

FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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).

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

OMB APPROVAL

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Estimated average burden hours per response: 0.5

1. Name and Address of Reporting Person * <u>Barron Bradley C</u> (Last) (First) (Middle) <u>2330 NORTH LOOP 1604 WEST</u> (Street) <u>SAN ANTONIO TX</u> <u>78248</u> (City) (State) (Zip)	2. Issuer Name and Ticker or Trading Symbol <u>NuStar Energy L.P. [NS]</u> 3. Date of Earliest Transaction (Month/Day/Year) <u>01/22/2009</u> 4. If Amendment, Date of Original Filed (Month/Day/Year)	5. Relationship of Reporting Person(s) to Issuer (Check all applicable) <div>Director 10% Owner</div> <div><input checked="" type="checkbox"/> Officer (give title below) Other (specify below)</div> <div><u>SVP, Gen Counsel and Secretary</u></div> 6. Individual or Joint/Group Filing (Check Applicable Line) <div><input checked="" type="checkbox"/> Form filed by One Reporting Person</div> <div>Form filed by More than One Reporting Person</div>
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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 Indirect Beneficial Ownership (Instr. 4)
			Code	V	Amount	(A) or (D)	Price			
Common Units (tax withheld for performance unit vesting)	01/22/2009		F		60	D	\$45.26	7,256	D	
Common Units	01/22/2009		M		180	A	\$0	7,434	D	
Common Units (tax withheld for performance unit vesting)	01/22/2009		F		74	D	\$45.26	7,362	D	
Common Units	01/22/2009		M		226	A	\$0	7,588	D	
Common Units (tax withheld for performance unit vesting)	01/22/2009		F		77	D	\$45.26	7,511	D	
Common Units	01/22/2009		M		233	A	\$0	7,744	D	

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)
				Code	V		Date Exercisable	Expiration Date	Title	Amount or Number of Shares				
Performance Units	(1)	01/22/2009		A		2,000	(1)	01/22/2012	Common	2,000	\$0	2,000	D	
Performance Units	(2)	01/22/2009		M		180	01/22/2009	01/22/2009	Common	360	\$0	90	D	
Performance Units	(2)	01/22/2009		M		226	01/22/2009	01/22/2010	Common	454	\$0	340	D	
Performance Units	(3)	01/22/2009		M		233	01/22/2009	01/22/2011	Common	467	\$0	1,167	D	

Explanation of Responses:

1. Award of performance units. The performance units vest annually in one-third increments beginning on the first anniversary of the grant date and are payable in common units in amounts ranging from zero to 200% of the performance units.
2. Settlement of previously awarded performance units at 50% of the base units awarded in 2006 and 2007 and vested on January 22, 2009, as well as the portion of units that vested but were not awarded in January 2008, which carried over pursuant to the terms of the performance unit grants.
3. Settlement of performance units awarded in 2008 at 50% of base units.

Elizabeth E. Clifton as
Attorney-in-Fact for Bradley C. Barron
01/26/2009

** 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.