE LANDS COMMISSION

ATTACHMENT 4D

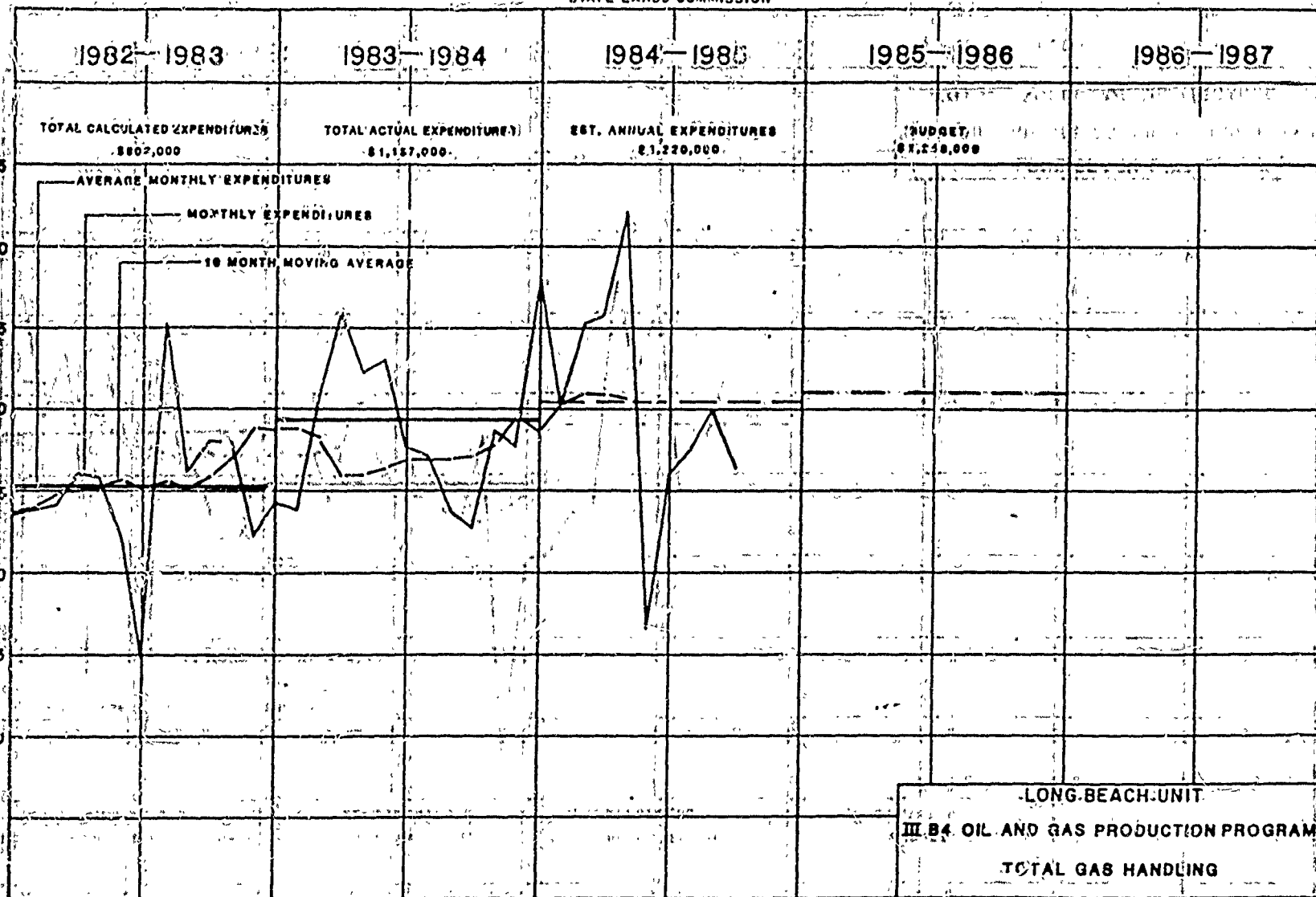
93.11
CALENDAR PAGE 1360
MINUTE PAGE



STATE OF CALIFORNIA
STATE LANDS COMMISSION

ATTACHMENT 4E

93.12
CALENDAR PAGE 136
MINUTE PAGE



THOUSANDS OF DOLLARS PER MONTH

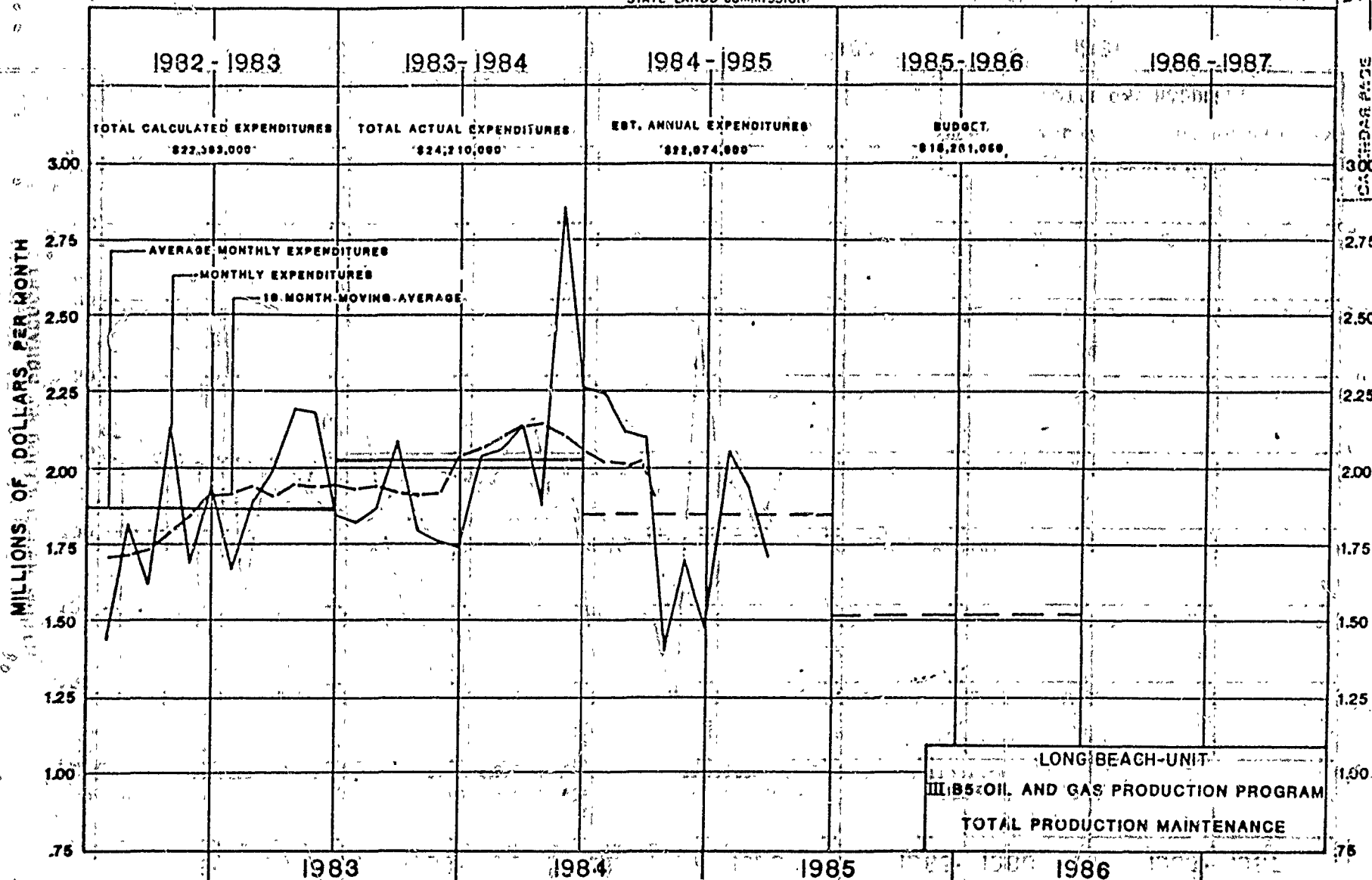
STATE OF CALIFORNIA
STATE LANDS COMMISSION

