

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549**

Form 8-K

CURRENT REPORT

**Pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): **May 18, 2005**

Bimini Mortgage Management, Inc.

(Exact Name of Registrant as Specified in Charter)

Maryland
(State or Other Jurisdiction
of Incorporation)

001-32171
(Commission
File Number)

72-1571637
(IRS Employer
Identification No.)

3305 Flamingo Drive, Vero Beach, Florida 32963
(Address of Principal Executive Offices) (Zip Code)

Registrant's telephone number, including area code **(772) 231-1400**

N/A

(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

ITEM 8.01. OTHER EVENTS

On May 17, 2005, Bimini Mortgage Management, Inc. issued a press release announcing that it issued and sold in a private placement, \$50 million of trust preferred securities through a newly formed trust, Bimini Capital Trust I. A copy of the press release is attached to this report.

ITEM 9.01. EXHIBITS

(c) Exhibits

99.1 - Press release dated May 17, 2005.

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 hereunto duly authorized.

Date: May 18, 2005

BIMINI MORTGAGE MANAGEMENT, INC.

By: /s/ Jeffrey J. Zimmer

EXHIBIT INDEX

Exhibit No.

99.1 - Press release dated May 17, 2005.



**BIMINI MORTGAGE MANAGEMENT ANNOUNCES PRIVATE PLACEMENT OF
\$50 MILLION OF TRUST PREFERRED SECURITIES**

VERO BEACH, Fla. (May 17, 2005) — Bimini Mortgage Management, Inc. (NYSE:BMM) today announced that it has issued and sold in a private placement \$50.0 million of trust preferred securities through a newly formed trust, Bimini Capital Trust I, organized under Delaware law. The trust preferred securities will require quarterly distributions and will bear an interest rate of 7.61% through March 30, 2010. The securities are redeemable, in whole or in part, without penalty, at the option of Bimini any time on or after March 30, 2010. The securities will mature on March 30, 2035, and will bear interest at the prevailing three-month LIBOR rate +3.30% between March 30, 2010 and March 30, 2035, if Bimini chooses not to redeem them. Bimini intends to use the net proceeds of this private placement to invest in mortgage related securities issued by Fannie Mae, Freddie Mac, and Ginnie Mae.

Commenting on the issuance, Bimini Chairman, President and Chief Executive Officer, Jeffrey J. Zimmer, stated, "The Board of Directors of Bimini Mortgage Management, Inc. is very pleased to be able to issue 30-year unsecured debt at such favorable terms. This long-term financing will complement and benefit our asset-liability management activities and will benefit the interests of our common stockholders."

Bimini Mortgage Management, Inc., a real estate investment trust, invests primarily in residential mortgage-related securities issued by the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and the Government National Mortgage Association (Ginnie Mae). It earns returns on the spread between the yield on its assets and its costs, including the interest expense on the funds it borrows.

This news release contains forward-looking statements made pursuant to the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. The reader is cautioned that such forward-looking statements are based on information available at the time and on management's good faith belief with respect to future events, and are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in the statements. Important factors that could cause such differences are described in the Company's periodic filings with the Securities and Exchange Commission, including the Company's Registration Statement on Form S-11. The Company assumes no obligation to update forward-looking information to reflect subsequent results, changes in assumptions or changes in other factors affecting forward-looking information.

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