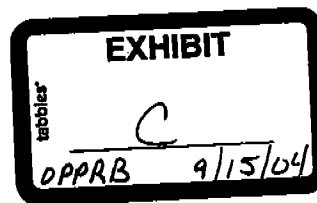




**Mellon**



***Oklahoma Police Pension  
and Retirement System  
Actuarial Valuation Report as of  
July 1, 2004***

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## ***HIGHLIGHTS - PURPOSE***

This report has been prepared by Mellon Human Resources & Investor Solutions for the Oklahoma Police Pension and Retirement System to:

- Present the results of a valuation of the Oklahoma Police Pension and Retirement System as of July 1, 2004;
- Review experience under the System for the year ended June 30, 2004; and
- Provide reporting and disclosure information for auditors' reports, governmental agencies and other interested parties.

### **The main financial highlights are:**

- The funded status of the System decreased since the prior valuation as indicated by the table below.

<b>GASB No. 25 Funded Status (\$000,000)</b>	<b>July 1, 2004</b>	<b>July 1, 2003</b>
Accrued Liability	\$ 1,727.1	\$ 1,647.0
Actuarial Value of Assets	\$ 1,400.0	\$ 1,392.0
Unfunded Accrued Liability	\$ 327.2	\$ 254.9
Funded Ratio	81.1%	84.5%

- The funded ratio on a SFAS No. 35 basis, measuring the market value of System assets versus the present value of benefits accrued as of the valuation date, increased from 99.4% to 105.0%.
- The required state contribution for the System increased from \$40.0 million to \$49.7 million.

<b>Contribution Summary (\$000,000)</b>	<b>July 1, 2004</b>	<b>July 1, 2003<sup>(1)</sup></b>
Total Required Contribution	\$ 87.8	\$ 77.2
Expected Employee Contributions	14.0	13.6
Expected Municipality Contributions	24.1	23.5
Required State Contribution	\$ 49.7	\$ 40.0
--As a Percentage of Payroll	28.3%	23.5%

- <sup>(1)</sup> The July 1, 2003 contribution shown in this report has been revised from the July 1, 2003 report to reflect the new amortization period adopted by the Board in 2003. The prior valuation report amortized the unfunded over 20 years from July 1, 1988. The Board adopted an amortization period of 30 years from July 1, 1988 and these results reflect that decision.

## HIGHLIGHTS - SUMMARY OF PRINCIPAL VALUATION RESULTS

A summary of principal valuation results from the current valuation and the prior valuation follows. Any changes in actuarial assumptions, methods or system provisions between the two valuations are described in the section titled "Effects of Changes."

	Actuarial Valuation as of		Change Between Years	
	July 1, 2004	July 1, 2003	Amount	Percent
<b>Summary of Costs</b>				
Required State Contribution for Current Year	\$ 49,700,490	\$ 40,032,242 <sup>(3)</sup>	\$ 9,668,248	24.2%
Actual State Contribution Received in Prior Year <sup>(1)</sup>	\$ 0	\$ 20,400,000	\$ (20,400,000)	(100.0%)

<b>GASB No. 25 Funded Status</b>				
Actuarial Accrued Liability	\$ 1,727,162,602	\$ 1,646,979,675	\$ 80,182,927	4.9%
Actuarial Value of Assets	\$ 1,399,975,000	\$ 1,392,043,000	\$ 7,932,000	0.6%
Unfunded Actuarial Accrued Liability	\$ 327,187,602	\$ 254,936,675	\$ 72,250,927	28.3%

<b>Market Value of Assets and Additional Liabilities</b>				
Market Value of Assets	\$ 1,319,329,000	\$ 1,182,326,000	\$ 137,003,000	11.6%
Actuarial Present Value of Accumulated System Benefits (SFAS No. 35)	\$ 1,256,538,745	\$ 1,189,283,904	\$ 67,254,841	5.7%
Present Value of Projected System Benefits	\$ 2,153,727,502	\$ 2,071,023,181	\$ 82,704,321	4.0%

<b>Summary of Data</b>				
Number of Members in Valuation				
Active Paid Members	3,895	3,880	15	0.4%
Members with Deferred Benefits	74	52	22	42.3%
Retired Members	1,788	1,715	73	4.3%
Beneficiaries	432	424	8	1.9%
Disabled Members	153	151	2	1.3%
Deferred Option Plan Members	284	324	(40)	(12.3%)
<b>Total</b>	<b>6,626</b>	<b>6,546</b>	<b>80</b>	<b>1.2%</b>

<b>Active Member Statistics</b>				
Total Annual Compensation <sup>(2)</sup>	\$ 175,559,285	\$ 170,507,025	\$ 5,052,260	3.0%
Average Compensation <sup>(2)</sup>	\$ 45,073	\$ 43,945	\$ 1,128	2.6%
Average Age	37.5	37.1	0.4	1.1%
Average Service	9.9	9.5	0.4	4.2%

<sup>(1)</sup> For the fiscal year beginning July 1, 2003, the system did not receive any state contribution. For the fiscal years beginning July 1, 2004 and ending with June 30, 2009, the system will receive 17% of such taxes. For the fiscal year beginning July 1, 2009 and each fiscal year thereafter, the system will receive 14% of such taxes.

<sup>(2)</sup> Compensation is projected one year based on the salary increase assumptions.

<sup>(3)</sup> Restated to reflect new amortization period of 30 years from July 1, 1988.

## ***HIGHLIGHTS - EFFECTS OF CHANGES***

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### **Changes in Plan Provisions**

As of July 1, 2004, a 4.0% ad hoc cost-of-living increase was granted for those participants receiving benefits as of June 30, 2003. This increase was offset by automatic cost-of-living increases granted after June 30, 2002. The 4% COLA increased liabilities by \$27.6M which decreased the COLA reserve before the implementation of the COLA from \$27.9M as of July 1, 2004 to \$0.3M after the COLA. Therefore, there was no net additional increase to the actuarial accrued liability due to the COLA.

### **Change in Period for Amortizing the Unfunded Accrued Liability**

The Retirement Board adopted a funding policy with an amortization period of 30 years from July 1, 1988. The prior amortization period was 20 years from July 1, 1988. We have restated July 1, 2003 valuation results to reflect the new amortization period.

### **Change in Insurance Premium Tax for Fiscal Year Ending June 30, 2004**

As noted in the July 1, 2003 valuation report, the System did not receive any insurance premium taxes for fiscal year ending June 30, 2004. Fiscal years from July 1, 2004 through June 30, 2009, the System will receive 17% of insurance premium taxes. After July 1, 2009, the System will receive 14% of the taxes.

## ***HIGHLIGHTS - EFFECTS OF CHANGES (CONTINUED)***

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### **Changes in System Benefits**

The following Legislation affecting the Oklahoma Police Pension and Retirement System became effective July 1, 2004.

- |         |  |
|---------|--|
| HB 2693 | Modifies maximum age provisions and clarifies purchase of service procedures.  |
| SB 1134 | Increases benefits by 4% for all participants receiving benefits as of June 30, 2003 (offset by automatic COLAs, if any), requires a cost-of-living assumption, and modifies payback approaches for purchase of service. |
| SB 1422 | Cleans up obsolete provisions and allows a surviving spouse of an active member who dies after eligibility to receive a service pension to opt into the Deferred Option Plan.  |
| SB 1434 | Modifies military service provisions and clarifies military service eligibility periods.   |

Please see page 3 for the impact of the 4% COLA provision in SB 1134. There was no actuarial impact from the other changes indicated above.

## ***HIGHLIGHTS - EFFECTS OF CHANGES (CONTINUED)***

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### **Actuarial Experience During the Plan Year**

The System experienced the following gains/(losses) during the year ending June 30, 2004. These amounts are developed in Section 1.3 of this report:

	Millions
Liability Gain	\$ 19.6
Asset Loss	\$ (59.2)
Total Loss	\$ (39.6)

## ***HIGHLIGHTS - DEFERRED OPTION PLAN***

The Oklahoma Police Deferred Option Plan (DOP) allows employees eligible for a normal retirement benefit to defer the receipt of retirement benefits while continuing employment. Participation in the Deferred Option Plan is limited to five years. During this time, the members' contributions stop, but the employer contributes half of the regular contribution on base salary to the Police Pension and Retirement System and the other half to the members' account in the Deferred Option Plan. In addition, the monthly retirement benefits are paid into the employees' account in the Deferred Option Plan. The DOP was also modified to allow members to retroactively elect to enter DOP as of a back-drop-date upon termination. The monthly retirement benefits and member contributions that would have been payable had the member elected to enter DOP are credited to the employee's account in the DOP.

The Deferred Option Plan accounts are credited with interest at a rate of 2% less than the total fund net earnings, with a guaranteed minimum interest rate equal to the valuation interest rate of 7.5%. The accrual rate credited for the fiscal year ended June 30, 2004, was 13.1%. The assets and liabilities reflected in these results as of July 1, 2004, include the account balances for the Deferred Option Plan, as in prior valuations.

Statistics regarding the number of Deferred Option Plan members and total account balances are shown in the table below:

<b>DOP Statistics</b>	<b>July 1, 2004</b>	<b>July 1, 2003</b>
Number of DOP Members	284	324
DOP Account Balances	\$ 30.8M	\$ 29.4M
Annual Retirement Benefits of DOP Members	\$ 9.0M	\$ 9.8M



## **HIGHLIGHTS - CERTIFICATION**

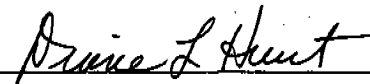
We have prepared an actuarial valuation of the Oklahoma Police Pension and Retirement System as of July 1, 2004, for the plan year ending June 30, 2005. The results of the valuation are set forth in this report, which reflects the provisions of the System as amended and effective on July 1, 2004.

The valuation is based on employee and financial data which were provided by the Oklahoma Police Pension and Retirement System and the independent auditor, respectively, and which are summarized in this report.

All costs, liabilities and other factors under the System were determined in accordance with generally accepted actuarial principles and procedures, in accordance with the provisions of current State Statutes and regulations issued thereunder, using an actuarial cost method which we believe is appropriate. In our opinion, the actuarial assumptions are reasonable and represent our best estimate of the anticipated experience under the System. This report fully and fairly discloses the actuarial position of the System on an ongoing basis.

There have been no changes in actuarial methods or assumptions. The changes in benefit provisions since the last valuation of the System as of July 1, 2003 are summarized on page 4 and the financial impact, if any, are incorporated in this report.

