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CALDERONI ROBERT Form 3 April 05, 2007 FORM 3 UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549 OMB Number 3235-0104

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person <u>*</u> CALDERONI ROBERT			2. Date of Event Requiring Statement (Month/Day/Year)		3. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [KLAC]					
(Last)	(First)	(Middle)	03/29/2007	,	4. Relationship of Reporting Person(s) to Issuer			5. If Amendment, Date Original Filed(Month/Day/Year)		
C/O KLA-TENCOR CORPORATION, 160 RIO ROBLES (Street)					(Check all applicable) X Director 10% Ow Officer Other (give title below) (specify below)		Owner r	 oner 6. Individual or Joint/Group Filing(Check Applicable Line) _X_ Form filed by One Reporting 		
SAN JOSE,	SAN JOSE, CA 95130							Person Form filed by More than One Reporting Person		
(City)	(State)	(Zip)		Table I - N	Non-Deriva	tive Securit	ies Be	neficially Owned		
1.Title of Secu (Instr. 4)	rity			2. Amount o Beneficially (Instr. 4)		3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Na Owne (Instr	1		
Common Stock-Restricted Stock Units (1)			Units <u>(1)</u>	935 <u>(2)</u>		D	Â			
Reminder: Rep owned directly			ach class of sec	urities benefic	ially S	SEC 1473 (7-02	2)			
	infor	mation cont	pond to the c ained in this t ond unless th	form are not						

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

currently valid OMB control number.

1. Title of Derivative Security	2. Date Exercisable and	3. Title and Amount of	4.	5.	6. Nature of Indirect
(Instr. 4)	Expiration Date	Securities Underlying	Conversion	Ownership	Beneficial Ownership
	(Month/Day/Year)	Derivative Security	or Exercise	Form of	(Instr. 5)
		(Instr. 4)	Price of	Derivative	
			Derivative	Security:	

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Date	Expiration	Title	Amount or	Security	Direct (D)
Exercisable	Date		Number of		or Indirect
			Shares		(I)
					(Instr. 5)

Reporting Owners

Reporting Owner Name / Address	Relationships				
	Director	10% Owner	Officer	Other	
CALDERONI ROBERT C/O KLA-TENCOR CORPORATION 160 RIO ROBLES SAN JOSE, CA 95130	ÂX	Â	Â	Â	
Signatures					
By: John Kispert For: Robert Calderoni	04/05	5/2007			
**Signature of Reporting Person	E	Date			

Explanation of Responses:

- * If the form is filed by more than one reporting person, *see* Instruction 5(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).
- (1) Each restricted stock unit represents a contingent right to receive one share of KLAC common stock.
- (2) The restricted stock units will fully vest one year from date of grant and will not be deliverable until three years from the date of grant. The RSU Grant date is 3/29/2007.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *See* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.