

FALL 2011

EXAM DP-RU

**Design and Pricing
Retirement Benefits
U.S.**

CASE STUDY

DP-RU

Case Study - Course DP Retirement - US

National Oil Company - Background

National Oil Company (NOC) is a large well-established company that services oil wells all over the United States (US). NOC has been in existence for over 30 years and has more than 10,000 full-time salaried and union hourly employees and over 6,000 part-time employees. The full-time workforce is reasonably stable, but turnover in the last 5 years has been greater than desired, due to competitors recruiting NOC's employees.

Normally, an undergraduate degree is a minimum requirement to obtain entry to the salaried workforce and many employees have graduate degrees. About half of NOC's salaried employees are recruited directly from university with the other half coming from competitors.

The company's financial position varies with the price of oil. As oil prices rise, oil companies become increasingly active and in turn require the services of NOC. Conversely, activity slows as oil prices drop. Despite this, the company is usually in a taxable position.

NOC has managed to be successful by staying on the cutting edge of technology. NOC prides itself in being state of the art in processes and software relevant to its industry. This has helped it to stave off competition from both inside and outside of US. Although NOC is the largest player in the industry within US, there are larger players from outside of the country, with which NOC has to compete. From time to time, there are rumors of a takeover of NOC.

United States legislation and social programs will apply to NOC in this case study.

Summary of National Oil's Retirement Benefits

NOC maintains five retirement programs:

1. a final-average pay defined benefit (DB) qualified plan for its full-time salaried employees;
2. a flat dollar DB qualified plan for its full-time hourly union staff;
3. a defined contribution (DC) qualified plan for its part-time workforce; and
4. a non-qualified pension plan (referred to as the SERP) for its executives that is supplemental to the salaried qualified plan. This plan has no assets.
5. a retiree health and welfare plan for the full-time salaried and union retirees. This plan has no assets.

Extracts of Retirement Benefits Provisions and Financial Information

National Oil Full-Time Salaried Pension Plan

| | |
|------------------------------|--|
| Eligibility | Immediate |
| Vesting | 100% after 5 years of plan membership |
| Normal Retirement Age | 65 |
| Early Retirement Age | 55 with 5 years of plan membership |
| Best Average Earnings | Average annual earnings during 60 consecutive months in which earnings were highest |
| Earnings | Base pay, excluding overtime and bonuses |
| Normal Retirement Benefit | 2% of best average earnings times years of service, subject to tax system maximum |
| Accrued Benefit | Benefit calculated as under the normal retirement benefit formula using best average earnings and service as of date of calculation |
| Early Retirement Benefit | Accrued benefit reduced by 0.25% per month that early retirement precedes age 62 for active participants and actuarial equivalent for terminated vested participants |
| Form of Benefit | If with spouse, 60% joint & survivor benefit, without reduction. If without spouse, single life annuity |
| Optional Forms of Benefit | None |
| Indexing | None |
| Termination Benefit | (1) Lump sum value equal to actuarial present value of accrued pension payable at age 65; or (2) Deferred pension |
| Pre-Retirement Death Benefit | Lump sum value equal to actuarial present value of accrued pension payable at age 65 to named beneficiary |
| Disability Benefit | Accrual of service while on long term disability and immediate pension without a reduction upon permanent and total disability |

National Oil Full-Time Salaried Pension Plan
Historical Actuarial Valuation Results

2008 2009 2010 2011

Participant Summary - January 1

| | | | | |
|--|--------|--------|--------|--------|
| <i>Active Participants</i> | | | | |
| (a) count | 4,268 | 4,286 | 4,251 | 4,076 |
| (b) average age | 45.6 | 45.5 | 45.4 | 45.2 |
| (c) average service | 15.2 | 15.4 | 15.3 | 15.4 |
| (d) average future working lifetime | 11.0 | 11.0 | 11.0 | 11.0 |
| (e) average plan earnings (prior year) | 65,000 | 65,000 | 66,300 | 67,400 |
| <i>Deferred Vested Participants</i> | | | | |
| (a) count | - | - | - | - |
| <i>Pensioners (incl beneficiaries)</i> | | | | |
| (a) count | 665 | 695 | 720 | 773 |
| (b) average age | 70.9 | 69.8 | 68.2 | 68.0 |
| (c) average annual benefit | 19,700 | 20,100 | 21,800 | 22,000 |

