

PART I – DISTRIBUTION INFORMATION

ITEM 1 – Distribution and Pool Performance Information.

The response to Item 1 is set forth in part herein and in part in Exhibit 99.1.

Introductory and explanatory information regarding the material terms, parties and distributions described in Exhibit 99.1 is included in the Prospectus Supplement relating to the RALI Series 2006-QO1 Mortgage Asset-Backed Pass-Through Certificates (the "Certificates") dated January 26, 2006, and related Prospectus dated January 24, 2006 (collectively, the "Prospectus"), of the RALI Series 2006-QO1 Trust (the "Issuing Entity") filed with the Securities and Exchange Commission pursuant to Rule 424(b)(5) under the Securities Act of 1933. The following classes of Certificates were offered under the Prospectus: Class 1-A-1, Class 1-A-2, Class 2-A-1, Class 2-A-2, Class 2-A-3, Class 3-A-1, Class 3-A-2, Class 3-A-3, Class X-1, Class X-2, Class X-3, Class R-I, Class R-II, Class M-1, Class M-2, Class M-3, Class M-4, Class M-5 and Class M-6.

PART II – OTHER INFORMATION

ITEM 2 – Legal Proceedings

Nothing to report.

ITEM 3 – Sales of Securities and Use of Proceeds.

Nothing to report.

ITEM 4 – Defaults Upon Senior Securities.

Nothing to report.

ITEM 5 – Submission of Matters to a Vote of Security Holders.

Nothing to report.

ITEM 6 – Significant Obligors of Pool Assets.

Inapplicable.

ITEM 7 – Significant Enhancement Provider Information.

Nothing to report.

ITEM 8 – Other Information.

Nothing to report.

ITEM 9 – Exhibits

- (a) Documents filed as part of this report.

Exhibit 99.1 September 2006 Monthly Statement to Certificateholders

- (b) Exhibits required by Form 10-D and Item 601 of Regulation S-K.

Exhibit 10.1 Series Supplement, dated as of January 1, 2006, and the Standard Terms of Pooling and Servicing Agreement, dated as of January 1, 2006, among Residential Accredit Loans, Inc., as company, Residential Funding Corporation, as master servicer, and Deutsche Bank Trust Company Americas, as trustee (incorporated by reference to the exhibit with the same numerical designation included in the Report on Form 8-K filed by the Issuing Entity with the Securities and Exchange Commission on February 15, 2006).

Exhibit 10.2 Assignment and Assumption Agreement, dated as of January 30, 2006, between Residential Funding Corporation and Residential Accredit Loans, Inc (incorporated by reference to the exhibit with the same numerical designation included in the Report on Form 8-K filed by the Issuing Entity with the Securities and Exchange Commission on February 15, 2006).

Exhibit 99.1 September 2006 Monthly Statement to Certificateholders

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Dated: September 25, 2006

RALI Series 2006-QO1 Trust
(Issuing entity)

By: Residential Funding Corporation, as Master Servicer

By: /s/ Darsi Meyer
Name: Darsi Meyer
Title: Director

EXHIBIT 99.1 -- MONTHLY STATEMENT TO CERTIFICATEHOLDERS