UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 11-K

(Mark One):

x ANNUAL REPORT PURSUANT TO SECTION 15 (d) of THE SECURITIES EXCHANGE ACT OF 1934 (NO FEE REQUIRED)

For the fiscal year ended December 31, 2004

OR

" TRANSITION REPORT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 (NO FEE REQUIRED)

For the transition period from _____ to _____

Commission File No. 2-83256

A. Full title of the plan and the address of the plan, if different from that of the issuer named below:

RELIABILITY INCORPORATED EMPLOYEE STOCK SAVINGS PLAN

B. Name of issuer of the securities held pursuant to the plan and the address of its principal executive office:

RELIABILITY INCORPORATED

16400 Park Row

Houston, Texas 77084

P. O. Box 218370

Houston, Texas 77218-8370

RELIABILITY INCORPORATED

EMPLOYEE STOCK SAVINGS PLAN

December 31, 2004

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RELIABILITY INCORPORATED

EMPLOYEE STOCK SAVINGS PLAN

STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS

		December 31, Unaudited	
	2004	2003	
Plan assets:			
Investments, at fair value (Note G)	\$ 2,690,006	\$ 2,778,195	
Total assets	\$ 2,690,006	\$ 2,778,195	
Net plan liabilities:			
Cash overdraft	4,216	466	
Net assets available for benefits	\$ 2,685,790	\$ 2,777,729	

See accompanying notes.

RELIABILITY INCORPORATED

EMPLOYEE STOCK SAVINGS PLAN

STATEMENT OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

Year ended December 31, 2004

	(Unaudited)
Investment income (loss):	
Interest and dividends	\$ 36,810
Net appreciation in fair value of investments	104
Total investment gain	36,914
Contributions:	
Employee	119,726
Employer	42,695
Total contributions	162,421
Deductions:	
Withdrawals and terminations	(291,009)
Administrative fees	(265)
Total deductions	(291,274)
Decrease in net assets available for benefits	(91,939)
Net assets available for benefits at beginning of year	2,777,729
Net assets available for benefits at end of year	\$ 2,685,790

See accompanying notes.

RELIABILITY INCORPORATED

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NOTES TO FINANCIAL STATEMENTS

December 31, 2004

NOTE A EXAMINATION OF FINANCIAL STATEMENTS

The rules for Form 11 K require financial statements to be examined to the extent required by ERISA . ERISA does not require plans that have less than 100 participants as of the beginning of the plan year to have the financial statements examined. Whereas the plan had less than 100 participants as of January 1, 2003 and 2004, the financial information has not been examined by an independent registered public accountant.

NOTE B - PARTICIPATION AND CONTRIBUTIONS

In July 1983, Reliability Incorporated (the Company or Employer) adopted an Employee Stock Savings Plan (the Plan). The following description of the Plan provides only general information. Participants should refer to the Plan Agreement for a more complete description of the Plan s provisions. The Plan is subject to certain provisions of the Employee Retirement Income Security Act of 1974 (ERISA). The Plan is administered by an Administrative Committee (the Committee) appointed by the Board of Directors of the Company. All assets of the Plan, except for the Loan Fund, are held under discretionary trust agreements.

Any United States employee of the Employer who has completed six months of service including at least 900 hours of service or one year of service including at least 1,000 hours of service becomes a member (Member) of the Plan on the first day of the next month following the date on which the employee becomes eligible and may elect to make contributions to the Plan.

Under the Plan, a Member may contribute, through payroll deductions, up to 100 percent of his compensation (Employee Contribution), as defined in the Plan Agreement. Members may increase or decrease contribution percentages each pay period. Members may elect to invest their contributions in various mutual funds, a common collective trust fund or in The Reliability Incorporated Common Stock Fund (Common Stock).

The Employer matches the Employee Contribution by an amount (Employer Contribution) equal to 50 percent of the Employee Contribution up to a maximum of 2% of the Member's compensation. Also, the Employer annually contributes, for employed Members, a supplemental amount (Employer Voluntary Contribution) equal to 1% of each Member's compensation for the period during which he was a Member. An additional discretionary contribution (Discretionary Contribution) may be made. The amount of the Discretionary Contribution, if any, will be determined annually by the Board of Directors and will be contributed as a percent of each Member's compensation. The Employer did not make a Discretionary Contribution for 2004.

