

FORM 5

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

OMB APPROVAL	
OMB Number:	3235-0362
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ANNUAL STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Form 3 Holdings Reported.

Form 4 Transactions Reported.

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

1. Name and Address of Reporting Person* <u>WELLS LEO F III</u> (Last) (First) (Middle) <u>6200 THE CORNERS PARKWAY</u> (Street) <u>NORCROSS GA 30092</u> (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>WELLS REAL ESTATE INVESTMENT TRUST INC [N/A]</u>	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <input checked="" type="checkbox"/> Director 10% Owner Officer (give title below) Other (specify below)
	3. Statement for Issuer's Fiscal Year Ended (Month/Day/Year) <u>12/31/2006</u>	
4. If Amendment, Date of Original Filed (Month/Day/Year)		6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (Month/Day/Year)	2A. Deemed Execution Date, if any (Month/Day/Year)	3. Transaction Code (Instr. 8)	4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned at end of Issuer's Fiscal Year (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
				Amount	(A) or (D)	Price			
Common Stock	03/22/2006		P	56.74	A	\$8.31	4,539.61	D	
Common Stock	03/22/2006		P	17.98	A	\$8.31	4,539.61	I	Spouse
Common Stock	06/22/2006		P	57.74	A	\$8.31	4,539.61	D	
Common Stock	06/22/2006		P	18.3	A	\$8.31	4,539.61	I	Spouse
Common Stock	09/22/2006		P	58.76	A	\$8.31	4,539.61	D	
Common Stock	09/22/2006		P	18.62	A	\$8.31	4,539.61	I	Spouse
Common Stock	12/22/2006		P	59.81	A	\$8.31	4,539.61	D	
Common Stock	12/22/2006		P	18.95	A	\$8.31	4,539.61	I	Spouse

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conversion or Exercise Price of Derivative Security	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4)	8. Price of Derivative Security (Instr. 5)	9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4)	10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
					(A)	(D)	Date Exercisable	Expiration Date					

Explanation of Responses:

Douglas P. Williams, 02/13/2007
Attorney-in-Fact
 ** Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.