

Lightwave Logic, Inc.  
Form 4  
October 27, 2009

**FORM 4**

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

OMB APPROVAL

OMB Number: 3235-0287  
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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

**STATEMENT OF CHANGES IN 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 \*  
SMITH THOMAS P

(Last) (First) (Middle)  
17800 N. 85TH STREET  
(Street)

SCOTTSDALE, AZ 85255

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol  
Lightwave Logic, Inc. [LWLG]

3. Date of Earliest Transaction  
(Month/Day/Year)  
10/23/2009

4. If Amendment, Date Original Filed(Month/Day/Year)

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

Director  10% Owner  
 Officer (give title below)  Other (specify below)

6. Individual or Joint/Group Filing(Check Applicable Line)  
 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 Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Ownership (Instr. 4)
			Code	V	Amount or (D) Price		
Common Stock (1)	10/24/2009		M		150,000 (1) \$ 1	900,000	D
Common Stock	10/26/2009		S		2,000 \$ 2.57	898,000	D
Common Stock	10/26/2009		S		2,500 \$ 2.56	895,500	D
Common Stock	10/26/2009		S		1,150 \$ 2.54	894,350	D
Common Stock	10/26/2009		S		500 \$ 2.52	893,850	D
	10/27/2009		S		4,500	889,350	D

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Common Stock					\$			
					2.53			
Common Stock	10/27/2009		S	1,500	D	\$	887,850	D
					2.55			
Common Stock	10/27/2009		S	2,500	D	\$	885,350	D
					2.52			

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

**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 control number.** SEC 1474 (9-02)

**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 Underlying Security (Instr. 3 and 4)
					V	(A)	(D)	Date Exercisable	Expiration Date	
Warrant (Right to Buy) <sup>(2)</sup>	\$ 1	10/23/2009		G	V	150,000		10/24/2007	10/24/2009	Common Stock
Warrant (Right to Buy)	\$ 1	10/24/2009		M		150,000		10/24/2007	10/24/2009	Common Stock

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
SMITH THOMAS P 17800 N. 85TH STREET SCOTTSDALE, AZ 85255		X		

## Signatures

/s/Thomas P. Smith 10/27/2009

\*\*Signature of Reporting Person Date

## Explanation of Responses:

- \* 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).
- (1) Acquired restricted stock pursuant to exercise of warrant.
  - (2) Acquired warrant pursuant to a bona fide gift transaction.

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.