Plan Assets (numbers in \$000's) *

| | | | | |
|---|-----------|-----------|-----------|-----------|
| <i>Change in Plan Assets during Prior Year:</i> | | | | |
| Market Value of Assets at January 1 of prior year | 772,639 | 756,844 | 602,863 | 633,966 |
| Employer Contributions during prior year | 10,000 | 40,000 | 92,000 | 92,000 |
| Benefit Payments during prior year | (20,500) | (20,500) | (21,000) | (21,000) |
| Expenses during prior year | - | - | - | - |
| Investment return during prior year | (5,295) | (173,480) | (39,898) | 43,515 |
| Market Value of Assets at January 1 of current year | 756,844 | 602,863 | 633,966 | 748,481 |
| Rate of return during prior year | -1% | -23% | -6% | 6.5% |
| <i>Average Portfolio Mix During Prior Year:</i> | | | | |
| (a) Domestic Large Cap Equities | 29% | 30% | 32% | 30% |
| (b) Domestic Small Cap Equities | 28% | 27% | 25% | 10% |
| (c) Domestic Fixed Income | 27% | 27% | 23% | 35% |
| (d) International Equities | 11% | 11% | 15% | 20% |
| (e) Real Estate | 3% | 3% | 3% | 0% |
| (f) Cash | <u>2%</u> | <u>2%</u> | <u>2%</u> | <u>5%</u> |
| (g) Total | 100% | 100% | 100% | 100% |
| <i>Asset Class Returns during Prior Year:</i> | | | | |
| (a) Domestic Large Cap Equities | -3% | -30% | -12% | 12% |
| (b) Domestic Small Cap Equities | -2% | -45% | -5% | 5% |
| (c) Domestic Fixed Income | 4% | 8% | 1% | 1% |
| (d) International Equities | -5% | -35% | -10% | 10% |
| (e) Real Estate | 5% | 5% | 3% | 3% |
| (f) Cash | 3% | 3% | 1% | 1% |

* numbers may not add due to rounding

National Oil Full-Time Salaried Pension Plan
Historical Actuarial Valuation Results

2008 2009 2010 2011

Actuarial Valuation - January 1 (numbers in \$000's) *

| | | | | |
|--|--|--------------|---|---|
| 1. Actuarial Accrued Liability: | | | | |
| (a) Active participants | 737,486 | 748,857 | 692,620 | 776,554 |
| (b) Deferred vested participants | - | - | - | - |
| (c) Pensioners | 153,276 | 163,443 | 185,213 | 210,874 |
| (d) Total | 890,762 | 912,300 | 877,833 | 987,429 |
| 2. Actuarial Value of Assets | | | | |
| | 756,844 | 602,863 | 633,966 | 748,481 |
| 3. Unfunded Actuarial Accrued Liability: (1d)-(2) | | | | |
| | 133,918 | 309,436 | 243,867 | 238,948 |
| 4. Normal Cost (beg. Of year) | | | | |
| | 48,519 | 48,627 | 45,269 | 50,426 |
| 5. Change in Unfunded AAL during prior year: | | | | |
| (a) Unfunded AAL at prior valuation date | (41,464) | 133,918 | 309,436 | 243,867 |
| (b) Adjustment for Interest | (2,799) | 8,705 | 20,113 | 15,851 |
| (c) Normal Cost w/interest less contributions | 32,137 | 10,373 | (43,202) | (46,778) |
| (d) (Gain)/Loss on investment | 57,094 | 223,309 | 81,391 | - |
| (e) (Gain)/Loss on termination | (15,400) | (14,000) | (17,000) | (20,000) |
| (f) (Gain)/Loss on salary increases less than expected | (23,700) | (50,000) | (100,000) | (25,000) |
| (g) (Gain)/Loss on mortality | (6,800) | (6,800) | (6,900) | 2,000 |
| (h) (Gain)/Loss on retirement | 63,000 | 50,000 | 25,000 | 23,000 |
| (i) (Gain)/Loss on assumption changes | - | - | 20,000 | 40,000 |
| (j) (Gain)/Loss on expenses | - | - | - | - |
| (k) (Gain)/Loss on all other factors | 71,850 | (46,068) | (44,972) | 6,007 |
| (l) Unfunded AAL at current valuation date | 133,918 | 309,436 | 243,867 | 238,948 |
| 6. Actuarial Basis | | | | |
| (a) Interest | 6.50% | 6.50% | 6.50% | 6.00% |
| (b) Salary scale | 4.50% | 4.50% | 4.00% | 4.00% |
| (c) Consumer Price Index | 3.00% | 3.00% | 2.50% | 2.50% |
| (d) Mortality | UP 1994 AA15 | UP 1994 AA15 | 1994 Uninsured Pensioner Mortality - Generational | 1994 Uninsured Pensioner Mortality - Generational |
| (e) Turnover | Based on NOC experience for 1986-1988 | | | |
| (f) Retirement age | Age 62 | | | |
| (g) Proportion married and age difference | 80% married, husbands 3 years older than wives | | | |
| (h) Expenses | Assume all expenses paid by company | | | |
| (i) Asset Valuation Method | Market value of assets | | | |
| (j) Actuarial Cost Method | Projected unit credit | | | |

