

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 11-K

ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

(Mark One)

Annual report pursuant to Section 15(d) of the Securities Exchange
Act of 1934

(No fee required, effective October 7, 1996)

For the fiscal year ended DECEMBER 31, 2003

Or

Transition report pursuant to Section 15(d) of the Securities
Exchange Act of 1934

(No fee required)

For the transition period from _____ to _____

Commission file number 1-12317

A. Full title of the plan and the address of the plan, if different from
that of the issuer named below NATIONAL-OILWELL RETIREMENT AND THRIFT PLAN

B. Name of issuer of the securities held pursuant to the plan and the
address of its principal executive office NATIONAL-OILWELL, INC.
10000 RICHMOND AVENUE
6TH FLOOR
HOUSTON, TEXAS 77042-4200

REQUIRED INFORMATION

The National-Oilwell Retirement and Thrift Plan (the Plan) is subject to the requirements of the Employee Retirement Income Security Act of 1974 (ERISA).

ITEM 4. In lieu of the requirements of Items 1, 2, and 3 of this Form 11-K, the following financial statements of the Plan, notes thereto, and the Report of Independent Registered Public Accounting Firm thereon are being filed in this Report:

- (a) Report of Independent Registered Public Accounting Firm
- (b) Statements of Net Assets Available for Benefits - December 31, 2003 and 2002
- (c) Statement of Changes in Net Assets Available for Benefits - Year ended December 31, 2003; and
- (d) Notes to Financial Statements

The Consent of Independent Registered Public Accounting Firm to the incorporation by reference of the foregoing financial statements in the Registration Statement on Form S-8 (No. 333-46459) pertaining to the Plan is being filed as Exhibit 23.1 to this Report.

NATIONAL-OILWELL RETIREMENT AND THRIFT PLAN

FINANCIAL STATEMENTS AND SCHEDULES

DECEMBER 31, 2003

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Report of Independent Registered Public Accounting Firm

The Benefit Plan Administrative Committee
National-Oilwell Retirement and Thrift Plan

We have audited the accompanying statements of net assets available for benefits of the National-Oilwell Retirement and Thrift Plan as of December 31, 2003 and 2002, and the related statement of changes in net assets available for benefits for the year ended December 31, 2003. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of the Plan at December 31, 2003 and 2002, and the changes in its net assets available for benefits for the year ended December 31, 2003, in conformity with U.S. generally accepted accounting principles.

Our audits were performed for the purpose of forming an opinion on the financial statements taken as a whole. The accompanying supplemental schedule of assets (held at end of year) as of December 31, 2003, is presented for purposes of additional analysis and is not a required part of the financial statements but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. This supplemental schedule is the responsibility of the Plan's management. The supplemental schedule has been subjected to the auditing procedures applied in our audits of the financial statements and, in our opinion, is fairly stated in all material respects in relation to the financial statements taken as a whole.

/s/ Ernst & Young LLP

Houston, TX
June 23, 2004

National-Oilwell Retirement and Thrift Plan
 Statements of Net Assets Available for Benefits

	DECEMBER 31	
	2003	2002
ASSETS		
Receivables:		
Accrued income	\$ --	\$ 621
Sales not yet settled	427,313	--
Total receivables	427,313	621
Investments	139,282,854	111,825,776
Total assets	139,710,167	111,826,397
LIABILITIES		
Cash overdraft	227,392	27,016
Purchases not yet settled	104,791	--
Total liabilities	332,183	27,016
Net assets available for benefits	\$139,377,984	\$111,799,381

See accompanying notes.

National-Oilwell Retirement and Thrift Plan
Statement of Changes in Net Assets Available for Benefits

Year ended December 31, 2003

Additions:	
Employer contributions	\$ 9,100,437
Participant contributions	7,731,905
Participant rollovers	616,830
Investment income	816,591
Net appreciation in fair value of investments	12,967,187

Total additions	31,232,950
Deductions:	
Benefits paid to participants	8,765,086
Corrective distributions	4,897
Administrative expenses	63,498

Total deductions	8,833,481
Other changes in net assets:	
Transfers from other qualified plans	5,179,134

Net increase	27,578,603
Net assets available for benefits at:	
Beginning of year	111,799,381

End of year	\$139,377,984
	=====

See accompanying notes.