RELIABILITY INCORPORATED

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NOTES TO FINANCIAL STATEMENTS - (Continued)

December 31, 2004

NOTE B - PARTICIPATION AND CONTRIBUTIONS Continued

A Member receives a vested interest in the balances in the Employer Contribution, Employer Voluntary Contribution and Discretionary Contribution accounts plus allocated earnings and realized and unrealized gains and losses thereon (Employer Account) based upon years of service (as defined in the Plan) as follows:

	Vested interest in
Years of service	Employer Account
Less than 2	0%
2	20
3	40
4	60
5	80
6 or more	100

A Member always has a 100 percent vested interest in the balance in his Employee Contributions plus allocated earnings and realized and unrealized gains and losses thereon (his Employee Account). Upon death or total and permanent disability, a Member is automatically 100% vested in his Employer Account. All Members become fully vested in all their accounts if the Company terminates the Plan and account balances will be distributed as prescribed by ERISA.

NOTE C - SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting

The accompanying financial statements have been prepared using the accrual basis of accounting. Benefits are recorded when paid.

Investment Valuation

Investments in Common Stock and mutual funds are stated at their fair value based on quoted market prices. The investment in the Stable Value Fund is based on the Fund s net asset value, as determined by the issuer based on the fair value of the underlying investments and the investment in the Money Market Fund is stated at cost, which approximates fair value.

Amounts contributed by the Company are invested solely in The Reliability Incorporated Common Stock Fund. Members may begin diversifying out of the Employer contributed portion of the Reliability Incorporated Common Stock Fund beginning at age 55 if they have completed ten years of service. Common Stock may be purchased by Smith Barney Corporate Trust Company (Trustee) directly from the Company or in the open market. The Trustee has not purchased any stock directly from the Company since 1998. The purchase price per share for stock purchased from the Company is the closing price on the day prior to the purchase by the Trustee. Gains and losses realized on the sale of Reliability Incorporated Common Stock are recorded on an average cost basis.

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EMPLOYEE STOCK SAVINGS PLAN

NOTES TO FINANCIAL STATEMENTS - (Continued)

December 31, 2004

Administrative Expenses

Certain administrative expenses are paid by the Company.

Use of Estimates

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

Risks and Uncertainties

The Plan provides for investments in various investment 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 change could materially affect the amounts reported in the statements of net assets available for benefits and participant account balances.

NOTE D - WITHDRAWALS AND TERMINATIONS

A Member may elect to withdraw all or a portion of his after-tax Employee Contributions at any time. Certain restrictions apply to withdrawals of pre-tax Employee Contributions. A Member making a withdrawal from pre-tax Employee Contributions is not permitted to make future pre-tax Employee Contributions prior to the first day of the month following the expiration of six months from the date of such withdrawal.

Upon a Member s termination of employment, the Member will generally receive a benefit in the form of a lump sum distribution.

The non-vested portions of the Employer Accounts of a Member whose employment is terminated prior to the attainment of six years of service or who retires prior to Normal Retirement Age (as defined in the Plan), are forfeited and allocated among the other Members in the ratio that each such Member s defined compensation for the Plan Year, or that portion of the Plan Year during which he was a Member of the Plan, bears to the total defined compensation for all Members for the Plan Year. Forfeitures do not reduce the Employer s Contribution or the Employer s Voluntary Contributions.

NOTE E - MEMBER LOANS

A Member may borrow up to the lesser of 1) \$50,000 or 2) 50 percent of his non-forfeitable accrued benefit. The minimum loan amount is \$1,000 and the maximum loan term is five years for general loans and 15 years for home loans. Loan payments are made through payroll deductions. Loans are stated at cost which approximates fair value.