* numbers may not add due to rounding

**National Oil Full-Time Salaried Pension Plan
Reconciliation of Plan Participants (2008 - 2011)**

| | <u>Active</u> | <u>Pensioners/ Beneficiaries</u> | <u>Total</u> |
|--|---------------|--------------------------------------|--------------|
| 1. Participants as of January 1, 2008 | 4,268 | 665 | 4,933 |
| - New Entrants/Rehires | 300 | - | 300 |
| - Terminated Nonvested | (130) | - | (130) |
| - Terminated Vested (Lump Sum Cashout) | (115) | - | (115) |
| - Retirement | (35) | 35 | - |
| - Death w/ Beneficiary | (2) | 2 | - |
| - Death w/o Beneficiary | - | (7) | (7) |
| - Net change | 18 | 30 | 48 |
| 2. Participants as of January 1, 2009 | 4,286 | 695 | 4,981 |
| - New Entrants/Rehires | 250 | - | 250 |
| - Terminated Nonvested | (120) | - | (120) |
| - Terminated Vested (Lump Sum Cashout) | (130) | - | (130) |
| - Retirement | (30) | 30 | - |
| - Death w/ Beneficiary | (5) | 5 | - |
| - Death w/o Beneficiary | - | (10) | (10) |
| - Net change | (35) | 25 | (10) |
| 3. Participants as of January 1, 2010 | 4,251 | 720 | 4,971 |
| - New Entrants/Rehires | 100 | - | 100 |
| - Terminated Nonvested | (100) | - | (100) |
| - Terminated Vested (Lump Sum Cashout) | (120) | - | (120) |
| - Retirement | (50) | 50 | - |
| - Death w/ Beneficiary | (5) | 5 | - |
| - Death w/o Beneficiary | - | (2) | (2) |
| - Net change | (175) | 53 | (122) |
| 4. Participants as of January 1, 2011 | 4,076 | 773 | 4,849 |

National Oil Full-Time Salaried Pension Plan
Age/Svc/Earnings as of January 1, 2011

