IPAA / TIPRO
“Leaders in Industry” Luncheon
State of U.S. A&D Market

November 9, 2011

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U.S. A&D Market Experiencing Quiet 4th Quarter

Note: Includes U.S. onshore transactions of at least $20 MM.

9 Acquisitions account for 52% of 2011 YTD Deal-Flow

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Transaction Volume ($ in billions)

- Conventional Oil Transactions
- Conventional Gas & Mature Resource Play Transactions
- Resource Play Transactions

Q1 2009
- Conventional Oil: $0.5
- Conventional Gas & Mature Resource: $3.9
- Resource: $4.0

Q2 2009
- Conventional Oil: $3.9
- Conventional Gas & Mature Resource: $4.0
- Resource: $5.1

Q3 2009
- Conventional Oil: $4.0
- Conventional Gas & Mature Resource: $5.1
- Resource: $5.1

Q4 2009
- Conventional Oil: $5.1
- Conventional Gas & Mature Resource: $5.1
- Resource: $5.1

Q1 2010
- Conventional Oil: $12.0
- Conventional Gas & Mature Resource: $9.9
- Resource: $15.3

Q2 2010
- Conventional Oil: $12.0
- Conventional Gas & Mature Resource: $9.9
- Resource: $15.3

Q3 2010
- Conventional Oil: $12.0
- Conventional Gas & Mature Resource: $9.9
- Resource: $15.3

Q4 2010
- Conventional Oil: $12.0
- Conventional Gas & Mature Resource: $9.9
- Resource: $15.3

Q1 2011
- Conventional Oil: $11.9
- Conventional Gas & Mature Resource: $12.9
- Resource: $17.8

Q2 2011
- Conventional Oil: $11.9
- Conventional Gas & Mature Resource: $12.9
- Resource: $17.8

Q3 2011
- Conventional Oil: $11.9
- Conventional Gas & Mature Resource: $12.9
- Resource: $17.8

Q4 2011
- Conventional Oil: $11.9
- Conventional Gas & Mature Resource: $12.9
- Resource: $17.8

TD 2011
- Conventional Oil: $11.9
- Conventional Gas & Mature Resource: $12.9
- Resource: $17.8

Transaction Volume ($ in billions)

- Conventional Oil Transactions
- Conventional Gas & Mature Resource Play Transactions
- Resource Play Transactions

Note: Includes U.S. onshore transactions of at least $20 MM.
Joint Venture Market Showing Signs of Slow-Down?

Oil / Liquids Resource Play Joint Ventures
Gas Resource Play Joint Ventures

Joint Venture Transactions ($ billions)

Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 TD

2009 2010 2011

Total Resource Play JV’s

0 5 2 5 4 7 4 2 5 1 4 1

Oil / Liquids Resource Play Joint Ventures
Gas Resource Play Joint Ventures
U.S. E&P M&A Market Is Picking Up

Corporate M&A Transactions ($ billions)

- $45.5
- $5.6
- $4.3
- $0.7

Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 TD
2009 2010 2011

Note: Percentages represent 1-day stock price premium paid.
Note: Kinder Morgan / El Paso transaction in Q4 2011 represents RBC-estimated value for E&P segment.
Capital Markets Have Re-Opened After Volatile Q3

Total Capital Markets Activity ($ billions)

2009
Q1: $7.9
Q2: $12.3
Q3: $7.8
Q4: $4.5

2010
Q1: $6.6
Q2: $7.5
Q3: $16.0
Q4: $8.8

2011
Q1: $6.8
Q2: $6.1
Q3: $6.0
Q4: $2.6

- Follow-On / Converts
- IPOs
- High Yield
- Investment Grade

10 E&P IPOs currently on file
## Potential E&P Initial Public Offerings

<table>
<thead>
<tr>
<th>Category</th>
<th>Company</th>
<th>Offer Size (in millions)</th>
<th>Location/Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-Corps</td>
<td>Laredo Petroleum, LLC</td>
<td>$450 million</td>
<td>Wolfberry / Granite Wash</td>
</tr>
<tr>
<td></td>
<td>Dynamic Offshore</td>
<td>$300 million</td>
<td>GOM Shelf / Niobrara / Mid-Continent</td>
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<tr>
<td></td>
<td>Matador</td>
<td>$150 million</td>
<td>Eagle Ford / East TX / North LA</td>
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<tr>
<td></td>
<td>Bonanza Creek</td>
<td>$200 million</td>
<td>Niobrara / Mid-Continent</td>
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<td></td>
<td>New Source</td>
<td>$100 million</td>
<td>East – Central Oklahoma</td>
</tr>
<tr>
<td>MLPs</td>
<td>Memorial Production</td>
<td>$288 million</td>
<td>South Texas / East Texas</td>
</tr>
<tr>
<td></td>
<td>LRR Energy</td>
<td>$282 million</td>
<td>Permian / Mid-Continent</td>
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<tr>
<td></td>
<td>Mid-Continent Energy</td>
<td>$140 million</td>
<td>Mid-Continent / Hugoton</td>
</tr>
<tr>
<td>Trusts</td>
<td>Chesapeake</td>
<td>$584 million</td>
<td>Granite Wash</td>
</tr>
</tbody>
</table>

