

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 11-K

(Mark One)

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**ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT
OF 1934 FOR THE FISCAL YEAR ENDED DECEMBER 31, 2005.**

OR

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**TRANSITION REPORT PURSUANT TO SECTION 15(D) OF THE SECURITIES EXCHANGE
ACT OF 1934 FOR THE TRANSITION PERIOD FROM _____ TO _____.**

COMMISSION FILE NO. 0-21911

SYNTROLEUM 401(k) PLAN

**4322 South 49th West Ave.
Tulsa, Oklahoma 74107**

(Full title of the plan and address of the plan)

SYNTROLEUM CORPORATION

Delaware

(State or other jurisdiction of
incorporation or organization)

73-1565725

(I.R.S. Employer
Identification No.)

**4322 South 49th West Ave.
Tulsa, Oklahoma 74107**

(Name of issuer of the securities held pursuant to the plan and the address of its principal executive offices)

**SYNTROLEUM 401(k) PLAN
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FOR THE FISCAL YEAR ENDED DECEMBER 31, 2005**

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Report of Independent Registered Public Accounting Firm

Participants and Administrator
Syntroleum 401(k) Plan

We have audited the accompanying statements of net assets available for benefits of the Syntroleum 401(k) Plan as of December 31, 2005 and 2004, and the related statements of changes in net assets available for benefits for the years then ended. 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. The Plan is not required to have, nor were we engaged to perform an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, 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 Syntroleum 401(k) Plan as of December 31, 2005 and 2004, and the changes in net assets available for benefits for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Our audit was conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedule of assets (held at end of year) is presented for purposes of additional analysis and is not a required part of the basic 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. The supplemental schedule has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

/s/ GRANT THORNTON LLP
Tulsa, Oklahoma
June 14, 2006

SYNTROLEUM 401(k) PLAN
STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS

	<u>December 31,</u> <u>2005</u>	<u>December 31,</u> <u>2004</u>
INVESTMENTS:		
Pooled separate accounts, at fair value	\$ 3,100,446	\$ 2,395,803
Participant loans	<u>33,558</u>	<u>6,230</u>
 TOTAL NET ASSETS AVAILABLE FOR BENEFITS	 <u>\$ 3,134,004</u>	 <u>\$ 2,402,033</u>

The accompanying notes are an integral part of these financial statements.

SYNTROLEUM 401(k) PLAN
STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

	For the Year Ended December 31,	
	2005	2004
ADDITIONS TO NET ASSETS ATTRIBUTED TO:		
Contributions-		
Participant	\$ 496,484	\$ 396,000
Rollover	105,741	44,123
Total contributions	<u>602,225</u>	<u>440,123</u>
Investment income-		
Net appreciation in fair value of investments	225,473	201,479
Interest income	313	540
Total investment income	<u>225,786</u>	<u>202,019</u>
Total additions	<u>828,011</u>	<u>642,142</u>
DEDUCTIONS FROM NET ASSETS ATTRIBUTED TO:		
Benefits paid to participants	95,752	189,847
Administrative expenses	<u>288</u>	<u>394</u>
Total deductions	<u>96,040</u>	<u>190,241</u>
NET INCREASE IN NET ASSETS AVAILABLE FOR BENEFITS	731,971	451,901
NET ASSETS AVAILABLE FOR BENEFITS:		
Beginning of year	<u>2,402,033</u>	<u>1,950,132</u>
End of year	<u>\$ 3,134,004</u>	<u>\$ 2,402,033</u>

The accompanying notes are an integral part of these financial statements.

SYNTROLEUM 401(k) PLAN
NOTES TO FINANCIAL STATEMENTS
December 31, 2005 and 2004

1. DESCRIPTION OF PLAN

The following description of the Syntroleum 401(k) Plan (the Plan) provides only general information. Participants should refer to the plan document for a more complete description of Plan provisions.

General

The Plan is a defined contribution plan covering virtually all employees of Syntroleum Corporation and its wholly-owned subsidiaries (collectively referred to as the Company) who have met the eligibility requirements. Nonresident aliens with no United States source income and collectively bargained employees are not eligible to participate in the Plan. Employees of the Company may participate in the Plan upon employment with the Company. Participants become eligible for Company matching and profit sharing contributions upon completion of more than 500 hours of service in the Plan year or if employed on the last day of the Plan year. The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 ("ERISA").

Contributions

Participants may contribute, on a pre-tax basis, 1% to 100% of eligible annual compensation as defined in the Plan, subject to a dollar limit specified each calendar year. Participant deferrals are intended to qualify as elective contributions under Section 401(k) of the Internal Revenue Code ("IRC"). Participants may transfer contributions from other qualified plans to the Plan. The Company may make discretionary matching and profit sharing contributions to the Plan. Only participants who complete more than 500 hours of service during the Plan year or are employed on the last day of the Plan year are eligible for profit sharing and Company matching contributions. During the years ended December 31, 2005 and 2004, no profit sharing or Company matching contributions were made to the Plan.