| | | Service (Years) | | | | | | |
|------------------------|--------|------------------------|--------|--------|--------|--------|--------|--------|
| | | < 5 | 5-10 | 10-15 | 15-20 | >20 | Totals | |
| Age (Years) | < 25 | # Participants | 180 | 120 | - | - | - | 300 |
| | | Average Salary | 35,900 | 46,100 | - | - | - | 40,000 |
| | 25-35 | # Participants | 210 | 140 | 90 | 55 | - | 495 |
| | | Average Salary | 47,100 | 58,000 | 62,000 | 65,100 | - | 54,900 |
| | 35-45 | # Participants | 175 | 198 | 176 | 201 | 201 | 951 |
| | | Average Salary | 59,400 | 66,300 | 70,200 | 76,300 | 77,800 | 70,300 |
| | 45-55 | # Participants | 164 | 153 | 175 | 290 | 739 | 1,521 |
| | | Average Salary | 62,600 | 65,200 | 72,000 | 75,600 | 77,800 | 73,800 |
| | 55-65 | # Participants | 168 | 77 | 77 | 75 | 399 | 796 |
| | | Average Salary | 61,200 | 64,100 | 68,100 | 73,900 | 74,200 | 69,900 |
| | > 65 | # Participants | 4 | 3 | 1 | 2 | 3 | 13 |
| | | Average Salary | 47,000 | 52,100 | 47,000 | 57,600 | 53,900 | 51,400 |
| | Totals | # Participants | 901 | 691 | 519 | 623 | 1,342 | 4,076 |
| | | Average Salary | 52,700 | 60,600 | 69,000 | 74,600 | 76,700 | 67,400 |
| | | Avg Age | 45.2 | | | | | |
| | | Avg Svc | 15.4 | | | | | |
| | | Avg Salary | 67,400 | | | | | |

National Oil Full-Time Salaried Supplemental Executive Retirement Plan (SERP)

| | |
|---------------------------------------|---|
| Eligibility | Immediate |
| Normal Retirement Age | 65 |
| Early Retirement Age | 55 with 5 years of plan membership |
| Accrued Benefit | Accrued Benefit calculated under the provisions of the Salaried Pension Plan without regard to tax system maximums <u>less</u> actual Accrued Benefit under the Salaried Pension Plan |
| Normal Retirement Benefit | Accrued Benefit |
| Early Retirement Benefit | Accrued benefit reduced by 0.25% per month that early retirement precedes age 62 for active participants |
| Commencement Date and Form of Benefit | Must be same as under Salaried Pension Plan |
| Indexing | None |
| Termination Benefit | None |
| Pre-Retirement Death Benefit | None |
| Disability Benefit | None |

Supplemental Retirement Plan
 Historical Valuation Results - January 1

2008 2009 2010 2011

Participant Summary

| | | | | |
|---|---------|---------|---------|---------|
| 1. Active Participants | | | | |
| (a) count | 49 | 52 | 60 | 60 |
| (b) average age | 53.1 | 53.1 | 52.0 | 50.0 |
| (c) average service | 18.2 | 18.2 | 19.1 | 17.0 |
| (d) average future working lifetime | 6.3 | 6.3 | 6.3 | 8.8 |
| (e) average earnings (prior year) | 315,000 | 325,000 | 350,000 | 350,000 |
| 2. Deferred Vested Participants | | | | |
| (a) count | - | - | - | - |
| 3. Pensioners (incl beneficiaries) | | | | |
| (a) count | 20 | 30 | 30 | 30 |
| (b) average age | 69.0 | 66.0 | 66.0 | 66.1 |
| (c) average annual benefit | 21,100 | 22,000 | 22,000 | 22,000 |

Valuation Results (numbers in \$000's) *

| | | | | |
|--|---------------------------|----------|----------|----------|
| 1. Reconciliation of funded status at valuation date: | | | | |
| (a) Accrued Benefit Obligation | (47,091) | (50,223) | (66,249) | (80,454) |
| (b) Fair Value of Assets | - | - | - | - |
| (c) Funded Status: (a) + (b) | (47,091) | (50,223) | (66,249) | (80,454) |
| 2. Service Cost | 1,211 | 1,508 | 1,841 | 1,791 |
| 3. Benefit Payments | 224 | 660 | 660 | 660 |
| 4. Actuarial Basis | | | | |
| (a) Discount rate | 5.25% | 7.50% | 6.50% | 5.50% |
| (b) Salary scale | 3.50% | 3.50% | 3.50% | 3.50% |
| (c) CPI | 3.00% | 3.00% | 2.50% | 2.50% |
| (d) All other assumptions | Same as the Salaried Plan | | | |

