

FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

| OMB APPROVAL | |
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| 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

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>Singletary Loren</u> <hr/> (Last) (First) (Middle) 5847 SAN FELIPE SUITE 3000 <hr/> (Street) HOUSTON TX US 77057 <hr/> (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol <u>Vanguard Natural Resources, LLC [VNR]</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. Date of Earliest Transaction (Month/Day/Year) 01/11/2014 | |
| | 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 representing LLC interests | 01/11/2014 | | C | | 4,671 | A | \$0 | 28,684 | 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) |
|--|--|--------------------------------------|--|--------------------------------|-----|--|-----|--|-----------------|---|----------------------------|--|
| | | | | Code | V | (A) | (D) | Date Exercisable | Expiration Date | Title | Amount or Number of Shares | |
| Phantom Units | (1) | 01/11/2014 | | D | (2) | 4,671 | (2) | 01/11/2014 | (2) | Common Units | 4,671 | \$0 |

Explanation of Responses:

- Each phantom unit gives the holder the right to receive a common unit equal to the number of phantom units or the cash value of the vested phantom units as determined by the Compensation Committee in its discretion.
- The phantom units were granted pursuant to a Written Consent of Directors dated January 11, 2013. Each phantom unit is the equivalent in value to a common unit but is subject to a one year vesting period which is January 11, 2014. The phantom units are accompanied by dividend equivalent rights ("DER"), which entitle the director to receive the value of any dividends made by the Company on its units generally with respect to the number of phantom units that director received pursuant to this grant.

/s/ Loren Singletary

04/17/2014

** 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.