We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.



Diane L. Hunt, FSA, MAAA

September 9, 2004

Mellon  
Human Resources & Investor Solutions  
1200 17<sup>th</sup> St. #1200  
Denver, CO 80202  
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## ***SECTION 1: FUNDING RESULTS***

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**Section 1.1** Comparative Summary of Principal Valuation Results

**Section 1.2** Unfunded Actuarial Accrued Liability

**Section 1.3** Actuarial Gain/(Loss)

**Section 1.4** Normal Cost

**Section 1.5** Contributions

**Section 1.6** Ten-Year Projected Cash Flow

**Section 1.7** Liability Detail

## SECTION 1.1

### COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

A. Summary of Data	Actuarial Valuation as of		Percent Change
	July 1, 2004	July 1, 2003	
<b>1. Active Members</b>			
a. Number	3,895	3,880	0.4%
b. Annual Compensation	\$ 175,559,285	\$ 170,507,025	3.0%
c. Average Annual Compensation	\$ 45,073	\$ 43,945	2.6%
d. Average Age	37.5	37.1	1.1%
e. Average Service	9.9	9.5	4.2%
<b>2. Vested Terminated Members</b>			
a. Number	74	52	42.3%
b. Annual Deferred Benefits	\$ 957,600	\$ 608,217	57.4%
c. Average Annual Deferred Benefit	\$ 12,941	\$ 11,696	10.6%
<b>3. Retired Members</b>			
a. Number	1,788	1,715	4.3%
b. Annual Retirement Benefits	\$ 47,519,364	\$ 43,916,759	8.2%
c. Average Annual Retirement Benefit	\$ 26,577	\$ 25,607	3.8%
<b>4. Beneficiaries</b>			
a. Number	432	424	1.9%
b. Annual Retirement Benefits	\$ 10,263,701	\$ 9,808,015	4.6%
c. Average Annual Retirement Benefit	\$ 23,759	\$ 23,132	2.7%
<b>5. Disabled Members</b>			
a. Number	153	151	1.3%
b. Annual Retirement Benefits	\$ 2,436,772	\$ 2,361,156	3.2%
c. Average Annual Retirement Benefit	\$ 15,927	\$ 15,637	1.9%
<b>6. Deferred Option Plan Members</b>			
a. Number	284	324	(12.3%)
b. Annual Retirement Benefits	\$ 8,955,499	\$ 9,679,050	(7.5%)
c. Average Annual Retirement Benefit	\$ 31,533	\$ 29,874	5.6%
d. Annual Compensation	\$ 18,969,231	\$ 20,200,000	(6.1%)
e. Total Account Balances	\$ 30,804,000	\$ 29,371,000	4.9%
<b>7. Total Members Included in Valuation</b>	<b>6,626</b>	<b>6,546</b>	<b>1.2%</b>

## SECTION 1.1

### COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS (CONTINUED)

B. Summary of Assets, Liabilities and Funded Status	Actuarial Valuation as of		Percent Change
	July 1, 2004	July 1, 2003	
1. System Assets on Valuation Date			
a. Actuarial Value	\$ 1,399,975,000	\$ 1,392,043,000	0.6%
b. Market Value	\$ 1,319,329,000	\$ 1,182,326,000	11.6%
2. Actuarial Accrued Liability <sup>(1)</sup>	\$ 1,727,162,602	\$ 1,646,979,675	4.9%
a. Funded Ratio - Actuarial Value <sup>(1)</sup>	81.1%	84.5%	(4.1%)
b. Funded Ratio - Market Value	76.4%	71.8%	6.4%
3. Unfunded Actuarial Accrued Liability (based on Actuarial Value of Assets)	\$ 327,187,602	\$ 254,936,675	28.3%
4. Present Value of Accrued Benefits (SFAS No. 35)	\$ 1,256,538,745	\$ 1,189,283,904	5.7%
a. Funded Ratio - Actuarial Value	111.4%	117.0%	(4.8%)
b. Funded Ratio - Market Value	105.0%	99.4%	5.6%
5. Present Value of Projected Benefits	\$ 2,153,727,502	\$ 2,071,023,181	4.0%

<sup>(1)</sup> GASB No. 25 Basis

## SECTION 1.1

### COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS (CONTINUED)

C. Summary of Contribution Requirements	Actuarial Valuation as of				Percent Change
	July 1, 2004		July 1, 2003 <sup>(1)</sup>		
	Amount	% of Active Covered Comp.	Amount	% of Active Covered Comp.	
1. Annual Covered Compensation for Members Included in Valuation					
a. Active Members	\$ 175,559,285	N/A	\$ 170,507,025	N/A	3.0%
b. Deferred Option Plan Members	18,969,231	N/A	20,200,000	N/A	(6.1%)
c. Total	\$ 194,528,516	N/A	\$ 190,707,025	N/A	2.0%
2. Total Normal Cost Mid-year	\$ 48,276,293	27.5%	\$ 47,127,437	27.6%	2.4%
3. Unfunded Actuarial Accrued Liability	\$ 327,187,602	N/A	\$ 254,936,675	N/A	28.4%
4. Amortization of Unfunded Actuarial Accrued Liability over 30 years From July 1, 1988 at mid-year <sup>(1)</sup>	\$ 37,197,357	21.2%	\$ 27,873,592	16.3%	33.5%
5. Budgeted Expenses	\$ 2,327,290	1.3%	\$ 2,150,688	1.3%	8.2%
6. Total Required Contribution (2 + 4 + 5)	\$ 87,800,940	50.0%	\$ 77,151,717	45.2%	13.8%
7. Estimated Employee Contribution (8% x 1a)	\$ 14,044,743	8.0%	\$ 13,640,562	8.0%	3.0%
8. Estimated Municipality Contributions					
a. Active Members	\$ 22,822,707	13.0%	\$ 22,165,913	13.0%	3.0%
b. Deferred Option Plan Members	1,233,000	6.5% <sup>(2)</sup>	1,313,000	6.5% <sup>(2)</sup>	(6.1%)
c. Total	\$ 24,055,707	12.4% <sup>(3)</sup>	\$ 23,478,913	12.3% <sup>(3)</sup>	2.5%
9. Required State Contribution to amortize Unfunded Actuarial Accrued Liability over 30 years from July 1, 1988 at mid-year. (6 - 7 - 8c)	\$ 49,700,490	28.3%	\$ 40,032,242	23.5%	24.2%
10. Previous year's actual State Contribution <sup>(5)</sup>	\$ 0	0.0% <sup>(4)</sup>	\$ 20,400,000	12.7% <sup>(4)</sup>	(100.0%)
11. Approximate period over which previous year's State Contribution will amortize Current Unfunded Actuarial Accrued Liability from July 1, 1988.	Not sufficient to amortize UAAL <sup>(5)</sup>	N/A	Not sufficient to amortize UAAL	N/A	N/A

<sup>(1)</sup> Funding Policy adopted by Board as of July 1, 2003. The prior valuation report showed the amortization as 20 years from July 1, 1988. The July 1, 2003 results are restated here to amortize over 30 years from July 1, 1988.

<sup>(2)</sup> Percentage of Deferred Option Plan Members' compensation.

<sup>(3)</sup> Percent of total compensation.

<sup>(4)</sup> Percent of previous years' annual compensation for active members.

<sup>(5)</sup> Historically, 14% of collected statewide insurance premium taxes have been allocated to the Oklahoma Police Pension and Retirement System. For the fiscal year beginning July 1, 2003, the system will not receive any such taxes. For the fiscal years beginning July 1, 2004 and ending with June 30, 2009, the system will receive 17% of such taxes. For the fiscal year beginning July 1, 2009 and each fiscal year thereafter, the system will receive 14% of such taxes.

## SECTION 1.2

### UNFUNDED ACTUARIAL ACCRUED LIABILITY

The actuarial accrued liability is the present value of projected system benefits allocated to past service by the actuarial funding method being used.

	Total System	
	July 1, 2004	July 1, 2003
1. Actuarial Present Value of Benefits		
a. Active Members	\$ 1,152,023,481	\$ 1,105,053,902
b. Members with Deferred Benefits	10,654,326	6,254,902
c. Members Receiving Benefits who are not eligible for Automatic COLA	606,395,643	545,486,086
d. Members Receiving Benefits who are eligible for Automatic COLA	210,587,917	217,950,405
e. Deferred Option Plan Members	173,763,724	184,276,104
f. COLA Reserve	302,411	12,001,782
g. Total	\$ 2,153,727,502	\$ 2,071,023,181
2. Actuarial Present Value of Future Normal Costs	\$ 426,564,900	\$ 424,043,506
3. Total Actuarial Accrued Liability (1g - 2)	\$ 1,727,162,602	\$ 1,646,979,675
4. Actuarial Value of Assets	\$ 1,399,975,000	\$ 1,392,043,000
5. Unfunded Actuarial Accrued Liability (3 - 4, not less than \$0)	\$ 327,187,602	\$ 254,936,675

## SECTION 1.3

### ACTUARIAL GAIN/(LOSS)

The actuarial gain/(loss) is comprised of both the liability gain/(loss) and the actuarial asset gain/(loss). Each of these represents the difference between the expected and actual values as of July 1, 2004.