ATTACHMENT 4F

93.13

CSRS HEADR PAGE 1308

MINUTE PAGE 1302



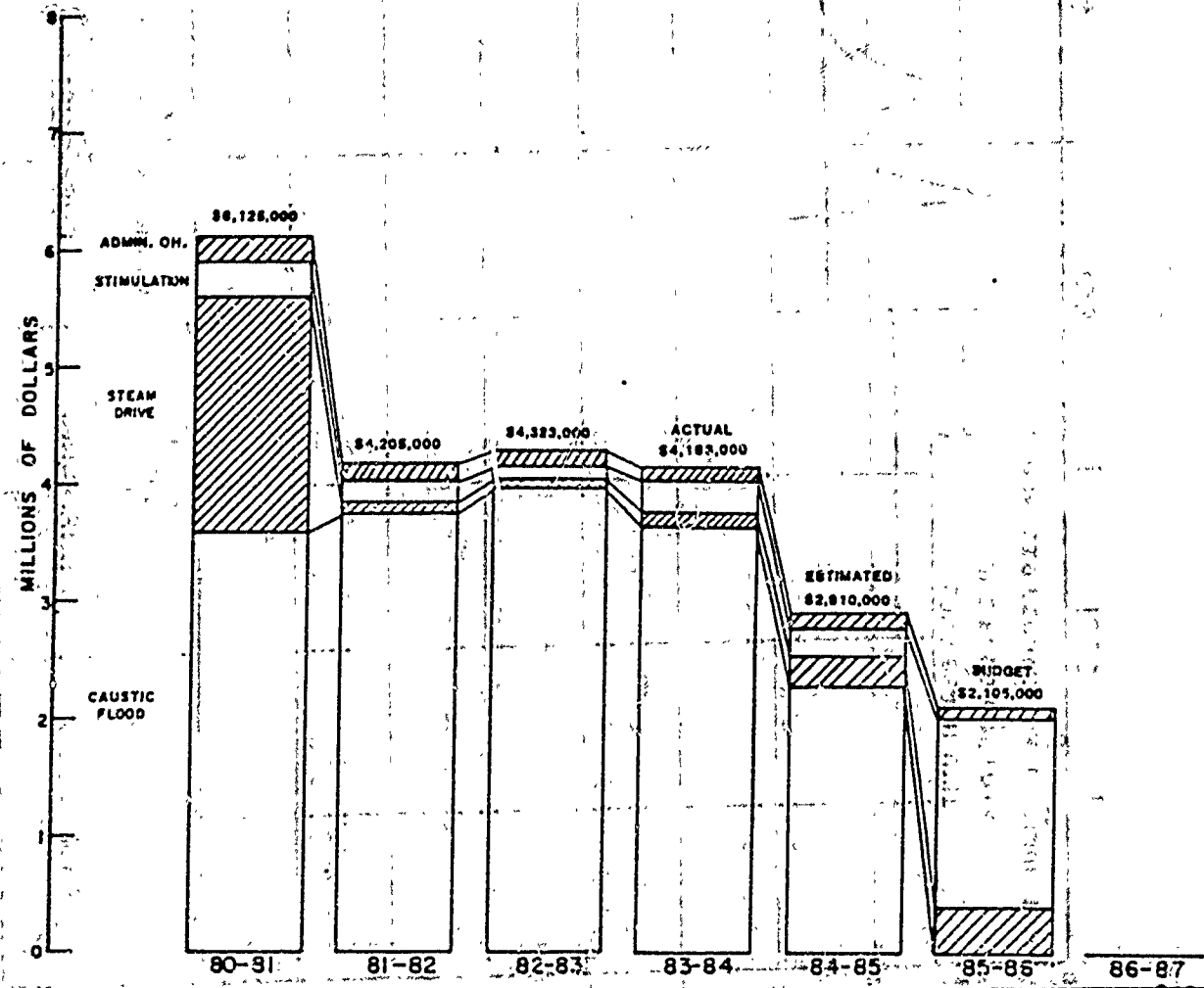
MILLIONS OF DOLLARS PER MONTH

0.75

LONG BEACH UNIT

ENHANCED RECOVERY AND STIMULATION PROGRAM

CALCULATED →

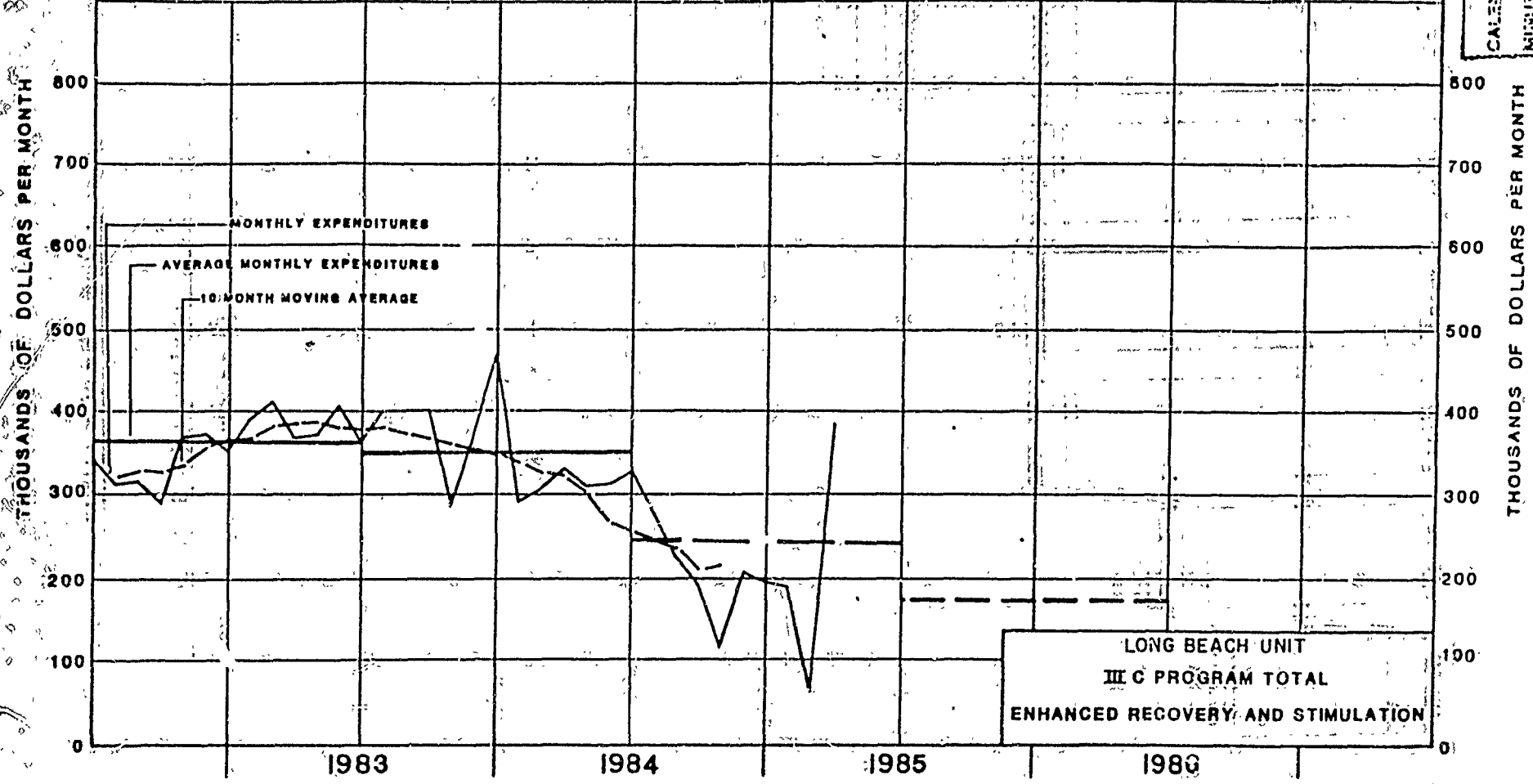


STATE OF CALIFORNIA
STATE LANDS COMMISSION

ATTACHMENT 5A

93.15