Private Equity Market Increasingly Competitive

Financial Sponsor Overview – Number of U.S.-Focused E&P Management Teams

- 31 Management Teams w/ U.S. focus
- $40 B Estimated E&P Capital *
- > 230 Financial Sponsors w/ E&P Teams

Private Equity Universe

- Yorktown
- ESS Funds
- Goldman Sachs PE
- SFC Energy
- Warburg Pincus
- KKR
- L Catterton
- Silver Lake
- Carlyle
- TPG

* RBC Richardson Barr estimate.
**Commodity Price Environment**

**Crude Oil (WTI)**

- Latest Spot: $96.80
- 2012 Average: $95.15
- 2013 Average: $93.52
- 2014 Average: $92.13

**Natural Gas (Henry Hub)**

- Latest Spot: $3.44
- 2012 Average: $3.93
- 2013 Average: $4.51
- 2014 Average: $4.88

Source: Bloomberg spot price and NYMEX data as of November 7, 2011.
Most Coveted Resource Plays In U.S.

- Bakken / Three Forks
- Utica Shale
- Mississippian Oil Play
- Bone Spring / Avalon / Yeso
- Wolfberry / Wolfcamp
- Eagle Ford Shale

MOST COVETED RESOURCE PLAYS
Majors / Large-Cap U.S. Publics

- Bone Spring / Avalon
  - CONCHO
  - Confidential Sellers
  - $330 million

- Marcellus Shale
  - HESS
  - CONSOL ENERGY
  - $2,175 million

- Utica Shale
  - HESS
  - CONSOL ENERGY
  - $1,343 million (JV)

- Eagle Ford
  - Marathon Oil Corporation
  - Hillcorp
  - KKR
  - $3,500 million

- Marcellus Shale
  - Chief
  - enerPLUS
  - $3,360 million (JV)
Private Equity / MLPs

- **Barnett Shale**
  - Confidential Seller
  - $1,208 million

- **Powder River**
  - Confidential Buyer
  - $350 million

- **Granite Wash**
  - LINN Energy
  - PXP Energy
  - $600 million

- **Wolfberry**
  - Laredo Petroleum, LLC
  - $1,000 million

- **East Texas**
  - NFR Energy
  - SandRidge Energy
  - $231 million
Internationals

Utica Shale
$2.4 billion (JV)

Eagle Ford
$710 million (JV)

Eagle Ford
$1,550 million (JV)
2012 A&D Expectations

- Continued Global economic uncertainty to cause volatility in Commodity and Capital Markets
  - Capital Markets windows of opportunity
  - U.S. Publics will turn to asset sales (mostly conventional gas) to fund resource play development

- Public Companies will be discriminating in acquisition posture
  - Focused in core areas of oil / liquids resource plays

- International Buying to slow as fewer available JV opportunities

- Private Equity and MLPs increasingly competitive for conventional asset opportunities
  - Most coveted conventional: oil, strong PDP component, low decline

- Strong demand for Conventional Dry Gas from Private Equity sector
  - Valuations in PDP PV$_{10}$ range

- Strong demand for Conventional Oil / Liquids from all sectors
  - Valuations in PDP PV$_{8}$ range

- Strong demand for Oil / Liquids Resource Plays
  - Most Coveted Resource Plays: Utica, Eagle Ford, Bakken, Bone Spring / Avalon, Mississippian
  - Discount rates of PV$_{25}$ – PV$_{15}$ paid for drillable locations in resource play core areas

- Corporate M&A activity will continue at slow but steady pace
Recent RBC Richardson Barr Transactions

**LINN Energy**
- **has agreed to acquire certain Mid-Continent oil and gas assets from PXP**
- RBC Richardson Barr served as buy-side financial advisor to Linn Energy, LLC
- **$600,000,000**
- **November 2011**

**Encana**
- **has agreed to acquire oil and gas assets in the Barnett Shale from EnerVest**
- RBC Richardson Barr served as exclusive buy-side financial advisor to EnerVest, Ltd. and EV Energy Partners, L.P.
- **$975,000,000**
- **November 2011**

**Confidential Sellers**
- **have divested their position in the Barnett Shale Combo play to EnerVest**
- RBC Richardson Barr served as financial advisor to Confidential Sellers
- **$233,000,000**
- **November 2011**

**Confidential Seller**
- **has divested certain Bakken / Three Forks assets in the Williston Basin to Kodiak Oil & Gas Corp.**
- RBC Richardson Barr served as financial advisor to a Confidential Seller
- **$235,000,000**
- **September 2011**

**Quantum Resources Fund**
- **has divested oil and gas assets in the Permian Basin and the Mid-Continent & Ark-La-Tex Regions to QR Energy**
- RBC Richardson Barr provided a Fair Market Valuation on the assets to Quantum Resources Fund
- **$577,000,000**
- **September 2011**