	Regular	Deferred Option	Total
1. Expected Actuarial Accrued Liability			
a. Actuarial Accrued Liability at July 1, 2003	\$ 1,617,608,675	\$ 29,371,000	\$ 1,646,979,675
b. Normal Cost at July 1, 2003 or DOP contributions	45,424,036	1,291,000	46,715,036
c. Benefit Payments for Plan Year Ending June 30, 2004	68,991,000	4,068,000	73,059,000
d. Interest on a + b - c to End of Year (or actual interest)	122,140,291	4,210,000	126,350,291
e. Expected Actuarial Accrued Liability Before Changes (a + b - c + d)	\$ 1,716,182,002	\$ 30,804,000	\$ 1,746,986,002
f. Changes in actuarial Accrued Liability at July 1, 2004 due to changes in Actuarial Assumptions	0	0	0
g. Change in Actuarial Accrued Liability at July 1, 2004 due to changes in System Provisions	0	0	0
h. Expected Actuarial Accrued Liability at July 1, 2004 (e + f + g)	\$ 1,716,182,002	\$ 30,804,000	\$ 1,746,986,002
2. Actuarial Accrued Liability at July 1, 2004	\$ 1,696,358,602	\$ 30,804,000	\$ 1,727,162,602
3. Actuarial Liability Gain/(Loss) (1h - 2)	\$ 19,823,400	\$ 0	\$ 19,823,400
4. Expected Actuarial Value of Assets			
a. Actuarial Value of Assets at July 1, 2003	\$ 1,362,672,000	\$ 29,371,000	\$ 1,392,043,000
b. Contributions Made for Plan Year Ending June 30, 2004	36,036,000	1,291,000	37,327,000
c. Benefit Payments and Expenses for Plan Year Ending June 30, 2004	71,218,000	4,068,000	75,286,000
d. Interest on a + b - c to End of Year (or actual interest)	100,881,075	4,210,000	105,091,075
e. Expected Actuarial Value of Assets at July 1, 2004 (a + b - c + d)	\$ 1,428,371,075	\$ 30,804,000	\$ 1,459,175,075
5. Actuarial Value of Assets as of July 1, 2004	\$ 1,369,171,000	\$ 30,804,000	\$ 1,399,975,000
6. Actuarial Asset Gain/(Loss) (5 - 4e)	\$ (59,200,075)	\$ 0	\$ (59,200,075)
7. Actuarial Gain/(Loss) (3 + 6)	\$ (39,376,675)	\$ 0	\$ (39,376,675)

### **SECTION 1.3**

#### **ACTUARIAL GAIN/(LOSS) (CONTINUED)**

<b>COLA Reserve</b>	
1. Reserve as of July 1, 2003	\$ 12,001,782
2. Interest at 7.5%	900,134
3. Liability for Inactive Members Not Eligible for COLA (See Section 1.7, Item 2)	749,355,367
4. Reserve Increment (2% x 3.)	14,987,107
5. Expected Reserve as of July 1, 2004	27,889,023
6. Ad Hoc cost of living increase	27,586,612
7. Actual Reserve (5. Less 6., not less than \$0) as of July 1, 2004	302,411



## **SECTION 1.4**

### **NORMAL COST**

The components of normal cost under the System's funding method are:

<b>Component</b>	<b>July 1, 2004</b>	<b>July 1, 2003</b>
Retirement Benefits	\$ 41,136,990	\$ 40,166,976
Withdrawal Benefits	3,487,986	3,400,518
Disability Benefits	628,941	612,000
Death Benefits	1,277,450	1,244,542
<b>Total Normal Cost at Beginning of Year</b>	<b>\$ 46,531,367</b>	<b>\$ 45,424,036</b>
<b>Total Normal Cost at Mid-year</b>	<b>\$ 48,276,293</b>	<b>\$ 47,127,437</b>
Annual Covered Payroll	\$ 175,559,285	\$ 170,507,025
Normal Cost Rate At Mid-year	27.50%	27.64%

## SECTION 1.5

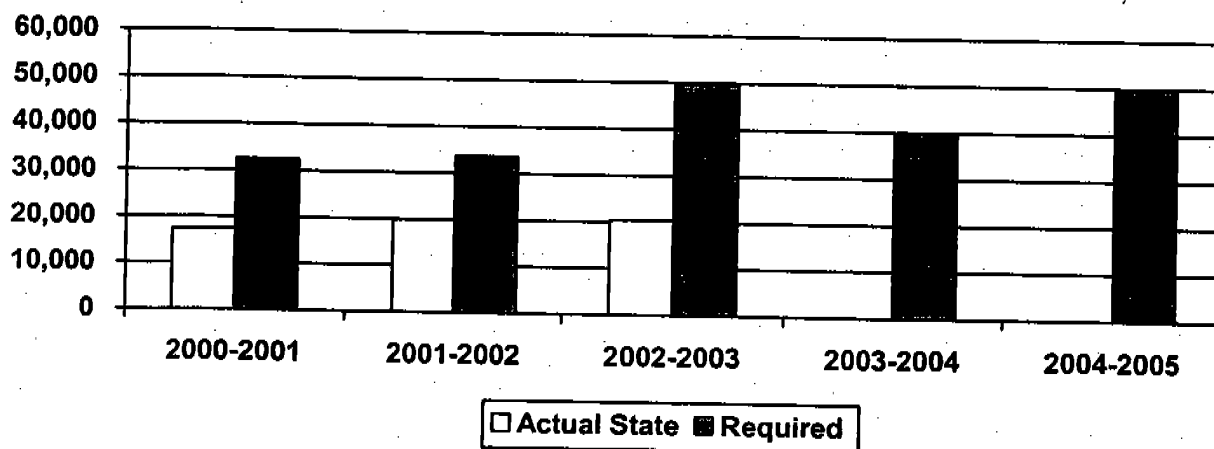
### CONTRIBUTIONS

Contributions to the Retirement System are made by the Members, municipalities, and the State of Oklahoma. Member contributions equal 8% of base salary. Municipalities contribute 13% of base salary per year for plan years after June 30, 1996.

The Deferred Option Plan Members do not make employee contributions to the plan. However, municipalities continue contributing for them, with 50% of the contribution going into the Retirement System fund and 50% going into the Deferred Option account. Contributions for members who retroactively elect to enter the Deferred Option Plan as of a back drop date are also deposited into the Deferred Option Account.

Prior to fiscal year beginning July 1, 2003, the fund received 14% of the insurance premium tax as illustrated in the chart below. However, SB 206 in 2003 reapportioned the insurance premium taxes. For the fiscal year ending June 30, 2004, the fund did not receive any taxes. Beginning in fiscal years July 1, 2004 and ending June 30, 2009, the fund shall receive 17% of the insurance premium tax. For years after that, the fund will receive 14% of the taxes.

**State Contributions Received versus  
Contributions Required by Funding Policy  
(000's)**



As of July 1, 2003, the amortization period was changed to 30 years from 1988. Prior years used an amortization period of 20 years from 1988.

## SECTION 1.6

### TEN-YEAR PROJECTED CASH FLOW (RETIREMENT BENEFIT PAYMENTS)

Plan Year Ending	Actives	Retirees <sup>(1)</sup>	Total
6/30/2005	\$ 5,211,884	\$ 69,388,285	\$ 74,600,169
6/30/2006	\$ 11,153,871	\$ 69,519,840	\$ 80,673,711
6/30/2007	\$ 15,791,488	\$ 69,692,121	\$ 85,483,609
6/30/2008	\$ 20,161,073	\$ 69,728,525	\$ 89,889,598
6/30/2009	\$ 24,616,575	\$ 69,702,770	\$ 94,319,345
6/30/2010	\$ 29,313,407	\$ 69,562,121	\$ 98,875,528
6/30/2011	\$ 34,655,682	\$ 69,363,213	\$ 104,018,895
6/30/2012	\$ 40,141,292	\$ 69,118,746	\$ 109,260,038
6/30/2013	\$ 45,661,896	\$ 68,807,557	\$ 114,469,453
6/30/2014	\$ 51,045,696	\$ 68,431,319	\$ 119,477,015

<sup>(1)</sup> Includes Deferred Option Plan Members, Disabled Members, Beneficiaries and Terminated Vested Members.

## SECTION 1.7

### LIABILITY DETAIL

Total	Without 2% COLA	With 2% Auto COLA
Present Value of Benefits	\$ 1,548,085,162	\$ 2,153,727,502
Accrued Liability	\$ 1,422,171,426	\$ 1,727,162,602
Normal Cost Mid-Year	\$ 38,012,501	\$ 48,276,293

Active		
a. Retirement	\$ 559,246,042	\$ 713,082,472
b. Disability	596,948	733,741
c. Withdrawal	9,140,123	11,431,055
d. Death	2,766,637	6,252,250
e. Refunds	(6,040,937)	(6,040,937)
f. Total	\$ 565,708,813	\$ 725,458,581
Inactive		
1. Members Eligible for Automatic COLA		
a. Retired Members	\$ 125,304,849	\$ 125,304,849
b. Disabled Members	20,391,645	20,391,645
c. Terminated Vested Members	0	0
d. Deferred Option Plan Members	0	0
e. Beneficiaries	64,891,423	64,891,423
f. Total	\$ 210,587,917	\$ 210,587,917
2. Members Not Eligible for Automatic COLA		
a. Retired Members	\$ 448,708,784	\$ 552,464,211
b. Disabled Members	10,225,658	12,782,390
c. Terminated Vested Members	8,457,776	10,654,326
d. Deferred Option Plan Members - Annuities	113,632,124	142,959,724
e. Deferred Option Plan Members - Account Balances	30,804,000	30,804,000
f. Beneficiaries	34,046,354	41,149,042
g. Reserve for COLA's in Future <sup>(1)</sup>	N/A	302,411
h. Total	\$ 645,874,696	\$ 791,116,104
3. Total Inactive (1f + 2h)	\$ 856,462,613	\$ 1,001,704,021
Accrued Liability (Active + Inactive)	\$ 1,422,171,426	\$ 1,727,162,602

<sup>(1)</sup> Ad Hoc cost of living adjustments (COLAs) are prefunded to the 2% per year level in this valuation. These COLAs are granted periodically, but generally not each year. Therefore, in years in which a COLA is not granted, this reserve is increased to fund future COLA's.

## ***SECTION 2: ACCOUNTING RESULTS***

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**Section 2.1** SFAS No. 35 Information

**Section 2.2** GASB No. 25 Information

## SECTION 2.1

### SFAS No. 35 INFORMATION

#### A. Actuarial Present Value of Accumulated System Benefits

The actuarial present value of vested and nonvested accumulated system benefits was computed on an ongoing system basis in order to provide required information under Financial Accounting Standards Board Statement No. 35. In this calculation, a determination is made of all benefits earned by current Members as of the valuation date; the actuarial present value is then computed using demographic assumptions and an assumed interest rate. Assumptions regarding future salary and accrual of future benefit service are not necessary for this purpose.