CALIFORNIA PAGE 1364
MINUTE PAGE

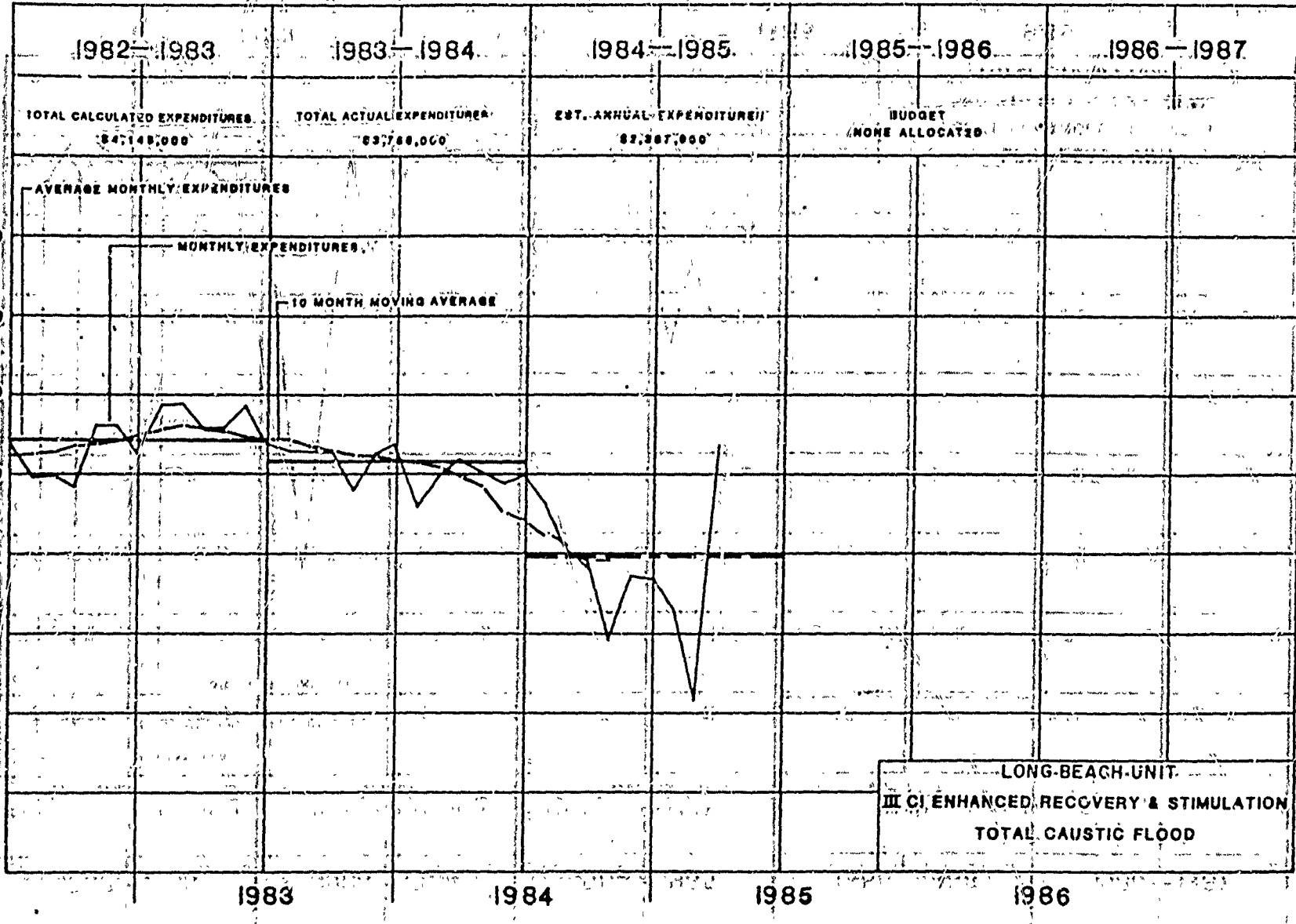
| 1982 - 1983 | 1983 - 1984 | 1984 - 1985 | 1985 - 1986 | 1986 - 1987 |
|---|---|--|----------------------|-------------|
| TOTAL CALCULATED EXPENDITURES 84,929,000 | TOTAL ACTUAL EXPENDITURES 84,199,000 | EST. ANNUAL EXPENDITURES 87,910,000 | BUDGET 82,105,000 | |



