



Panel: Commodity Prices, Service Costs and Hedging A guide to profit planning and protection in 2012

Nigel Browne
Macquarie Capital (USA) Inc
125 W 55th Street, L 23, New York, New York 10019
nigel.browne@macquarie.com | (212) 231-1945
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Over the next 10 minutes we will address:

- Commodity and activity forecast for the next 12-18 months
- Macro-picture and how it has been affecting OFS companies
- Key tight markets including pressure pumping and drilling rigs



Commodity and rig count assumptions

→ US dry gas rig count is forecast to fall, while liquids-rich and crude oil drilling is forecast to continue to increase

| | Rigs active | | | | | Change (%) | | | |
|-----------------------------------|-------------|---------|---------|---------|---------|------------|----------|----------|----------|
| | 2009 | 2010 | 2011E | 2012E | 2013E | 10 vs 09 | 11 vs 10 | 12 vs 11 | 13 vs 12 |
| <u>Commodity Prices</u> | | | | | | | | | |
| HHUB Natural Gas Price (\$/MMBtu) | \$3.95 | \$4.40 | \$4.12 | \$4.30 | \$4.85 | 11% | -6% | 4% | 13% |
| WTI Price (\$/b) | \$61.85 | \$79.57 | \$91.00 | \$79.50 | \$82.00 | 29% | 14% | -13% | 3% |
| <u>Rig Count</u> | | | | | | | | | |
| US | 1,091 | 1,539 | 1,841 | 1,923 | 2,051 | 41% | 20% | 4% | 7% |
| NEW | | | | | | | | | |
| Breakdown - US Rig Count | Rigs active | | | | | Change (%) | | | |
| | 2009 | 2010 | 2011E | 2012E | 2013E | 10 vs 09 | 11 vs 10 | 12 vs 11 | 13 vs 12 |
| Horizontal rigs | 455 | 817 | 1,062 | 1,145 | 1,261 | 79% | 30% | 8% | 10% |
| Directional rigs | 202 | 223 | 228 | 225 | 225 | 10% | 3% | -1% | 0% |
| Total Horizontal/Directional | 657 | 1,039 | 1,290 | 1,370 | 1,486 | 58% | 24% | 6% | 8% |
| Vertical rigs | 434 | 500 | 553 | 553 | 565 | 15% | 11% | 0% | 2% |
| Total | 1,091 | 1,539 | 1,843 | 1,923 | 2,051 | 41% | 20% | 4% | 7% |
| % of total - Hor/Dir | 60% | 68% | 70% | 71% | 72% | | | | |
| Oil rig count | 276 | 585 | 953 | 1,078 | 1,221 | 112% | 63% | 13% | 13% |
| Gas rig count | 802 | 943 | 880 | 838 | 820 | 18% | -7% | -5% | -2% |
| Miscellaneous | 13 | 12 | 8 | 8 | 10 | -12% | -33% | -2% | 33% |
| Total | 1,091 | 1,539 | 1,841 | 1,923 | 2,051 | 41% | 20% | 4% | 7% |
| % oil | 25% | 38% | 52% | 56% | 60% | | | | |
| % gas | 74% | 61% | 48% | 44% | 40% | | | | |

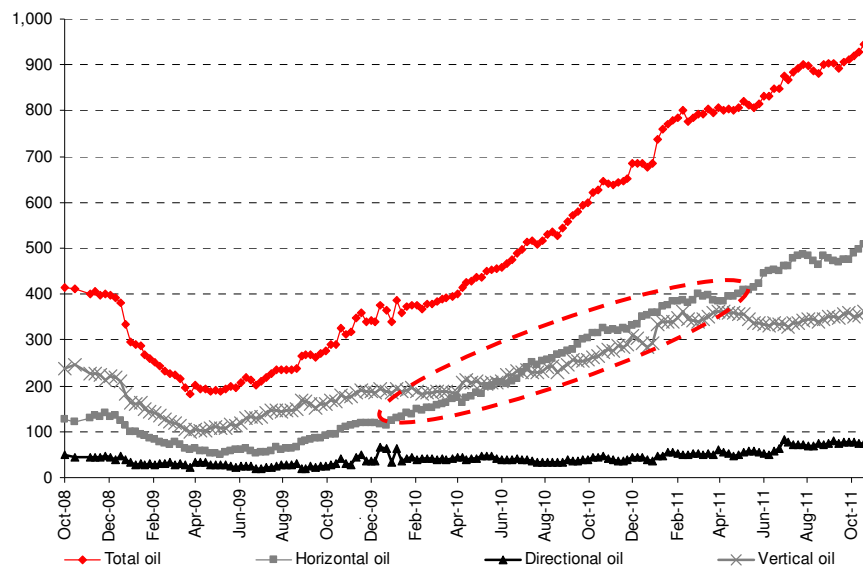
Source: Bloomberg, Baker Hughes, CAODC, Macquarie Capital (USA), November 2011, Prices are in US\$.