Accumulated System Benefits	July 1, 2004	July 1, 2003
<b>Vested Benefits</b>		
a. Active Members	\$ 328,694,555	\$ 301,390,517
b. Deferred Option Plan Members	144,436,124	152,386,692
c. Members with Deferred Benefits	8,457,776	4,962,956
d. Members Receiving Benefits	703,568,713	660,689,849
e. Total Vested Benefits	\$ 1,185,157,168	\$ 1,119,430,014
<b>Nonvested Benefits</b>	71,381,577	69,853,890
<b>Total Accumulated System Benefits <sup>(1)</sup></b>	<b>\$ 1,256,538,745</b>	<b>\$ 1,189,283,904</b>
Assumed Rate of Interest	7.5%	7.5%
Market Value of Assets Available for Benefits	\$ 1,319,329,000	\$ 1,182,326,000
Funded Ratio	105.0%	99.4%
Change in Accumulated System Benefits due to:		
a. Assumption Changes	\$ 0	\$ 0
b. System Provision Changes	\$ 22,338,484	\$ 5,907,338

Number of Members	July 1, 2004	July 1, 2003
<b>Vested Members</b>		
a. Active Members	1,817	1,774
b. Deferred Option Plan Members	284	324
c. Members with Deferred Benefits	74	52
d. Members Receiving Benefits	2,373	2,290
e. Total Vested Members	4,548	4,440
<b>Nonvested Members</b>	2,078	2,106
<b>Total Members</b>	<b>6,626</b>	<b>6,546</b>

<sup>(1)</sup> Assumption of 2% future ad hoc cost-of-living increases is not reflected in this liability. Only System liabilities accrued (and in statute) as of the valuation date are included.

## SECTION 2.1

### SFAS NO. 35 INFORMATION (CONTINUED)

#### B. Statement of Changes in Accumulated System Benefits

A statement of changes in the actuarial present value of accumulated system benefits follows. This statement shows the effect of certain events on the actuarial present value shown on the previous page.

<b>Actuarial Present Value of Accumulated System Benefits as of July 1, 2003</b>	<b>\$ 189,283,904</b>
<b>Increase/(Decrease) During Year Attributable to:</b>	
a. Normal Cost	\$ 41,365,949
b. Increase for Interest Due to Decrease in Discount Period	89,559,026
c. Benefits Paid, Including Refund of Contributions	(73,059,000)
d. System Amendment	22,338,484
e. Assumption Changes	0
f. (Gains)/Losses	(12,949,618)
<b>Net Increase/(Decrease)</b>	<b>\$ 67,254,841</b>
<b>Actuarial Present Value of Accumulated System Benefits as of July 1, 2004</b>	<b>\$ 1,256,538,745</b>

The benefits valued include all benefits – retirement, preretirement death and vested termination – payable from the System for employee service prior to the valuation date. Benefits are assumed to accrue/(accumulate) in accordance with the system provisions.

## SECTION 2.2

### GASB No. 25 INFORMATION

#### Supplementary Schedules

The GASB has issued a new statement; Financial Reporting for Defined Benefit and Note Disclosures for Defined Contribution Plans (GASB Statement No. 25). This standard became effective for periods beginning after June 15, 1996, and requires funding status to be measured based upon the actuarial funding method adopted by the Board, i.e., for the Oklahoma Police Retirement System, the Entry Age Normal Cost Method. The target value of assets is equal to the Actuarial Accrued Liability (AAL). The actual value of assets is the Actuarial Value developed later in this report. The new GASB standard supersedes GASB Statement No. 5 in its entirety.

#### A. Schedules of Funding Progress

The GASB Statement No. 25 liabilities and assets resulting from the last ten actuarial valuations are as follows:

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
07/01/1995	\$ 664,495,000	\$ 797,637,263	\$ 133,142,263	83.3%	\$ 112,995,471	117.8%
07/01/1996	\$ 738,547,000	\$ 830,586,623	\$ 92,039,623	88.9%	\$ 114,421,087	80.4%
07/01/1997	\$ 827,787,000	\$ 876,603,889	\$ 48,816,889	94.4%	\$ 122,715,886	39.8%
07/01/1998	\$ 966,907,000	\$ 1,092,443,208	\$ 125,536,208	88.5%	\$ 128,521,087	97.7%
07/01/1999	\$ 1,094,400,000	\$ 1,160,023,416	\$ 65,623,416	94.3%	\$ 139,242,527	47.1%
07/01/2000	\$ 1,222,123,000	\$ 1,354,500,875	\$ 132,377,875	90.2%	\$ 148,543,158	89.1%
07/01/2001	\$ 1,319,041,000	\$ 1,443,404,052	\$ 124,363,052	91.4%	\$ 153,350,395	81.1%
07/01/2002	\$ 1,370,024,000	\$ 1,554,288,324	\$ 184,264,324	88.1%	\$ 160,419,776	114.9%
07/01/2003	\$ 1,392,043,000	\$ 1,646,979,675	\$ 254,936,675	84.5%	\$ 170,507,025	149.5%
07/01/2004	\$ 1,399,975,000	\$ 1,727,162,602	\$ 327,187,602	81.0%	\$ 175,559,285	186.4%



## **SECTION 2.2**

### **GASB No. 25 INFORMATION**

#### **B. Schedule of Employer Contributions**

The GASB Statement No. 25 required and actual contributions for the last nine fiscal years are as follows:

<b>Year Ended June 30</b>	<b>Annual Required Contribution</b>	<b>Percentage Contributed</b>
1995	\$ 31,960,065	90.8%
1996	\$ 30,943,994	101.0%
1997	\$ 26,459,627	124.7%
1998	\$ 22,425,929	158.0%
1999	\$ 39,826,511	90.9%
2000	\$ 34,682,993	108.7%
2001	\$ 53,043,666	75.5%
2002	\$ 54,918,091	76.9%
2003	\$ 71,704,935	61.6%
2004	\$ 63,511,155	37.7%

### ***SECTION 3: SYSTEM ASSETS***

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This section presents information regarding System assets as reported by the auditor. The System assets represent the portion of total System liabilities, which has been funded as of the valuation date.

**Section 3.1**    Summary of Assets

**Section 3.2**    Reconciliation of Assets

**Section 3.3**    Actuarial Value of Assets

**Section 3.4**    Average Annual Rates of Investment Return

## SECTION 3.1

### SUMMARY OF ASSETS

Asset Category	Market Value as of June 30, 2004	Market Value as of June 30, 2003
<b>1. Cash and Short-term Investments</b>		
a. Cash	\$ (1,617,000)	\$ 19,000
b. Short-term Investments	13,193,000	44,847,000
c. Total	\$ 11,576,000	\$ 44,866,000
<b>2. Receivables</b>		
a. Interest and Dividends	\$ 2,759,000	\$ 3,841,000
b. Member, Employer, and State Contributions	1,573,000	7,546,000
c. Investments Sold	0	0
d. Other Receivables	0	0
e. Total	\$ 4,332,000	\$ 11,387,000
<b>3. Investments at fair value</b>		
a. Government Bonds	\$ 37,153,000	\$ 45,190,000
b. International Government Bonds	38,042,000	43,523,000
c. Corporate Bonds <sup>(1)</sup>	222,778,000	242,228,000
d. Common Stock	573,238,000	433,962,000
e. International Stock	63,981,000	145,640,000
f. Other	369,955,000	225,194,000
g. Securities Lending Short-term Pool	67,617,000	109,128,000
h. Total	\$ 1,372,764,000	\$ 1,244,865,000
<b>4. Assets used in system operations</b>		
a. Furniture, Fixtures and Equipment	\$ 0	\$ 0
<b>5. Total Assets</b>	\$ 1,388,672,000	\$ 1,301,118,000
<b>6. Liabilities</b>		
a. Payable for Investments Purchased	\$ 966,000	\$ 8,935,000
b. Accounts Payable and Accrued Expenses	760,000	729,000
c. Securities Lending Collateral Payable	67,617,000	109,128,000
d. Total Liabilities	\$ 69,343,000	\$ 118,792,000
<b>7. Net Assets for Pension Benefits</b>	\$ 1,319,329,000	\$ 1,182,326,000

<sup>(1)</sup> Includes Domestic and International Bonds

## SECTION 3.2

### RECONCILIATION OF ASSETS

Transactions	June 30, 2004	June 30, 2003
<b>Additions</b>		
<b>1. Contributions</b>		
a. Contributions from Employers	\$ 23,915,000	\$ 23,738,000
b. Contributions from System Members	13,412,000	12,879,000
c. Insurance Premium Tax	0	20,400,000
d. Total	\$ 37,327,000	\$ 57,017,000
<b>2. Net Investment Income</b>		
a. Interest	\$ 11,535,000	\$ 13,821,000
b. Dividends	3,651,000	6,762,000
c. Realized Gain and Unrealized Appreciation	164,862,000	28,840,000
d. Income from Securities Lending	233,000	265,000
e. Other	3,147,000	(2,707,000)
f. Total	\$ 183,428,000	\$ 46,981,000
g. Investment Expense	(8,466,000)	(6,983,000)
h. Net Investment Income	\$ 174,962,000	\$ 39,998,000
<b>3. Total Additions</b>	\$ 212,289,000	\$ 97,015,000
<b>Deductions</b>		
<b>4. Retirement Benefits</b>	\$ (71,932,000)	\$ (68,187,000)
<b>5. Deferred Option Benefits</b>	\$ 0	\$ 0
<b>6. Refund of Contributions</b>	\$ (1,127,000)	\$ (1,208,000)
<b>7. Administrative Expenses</b>	\$ (2,227,000)	\$ (1,930,000)
<b>8. Total Deductions</b>	\$ (75,286,000)	\$ (71,325,000)
<b>9. Net Increase</b>	\$ 137,003,000	\$ 25,690,000
<b>10. Net Assets Held in Trust for Pension Benefits</b>		
a. Beginning of Year	\$ 1,182,326,000	\$ 1,156,636,000
b. End of Year	\$ 1,319,329,000	\$ 1,182,326,000
<b>Reconciliation of Actuarial Asset Value and Market Value</b>		
Actuarial Asset Value	\$ 1,399,975,000	\$ 1,392,043,000
Deferred Gain/(Loss)	\$ (80,646,000)	\$ (209,717,000)
Market Value	\$ 1,319,329,000	\$ 1,182,326,000