STATE OF CALIFORNIA
STATE LANDS COMMISSION

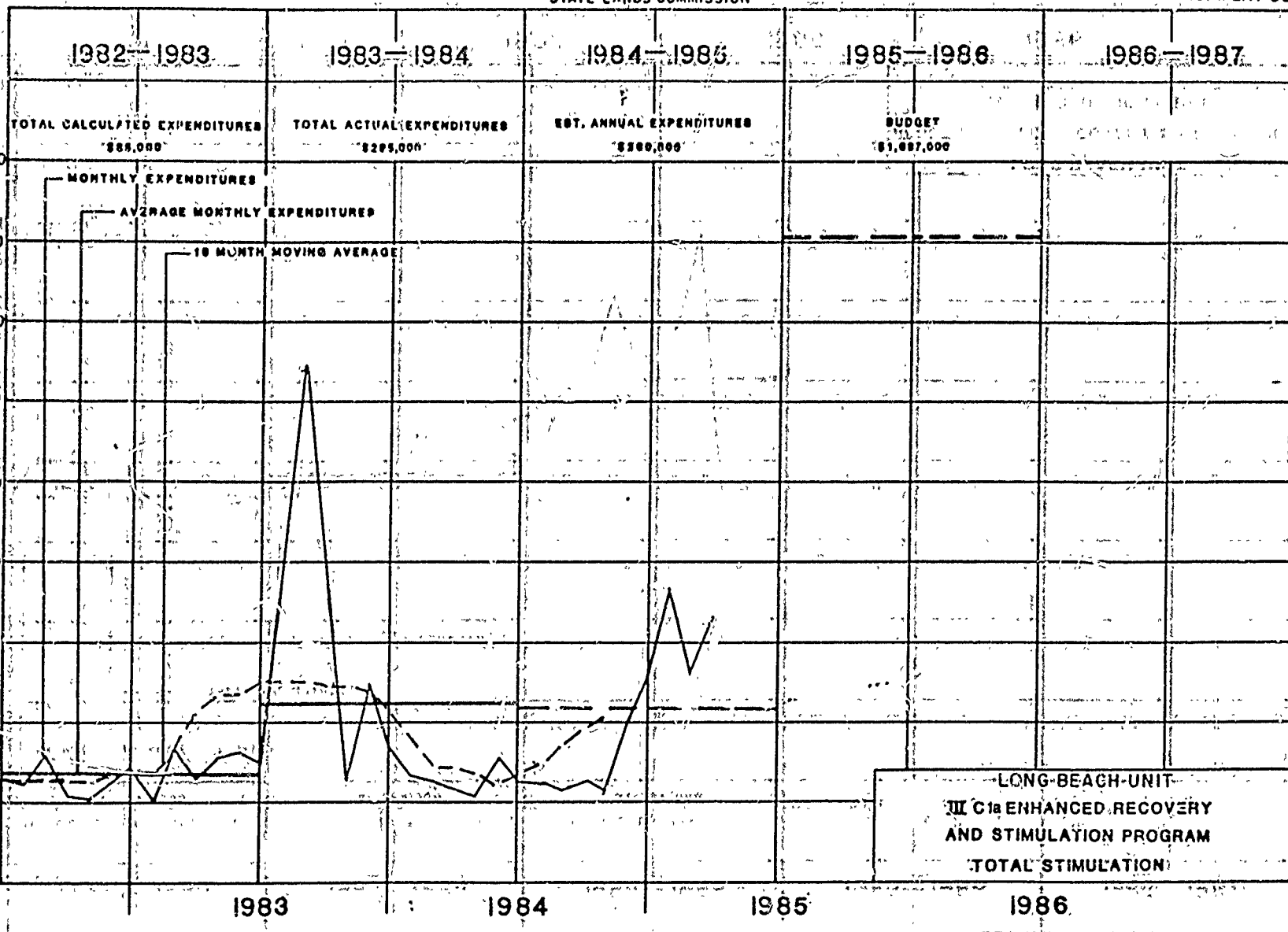
ATTACHMENT 5B

93.16
CALENDAR PAGE 1365
MINUTE PAGE



STATE OF CALIFORNIA
STATE LANDS COMMISSION

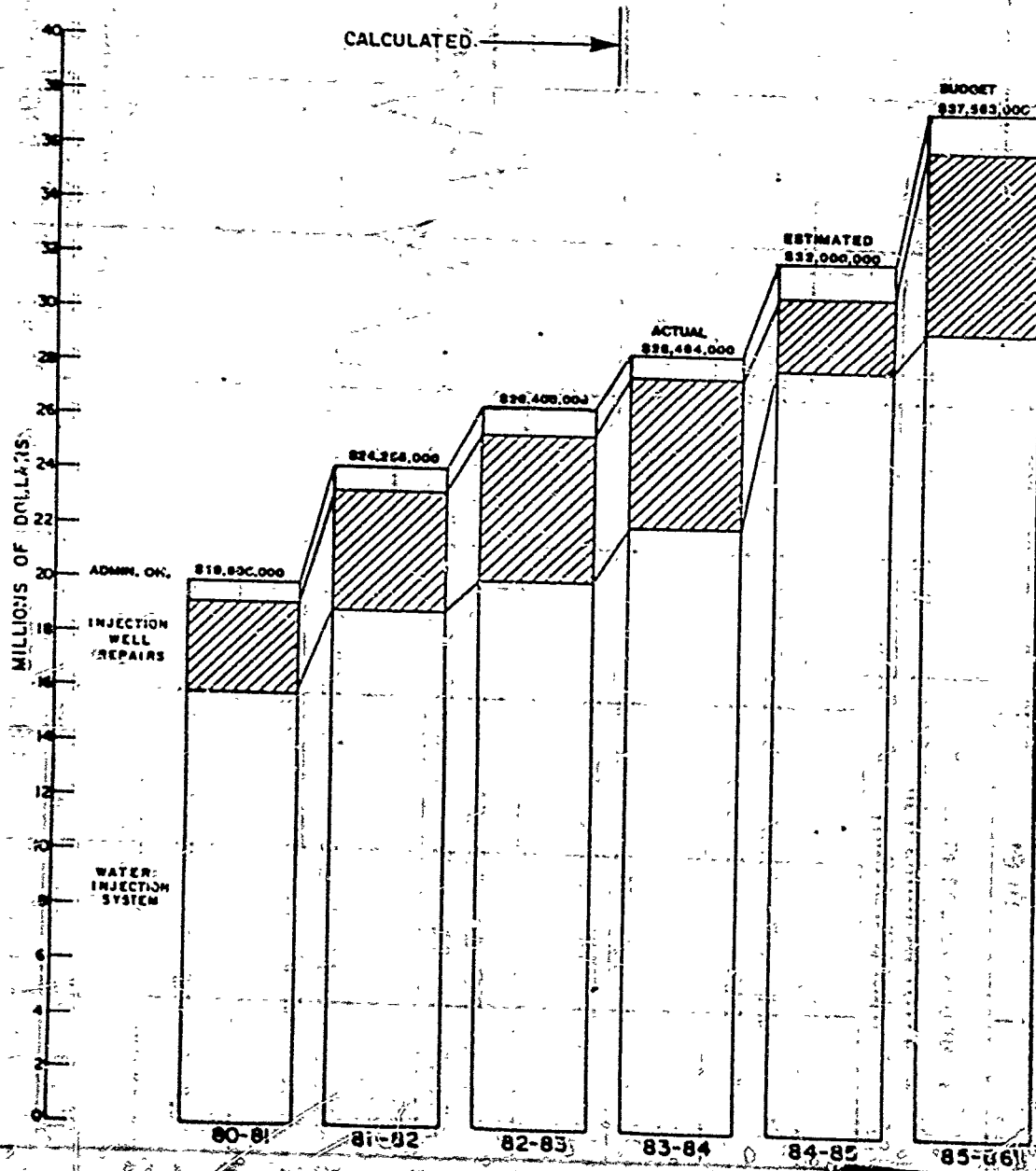
ATTACHMENT 5C

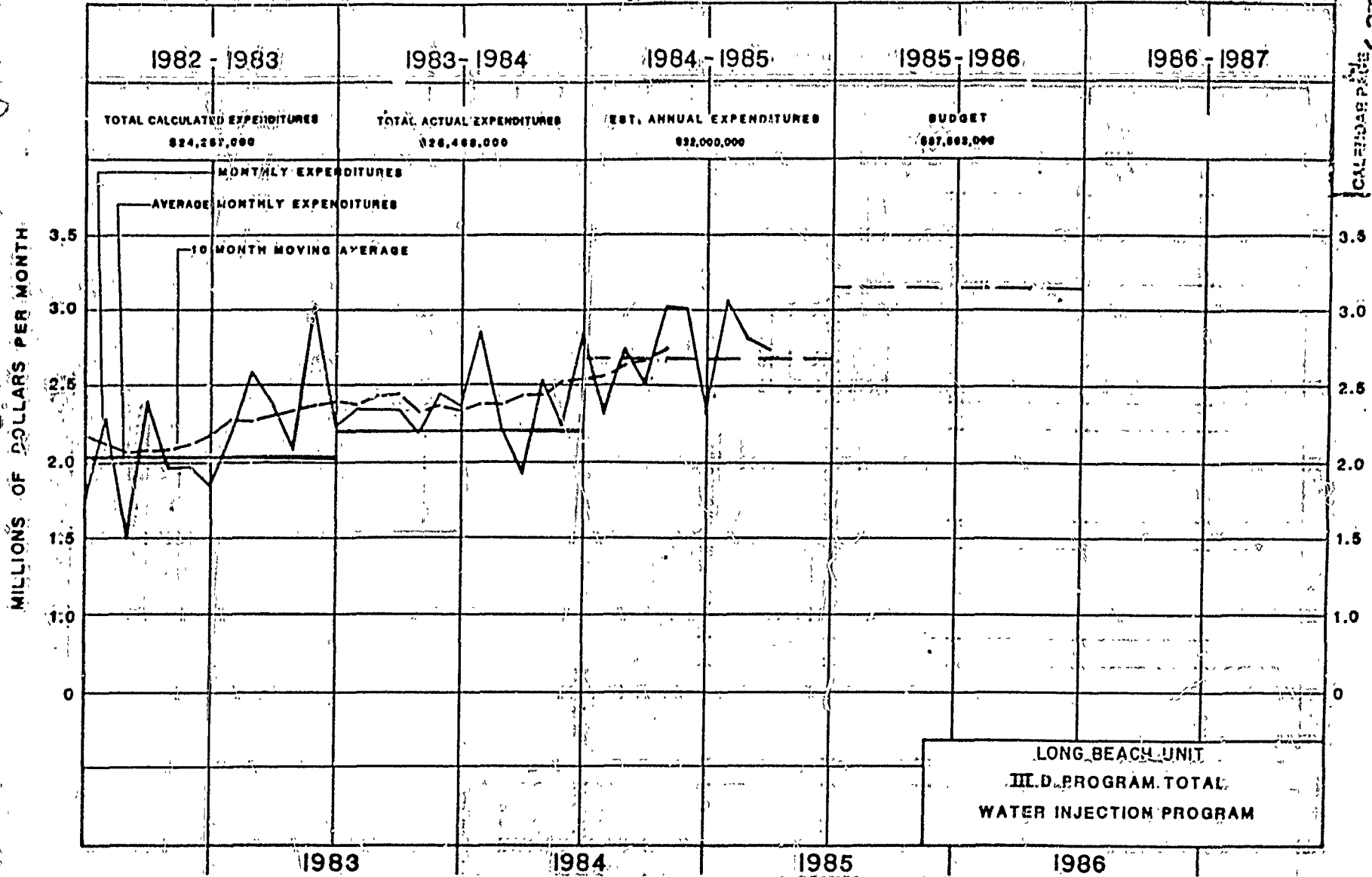


93.17
PAGE 1366

LONG BEACH UNIT

WATER INJECTION PROGRAM





