VANGUARD NATURAL RESOURCES, LLC

John S. Herold's 17th Annual Pacesetters Energy Conference

September 24 , 2008

Forward Looking Statements

Statements made by representatives of Vanguard Natural Resources, LLC during the course of this presentation that are not historical facts are forward looking statements. These statements are based on certain assumptions and expectations made by the Company which reflect management's experience, estimates and perception of historical trends, current conditions, anticipated future developments and other factors believed to be appropriate. Such statements are subject to a number of assumptions, risks and uncertainties, many of which are beyond the control of the Company, which may cause actual results to differ materially from those implied or anticipated in the forward looking statements. These include risks relating to financial performance and results, our indebtedness under our revolving credit facility, availability of sufficient cash to pay our distributions and execute our business plan, prices and demand for gas, oil and natural gas liquids, our ability to replace reserves and efficiently develop our reserves, our ability to make acquisitions on economically acceptable terms, and other important factors that could cause actual results to differ materially from those anticipated or implied in the forward looking statements. See "Risk Factors: in the Company's Annual Report for 2007 , Registration Statements on Form S-1 and the related prospectuses and any other public filings and press releases. Vanguard Natural Resources, LLC undertakes no obligation to publicly update any forward looking statements, whether as a result of new information or future events. This presentation has been prepared as of September 19, 2008.

Overview of Vanguard Natural Resources

- Growth-oriented upstream LLC headquartered in Houston
  - Initial Public Offering – "VNR" NYSE Arca October 2007
  - Since IPO have acquired approximately 50 Bcfe (52% natural gas, 48% oil) of long life oil and gas reserves for $130MM
  - Increased distributions 18%

- Focused on the acquisition and development of mature, long life oil & natural gas properties for stable cash flows. Diverse asset base with properties in:
  - Appalachian Basin – SE Kentucky and NE Tennessee
  - Permian Basin – W Texas and SE New Mexico
  - South Texas – Webb County

- Company Profile (1)
  - Equity Market Cap $172 million ~ 120 Bcfe total proved reserves
  - Total Debt <u>$132 million</u> ~ 78% Gas/22% Oil reserve mix
  - **Enterprise Value $304 million ~ 17** year reserve life/77% PDP

(1) Market data as of September 19, 2008 (VNR closing price of $13.72). Reserve data based on 12/31/07 reserve report and internal estimates.