## SECTION 3.2

### RECONCILIATION OF ASSETS <sup>(1)</sup> (CONTINUED)

Transactions	Non-Deferred Option Plan Assets	Deferred Option Plan Assets	Total
<b>Additions</b>			
<b>1. Contributions</b>			
a. Contributions from Employers	\$ 22,682,000	\$ 1,233,000	\$ 23,915,000
b. Contributions from System Members	13,354,000	58,000	13,412,000
c. Insurance Premium Tax	0	0	0
d. Total	\$ 36,036,000	\$ 1,291,000	\$ 37,327,000
<b>2. Net Investment Income</b>			
a. Interest	\$ 7,325,000	\$ 4,210,000	\$ 11,535,000
b. Dividends	3,651,000	0	3,651,000
c. Realized Gain and Unrealized Appreciation	164,862,000	0	164,862,000
d. Income from Security Lending	233,000	0	233,000
e. Other	3,147,000	0	3,147,000
f. Total	\$ 179,218,000	\$ 4,210,000	\$ 183,428,000
g. Investment Expense	(8,466,000)	0	(8,466,000)
h. Net Investment Income	\$ 170,752,000	\$ 4,210,000	\$ 174,962,000
<b>3. Total Additions</b>	\$ 206,788,000	\$ 5,501,000	\$ 212,289,000
<b>Deductions</b>			
<b>4. Retirement Benefits</b>	\$ (57,922,000)	\$ (14,010,000)	\$ (71,932,000)
<b>5. Deferred Option Benefits Credited to Account</b>	(9,942,000)	9,942,000	0
<b>6. Refund of Contributions</b>	(1,127,000)	0	(1,127,000)
<b>7. Administrative Expenses</b>	(2,227,000)	0	(2,227,000)
<b>8. Total Deductions</b>	\$ (71,218,000)	\$ (4,068,000)	\$ (75,286,000)
<b>9. Net Increase</b>	\$ 135,570,000	\$ 1,433,000	\$ 137,003,000
<b>10. Net Assets Held in Trust for Pension Benefits</b>			
a. Beginning of Year	\$ 1,152,955,000	\$ 29,371,000	\$ 1,182,326,000
b. End of Year	\$ 1,288,525,000	\$ 30,804,000	\$ 1,319,329,000

<sup>(1)</sup> This allocation of assets is maintained for accounting purposes only. It is our understanding that all assets of the System are available to pay all benefits provided under the System.

## SECTION 3.3

### ACTUARIAL VALUE OF ASSETS

Schedule of Assets Gains/(Losses)				
Year	Original Amount	Recognized in Prior Years	Recognized This Year	Recognized in Future Years
1999/2000	25,028,597	20,022,876	5,005,721	0
2000/2001	(161,346,342)	(96,807,804)	(32,269,268)	(32,269,270)
2001/2002	(167,298,717)	(66,919,486)	(33,459,743)	(66,919,488)
2002/2003	(62,256,106)	(12,451,221)	(12,451,221)	(37,353,664)
2003/2004	69,870,858	0	13,974,172	55,896,686
<b>Total</b>	<b>\$ (296,001,710)</b>	<b>\$ (156,155,635)</b>	<b>\$ (59,200,339)</b>	<b>\$ (80,645,736)</b>

Development of Actuarial Value of Assets	
1. Actuarial Value as of July 1, 2003 (Excluding DOP)	\$ 1,362,672,000
2. Contributions	
a. Member	\$ 13,354,000
b. Employer (Excluding DOP)	22,682,000
c. Insurance tax	0
d. Total	\$ 36,036,000
3. Decreases During the Year	
a. Benefit Payments (Excluding payments from DOP, including payments to DOP)	\$ 67,864,000
b. Return of Member Contributions	1,127,000
c. Noninvestment Expenses	2,227,000
d. Total	\$ 71,218,000
4. Expected Return at 7.5% on:	
a. Item 1	\$ 102,200,400
b. Item 2 (one-half year)	1,351,350
c. Item 3 (one-half year)	2,670,675
d. Total (a + b + c)	\$ 100,881,075
5. Expected Actuarial Value of Assets (Excluding DOP) June 30, 2004 (1 + 2 - 3 + 4)	\$ 1,428,371,075
6. Unrecognized Asset Gain as of June 30, 2003	\$ (209,716,933)
7. DOP Assets	\$ 30,804,000
8. Expected Actuarial Value June 30, 2004 plus previous year's Unrecognized Asset Gain (5 + 6 + 7)	\$ 1,249,458,142
9. Market Value as of June 30, 2004	\$ 1,319,329,000
10. 2003/2004 Asset Gain/(Loss) (9 - 8)	\$ 69,870,858
11. Asset Gain to be Recognized as of June 30, 2004	\$ (59,200,339)
12. Initial Actuarial Value July 1, 2004 (5 + 7 + 11) (Rounded to \$1,000's)	\$ 1,399,975,000
13. Constraining Values:	
a. 80% of Market Value (9 x 0.8)	\$ 1,055,463,000
b. 120% of Market Value (9 x 1.2)	\$ 1,583,195,000
14. Actuarial Value July 1, 2004 (12), but no less than (13a), nor greater than (13b)	\$ 1,399,975,000

## SECTION 3.4

### AVERAGE ANNUAL RATES OF INVESTMENT RETURN

Year Ending June 30	Actuarial Value		Market Value	
	Annual	Cumulative	Annual	Cumulative
1990	8.6%	8.6%	9.2%	9.2%
1991	7.9%	8.2%	8.1%	8.6%
1992	8.7%	8.4%	13.8%	10.3%
1993	10.3%	8.9%	15.1 %	11.5%
1994	9.3%	9.0%	0.0%	9.1%
1995	11.0%	9.3%	17.7%	10.5%
1996	11.9%	9.7%	13.5%	10.9%
1997	12.8%	10.1%	17.3%	11.7%
1998	13.5%	10.4%	16.9%	12.3%
1999	14.3%	10.8%	9.7%	12.0%
2000	12.8%	11.0%	8.7%	11.7%
2001	8.8%	10.8%	(5.3%)	10.2%
2002	4.9%	10.3%	(5.6%)	8.9%
2003	2.7%	9.8%	3.5%	8.5%
2004	3.3%	9.3%	15.0%	8.9%

Annual Returns before 1998 exclude DOP assets.

## ***SECTION 4: BASIS OF VALUATION***

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This section presents and describes the basis of the valuation. The census of Members, actuarial basis and benefit provisions of the System are the foundation of the valuation, since these are the present facts on which the projection of benefit payments will depend. The valuation is based on the premise that the System will continue in existence.

### **Section 4.1 System Members**

### **Section 4.2 Actuarial Basis**

### **Section 4.3 Summary of System Provisions**



## SECTION 4.1

### SYSTEM MEMBERS

#### A. Member Data Reconciliation

	Active Members		Inactive Members				Total
	Regular	Deferred Option Plan	Deferred Vested Members	Retired Members	Disabled Members	Bene-ficiaries	
As of July 1, 2003	3,880	324	52	1,715	151	424	6,546
Deferred Option Plan Retirees	(38)	38	0	0	0	0	0
Age Retirements	(20)	(77)	(6)	103	0	0	0
Disability Retirements	(2)	0	0	(1)	3	0	0
Deaths Without Beneficiaries	0	0	0	(6)	(1)	(14)	(21)
Deaths With Beneficiaries	(3)	(1)	0	(20)	(1)	25	0
Nonvested Terminations	(137)	0	0	0	0	0	(137)
Vested Terminations	(15)	0	15	0	0	0	0
Rehires	1	0	(1)	0	0	0	0
Expiration of Benefits	0	0	0	(4)	0	(8)	(12)
Vested Terminations Electing a Cash-Out	(6)	0	0	0	0	0	(6)
Data Corrections	9	0	14	1	1	5	30
Transfers Out	0	0	0	0	0	0	0
Transfers In	0	0	0	0	0	0	0
Net Change	(211)	(40)	22	73	2	8	(146)
New Entrants During the Year	226	0	0	0	0	0	226
As of July 1, 2004	3,895	284	74	1,788	153	432	6,626

## SECTION 4.1

### SYSTEM MEMBERS (CONTINUED)

#### B. Count of Active Members

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
Under 20										
20-24	110									110
25-29	434	115								549
30-34	357	437	70							864
35-39	145	250	302	130						827
40-44	64	110	191	327	108					800
45-49	26	60	52	119	149	45	3			454
50-54	1	19	40	64	51	57	12			244
55-59	2	2	10	10	8	5	2	1		40
60-64		1	1	2		2	1			7
65-69										0
70-74										0
75+										0
Total	1,139	994	666	652	316	109	18	1	0	3,895

#### C. Average Compensation

Age	Years of Service									Total
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
Under 20										
20-24	28,559									28,559
25-29	33,311	40,878								34,896
30-34	33,119	42,010	50,227							39,002
35-39	31,324	41,347	52,506	56,642						46,069
40-44	33,378	41,068	49,905	55,997	63,746					51,726
45-49	31,026	39,129	46,559	53,120	61,442	65,136	80,143			53,355
50-54	29,269	37,203	46,048	48,322	57,346	67,096	74,288			54,554
55-59	42,008	41,955	42,299	49,583	60,157	78,268	76,320	66,068		54,451
60-64		33,497	71,414	61,950		56,142	28,628			52,818
65-69										0
70-74										0
75+										0
Total	32,502	41,333	50,544	54,767	61,536	66,598	72,953	66,068	0	45,073

