

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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|---|---|---|
| 1. Name and Address of Reporting Person* <u>BLUNTZER JAMES R</u> (Last) (First) (Middle) 2330 NORTH LOOP 1604 WEST (Street) SAN ANTONIO TX 78248 (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol <u>NuStar Energy L.P. [NS]</u> | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner Officer (give title below) Other (specify below) X <u>Senior VP- Operations</u> |
| | 3. Date of Earliest Transaction (Month/Day/Year) <u>01/22/2009</u> | |
| | 4. If Amendment, Date of Original Filed (Month/Day/Year) | |

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 | | 126 | D | \$45.26 | 10,409 | D | |
| Common Units | 01/22/2009 | | M | | 380 | A | \$0 | 10,789 | D | |
| Common Units (tax withheld for performance unit vesting) | 01/22/2009 | | F | | 144 | D | \$45.26 | 10,645 | D | |
| Common Units | 01/22/2009 | | M | | 440 | A | \$0 | 11,085 | D | |
| Common Units (tax withheld for performance unit vesting) | 01/22/2009 | | F | | 77 | D | \$45.26 | 11,008 | D | |
| Common Units | 01/22/2009 | | M | | 234 | A | \$0 | 11,242 | 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 | (A) | (D) | Date Exercisable | Expiration Date | | | | | | Title |
| Performance Units | (1) | 01/22/2009 | | A | | 2,200 | | (1) | 01/22/2012 | Common | 2,200 | \$0 | 2,200 | D | |
| Performance Units | (2) | 01/22/2009 | | M | | | 380 | 01/22/2009 | 01/22/2009 | Common | 760 | \$0 | 190 | D | |
| Performance Units | (2) | 01/22/2009 | | M | | | 440 | 01/22/2009 | 01/22/2010 | Common | 880 | \$0 | 660 | D | |
| Performance Units | (3) | 01/22/2009 | | M | | | 234 | 01/22/2009 | 01/22/2011 | Common | 467 | \$0 | 1,166 | D | |

Explanation of Responses:

- 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.
- 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.
- Settlement of performance units awarded in 2008 at 50% of base units.

Elizabeth E. Clifton, as
Attorney-in-Fact for James R. Bluntzer 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.

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