MILLIONS OF DOLLARS PER MONTH

1983

1984

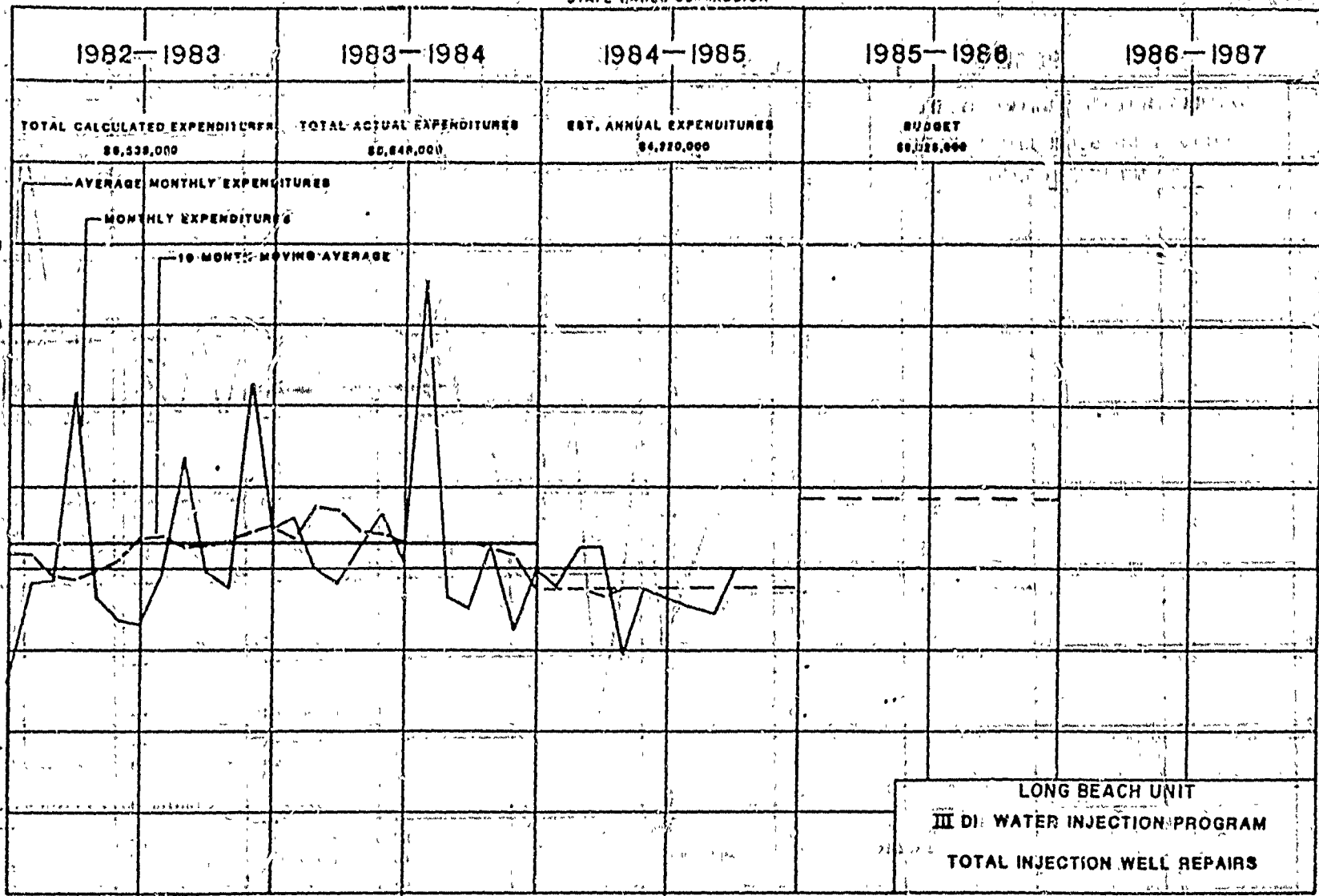
1985

1986

STATE OF CALIFORNIA
STATE LANDS COMMISSION

ATTACHMENT 6B

CALENDAR PAGE 93.20
MINUTE PAGE 1369



1983 1984 1985 1986, 1987

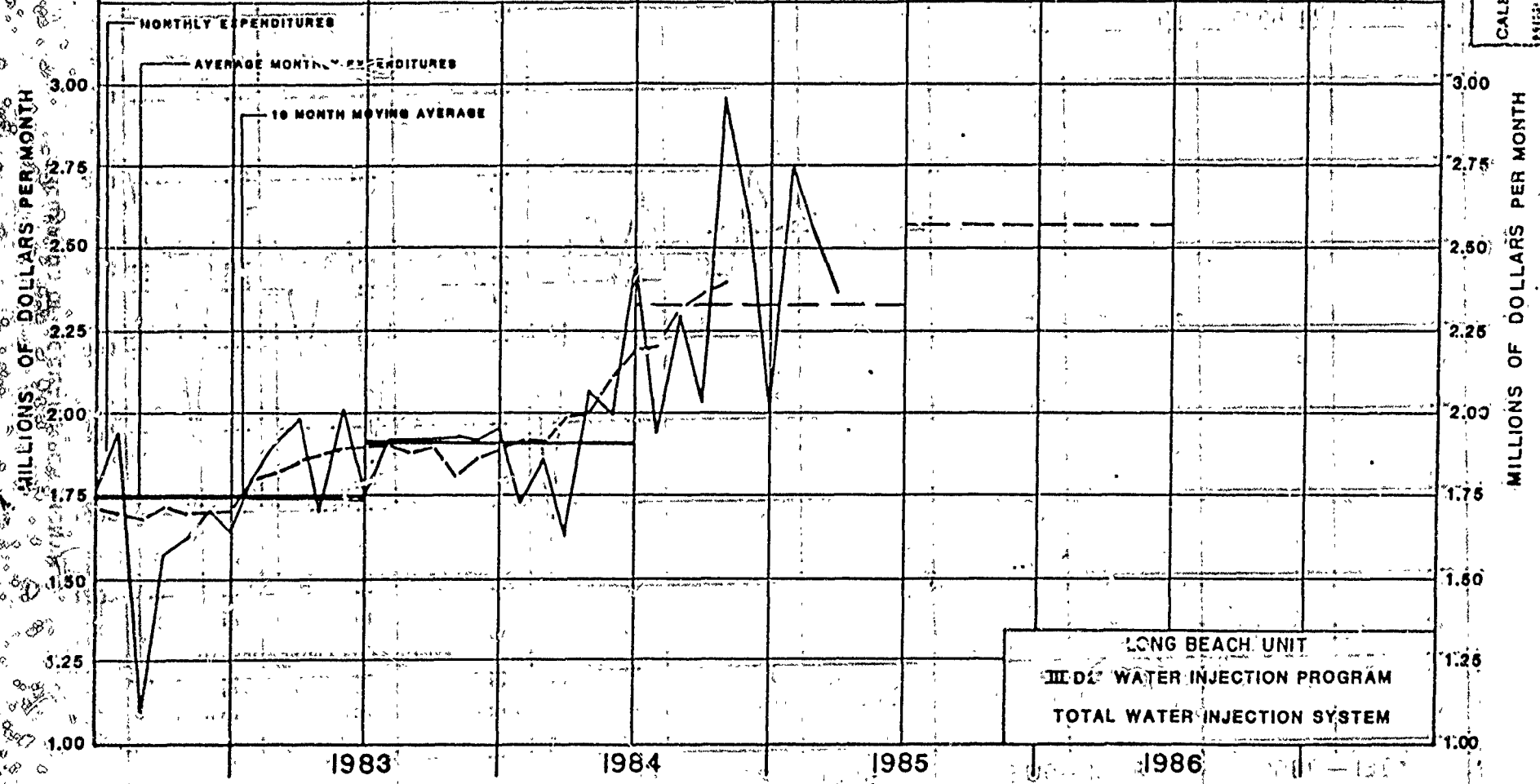
THOUSANDS OF DOLLARS PER MONTH

STATE OF CALIFORNIA
STATE LANDS COMMISSION

ATTACHMENT 6C