The Plan's investments consist primarily of pooled separate accounts. AXA Equitable Life Insurance Company ("AXA Equitable") is the recordkeeper of the Plan as agent for Chase Manhattan Bank ("Chase"), the asset custodian of the Plan. All funds are directed by the participants. Contributions may be divided among the funds in 1% increments. Investment allocations may be changed at any time.

Vesting

Participants are vested immediately in their contributions plus or minus actual earnings or losses thereon. Vesting in Company matching or profit sharing contributions is based on years of service. A participant becomes 20% vested after two years of service and continues to vest at 20% each year until fully vested after six years. Upon retirement, death, disability or attainment of age 55, a participant becomes 100% vested in his or her Company contributions.

Withdrawals

Upon separation from service, death, disability or attainment of age 55, a participant may elect to receive either a lump-sum amount equal to the vested balance in his or her account or an annuity over a 5, 10, 15 or 20-year period or over his or her lifetime. If the participant's vested balance is less than \$5,000, but more than \$1,000, the balance will be rolled over to an individual retirement account unless elected otherwise by the participant (Note 5). Balances less than \$1,000 are distributed in lump-sum.

Lump-sum hardship distributions are allowed from a participant's elective contributions in certain circumstances.

Participant Loans

A participant in the Plan may request a loan of, at a minimum, \$1,000, up to a maximum equal to the lesser of: (1) 50% of the participant's vested account balance or (2) \$50,000. The repayment terms of loans may not exceed five years except for loans used to acquire a participant's principal residence. Each loan bears interest at a rate determined by the plan administrator, which, during 2005 and 2004, was the prime rate at the time the loan was made plus 1% (8.25% at December 31, 2005; 5.25% to 9.50% for loans outstanding at December 31, 2005). Participants are limited to one outstanding loan.

Related Party Transactions

Certain Plan investments are in shares of pooled separate accounts managed by AXA Equitable. Transactions in such pooled separate accounts qualify as party-in-interest transactions, which are exempt from the prohibited transaction rules. Fees paid by the Plan for investment management services amounted to \$4,654 and \$4,046 for the years ended December 31, 2005 and 2004, respectively, and are included in net appreciation in fair value of investments in the statements of changes in net assets available for benefits, as the fees represent commission on investment transactions.

Plan Termination

The Company has not expressed any intent to terminate the Plan, but reserves the right to terminate it at any time, subject to the provisions of ERISA. In the event of Plan termination, participants would become 100% vested in their Company contributions.

Forfeitures

Forfeitures of nonvested accounts are first used to pay administrative expenses of the Plan and then are used to reduce Company contributions. As of December 31, 2005 and 2004, there were no forfeited nonvested accounts. During the years ended December 31, 2005 and 2004, no forfeitures were used to offset administrative expenses or Company contributions.

Participant Accounts

Each participant's account is credited with the participant's contribution, the Company's discretionary matching and profit sharing contributions, if any, and an allocation of plan earnings and losses and administrative expenses. Administrative expenses not paid by the Company and plan earnings and losses are allocated to each participant's account according to the ratio of the balance in the participant's account to the balance in all participants' accounts. Profit sharing contributions are allocated based on the participants' compensation, not to exceed 3% of such compensation.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**Basis of Accounting**

The financial statements of the Plan are prepared under the accrual method of accounting.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and changes therein, and disclosure of contingent assets and liabilities. Actual results could differ from those estimates.

Investment Valuation and Income Recognition

Pooled separate accounts are valued at the net asset market value of shares held by the Plan at year end. Participant loans are valued at their unpaid principal balances, which approximate fair value. Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded as earned. Dividends are recorded on the ex-dividend date.

The Plan provides for investments in various investment securities, which, in general, are exposed to various risks, such as interest rate, credit and market 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 participants' account balances and the amounts reported in the statements of net assets available for benefits.

Administrative Expenses

Certain administrative expenses of the Plan are paid directly by the Company. During 2005 and 2004, the Company paid \$2,000 and \$2,200 in administrative expenses on behalf of the Plan. The Company does not seek reimbursement from the Plan for these expenses.

Payment of Benefits

Benefits are recorded when paid.

3. INVESTMENTS

The following investments represent 5% or more of the Plan's net assets available for benefits as of:

	<u>December 31,</u> <u>2005</u>	<u>December 31,</u> <u>2004</u>
SSgA S&P 500 Index Fund	\$ 577,804	\$ 463,542
Janus Overseas Fund	447,619	321,992
Money Market Portfolio	277,846	176,945
Neuberger & Berman Focus Trust	257,998	239,581
Janus Fund	239,875	232,043
Neuberger & Berman Partners Trust	181,420	*
Franklin Custodian Funds – U.S. Government Securities Series	167,726	*
Alliance Small Cap Growth	157,228	*
Janus Balanced Fund	157,056	139,115

* Investment is less than 5% of the Plan's net assets at the date indicated.

For the year ended December 31, 2005 and 2004, the Plan's investments in pooled separate accounts (including gains and losses on investments bought and sold, as well as held during the year) appreciated in value by \$225,473 and \$201,479, respectively.

4. INCOME TAX STATUS

The Plan is a standardized prototype plan of AXA Equitable, which has received a determination letter from the Internal Revenue Service, dated February 5, 2002, stating that the prototype plan is qualified under Section 401(a) of the Internal Revenue Code and, therefore, the related trust is exempt from taxation.