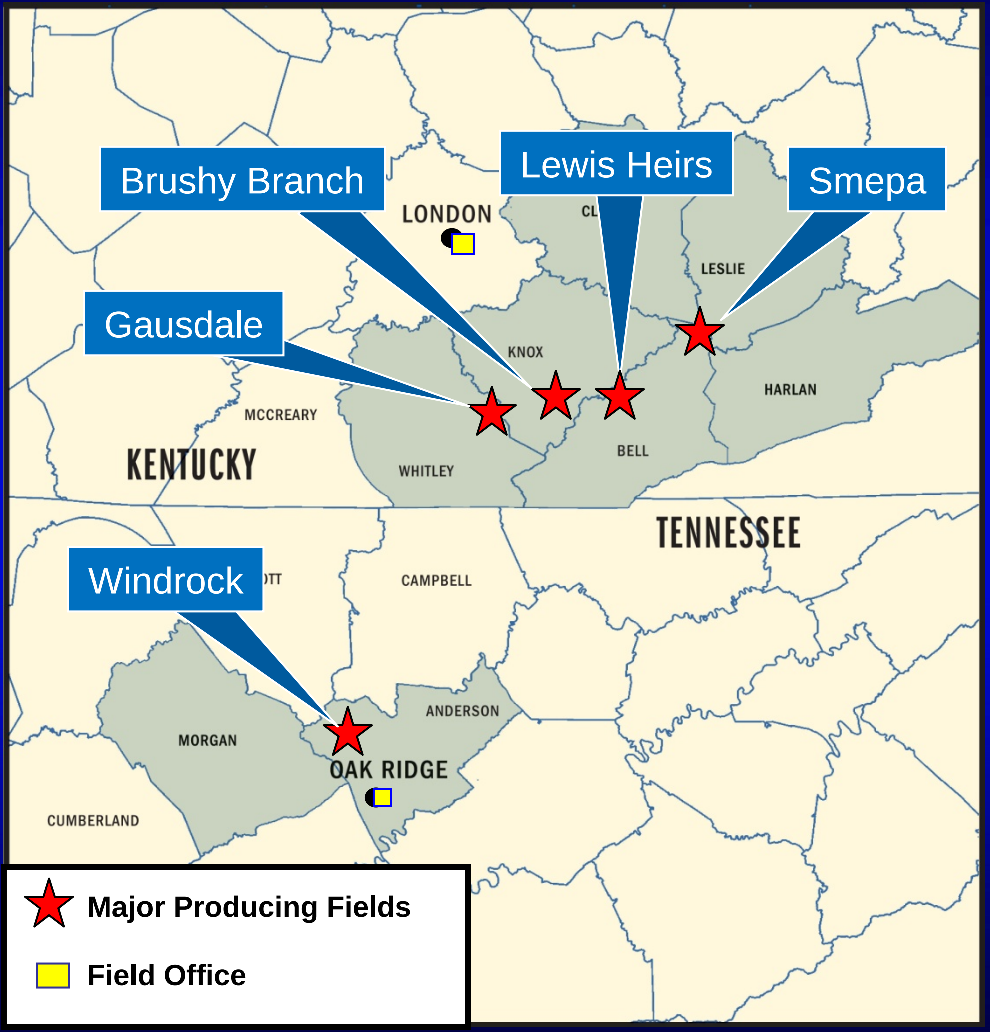
Appalachian Asset Profile

- High degree of step out development success – low risk and targeting multiple producing horizons, 500+ identified PUD/Probable locations
- 100 well per year drilling program designed to maintain production and reserves
- Premium pricing due to proximity to northeastern markets: $0.23/Mmbtu over NYMEX
- High BTU content gas compared to other basins : 1,230 Btu/Scf

Vanguard's Appalachian Position (1)

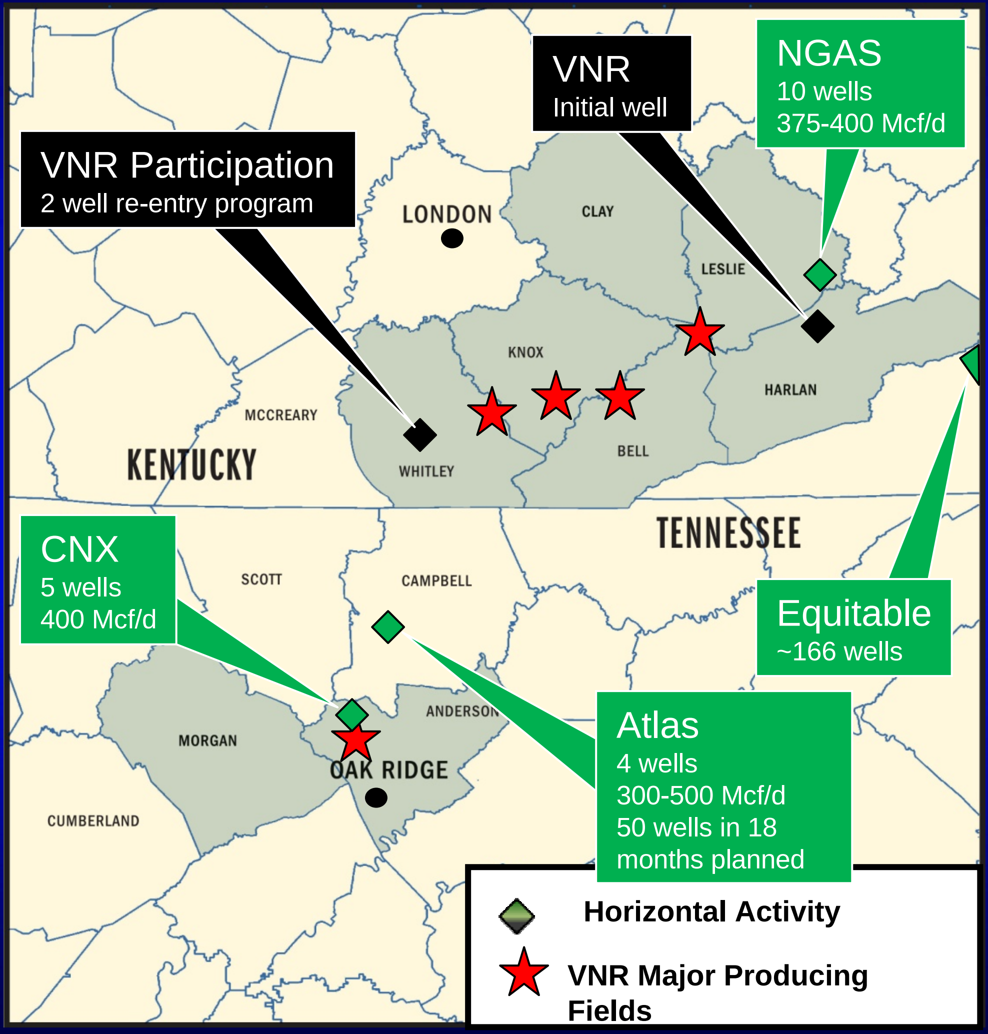
- Proved Reserves: 71 Bcfe
- Undeveloped gross acres: 104,000
- Gross locations: 543 (326 proved)