## SECTION 4.1

### SYSTEM MEMBERS (CONTINUED)

#### D. Members in Pay Status - Annual Benefits

Attained Age	Retired Members		Beneficiaries		Disabled Members		Current Payment	
	No.	Benefit	No.	Benefit	No.	Benefit	No.	Benefit
Under 51	151	\$ 1,253,756	31	\$ 640,674	41	\$ 408,182	223	\$ 4,756,568
51	57	1,253,756	2	44,081	6	42,249	65	1,340,086
52	63	1,496,964	8	182,217	5	44,589	76	1,723,770
53	59	1,484,742	2	53,189	2	33,239	63	1,571,170
54	66	1,750,299	6	113,697	7	76,440	79	1,940,436
55	90	2,383,627	11	263,312	4	73,108	105	2,720,047
56	111	3,085,929	3	69,019	8	114,976	122	3,269,924
57	102	2,787,358	9	211,099	3	61,380	114	3,059,837
58	57	3,006,425	12	283,373	6	8,432	117	3,298,230
59	57	2,381,942	12	283,891	6	83,944	100	2,749,777
60	57	2,367,482	7	173,400	3	66,567	97	2,607,449
61	57	1,964,055	6	138,522	2	20,811	83	2,123,388
62	57	1,987,846	7	137,389	3	33,548	81	2,158,783
63	57	1,768,330	7	178,881	4	74,709	77	2,021,920
64	68	1,823,603	11	263,237	5	105,083	84	2,191,923
65	59	1,639,753	10	245,402	3	59,740	72	1,944,895
66	54	1,430,397	13	367,899	4	71,569	71	1,869,865
67	42	1,111,391	7	201,149	3	64,786	52	1,377,326
68	44	1,123,606	12	283,771	4	100,751	60	1,508,128
69	45	1,199,585	17	446,588	3	52,135	65	1,698,308
70	37	994,471	12	354,902	3	73,272	52	1,422,645
71	20	524,311	11	330,580	2	33,689	33	888,580
72	31	840,630	12	318,636	2	47,125	45	1,206,391
73	29	853,718	7	142,359	3	59,512	39	1,055,589
74	17	474,441	14	413,893	4	91,199	35	979,533
75	24	606,952	18	472,882	1	30,984	43	1,110,818
76	24	708,562	11	290,671	3	81,605	38	1,080,838
77	20	523,593	11	257,382	4	109,744	35	890,719
78	14	409,039	12	316,770	3	80,819	29	806,628
79	11	293,381	8	189,255	2	48,889	21	531,525
80	12	327,180	14	348,012	0	0	26	675,192
81	13	322,203	12	219,648	0	0	25	541,851
82	9	205,997	6	146,181	2	36,810	17	388,988
83	9	220,035	11	267,221	1	23,258	21	510,514
84	9	206,681	5	120,830	1	16,013	15	343,524
85	2	24,993	5	109,192	2	42,041	9	176,226
86	3	67,659	10	191,048	0	0	13	258,707
87	5	120,455	6	94,016	0	0	11	214,471
88	0	0	6	125,995	0	0	6	125,995
89	0	0	7	146,254	0	0	7	146,254
90	1	30,429	2	39,009	2	29,330	5	98,768
Over 90	1	9,832	39	788,175	2	36,244	42	834,251
<b>Total</b>	<b>1,788</b>	<b>\$ 47,519,364</b>	<b>432</b>	<b>\$ 10,263,701</b>	<b>153</b>	<b>\$ 2,436,772</b>	<b>2,373</b>	<b>\$ 60,219,837</b>

## SECTION 4.1

### SYSTEM MEMBERS (CONTINUED)

#### E. Terminated Vested and Deferred Option Plan Members - Annual Benefits

Attained Age	Terminated Vested Members		Deferred Option Plan Members	
	No.	Benefit	No.	Benefit
Under 40	9	\$ 108,810	0	\$ 0
40	2	43,958	0	0
41	4	77,298	0	0
42	5	56,254	3	73,489
43	4	43,187	4	95,807
44	5	51,726	14	368,613
45	4	43,477	13	365,163
46	6	75,536	11	275,621
47	6	86,971	23	677,408
48	8	109,568	26	709,944
49	6	58,974	15	442,558
50	3	29,005	16	495,098
51	5	85,910	25	827,588
52	1	17,963	24	858,527
53	0	0	20	609,670
54	0	0	16	626,383
55	0	0	16	489,389
56	0	0	26	994,801
57	0	0	10	336,108
58	0	0	8	268,152
59	0	0	5	146,564
60	0	0	2	50,553
61	0	0	4	118,917
62	0	0	2	56,941
63	0	0	0	0
64	0	0	0	0
65 and over	0	0	1	68,205
<b>Total</b>	<b>74</b>	<b>\$ 957,600</b>	<b>284</b>	<b>\$ 8,955,499</b>

## SECTION 4.1

### SYSTEM MEMBERS (CONTINUED)

#### F. Member Statistics

Inactive Members as of July 1, 2004	Number	Amount of Annual Benefit
<b>Members Receiving Benefits</b>		
a. Retired	1,788	\$ 47,519,364
b. Beneficiaries	432	10,263,701
c. Disabled	153	2,436,772
<b>Total</b>	<b>2,373</b>	<b>\$ 60,219,837</b>
<b>Members with Deferred Benefits</b>		
a. Terminated Vested	74	\$ 957,600
b. Beneficiaries	N/A	N/A
c. Disabled	N/A	N/A
<b>Total</b>	<b>74</b>	<b>\$ 957,600</b>
<b>Deferred Option Plan Members</b>	<b>284</b>	<b>\$ 8,955,499</b>

Statistics for Active Members	Number	Average		
		Age	Service	Earnings
As of July 1, 2003				
a. Continuing	3,585	37.7	10.2	\$ 45,250
b. New	295	29.4	0.9	28,084
Total	3,880	37.1	9.5	\$ 43,945
As of July 1, 2004				
a. Continuing	3,659	38.0	10.5	\$ 46,183
b. New	236	29.1	0.7	27,856
Total	3,895	37.5	9.9	\$ 45,073

## **SECTION 4.1**

### **SYSTEM MEMBERS (CONTINUED)**

#### **G. Data Tape Reconciliation**

	<b>July 1, 2004</b>	<b>July 1, 2003</b>
<b>Tape Records Submitted</b>		
Records submitted	7,221	7,181
Not Eligible to Participate	0	0
Terminations/ No Benefits Payable	(595)	(635)
Denied Benefit	0	0
Data Corrections	0	0
Number Added	0	0
<b>Total Valued</b>	<b>6,626</b>	<b>6,546</b>

## SECTION 4.2

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### ACTUARIAL BASIS

#### A. Entry Age Actuarial Cost Method

The actuarial cost method is selected by the Board with the recommendation of the actuary. Liabilities and contributions shown in this report are computed using the Individual Entry Age method of funding. The System has used this cost method since at least 1990.

Sometimes called "funding method", this is a particular technique used by actuaries for establishing the amount and incidence of the annual actuarial cost of pension plan benefits, or normal cost, and the related unfunded actuarial accrued liability. Ordinarily the annual contribution to the system is comprised of (1) the normal cost and (2) an amortization payment on the unfunded actuarial accrued liability.

Under the Entry Age Actuarial Cost Method, the **Normal Cost** is computed as the level percentage of pay which, if paid from the earliest time each Member would have been eligible to join the system if it then existed (thus, entry age) until his retirement or termination, would accumulate with interest at the rate assumed in the valuation to a fund sufficient to pay all benefits under the system.

The **Actuarial Accrued Liability** under this method at any point in time is the theoretical amount of the fund that would have accumulated had annual contributions equal to the normal cost been made in prior years (it does not represent the liability for benefits accrued to the valuation date.) The **Unfunded Actuarial Accrued Liability** is the excess of the actuarial accrued liability over the actuarial value of system assets actually on hand on the valuation date.

Under this method experience gains or losses, i.e. decreases or increases in accrued liabilities attributable to deviations in experience from the actuarial assumptions, adjust the unfunded actuarial accrued liability.

#### B. Asset Valuation Method

The asset valuation method is selected by the Board with the recommendation of the actuary. The actuarial value of assets is based on a five-year moving average of expected and market values determined as follows:

- at the beginning of each plan year, a preliminary expected actuarial asset value is calculated as the sum of the previous year's actuarial value increased with a year's interest at the System valuation rate plus net cash flow adjusted for interest (at the same rate) to the end of the previous plan year;
- the expected actuarial asset value is set equal to the preliminary expected actuarial value plus the unrecognized investment gains and losses as of the beginning of the previous plan year;

## **SECTION 4.2**

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### **ACTUARIAL BASIS (CONTINUED)**

#### **B. Asset Valuation Method (continued)**

- the difference between the expected actuarial asset value and the market value is the investment gain or loss for the previous plan year;
- the (final) actuarial asset value is the preliminary value plus 20% of the investment gains and losses for each of the five previous plan years, but in no case more than 120% of the market value or less than 80% of the market value.
- Deferred Option Plan assets are included in the actuarial value. However, they are included at market value and are not subject to the smoothing described above.

The System has used this method since at least 1998.

#### **C. Valuation Procedures**

No actuarial accrued liability is held for nonvested, inactive Members who have a break in service, or for nonvested Members who have quit or been terminated, even if a break in service had not occurred as of the valuation date.

The wages used in the projection of benefits and liabilities are July 1, 2004 rates of pay based upon the prior year's earnings increased by the salary scale.

In computing accrued benefits, average earnings were determined using actual pay history.

No benefits are projected to be greater than the dollar limitation and compensation limitation required by the Internal Revenue Code Section 401 and 415 for governmental plans.

No additional liability is being carried for the guaranteed minimum interest rate for the Deferred Option Plan account balances. Stochastic studies of similar Systems have been used to quantify the cost of this benefit. Further review and analysis of this liability is recommended. Please note that this is a volatile benefit and the impact in any one-year may be large.

The calculations for the required state contribution are determined as of mid-year. This is a reasonable assumption since the employer contributions, employee contributions and State insurance premium tax allocations are made on a monthly basis throughout the year, and mid-year represents an average weighting of the contributions.



## **SECTION 4.2**

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### **ACTUARIAL BASIS (CONTINUED)**

#### **C. Valuation Procedures (continued)**

The contribution requirements are based on total annual compensation rather than total covered compensation of employees under assumed retirement age. This is a better reflection of the overall expectations for the System.

The Entry Age Normal Funding Method has been adjusted for those members granted prior service. The prior service is treated as occurring immediately before the membership date. Level pay is assumed during this period before actual membership. Entry Age costs are determined as if the member entered the System on the date the prior service is assumed to have begun. This treatment reflects the extra cost of prior service immediately in the accrued liability and preserves the relationship of normal cost to a year of service accrual.

## SECTION 4.2

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### ACTUARIAL BASIS (CONTINUED)

#### D. Actuarial Assumptions

The actuarial assumptions are selected by the Board with the recommendation of the actuary.

#### Economic Assumptions

##### 1. Investment Return

7.5%, net of investment expenses, per annum, compound annually. The System has used this assumption since at least 1984.