* numbers may not add due to rounding

National Oil Full-Time Hourly Union Pension Plan

| | |
|------------------------------|--|
| Eligibility | Immediate |
| Vesting | 100% after 10 years of plan membership |
| Normal Retirement Age | 65 |
| Early Retirement Age | 55 with 10 years of service |
| Normal Retirement Benefit | \$80 per month times all years of service for terminations/retirements after 2004 |
| Accrued Benefit | Benefit calculated as under the normal retirement benefit formula based on service and multiplier as of date of calculation |
| Early Retirement Benefit | Unreduced benefit at 62 with 30 years of service, otherwise reduced by 0.25% per month that early retirement precedes Normal Retirement Age for actives participants and actuarial equivalent for terminated vested participants |
| Form of Benefit | With a spouse, 60% joint & survivor benefit without reduction Without a spouse, single life annuity. |
| Optional Forms of Benefit | Level Income Option, Lump Sum Option, and 75% Joint & Survivor Option |
| Post-Retirement Indexing | Lesser of 1% or CPI each year after pension commencement |
| Termination Benefit | (1) Lump sum value equal to actuarial present value of accrued pension payable at age 65; or (2) Deferred pension |
| Pre-Retirement Death Benefit | Lump sum value equal to actuarial present value of accrued pension payable at age 65 to named beneficiary |
| Disability Benefit | None |

National Oil Full-Time Hourly Union Pension Plan
Historical Actuarial Valuation Results

2008 2009 2010 2011

Participant Summary - January 1

| | | | | |
|--|--------|--------|--------|--------|
| <i>Active Participants</i> | | | | |
| (a) count | 6,253 | 6,321 | 6,395 | 6,225 |
| (b) average age | 46.3 | 46.0 | 46.1 | 46.1 |
| (c) average service | 17.2 | 17.0 | 17.3 | 17.3 |
| (d) average future working lifetime | 10.8 | 10.8 | 10.8 | 10.8 |
| (e) average plan earnings (prior year) | 49,000 | 49,500 | 51,000 | 53,100 |
| <i>Deferred Vested Participants</i> | | | | |
| (a) count | - | - | - | - |
| <i>Pensioners (incl beneficiaries)</i> | | | | |
| (a) count | 1,060 | 1,081 | 1,120 | 1,135 |
| (b) average age | 71.8 | 70.0 | 68.0 | 68.0 |
| (c) average annual benefit | 11,200 | 12,200 | 13,400 | 13,400 |

Plan Assets (numbers in \$000's) *

| | | | | |
|---|-----------|-----------|-----------|-----------|
| <i>Change in Plan Assets during Prior Year:</i> | | | | |
| Market Value of Assets at January 1 of prior year | 444,857 | 471,638 | 432,988 | 488,942 |
| Employer Contributions during prior year | 42,000 | 100,000 | 100,000 | 100,000 |
| Benefit Payments during prior year | (12,000) | (15,000) | (17,000) | (17,000) |
| Expenses during prior year | - | - | - | - |
| Investment return during prior year | (3,219) | (123,650) | (27,046) | 34,479 |
| Market Value of Assets at January 1 of current year | 471,638 | 432,988 | 488,942 | 606,421 |
| Rate of return during prior year | -1% | -24% | -6% | 6.5% |
| <i>Average Portfolio Mix During Prior Year:</i> | | | | |
| (a) Domestic Large Cap Equities | 30% | 32% | 30% | 30% |
| (b) Domestic Small Cap Equities | 27% | 25% | 10% | 10% |
| (c) Domestic Fixed Income | 27% | 23% | 35% | 35% |
| (d) International Equities | 11% | 15% | 20% | 20% |
| (e) Real Estate | 3% | 3% | 0% | 0% |
| (f) Cash | <u>2%</u> | <u>2%</u> | <u>5%</u> | <u>5%</u> |
| (g) Total | 100% | 100% | 100% | 100% |
| <i>Asset Class Returns during Prior Year:</i> | | | | |
| (a) Domestic Large Cap Equities | -3% | -30% | -12% | 12% |
| (b) Domestic Small Cap Equities | -2% | -45% | -5% | 5% |
| (c) Domestic Fixed Income | 4% | 8% | 1% | 1% |
| (d) International Equities | -5% | -35% | -10% | 10% |
| (e) Real Estate | 5% | 5% | 3% | 3% |
| (f) Cash | 3% | 3% | 1% | 1% |