(1) Based on internal estimates at 6/30/08



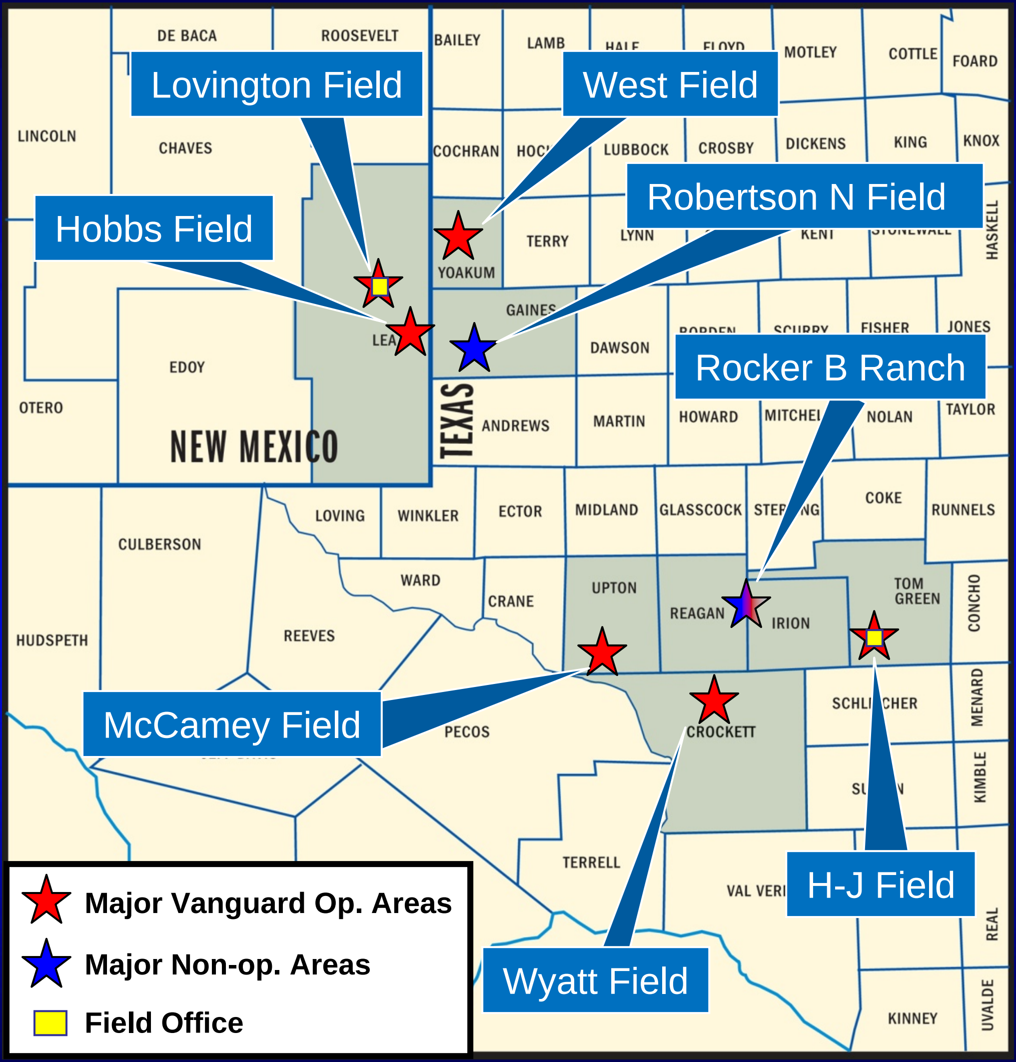
Devonian Shale Potential

- Development of the Devonian shale through horizontal drilling is taking place in the southern portion of the Appalachian Basin
- Atlas, Equitable, CNX and NGAS have all announced multiple successful wells using this application
- Devonian shale formation is present throughout entire 104,000 acres of VNR gross leasehold, at varying depths and thickness depending on location
- VNR has participated in 1 well with Vinland and participated for a minority working interest in a 2 well re-entry program to test this concept near existing fields