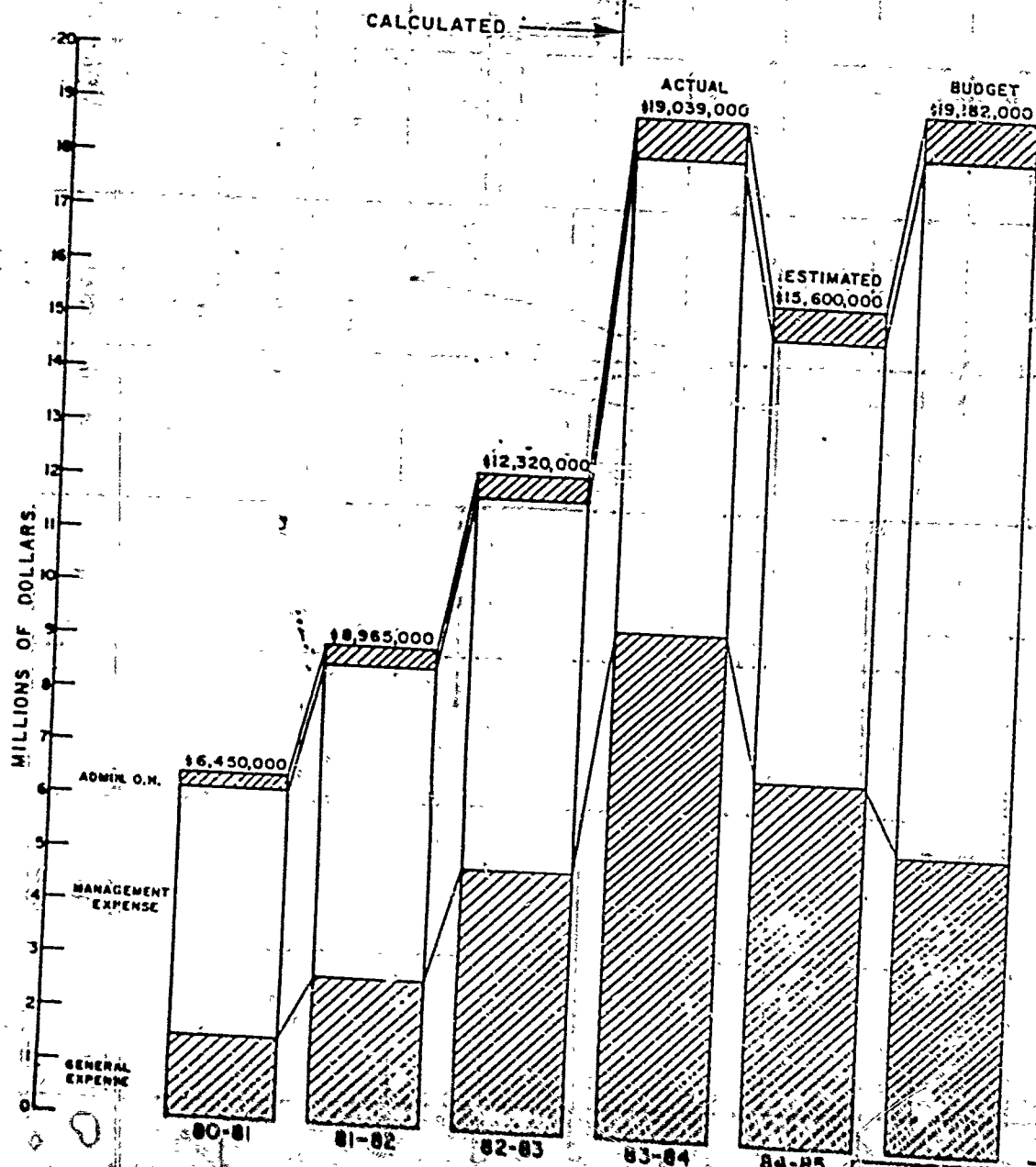
93.21
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FISCAL PAGE

| 1982-1983 | 1983-1984 | 1984-1985 | 1985-1986 | 1986-1987 |
|---|---|--|------------------------|-----------|
| TOTAL CALCULATED EXPENDITURES \$20,866,000 | TOTAL ACTUAL EXPENDITURES \$23,187,000 | EST. ANNUAL EXPENDITURES \$28,000,000 | BUDGET \$30,000,000 | |