* numbers may not add due to rounding

National Oil Full-Time Hourly Union Pension Plan
Historical Actuarial Valuation Results

2008 2009 2010 2011

Actuarial Valuation - January 1 (numbers in \$000's) *

| 1. Actuarial Accrued Liability: | | | | | | |
|--|---|-----------|-----------|-----------|-----------|-----------|
| <i>Active Multiplier</i> | | | | | | |
| | \$ | 80 | \$ | 80 | \$ | 80 |
| (a) Active participants | 441,771 | | 496,187 | | 543,526 | 587,192 |
| (b) Deferred vested participants | - | | - | | - | - |
| (c) Pensioners | 118,720 | | 146,389 | | 172,592 | 182,508 |
| (d) Total | 560,491 | | 642,576 | | 716,118 | 769,700 |
| 2. Actuarial Value of Assets | 471,638 | | 432,988 | | 488,942 | 606,421 |
| 3. Unfunded Actuarial Accrued Liability: (1d)-(2) | 88,853 | | 209,588 | | 227,176 | 163,279 |
| 4. Normal Cost (beg. Of year) | 25,684 | | 29,187 | | 31,418 | 33,942 |
| 5. Change in Unfunded AAL during prior year: | | | | | | |
| (a) Unfunded AAL at prior valuation date | 88,534 | | 88,853 | | 209,588 | 227,176 |
| (b) Adjustment for Interest | 5,976 | | 5,775 | | 13,623 | 14,766 |
| (c) Normal Cost w/interest less contributions | (16,566) | | (75,896) | | (72,165) | (69,790) |
| (d) (Gain)/Loss on investment | 34,259 | | 157,069 | | 57,888 | - |
| (e) (Gain)/Loss on termination | (10,400) | | (6,000) | | (8,000) | 12,000 |
| (f) (Gain)/Loss on salary increases less than expected | - | | - | | - | - |
| (g) (Gain)/Loss on mortality | (1,900) | | (1,900) | | (3,900) | (28,000) |
| (h) (Gain)/Loss on retirement | (550) | | (400) | | (600) | (26,000) |
| (i) (Gain)/Loss on assumption changes | - | | - | | - | 33,000 |
| (j) (Gain)/Loss on expenses | - | | - | | - | - |
| (k) (Gain)/Loss on all other factors | (10,501) | | 42,087 | | 30,742 | 127 |
| (l) Change in active benefit multiplier | - | | - | | - | - |
| (m) Unfunded AAL at current valuation date | 88,853 | | 209,588 | | 227,176 | 163,279 |
| 6. Actuarial Basis | | | | | | |
| (a) Interest | 6.50% | | 6.50% | | 6.50% | 6.00% |
| (b) Salary scale | N/A | | N/A | | N/A | N/A |
| (c) Consumer Price Index | 3.00% | | 3.00% | | 2.50% | 2.50% |
| (d) Mortality | GAM 1994 | | GAM 1994 | | GAM 1994 | GAM 1994 |
| (e) Turnover | Based on NOC experience for 1996-2006 | | | | | |
| (f) Retirement age | Age 62, with the appropriate early retirement reduction, if any | | | | | |
| (g) Proportion married and age difference | 80% married, husbands 3 years older than wives | | | | | |
| (h) Expenses | Assume all expenses paid by company | | | | | |
| (i) Post-retirement indexing | 1% | | | | | |
| (j) Asset Valuation Method | Market value of assets | | | | | |
| (k) Actuarial Cost Method | Unit credit | | | | | |