National-Oilwell Retirement and Thrift Plan

Notes to Financial Statements

December 31, 2003

1. DESCRIPTION OF PLAN

The following description of the National-Oilwell Retirement and Thrift Plan (the "Plan") is provided for general information only. Participants should refer to the Summary Plan Description for a more complete description of the Plan's provisions, a copy of which is available from National-Oilwell, L.P. (the "Company").

GENERAL

The Plan was established effective April 1, 1987 for the benefit of the employees of the Company. The Plan is a defined contribution plan covering substantially all domestic employees who have completed at least six months of service. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 ("ERISA").

Effective November 1, 2003, the Company merged the Hydralift Holding Inc. 401(k) Retirement Plan and Trust into the Plan. Net assets of approximately \$4,447,300 were transferred into the Plan as a result of the merger.

Effective December 1, 2003, the Company merged the Hydralift Inc. 401(k) Plan and Trust into the Plan. Net assets of approximately \$731,800 were transferred into the Plan as a result of the merger.

CONTRIBUTIONS

Participants may make both pretax and after-tax contributions to the Plan. Effective January 1, 2003, the Plan was amended to allow pretax salary deferral contributions of 1% to 100% (less any after-tax contributions, required withholdings, or other elected deductions) of compensation, subject to certain Internal Revenue Service ("IRS") limitations. After-tax contributions remain at 1% to 18% of compensation. However, combined pretax and after-tax contributions, required withholdings, and other elected deductions cannot exceed 100% of compensation. Prior to January 1, 2003, the minimum contribution was 1% of compensation and the maximum contribution was 18% (both pretax and after-tax combined). The Company matches 100% of the first 3% and 50% of the next 2% of each participant's contribution. The Company's discretionary contribution to the Plan, the Employer Retirement Contribution ("Retirement"), is allocated to

National-Oilwell Retirement and Thrift Plan

Notes to Financial Statements (continued)

participants' accounts based on their years of service. Each participant may direct the trustee to invest both the participant's and the Company's contributions in one or more of the investment options offered by the Plan.

VESTING

Participants are immediately vested in participant and employer contributions and the related earnings which have been credited to their accounts.

BENEFIT PAYMENTS

The Plan pays lump-sum benefits on retirement, disability, death, or termination of employment. In-service withdrawals, subject to certain rules and restrictions, may also be made from certain account balances.

PARTICIPANT LOANS

The Plan includes a loan provision that permits participants to borrow up to the lesser of \$50,000 or 50% of the total value of their Plan assets. The loans are payable in principal installments plus interest at prime plus 1% through payroll deductions and are due in one to five-year terms.

ADMINISTRATIVE EXPENSES

Certain administrative expenses are paid from the Plan's assets. All other Plan expenses are paid by the Company.

PLAN TERMINATION

Although it has not expressed any intent to do so, the Company has the right under the Plan to discontinue contributions at any time and to terminate the Plan subject to the provisions of ERISA. Participants are 100% vested in their accounts in any event. Assets would be distributed to participants as prescribed by ERISA.

2. SUMMARY OF ACCOUNTING POLICIES

BASIS OF ACCOUNTING

The accompanying financial statements of the Plan have been prepared on the accrual basis of accounting in accordance with U.S. generally accepted accounting principles. Benefit payments to participants are recorded upon distribution.

National-Oilwell Retirement and Thrift Plan

Notes to Financial Statements (continued)

2. SUMMARY OF ACCOUNTING POLICIES (CONTINUED)

USE OF ESTIMATES

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates that affect the reported amounts in the financial statements and accompanying notes and schedule. Actual results could differ from those estimates.

INVESTMENT VALUATION AND INCOME RECOGNITION

Money market funds are stated at cost, which approximates fair value. Investments in common stock and mutual funds are stated at fair value, based on quotations obtained from national securities exchanges. Investments in common collective trust funds are based on quoted market values as determined by the issuer based on the fair value of the underlying investments. Participant loans are stated at cost, which approximates fair value.

Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date.

RISK AND UNCERTAINTIES

The Plan provides for investments in various securities which, in general, are exposed to various risks, such as interest rate, credit, and overall market volatility risks. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the statements of net assets available for benefits and participant account balances.

3. INVESTMENTS

Effective October 1, 2003, Wachovia Bank, N.A. ("Wachovia"), was named trustee of the Plan. Prior to October 1, 2003, American Express Trust Company ("AETC") served as the Plan's trustee. Due to certain contractual restrictions, AETC continues to hold the American Express Trust Income Fund II at December 31, 2003. All other Plan assets are held by Wachovia.