- Provided horizontal drilling in the Devonian shale proves to be commercially viable in this portion of the Appalachian Basin, the impact on VNR reserves would be significant



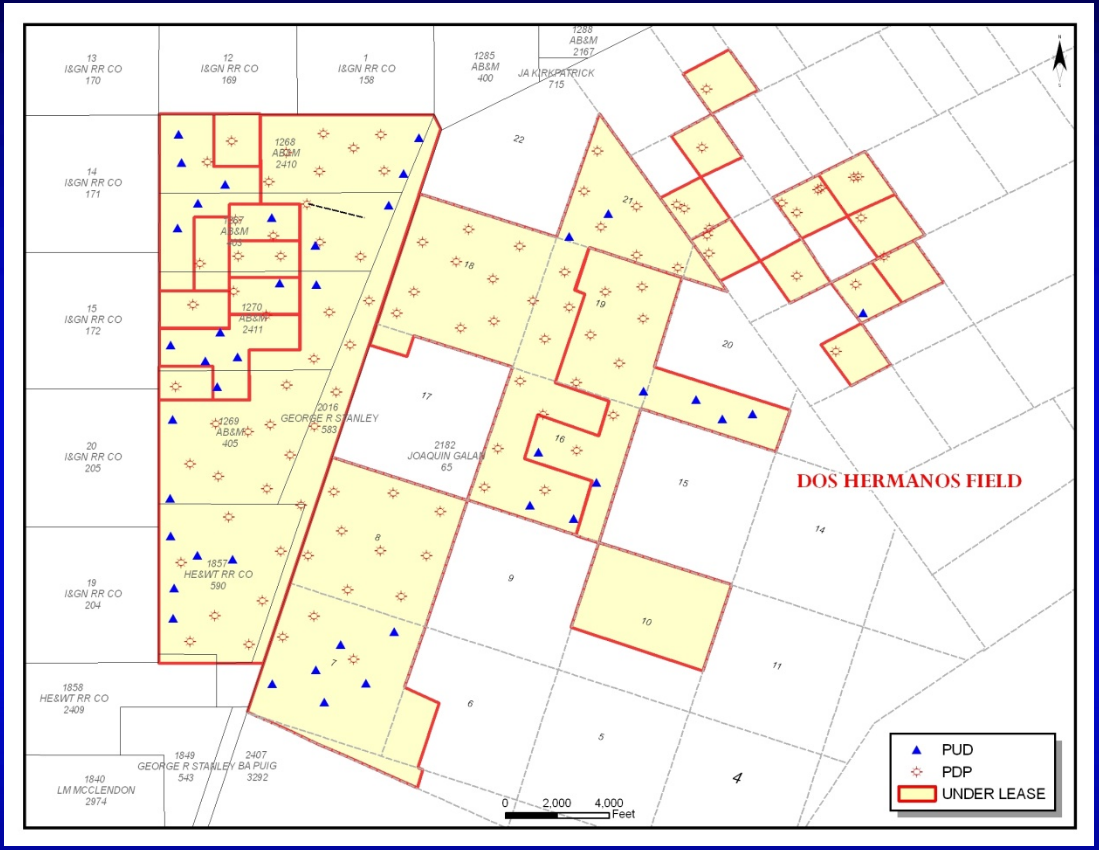
Permian Basin Asset Profile

- Acquisition of producing assets from Apache, closed 1/31/08
- 4.4 Mboe acquired, 84% oil and 89% PDP
- 65% Operated and 35% Non-Operated in terms of value
- Production of ~ 800 Boe/d
- Establishes Permian Basin as an operating area, approx. 50 operated wells in 8 fields
- Nominal re-investment after first year PUD development (7% of cash flow)