* numbers may not add due to rounding

**National Oil Full-Time Hourly Union Pension Plan
Reconciliation of Plan Participants (2008 - 2011)**

| | <u>Active</u> | <u>Pensioners/ Beneficiaries</u> | <u>Total</u> |
|--|---------------|--------------------------------------|--------------|
| 1. Participants as of January 1, 2008 | 6,253 | 1,060 | 7,313 |
| - New Entrants/Rehires | 170 | - | 170 |
| - Terminated Nonvested | (30) | - | (30) |
| - Terminated Vested (Lump Sum Cashout) | (40) | - | (40) |
| - Retirement | (30) | 30 | - |
| - Death w/ Beneficiary | (2) | 2 | - |
| - Death w/o Beneficiary | - | (11) | (11) |
| - Net change | 68 | 21 | 89 |
| 2. Participants as of January 1, 2009 | 6,321 | 1,081 | 7,402 |
| - New Entrants/Rehires | 220 | - | 220 |
| - Terminated Nonvested | (50) | - | (50) |
| - Terminated Vested (Lump Sum Cashout) | (50) | - | (50) |
| - Retirement | (40) | 40 | - |
| - Death w/ Beneficiary | (6) | 6 | - |
| - Death w/o Beneficiary | - | (7) | (7) |
| - Net change | 74 | 39 | 113 |
| 3. Participants as of January 1, 2010 | 6,395 | 1,120 | 7,515 |
| - New Entrants/Rehires | 50 | - | 50 |
| - Terminated Nonvested | (50) | - | (50) |
| - Terminated Vested (Lump Sum Cashout) | (120) | - | (120) |
| - Retirement | (50) | 50 | - |
| - Death w/ Beneficiary | - | - | - |
| - Death w/o Beneficiary | - | (35) | (35) |
| - Net change | (170) | 15 | (155) |
| 4. Participants as of January 1, 2011 | 6,225 | 1,135 | 7,360 |

**National Oil Full-Time Hourly Union Pension Plan
Age/Svc/Earnings as of January 1, 2011**

| | | Service (Years) | | | | | | |
|------------------------|--------|------------------------|--------|--------|--------|--------|--------|--------|
| | | < 5 | 5-10 | 10-15 | 15-20 | >20 | Totals | |
| Age (Years) | < 25 | # Participants | 200 | 139 | - | - | - | 339 |
| | | Average Salary | 40,000 | 45,000 | - | - | - | 42,100 |
| | 25-35 | # Participants | 256 | 105 | 91 | 62 | - | 514 |
| | | Average Salary | 44,000 | 46,000 | 50,000 | 53,000 | - | 46,600 |
| | 35-45 | # Participants | 215 | 330 | 320 | 659 | 441 | 1,965 |
| | | Average Salary | 49,000 | 45,400 | 53,400 | 54,300 | 55,900 | 52,400 |
| | 45-55 | # Participants | 120 | 160 | 315 | 688 | 895 | 2,178 |
| | | Average Salary | 50,000 | 47,000 | 55,800 | 55,100 | 56,800 | 55,000 |
| | 55-65 | # Participants | 95 | 62 | 91 | 180 | 779 | 1,207 |
| | | Average Salary | 49,000 | 49,600 | 56,200 | 56,900 | 58,200 | 56,700 |
| | > 65 | # Participants | 7 | 6 | 5 | 3 | 1 | 22 |
| | | Average Salary | 51,000 | 50,000 | 57,800 | 55,000 | 60,000 | 53,200 |
| | Totals | # Participants | 893 | 802 | 822 | 1,592 | 2,116 | 6,225 |
| | | Average Salary | 45,700 | 46,100 | 54,300 | 54,900 | 57,100 | 53,100 |
| | | Avg Age | 46.1 | | | | | |
| | | Avg Svc | 17.3 | | | | | |
| | | Avg Salary | 53,100 | | | | | |

National Oil Part-Time DC Pension Plan

| | |
|---|---|
| Eligibility | Immediate |
| Vesting | Immediate |
| Employer Contributions - Base Employer Contributions - Match | 3% of base pay 100% on the first 3% and 50% thereafter |
| Employee Contributions | Up to 6% of base pay |
| Plan Fund | The employer invests the contributions in a balanced fund. There are no employee investment choices. |
| Account Balance | Contributions are accumulated in member's individual account earning investment income at the rate of return earned by the Plan Fund. |
| Benefit on Termination or Retirement | Account balance is transferred out for the member after one year from date of termination or retirement, unless employee has since returned to employment with NOC. |
| Benefit on Death | Account balance is payable to named beneficiary |