National-Oilwell Retirement and Thrift Plan

Notes to Financial Statements (continued)

3. INVESTMENTS (CONTINUED)

Individual investments that represent 5% or more of the Plan's net assets are as follows:

	DECEMBER 31	
	2003	2002
American Express Trust Income Fund II	\$25,307,741	\$47,753,497
National-Oilwell common stock	9,477,778	9,265,052
Enhanced Stock Market Fund	16,239,005	--
Vanguard Growth Index Fund	14,488,029	--
Vanguard Total International Stock Fund	10,451,540	--
Vanguard Balanced Index Fund	8,169,082	--
Gartmore Morley Stable Value Fund	26,941,954	--
American Express Trust Equity Index Fund II	--	12,116,031
AIM Balanced Fund	--	6,435,757
AXP Growth Fund	--	11,052,635
Janus Worldwide Fund	--	7,030,521

During 2003, the Plan's investments (including investments bought, sold, and held during the year) appreciated in value as follows:

Common stock	\$ 328,930
Common collective trust funds	4,907,061
Mutual funds	7,731,196
Net appreciation	\$12,967,187

4. INCOME TAX STATUS

The Plan has received a determination letter from the IRS dated September 8, 2003, stating that the Plan is qualified under Section 401(a) of the Internal Revenue Code (the "IRC") and, therefore, the related trust is exempt from taxation. Subsequent to this determination by the IRS, the Plan was amended. Once qualified, the Plan is required to operate in conformity with the IRC to maintain its qualification. The Plan sponsor has indicated that it will take the necessary steps, if any, to bring the Plan's operations into compliance with the IRC.

National-Oilwell Retirement and Thrift Plan

Schedule H, Line 4(i) - Schedule of Assets (Held At End of Year)

December 31, 2003
 EIN: 76-0488987 PN: 001

IDENTITY OF ISSUE, BORROWER, LESSOR, OR SIMILAR PARTY	DESCRIPTION OF INVESTMENT	CURRENT VALUE
*National-Oilwell, Inc.	423,782 shares of common stock	\$ 9,477,778
*Wachovia Bank	Enhanced Stock Market Fund	16,239,005
Dreyfus Funds	Dreyfus Small Cap Stock Index Fund	881,438
Dreyfus Funds	Dreyfus Midcap Index Fund	1,010,788
Principal Investors	Principal Investors Midcap Value Institutional Fund	598,491
Principal Investors	Principal Investors Midcap Growth Institutional Fund	6,045,869
Vanguard	Vanguard Value Index Fund	6,065,538
Vanguard	Vanguard Growth Index Fund	14,488,029
Vanguard	Vanguard Small Cap Value Index Fund	879,852
Vanguard	Vanguard Small Cap Growth Index Fund	910,627
Vanguard	Vanguard Total International Stock Index Fund	10,451,540
Vanguard	Vanguard Balanced Index Fund	8,169,082
Vanguard	Vanguard Index Fund	6,213,329
Gartmore Morley	Gartmore Morley Stable Value Fund	26,941,954
Evergreen Investments	Evergreen Money Market Fund	93,425
*American Express Trust Company	American Express Trust Income Fund II	25,307,741
Various	Self-directed brokerage accounts	28,321
*Participant loans	Various maturities and interest rates ranging from 5.00% to 11.00%	5,480,047
		----- \$ 139,282,854 =====

*Party-in-interest

SIGNATURE

The Plan. Pursuant to the requirements of the Securities Exchange Act of 1934, the trustees (or other persons who administer the employee benefit plan) have duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

NATIONAL-OILWELL RETIREMENT AND THRIFT PLAN

June 25, 2004

/s/Daniel L. Molinaro

Date

Daniel L. Molinaro
Member of the National-Oilwell Benefits
Plan Administrative Committee

EXHIBIT INDEX

Exhibit Number -----	Description -----
23.1	Consent of Independent Registered Public Accounting Firm

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-46459) pertaining to the National-Oilwell Retirement and Thrift Plan of our report dated June 23, 2004, with respect to the financial statements and schedule of the National-Oilwell Retirement and Thrift Plan included in this Annual Report (Form 11-K) for the year ended December 31, 2003.

/s/ Ernst & Young LLP

Houston, Texas
June 23, 2004