##### 2. Earnings Progression

Sample rates below:

Years of Service	Current Assumptions		
	Inflation %	Merrill Lynch %	Inflation %
1	3.0	16.00	19.00
2	3.0	12.00	15.00
3	3.0	6.75	9.75
4	3.0	6.25	9.25
5	3.0	5.75	8.75
6	3.0	5.50	8.50
7	3.0	5.00	8.00
8	3.0	4.25	7.25
9	3.0	4.10	7.10
10	3.0	3.90	6.90
15	3.0	2.90	5.90
20	3.0	2.00	5.00

## **SECTION 4.2**

### **ACTUARIAL BASIS (CONTINUED)**

#### **D. Actuarial Assumptions (continued)**

##### **Demographic Assumptions**

###### **1. Retirement Rates**

Sample rates below:

Attained Service	Annual Rates of Retirement Per 100 Eligible Member	
	Prior Assumption	Current Assumption
20	30	39
21	30	21
22	20	17
23	20	17
24	25	19
25	25	22
26	30	80
27	35	80
28	40	80
29	45	80
30	100	100

###### **2. Mortality Rates**

- |   |  |
|---|--|
| (a) Active employees<br>(pre-retirement)                                | RP-2000 No Collar Healthy<br>Employees (Generational)          |
| (b) Active employees<br>(post-retirement) and<br>nondisabled pensioners | RP-2000 Blue Collar Healthy<br>Annuitant (Generational)        |
| (c) Disabled pensioners   | RP-2000 Blue Collar Healthy Annuitant<br>(Set forward 7 years) |

## **SECTION 4.2**

### **ACTUARIAL BASIS (CONTINUED)**

#### **D. Actuarial Assumptions (continued)**

##### **Demographic Assumptions (continued)**

#### **3. Disability Rates**

Graduated rates. See table below:

Age Range	Rate
	Current Assumption
20-24	.0002
25-29	.0004
30-34	.0006
35-39	.0011
40-44	.0020
45-49	.0020
50-54	.0020
55-59	.0010

#### **4. Withdrawal Rates**

Graduated rates by years of service.

Service Range	Rate
	Current Assumption
0-1	.100
2	.085
3	.070
4	.060
5-10	.040
11-15	.020
16-20	.005
Over 20	.000

#### **5. Marital Status**

(a) Percentage married:

Males: 85%; Females: 85%

(b) Age difference:

Males are assumed to be three (3) years older than females.

## **SECTION 4.2**

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### **ACTUARIAL BASIS (CONTINUED)**

#### **D. Actuarial Assumptions (continued)**

##### **Other Assumptions**

1. Assumed Age of Commencement for Deferred Benefits: Age 50.
2. Provision for Expenses: Administrative Expenses, as budgeted by the Oklahoma Police Pension and Retirement System.
3. Percentage of Disability: Based upon information provided by the Executive Director, we assume that employees becoming disabled have a 25%-49% impairment.
4. Duty-Related Death: Assuming all active pre-retirement deaths are duty-related.
5. Cost-of-Living Allowance: Police officers eligible to receive increased benefits according to repealed Section 50-120 of Title 11 of the Oklahoma Statutes pursuant to a court order receive an adjustment of 1/3 to 1/2 of the increase or decrease of any adjustment to the base salary of a regular police officer, based on an increase in base salary of 3.6%, with a 2% minimum benefit increase assumed.  
  
Members, not eligible for this increase are assumed to receive a 2% annual ad hoc increase in benefits during each year of retirement. This assumption was adopted in 2000.
6. Deferred Option Plan: Deferred Option Plan members are assumed to remain in the Deferred Option Plan for the maximum of five years prior to electing a lump sum.

## **SECTION 4.3**

### **SUMMARY OF SYSTEM PROVISIONS**

<b>Effective Date and Plan Year:</b>	The System became effective January 1, 1981 and has been amended each year since then. The plan year is July 1 to June 30.
<b>Administration:</b>	The system is administered by the Oklahoma Police Pension and Retirement Board consisting of thirteen Members. The Board shall be responsible for the policies and rules for the general administration of the System.
<b>Type of Plan:</b>	A defined benefit plan.
<b>Employers Included:</b>	An eligible employer may join the System on the first day of any month. An application of affiliation must be filed in the form of a resolution before the eligible municipality can become a participating municipality.
<b>Eligibility:</b>	All persons employed full-time as officers working more than 25 hours per week or any person undergoing police training to become a permanent police officer with a police department of a participating municipality, with ages not less than twenty-one (21) nor more than forty-five (45) when accepted for membership.
<b>Service Considered:</b>	Credited service consists of the period during which the Member participated in the System or predecessor municipal plan as an active employee, plus any service prior to the establishment of the municipal plan which was credited under the predecessor municipal systems or credited service granted by the State Board.
<b>Salary Considered:</b>	<p>Base salary used in the determination of benefits does not include payment for accumulated sick and annual leave upon termination of employment or any uniform allowances.</p> <p>Final average salary means the average paid base salary for normally scheduled hours of an officer over the highest 30 consecutive months of the last 60 months of credited service.</p>

## **SECTION 4.3**

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### **SUMMARY OF SYSTEM PROVISIONS (CONTINUED)**

<b>State Contributions:</b>	Insurance premium tax allocation. Historically, the fund has received 14% of these collected taxes. For the fiscal year ending June 30, 2004 the fund will not receive any such taxes. For the fiscal years beginning July 1, 2004 and ending June 30, 2009, the fund shall receive 17% of these collected taxes. For the fiscal year beginning July 1, 2009 and each fiscal year thereafter, the fund will receive 14% of these collected taxes.
<b>Municipality Contributions:</b>	Contribution is thirteen (13%) percent as of July 1, 1996.
<b>Member Contributions:</b>	Eight (8%) percent of base salary. These contributions shall be "picked up" after December 31, 1988 pursuant to Section 414(h)(2) of the Internal Revenue Code.
<b>Normal Retirement Benefit:</b>	
Eligibility:	20 years of credited service.
Benefit:	2 1/2% of the final average salary multiplied by the years of credited service, with a maximum of 30 years of credited service considered.
Form of Benefit:	Lifetime benefit.
Cost-of-Living Adjustments:	Police officers eligible to receive increased benefits according to repealed Section 50-120 of Title 11 of the Oklahoma Statutes pursuant to a court order shall receive an adjustment of 1/3 to 1/2 of the increase or decrease of any adjustment to the base salary of a regular police officer.
<b>Termination:</b>	
Less Than 10 Years of Service:	A refund of contributions without interest.
More than 10 Years of Service:	If greater than 10 years of service, but not eligible for the normal retirement benefit, the benefit is payable at the later of the date the Member would have had 20 years of service or attained age 50 in an amount equal to 2 1/2% of the final average salary multiplied by the years of credited service. The Member may elect a refund of contributions instead of the retirement benefit.

## **SECTION 4.3**

### **SUMMARY OF SYSTEM PROVISIONS (CONTINUED)**

#### **Disability Benefit (Duty):**

##### Total Disability

Upon determination of total disability incurred as a result of the performance of duty, the normal disability benefit is 50% of final average salary.

##### Partial Disability

Upon determination of partial disability incurred as a result of the performance of duty, the normal disability is reduced according to the percentage of impairment, as outlined in the "American Medical Association's Guide to the Evaluation of Permanent Impairment." The following shows the percent of normal disability benefit payable as related to the percent of impairment.

<u>% Impairment</u>	<u>% of Benefit</u>
1% to 49%	50%
50% to 74%	75%
75% to 99%	100%

#### **Disability Benefit (Non-Duty):**

Upon determination of disability after 10 years of service due to causes other than duty, the benefit equals the accrued benefit of 2 1/2% of final average salary times years of credited service (maximum of 30 years) times:

- 100%, if permanent and total, or
- the following percentages, if partial disability.

1% to 24%	25%
25% to 49%	50%
50% to 74%	75%
75% to 99%	90%



## **SECTION 4.3**

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### **SUMMARY OF SYSTEM PROVISIONS (CONTINUED)**

#### **Death Benefits Payable to Beneficiaries:**

**Prior to Retirement (Duty):**

The greater of:

- 1) 2 1/2% of final average salary times years of credited service (maximum of 30 years), or
- 2) 50% of final average salary.

**Prior to Retirement  
(Non-Duty):**

After 10 years of service, a benefit equal to 2 1/2% of final average salary times years of credited service (maximum of 30 years).

**After Retirement:**

100% of the Member's retirement or deferred vested benefit, payable when the Member would have been eligible to receive it, payable to the beneficiary.

**Death Benefit:**

The beneficiary shall receive a death benefit amount of \$5,000.

If an active Member dies prior to retirement without leaving a beneficiary, a refund of the accumulated contributions made by the Member will be paid to the estate.

**Beneficiary:**

Surviving spouses must be married to the member for 30 continuous months prior to the date of death (waived in the case of duty related death).

If the beneficiary is a child, the benefits are payable to age 18, or 22 if a full-time student.

## **SECTION 4.3**

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### **SUMMARY OF SYSTEM PROVISIONS (CONTINUED)**

#### **Deferred Option Plan:**

A Member who has 20 or more years of service and continues employment may elect to participate in the Deferred Option Plan (DOP). Participation in the DOP shall not exceed five years. The employees' contributions cease upon entering the Plan, but the employer contributions are divided equally between the Retirement System and DOP. The monthly retirement benefits that the employee is eligible to receive are paid into the DOP account.

A member is also allowed to retroactively elect to join the DOP as of a back-drop-date which is no earlier than the member's normal retirement date or five years before his termination date. The monthly retirement benefits and employee contributions that would have been payable had the member elected to join the DOP are credited to the member's DOP account with interest.

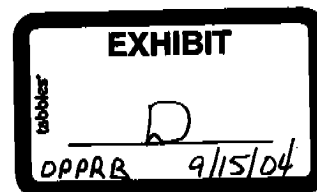
The retirement benefits are not recalculated for service and salary past the election date to join the DOP. However, the benefits may be increased by any applicable cost-of-living increases.

When the Member actually terminates employment, the DOP account balance may be paid in a lump sum or to an annuity provider. Monthly retirement benefits are then paid directly to the retired Member.

This Plan became effective during the July 1, 1990 to June 30, 1991 Plan Year. The DOP account is guaranteed a minimum of the valuation interest rate for investment return, or 2% less than the fund rate of return, if greater.



Mellon



## ADDENDUM TO JULY 1, 2004 ACTUARIAL VALUATION

### CERTIFICATION

We have prepared an actuarial valuation of the Oklahoma Police Pension and Retirement System as of July 1, 2004, for the plan year ending June 30, 2005. The results of the valuation are set forth in this report, which reflects the provisions of the System as amended and effective on July 1, 2004.

The valuation is based on employee and financial data which were provided by the Oklahoma Police Pension and Retirement System and the independent auditor, respectively, and which are summarized in this report.


The results in this Addendum have been prepared for the sole purpose of meeting the Retirement Board's requirement to submit this information to the Oklahoma State Pension Oversight Commission, based on the following prescribed assumptions (11 O.S. 2001, Section 50-105.4, Section H):

Interest rate: 7.5%  
COLA assumption: 2.0%  
Mortality: RP 2000 Generational Mortality Table  
Amortization period: 30 years, open period  
Sources of all contributions and revenues, including dedicated  
tax fee revenue and federal monies

All other assumptions, methodologies, and plan provisions used are consistent with those used in the July 1, 2004 valuation.