LONG BEACH UNIT

MANAGEMENT PROGRAM

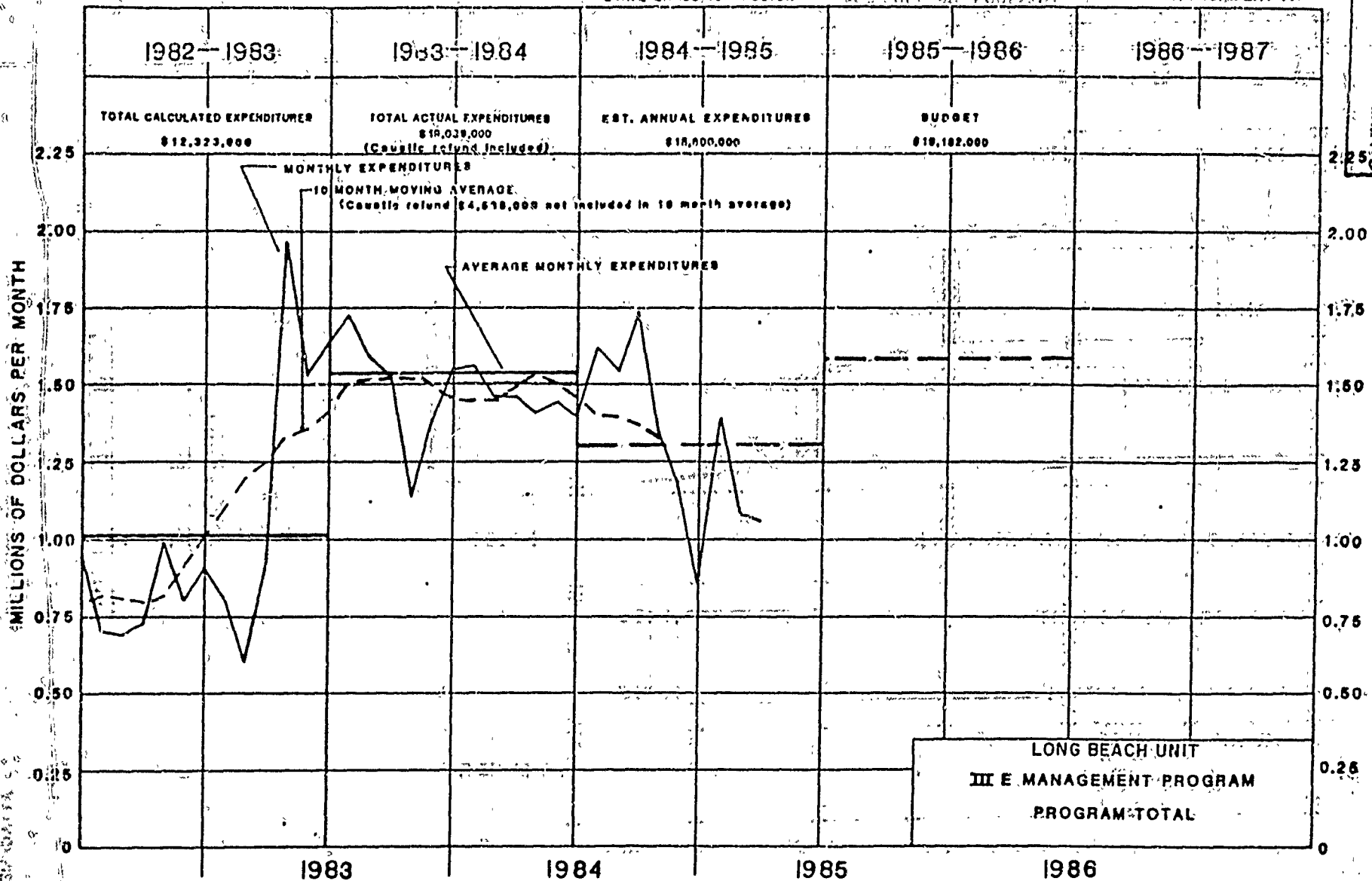


MILLIONS OF DOLLARS PER MONTH

CALENDAR YEAR 85-86
 93.22
 371

STATE OF CALIFORNIA
STATE LANDS COMMISSION

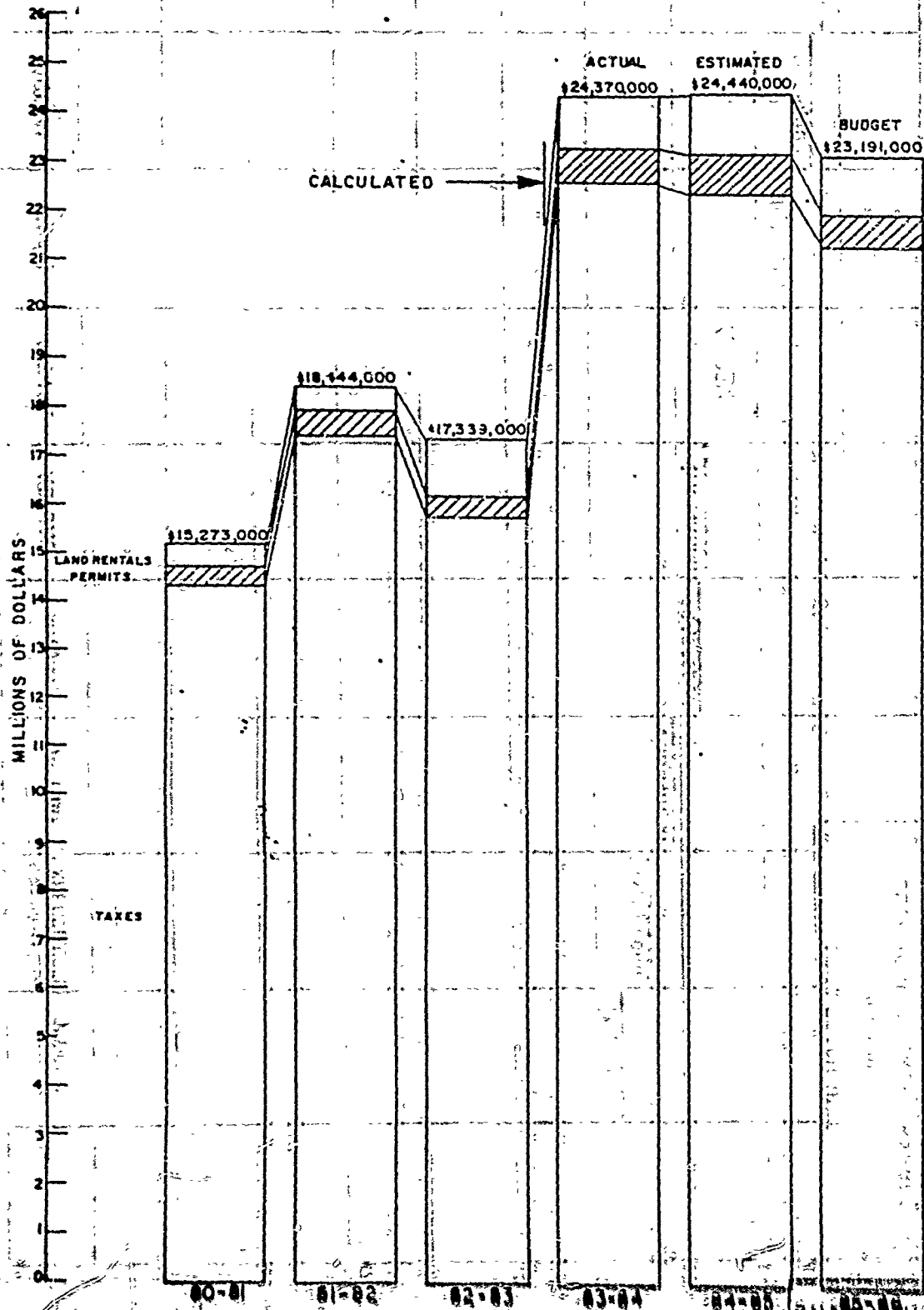
ATTACHMENT 7A



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CALENDAR PAGE 1372
MINUTE PAGE