South Texas Assets

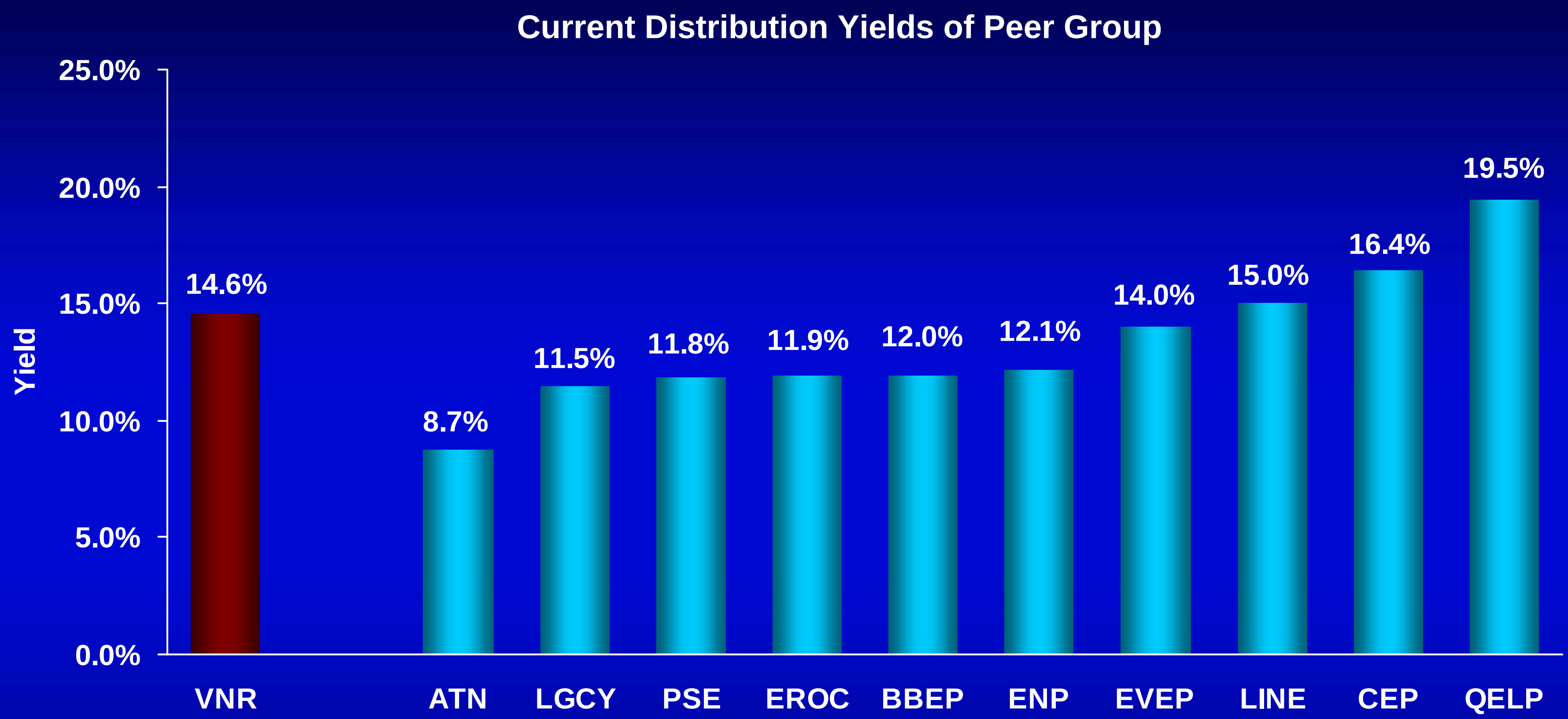
- Acquisition from Lewis Energy, closed July 2008 (60/40 cash and stock transaction)
- 20 Bcfe of reserves
- 65% PDP, 98% natural gas
- 1,150 Btu gas content
- 3,000 Mcf/d current net production
- Lewis to operate and conduct PUD drilling program through 2013 (6-8 wells per year)
- As largest operator in the Olmos trend with over 1,000 producing wells, 67,000 Mcf/d of net production and 350,000 acres under lease, additional “drop – downs” from Lewis are possible as they look to monetize mature assets
- Swaps on 85% of PDP through 2011 in place at weighted average HSC price of $10.52/mcf