The results shown in this Addendum are not consistent with those in the July 1, 2004 valuation. The July 1, 2004 valuation results were determined in accordance with generally accepted actuarial principles and procedures, and are in compliance with the Actuarial Standards Board Actuarial Standard of Practice No. 27-Selection of Economic Assumptions for Measuring Pension Obligations. The results shown in this Addendum are not based on the assumptions and methodologies adopted by the Retirement Board. For those results, see the July 1, 2004 actuarial valuation.

We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate.

  
Diane Hunt, F.S.A., M.A.A.A.

September 9, 2004

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## ***SUMMARY OF VALUATION RESULTS UNDER PRESCRIBED ASSUMPTIONS***

This supplemental report has been prepared by Mellon's Human Resources & Investor Solutions for the Oklahoma Police Pension Retirement Board to present the results of a valuation of the Oklahoma Police Pension and Retirement System as of July 1, 2004, based on the prescribed assumptions under 11 O.S. 2001, Section 50-105.4, Section H of current State Statutes and regulations issued thereunder.

A summary of principal valuation results from the current valuation follows.

<b>Actuarial Valuation As of July 1, 2004</b>	
<b>Summary of Costs</b>	
Required State Contribution for Current Year under Prescribed Assumptions	\$ 40,585,070
Actual State Contribution Received in Prior Year	\$ 0
<b>Funded Status</b>	
Actuarial Accrued Liability	\$ 1,740,150,283
Actuarial Value of Assets	\$ 1,399,975,000
Unfunded Actuarial Accrued Liability	\$ 340,175,283
<b>Market Value of Assets and Additional Liabilities</b>	
Market Value of Assets	\$ 1,319,329,000
Present Value of Projected System Benefits	\$ 2,169,166,852

# SUMMARY OF VALUATION RESULTS UNDER PRESCRIBED ASSUMPTIONS

Summary of Contribution Requirements	Actuarial Valuation as of	
	July 1, 2004	
	Amount	% of Active Covered Comp.
1. Annual Covered Compensation for Members Included in Valuation		
a. Active Members	\$ 175,559,285	N/A
b. Deferred Option Plan Members	18,969,231	N/A
c. Total	\$ 194,528,516	N/A
2. Total Normal Cost Mid-year	\$ 48,559,926	27.7%
3. Unfunded Actuarial Accrued Liability	\$ 340,175,283	N/A
4. Amortization of Unfunded Actuarial Accrued Liability over 30 years From July 1, 2004 at mid-year	\$ 27,798,304	15.8%
5. Budgeted Expenses	\$ 2,327,290	1.3%
6. Total Required Contribution under Prescribed Assumptions (2 + 4 + 5)	\$ 78,685,520	44.8%
7. Estimated Employee Contribution (8% x 1a)	\$ 14,044,743	8.0%
8. Estimated Municipality Contributions		
a. Active Members	\$ 22,822,707	13.0%
b. Deferred Option Plan Members	1,233,000	6.5% <sup>(1)</sup>
c. Total	\$ 24,055,707	12.4% <sup>(2)</sup>
9. Required State Contribution to amortize Unfunded Actuarial Accrued Liability over 30 years from July 1, 2004 at mid-year (6 - 7 - 8c)	\$ 40,585,070	23.1%

(1) Percentage of Deferred Option Plan Members' compensation.

(2) Percent of total compensation.

## ***SUMMARY OF VALUATION RESULTS UNDER PRESCRIBED ASSUMPTIONS***

### **UNFUNDED ACTUARIAL ACCRUED LIABILITY**

The actuarial accrued liability is the present value of projected system benefits allocated to past service by the actuarial funding method being used.

	<b>Total System</b>
	<b>July 1, 2004</b>
1. Actuarial Present Value of Benefits	
a. Active Members	\$ 1,159,987,138
b. Members with Deferred Benefits	10,705,915
c. Members Receiving Benefits who are not eligible for Automatic COLA	610,349,255
d. Members Receiving Benefits who are eligible for Automatic COLA	213,298,752
e. Deferred Option Plan Members <sup>(1)</sup>	174,523,381
f. COLA Reserve	302,411
g. Total	\$ 2,169,166,852
2. Actuarial Present Value of Future Normal Costs	\$ 429,016,569
3. Total Actuarial Accrued Liability (1g - 2)	\$ 1,740,150,283
4. Actuarial Value of Assets	\$ 1,399,975,000
5. Unfunded Actuarial Accrued Liability (3 - 4, not less than \$0)	\$ 340,175,283

### **NORMAL COST**

The components of normal cost under the System's funding method are:

<b>Component</b>	<b>July 1, 2004</b>
Retirement Benefits	\$ 41,433,400
Withdrawal Benefits	3,479,422
Disability Benefits	614,476
Death Benefits	1,277,450
<b>Total Normal Cost at Beginning of Year</b>	<b>\$ 46,804,748</b>
<b>Total Normal Cost at Mid-year</b>	<b>\$ 48,559,926</b>
Annual Covered Payroll	\$ 175,559,285
Normal Cost Rate At Mid-year	27.66%

## ***SUMMARY OF VALUATION RESULTS UNDER PRESCRIBED ASSUMPTIONS***

### **LIABILITY DETAIL**

<b>Total</b>	<b>July 1, 2004</b>
<b>Present Value of Benefits</b>	<b>\$ 2,169,166,852</b>
<b>Accrued Liability</b>	<b>\$ 1,740,150,283</b>
<b>Normal Cost Mid-Year</b>	<b>\$ 48,559,926</b>

<b>Active</b>	
a. Retirement	\$ 718,305,308
b. Disability	744,936
c. Withdrawal	11,709,012
d. Death	6,252,250
e. Refunds	(6,040,937)
f. Total	\$ 730,970,569
<b>Inactive</b>	
<b>1. Members Eligible for Automatic COLA</b>	
a. Retired Members	\$ 126,338,336
b. Disabled Members	20,686,534
c. Terminated Vested Members	0
d. Deferred Option Plan Members	0
e. Beneficiaries	66,273,882
f. Total	\$ 213,298,752
<b>2. Members Not Eligible for Automatic COLA</b>	
a. Retired Members	\$ 556,259,904
b. Disabled Members	12,531,424
c. Terminated Vested Members	10,705,915
d. Deferred Option Plan Members - Annuities	143,719,381
e. Deferred Option Plan Members - Account Balances	30,804,000
f. Beneficiaries	41,557,927
g. Reserve for COLA's in Future <sup>(1)</sup>	302,411
h. Total	\$ 795,880,962
<b>3. Total Inactive (1f + 2h)</b>	<b>\$ 1,009,179,714</b>
<b>Accrued Liability (Active + Inactive)</b>	<b>\$ 1,740,150,283</b>

<sup>(1)</sup> Ad Hoc cost of living adjustments (COLAs) are prefunded to the 2% per year level in this valuation. These COLAs are granted periodically, but generally not each year. Therefore, in years in which a COLA is not granted, this reserve is increased to fund future COLA's.



## **ACTUARIAL ASSUMPTIONS**

This section presents and describes the actuarial assumptions used for this supplemental valuation. The census of Members, market and actuarial value of assets, actuarial basis and provisions of the Plan are the same as described in Sections 3 and 4 of the valuation report. The valuation is based on the premise that the Plan will continue in existence.

### **Economic Assumptions**

1. Investment Return  
(Prescribed)

7.5%, net of investment expenses, per annum, compound annually. The System has used this assumption since at least 1984.

2. Earnings Progression

Sample rates below:

Years of Service	Current Assumption		
	Inflation %	Merit %	Increase %
1	3.0	16.00	19.00
2	3.0	12.00	15.00
3	3.0	6.75	9.75
4	3.0	6.25	9.25
5	3.0	5.75	8.75
6	3.0	5.50	8.50
7	3.0	5.00	8.00
8	3.0	4.25	7.25
9	3.0	4.10	7.10
10	3.0	3.90	6.90
15	3.0	2.90	5.90
20	3.0	2.00	5.00

## **ACTUARIAL ASSUMPTIONS**

### **Demographic Assumptions**

#### **1. Retirement Rates**

Sample rates below:

<b>Attained Service</b>	<b>Annual Rates of Retirement Per 100 Eligible Members</b>
20	39
21	21
22	17
23	17
24	19
25	22
26	80
27	80
28	80
29	80
30	100

#### **2. Mortality Rates**

- (a) Active employees  
(pre-retirement)  
(Prescribed)
- (b) Active employees  
(post-retirement and  
nondisabled pensioners)  
(Prescribed)
- (c) Disabled pensioners  
(Prescribed)

RP-2000 Generational Mortality Tables with generational  
projections - Employees

RP-2000 Generational Mortality Tables with generational  
projections - Healthy Annuitants (except before age 50  
uses Employees mortality)

RP-2000 Generational Mortality Tables with generational  
projections - Disabled Retirees

## ACTUARIAL ASSUMPTIONS

### Demographic Assumptions (continued)

#### 3. Disability Rates

Graduated rates. See table below:

Age Range	Annual Rate
20-24	.0002
25-29	.0004
30-34	.0006
35-39	.0011
40-44	.0020
45-49	.0020
50-54	.0020
55-59	.0010

#### 4. Withdrawal Rates

Graduated rates by years of service.

Service Range	Annual Rate
0-1	.100
2	.085
3	.070
4	.060
5-10	.040
11-15	.020
16-20	.005
Over 20	.000

#### 5. Marital Status

(a) Percentage married:

Males: 85%; Females: 85%

(b) Age difference:

Males are assumed to be three (3) years older than females.

## **ACTUARIAL ASSUMPTIONS**

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### **Other Assumptions**

1. Assumed Age of Commencement for Deferred Benefits: Age 50.
2. Provision for Expenses: Administrative Expenses, as budgeted by the Oklahoma Police Pension and Retirement System.
3. Percentage of Disability: Based upon information provided by the Executive Director, we assume that employees becoming disabled have a 25%-49% impairment.
4. Duty-Related Death: Assuming all active pre-retirement deaths are duty-related.
5. Cost-of-Living Allowance: (Prescribed) 2% annually.
6. Deferred Option Plan: Deferred Option Plan members are assumed to remain in the Deferred Option Plan for the maximum of five years prior to electing a lump sum.