National Oil Part-Time DC Pension Plan
Historical Results - January 1

2008 2009 2010 2011

Participant Summary

| | | | | |
|--|-----------|-----------|-----------|-----------|
| (a) number participating during prior year | 6,250 | 6,500 | 7,000 | 6,800 |
| (b) average age | 30.9 | 28.9 | 29.2 | 30.8 |
| (c) average base pay | 26,000.00 | 29,000.00 | 30,000.00 | 31,000.00 |

Plan Assets (numbers in \$000's) *

| | | | | |
|---|---------|----------|---------|---------|
| <i>Change in Plan Assets during Prior Year:</i> | | | | |
| Market Value of Assets at January 1 of prior year | 57,871 | 73,760 | 71,556 | 96,044 |
| Employee Contributions during prior year | 6,500 | 7,540 | 8,400 | 8,432 |
| Company Contributions during prior year | 10,563 | 12,253 | 13,650 | 13,702 |
| Benefit Payments during prior year | (5,625) | (5,850) | (6,300) | (6,120) |
| Expenses during prior year | - | - | - | - |
| Investment return during prior year | 4,451 | (16,146) | 8,737 | 7,284 |
| Market Value of Assets at January 1 of current year | 73,760 | 71,556 | 96,044 | 119,341 |
| Rate of return during prior year | 7% | -20% | 11% | 7% |

* numbers may not add due to rounding

National Oil Full-Time Salaried and Union Retiree Health Benefit Program

| | |
|---------------------------|--|
| Eligibility | Immediate |
| Earliest Retirement Age | 55 and 10 years of service |
| Retirement benefit | Retirees and their spouses may elect to participate in a self insured health plan, with 100% of cost paid by the employer |
| Death benefit | Coverage continues for the life of the spouse after death of an eligible employee |
| Benefits Covered - Pre 65 | \$0 deductible; \$0 copay No lifetime maximum Office visits Hospital visits Surgery Prescription drugs |
| Benefits Covered - Pre 65 | \$0 deductible; \$0 copay No lifetime maximum Office visits Hospital visits Surgery Prescription drugs Government Benefits carve out |

Retiree Health and Welfare Program
Historical Valuation Results

2008 2009 2010 2011

Valuation Results - January 1 (numbers in \$000's) *

| | | | | |
|---|--------------------------------------|-------------|-------------|-------------|
| 1. Reconciliation of funded status at valuation date: | | | | |
| (a) Accrued Benefit Obligation | | | | |
| (i) actives | (847,616) | (858,653) | (1,396,669) | (1,929,494) |
| (ii) retirees | (513,360) | (585,386) | (719,754) | (923,781) |
| (iii) total | (1,360,976) | (1,444,039) | (2,116,424) | (2,853,275) |
| (b) Market Value of Assets | 0 | 0 | 0 | 0 |
| (c) Surplus: (a) + (b) | (1,360,976) | (1,444,039) | (2,116,424) | (2,853,275) |
| 2. Service Cost (beg. of year) | 52,976 | 53,666 | 87,292 | 148,423 |
| 3. Benefit Payments | 27,000 | 30,000 | 32,000 | 40,000 |
| 4. Actuarial Basis | | | | |
| (a) Discount rate | 5.25% | 7.50% | 6.50% | 5.50% |
| (b) Return on assets | N/A | N/A | N/A | N/A |
| (c) Medical trend | | | | |
| Initial rate | 6.00% | 7.00% | 10.00% | 10.00% |
| Annual decrease | 0.50% | 0.50% | 0.50% | 0.50% |
| Ultimate rate | 4.50% | 4.50% | 5.00% | 5.00% |
| Year ultimate trend rate reached | 2011 | 2014 | 2020 | 2020 |
| (d) CPI | 3.00% | 3.00% | 2.50% | 2.50% |
| (e) Per capita claims cost | 9,500 | 10,500 | 12,000 | 12,000 |
| (f) Retirement assumption | Age 62 with 10 years of service | | | |
| (g) All other demographic assumptions | Same as those used for pension plans | | | |

* numbers may not add due to rounding