Advantages of Vanguard's LLC Structure

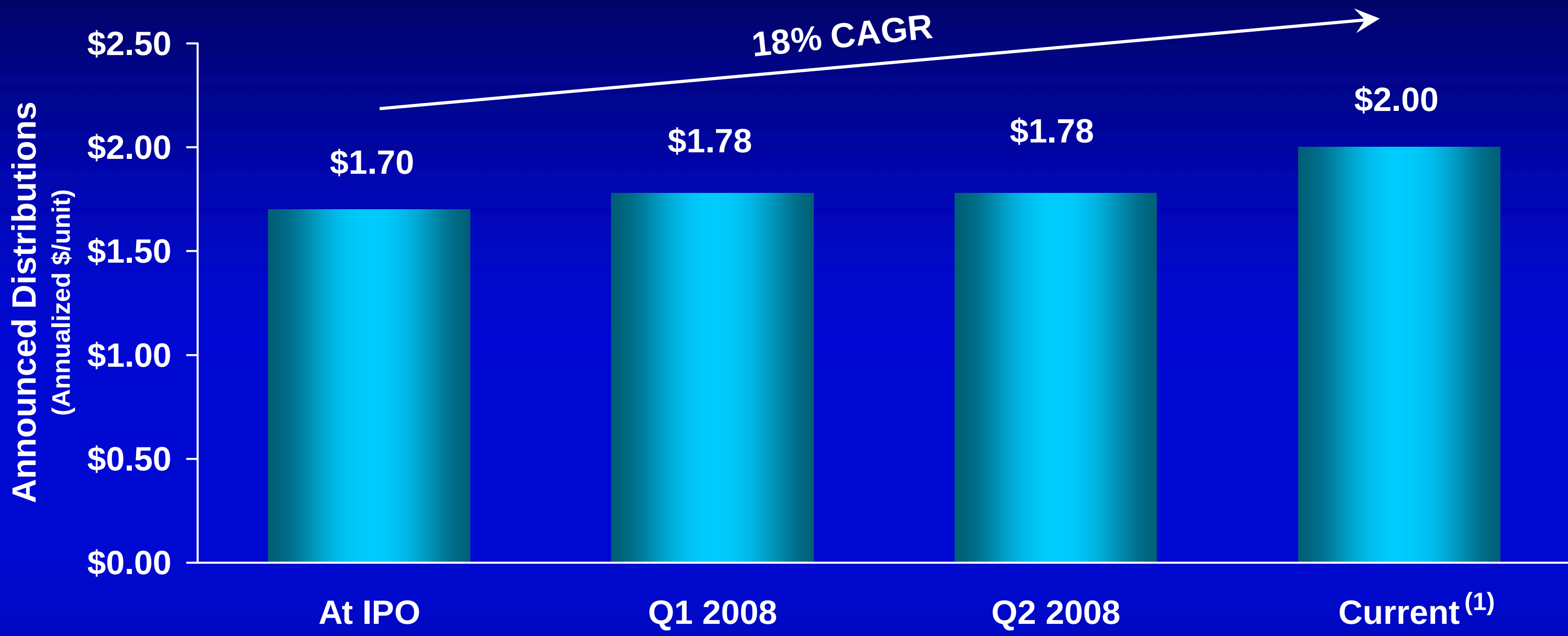
- Fair governance – all unit holders vote (no general partner)
- No entity level income tax – competitive advantage in the acquisition market
- Tax Shield – 2008 distributions have been 100% tax deferred
  - Unitholders benefit from favorable tax treatment compared to alternative yield products while having upside exposure through unit price appreciation
- No Incentive Distribution Rights (IDRs)
  - Investors share equally in all cash flows – no management or general partner "double-dipping"
  - Acquisitions are more accretive without IDRs
- Vanguard's management aligned with public unit holders – significant portion of compensation from unit ownership