The Company is aware of certain operational issues during 2005. The plan administrator believes all necessary actions will be taken to maintain the qualified status of the Plan and therefore, no provision for income taxes has been included in the Plan's financial statements.

5. PLAN AMENDMENTS

Effective March 28, 2005, the Plan's automatic rollover provisions were amended. Upon termination of employment, should a participant's vested interest in the Plan be less than \$5,000, but more than \$1,000, the amount will be automatically rolled over to an individual retirement account unless elected otherwise by the participant.

Effective January 1, 2005, the Company modified the definition of compensation for purposes of contributions and nondiscrimination testing under the Plan to exclude reimbursements or other expense allowances, fringe benefits (cash and non-cash), moving expenses, deferred compensation (but not stock option gains) and welfare benefits.

6. SUBSEQUENT EVENTS

Subsequent to the year ended December 31, 2005, the Company approved the adoption of the Bank of Oklahoma, N.A. standardized prototype plan. The prototype plan has received a favorable determination letter from the Internal Revenue Service dated August 30, 2001, stating that the form of the Plan is acceptable under Section 401 of the IRC for use by employers for the benefit of their employees. However, the determination letter is not an individualized determination that the Plan is qualified under Section 401(a) of the Internal Revenue Code.

Effective July 1, 2006, the Plan will adopt an amendment to include the ability to invest in qualifying employer securities, as defined in Section 407(d)(5) of ERISA, which specifically includes the common stock of the Company ("Common Stock"). The Plan will include investments in shares of Common Stock to the extent that such shares are contributed by the Company as a matching or profit sharing contribution. No purchases of Common Stock shall be permitted.

Additionally, effective July 1, 2006, the Plan will be amended to change the recordkeeper and asset custodian to Bank of Oklahoma, N.A.

Syntroleum 401(k) Plan

Schedule H, Line 4i – Schedule of assets (held at end of year)

EIN #: 73-1565725; Plan #: 001

December 31, 2005

Identity of Issue, Borrower, Lessor, or Similar Party	Description of Investment, Including Maturity Date, Rate of Interest, Collateral, Par or Maturity Value	Current Value
* AXA Equitable Life Insurance Company – Janus Fund	Pooled Separate Account	\$ 239,875
* AXA Equitable Life Insurance Company – Janus Growth & Income Fund	Pooled Separate Account	107,510
* AXA Equitable Life Insurance Company – Janus Balanced Fund	Pooled Separate Account	157,056
* AXA Equitable Life Insurance Company – Janus Overseas Fund	Pooled Separate Account	447,619
* AXA Equitable Life Insurance Company – Neuberger & Berman Focus Trust	Pooled Separate Account	257,998
* AXA Equitable Life Insurance Company – Money Market Portfolio	Pooled Separate Account	277,846
* AXA Equitable Life Insurance Company – Franklin Custodian Funds – U.S. Government Securities Series	Pooled Separate Account	167,726
* AXA Equitable Life Insurance Company – SSgA S&P 500 Index Fund	Pooled Separate Account	577,804
* AXA Equitable Life Insurance Company – FI Small/Mid Cap Value	Pooled Separate Account	91,048
* AXA Equitable Life Insurance Company – DWS Growth & Income Fund	Pooled Separate Account	75,641
* AXA Equitable Life Insurance Company – Janus Twenty Fund	Pooled Separate Account	134,916
* AXA Equitable Life Insurance Company – Neuberger & Berman Partners Trust	Pooled Separate Account	181,420
* AXA Equitable Life Insurance Company – Premier VIP High Yield	Pooled Separate Account	64,704
* AXA Equitable Life Insurance Company – Alliance Small Cap Growth	Pooled Separate Account	157,228
* AXA Equitable Life Insurance Company – AllianceBernstein Global Technology Fund	Pooled Separate Account	62,688
* AXA Equitable Life Insurance Company – American Century: Ultra Fund	Pooled Separate Account	78,410
* AXA Equitable Life Insurance Company – Moderate Allocation Portfolio	Pooled Separate Account	20,957
* Various Plan participants	Participant loans, with interest rates from 5.25% to 9.50% and various maturities	33,558
		<u>\$ 3,134,004</u>

* Parties-in-interest

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the trustee (or other persons who administer the Plan) have duly caused this annual report to be signed by the undersigned hereunto duly authorized.

Date: June 27, 2006

SYNTROLEUM 401(k) PLAN

By: /s/ Carla S. Covey
Carla S. Covey
Senior Vice President of Finance and Chief
Accounting Officer, and Plan Administrator

Consent of Independent Registered Public Accounting Firm

We have issued our report dated June 14, 2006 accompanying the financial statements and schedule included in the Annual Report for the Syntroleum 401(k) Plan on Form 11-K for the years ended December 31, 2005 and 2004. We hereby consent to the incorporation by reference of said report in the Registration Statement of Syntroleum Corporation on Form S-8 (File No. 333-134336 effective May 22, 2006).

/s/ Grant Thornton LLP

Tulsa, Oklahoma
June 14, 2006