RELIABILITY INCORPORATED

EMPLOYEE STOCK SAVINGS PLAN

NOTES TO FINANCIAL STATEMENTS - (Continued)

December 31, 2004

NOTE F - FEDERAL INCOME TAX AND ERISA

The Plan received a determination letter from the Internal Revenue Service dated September 7, 2001, stating that the Plan is qualified under Section 401(a) of the Internal Revenue Code (the Code) and, therefore, the related trust is exempt from taxation. The Plan has subsequently been amended for certain tax legislation enacted since the date of the determination letter. The Plan is required to operate in conformity with the Code to maintain its qualification. The Plan s Administrative Committee believes the Plan, as amended, is being operated in compliance with the applicable requirements of the Code and, therefore, believes that the Plan and the related trust are tax exempt.

NOTE G - INVESTMENTS

The following table presents details related to individual investments representing 5% or more of the Plan s net assets.

		December 31, (Unaudited)	
	2004	2003	
Large Capitalization Value Equity Investments Fund	\$ 573,770	\$ 511,832	
Stable Value Fund	612,546	553,458	
Reliability Incorporated Common Stock*	326,098	486,138	
Large Capitalization Growth Investments Fund	540,595	505,930	
Small Capitalization Growth Investments Fund	346,848	326,121	
International Equity Investments Fund	215,353	196,564	
SEI Prime Obligation Fund	9,491	144,441	

* Indicates both non-member directed and member directed

During 2004, the Plan s investments, including gains and losses in investments bought and sold, as well as held during the year, appreciated in value as follows:

(Unaudited)

Reliability Incorporated Common Stock Mutual funds	\$ ((173,267) 173,371
Net appreciation	\$	104

RELIABILITY INCORPORATED

EMPLOYEE STOCK SAVINGS PLAN

NOTES TO FINANCIAL STATEMENTS - (Continued)

December 31, 2004

NOTE H - NON-MEMBER DIRECTED INVESTMENTS

Information about the significant components of the changes in net assets relating to Reliability Incorporated Common Stock Fund is as follows:

	(Unaudited)
Employer contributions	\$ 42,695
Inter-fund transfers	(6,872)
Net depreciation in fair value of common stock	(173,267)
Withdrawals and terminations	(22,596)
Net decrease	(160,040)
Net assets at beginning of the year	486,138
Net assets at end of the year	\$ 326,098

NOTE I - RECONCILIATION OF FINANCIAL STATEMENTS TO FORM 5500

The following is a reconciliation of net assets available for benefits per the financial statements to the Form 5500:

		December 31, (Unaudited)	
	2004	2003	
Net assets available for benefits per the financial statements	\$ 2,685,790	\$ 2,777,729	
Less amounts allocated to withdrawing participants		(137,058)	
Less amounts allocated to participants for contributions		(5,000)	
Unallocated dividends	(46)		
Net assets available for benefits per the Form 5500	\$ 2,685,744	2,640,671	

The following is a reconciliation of benefits paid to participants per the financial statements to Form 5500 for the period ended December 31, 2004:

	(Unaudited)
Benefits paid to participants per the financial statements Less prior year pending distributions	\$ 291,009 (137,058)
Benefits paid to participants per the Form 5500	\$ 153,951

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EMPLOYEE STOCK SAVINGS PLAN

NOTES TO FINANCIAL STATEMENTS - (Continued)

December 31, 2004

NOTE J SUBSEQUENT EVENT

On February 24, 2005, the common stock of the Plan Sponsor, Reliability Incorporated (Reliability), was delisted from the Nasdaq SmallCap Market. The common stock of Reliability now trades on the Pink Sheets. Concurrent with the delisting, the share price of Reliability common stock declined significantly and has continued to decrease. The closing price of Reliability common stock was \$.19 at May 31, 2005, compared to \$.78 at December 31, 2004.

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EMPLOYEE STOCK SAVINGS PLAN

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Administrative Committee of the Plan has duly caused this annual report to be signed by the undersigned thereunto duly authorized.

RELIABILITY INCORPORATED EMPLOYEE

STOCK SAVINGS PLAN By: Administrative Committee (Plan Administrator)

/s/ Carl V. Schmidt

Date: June 22, 2005

Administrative Committee Member