Comparable Company Trading Yields



Source: Company press releases.
Note: Data as of 09/19/2008.
BBEP: Based on price of $17.40 and annualized distribution of $2.08 announced on 8/1/08
LINE: Based on price of $16.75 and annualized distribution of $2.52 announced on 7/28/08
VNR: Based on price of $13.72 and annualized distribution of $2.00 announced on 8/11/08
QELP: Based on price of $8.84 and annualized distribution of $1.72 announced on 7/25/08
PSE: Based on price of $16.88 and initial annualized distribution of $2.00 announced 7/18/2008
ENP: Based on price of $22.69 and annualized distribution of $2.75 announced on 8/4/08
EROC: Based on price of $13.75 and annualized distribution of $1.64 announced on 7/31/08
EVEP: Based on price of $19.99 and annualized distribution of $2.80 announced on 7/24/08
LGCY: Based on price of $18.13 and annualized distribution of $2.08 announced on 7/22/08
ATN: Based on price of $27.91 and annualized distribution of $2.44 announced on 7/22/08
CEP: Based on price of $13.74 and annualized distribution of $2.25 announced on 7/23/08

Performance since IPO



	At IPO	Q1 2008	Q2 2008	Current[1]
Yield	8.9%	10.8%	10.6%	14.0%
Coverage	1.1x	1.3x	1.3x[2]	1.3x[2]
R / P (Years)	15.3	17.1[3]	16.1	17.4[4]

(1) Current yield calculated using VNR price as of 8/8/2008 of $14.24/unit.

(2) Estimate based on Wall Street Research.

(3) Pro forma for February, 2008 acquisition of 4.4 MMboe of proved reserves.

(4) Pro forma for July, 2008 acquisition of 20 Bcfe of proved reserves.

Risk Management

- We intend to maintain hedges for 80-95% of our total 3-year forecasted production (currently at 82%)
- We also have in place interest rate swaps on ~45% of our floating rate debt for the next 2.5 years, having locked in a Libor rate of 3.24%, overall borrowing costs ~5%.
- Approximately 74% of expected oil production from 10/08 thru 2010 is hedged via swaps/collars at floor weighted average price of $88 per barrel
- Significant percentage of expected natural gas production thru 2010 is hedged via a combination of swaps, collars and puts as follows:

	2008	2009	2010
% Hedged	100%	91%	66%
Swaps	53%/$9.00	60%/$9.43	54%/$9.10
Collars	25%/$9.52-$10.22	17%/$7.50-$9.00	12%/$8.00-$9.30
Puts	21%/$7.50	14%/$7.50	N/A

Revised 2008 Calendar Year Guidance

Total Production (MMcfe)	5,728	-	6,029
Average Daily Production - Gas (Mcf/d)	11,530	-	12,140
Average Daily Production - Oil (Bbls/d)	694	-	730
Lease Operating Expenses (000's)	$9,500	-	$9,900
G&A (000's) (excluding incentive comp plans)	$3,000	-	$3,500
G&A incentive comp plans (1)	$3,550	-	$3,550
Cash Interest Expense (000's)	$5,850	-	$5,850
Capital Expenditures (000's)	$18,000	-	$19,500
Adjusted EBITDA (000's)	$52,035	-	$54,475

(1) Amounts represent non-cash expense recognition of Class B unit grants. In addition, the management incentive plan is tied to the unit price. Vanguard is not providing guidance on the unit price for 2008. However, if the VNR units do not appreciate over the grant date price ($15.82) there would be no additional compensation to management.

Vanguard Investment Highlights

- High quality, long lived reserves with stable production profile
- Recent acquisitions in the Permian basin and South Texas balance the commodity and geographic mix and support 18% distribution increase since the IPO
- Well positioned to grow through additional acquisitions of producing properties in Appalachia, Permian, South Texas and other mature producing basins
- Robust hedging program supports distribution visibility and stability
- Governance structure which aligns the interest of management and unit holders
- Attractive distribution yield relative to peers

Focused on Unit Price Appreciation Through Increased Distributions