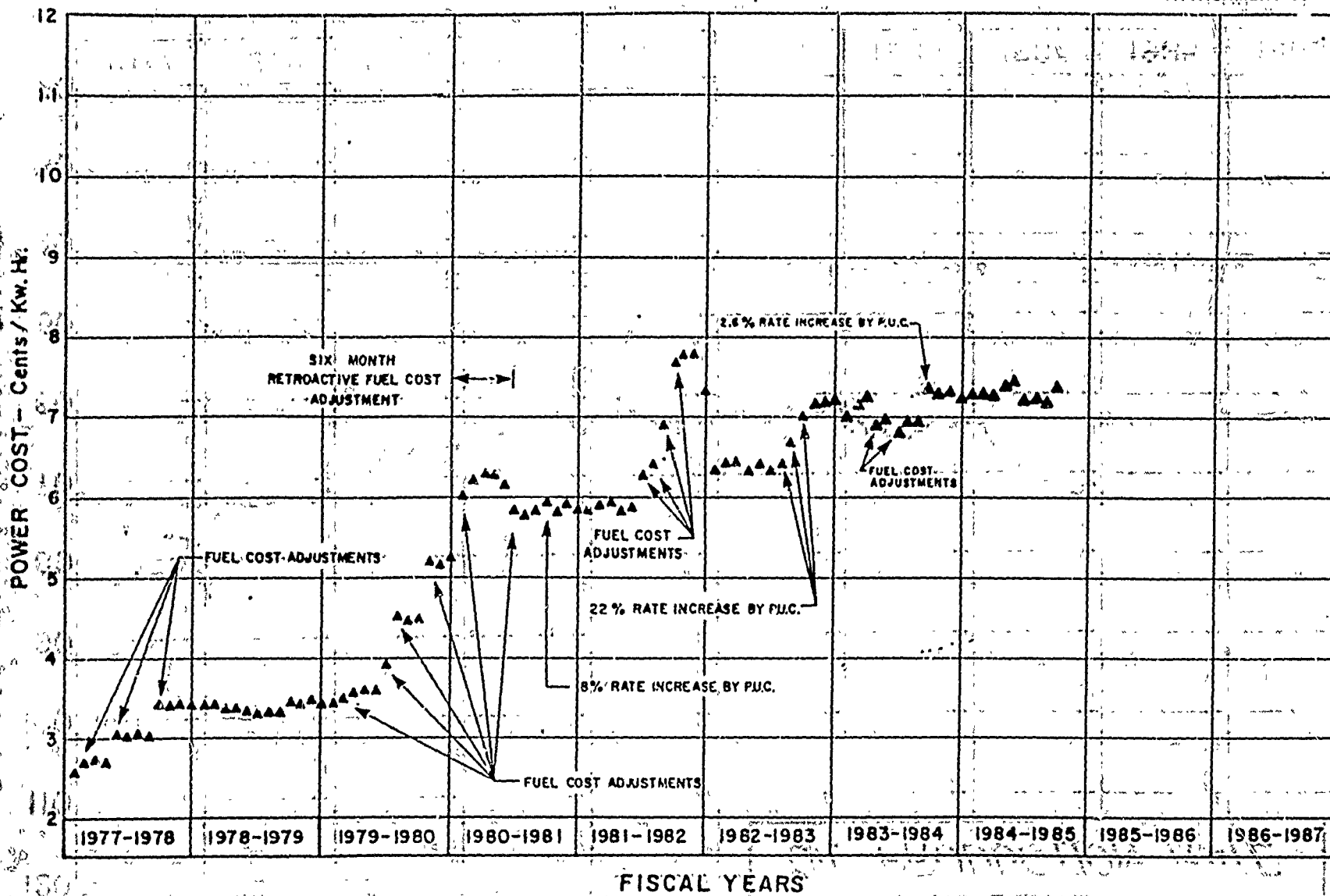
LONG BEACH UNIT

TAXES, PERMITS AND LAND RENTAL
PROGRAM



LONG BEACH UNIT
ELECTRICAL ENERGY COSTS

ATTACHMENT 10



93.26

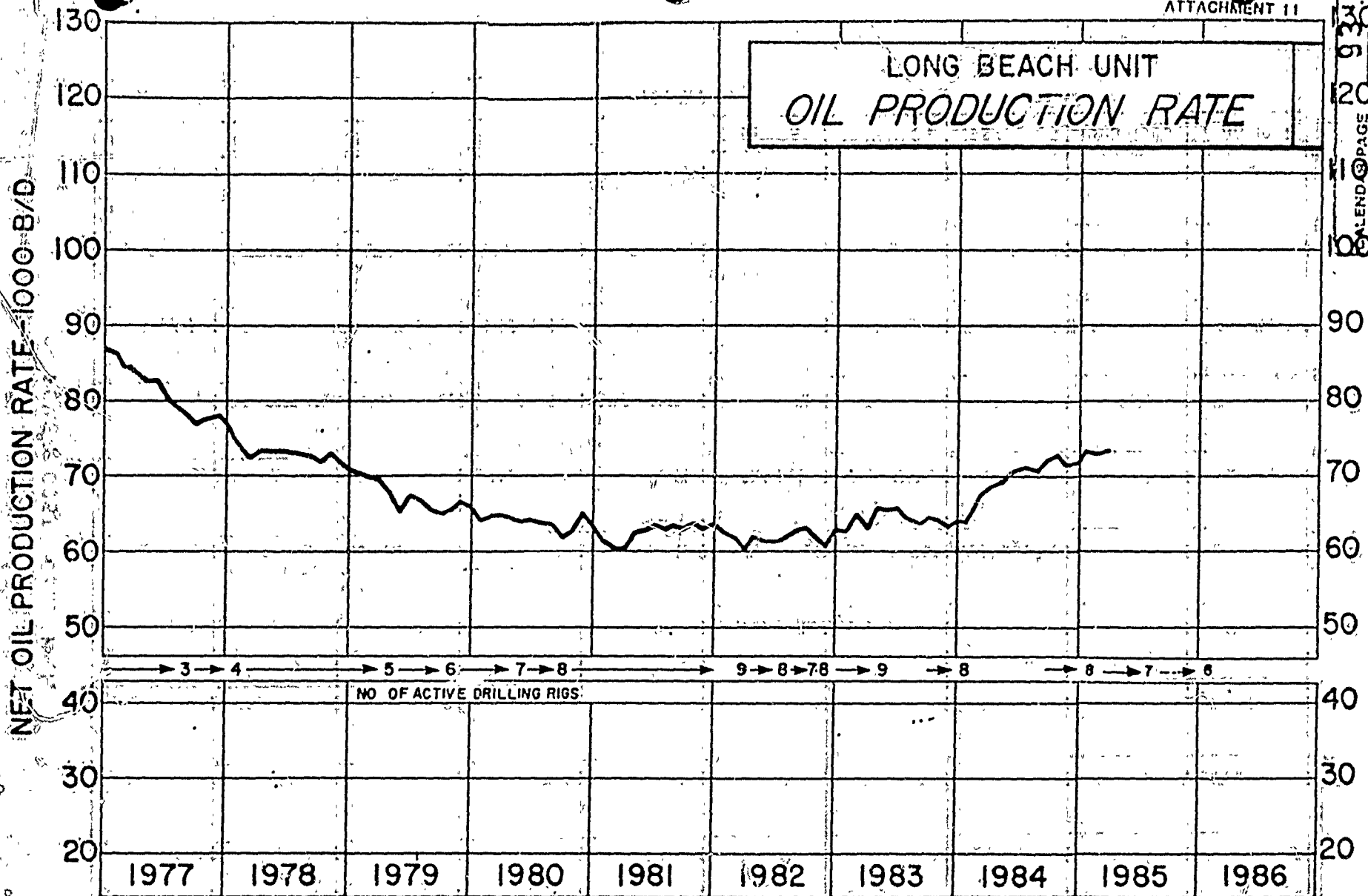
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CALENDAR PAGE

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STATE OF CALIFORNIA
STATE LANDS COMMISSION

ATTACHMENT 12
LONG BEACH UNIT

93.28
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