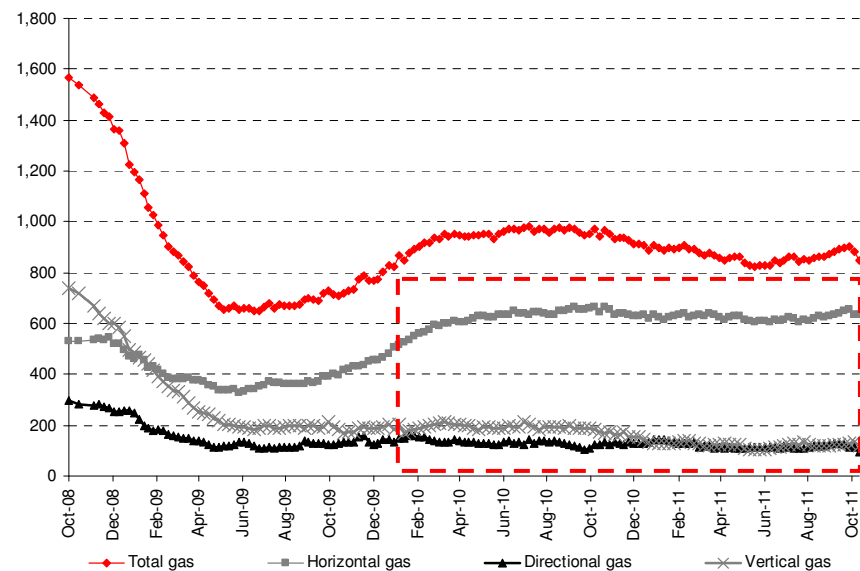
US Oil and Gas rig count by rig type

➔ US dry gas rig count is forecast to fall, while liquids-rich and crude oil drilling is forecast to continue to increase

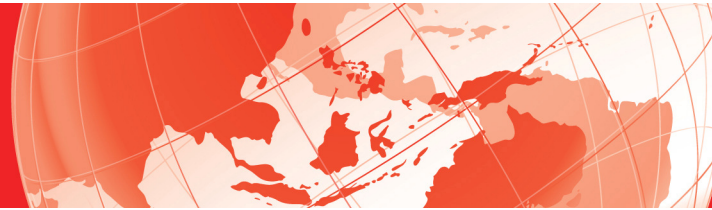
Historical Oil Rig Count



Historical Natural Gas Rig Count



Source: Smith Bits STATS, Macquarie Capital (USA), November 2011

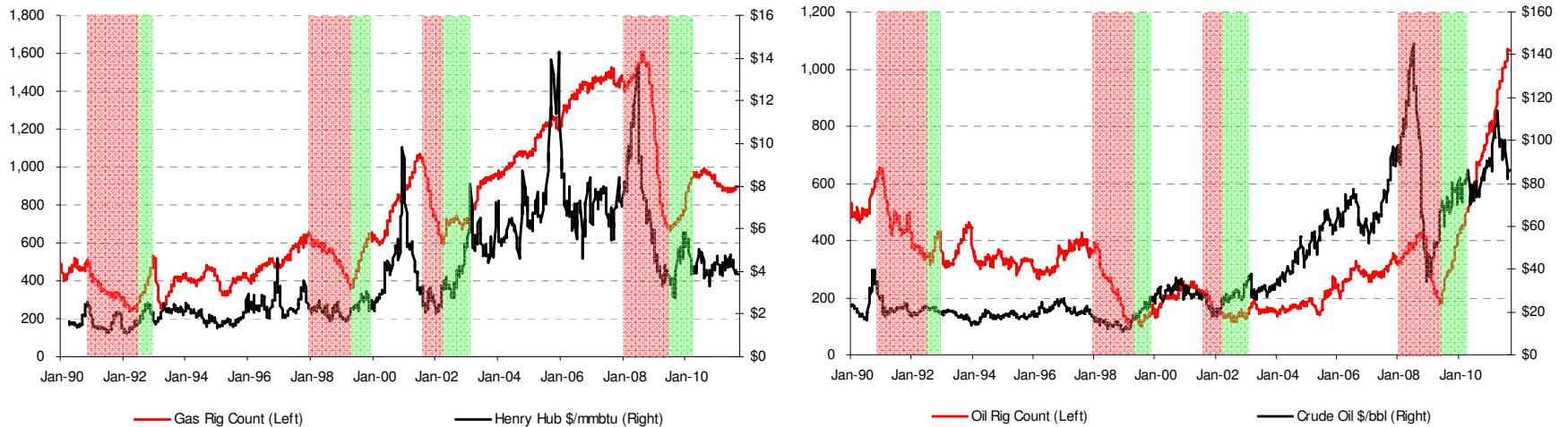


Oilfield services equity reflecting doomsday scenario

Rig count corrections are usually steep and coincide with recessionary periods

| Event | Adverse Rig Count Declines | | | | | | | | Subsequent recovery | |
|----------------------------|----------------------------|-----------------|-----------------|-------------------|-------------------------------|-------------------------------|-----------|-----------------------|---------------------|--------------------|
| | Activity Decline Start | Associated Peak | Activity Bottom | Associated Bottom | Peak-Trough Activity Decrease | Peak-Trough Activity Decrease | Duration | Activity Decline Rate | 50% Recovery Time | 100% Recovery Time |
| | Date | Rig Count | Date | Rig Count | rigs | (%) | (months) | (rigs/mth) | (months) | (months) |
| Gulf War and Oil Spike | Jan-91 | 1,080 | Jun-92 | 551 | (529) | (49.0%) | 17 | (31) | 11 | 122 |
| Asian Financial Crisis | Feb-98 | 907 | Apr-99 | 392 | (515) | (56.8%) | 14 | (36) | 7 | 20 |
| "Dot-Com" Bubble / "9-11" | Sep-01 | 1,130 | Apr-02 | 628 | (502) | (44.4%) | 7 | (71) | 13 | 31 |
| Financial/Sub-prime Crisis | Sep-08 | 2,022 | May-09 | 868 | (1,154) | (57.1%) | 8 | (142) | 7 | 29 |
| Average | | | | | (675) | (51.8%) | 12 | (70) | 10 | 27* |

Negative commodity price shocks preceded recessionary periods and steep declines in drilling rig count

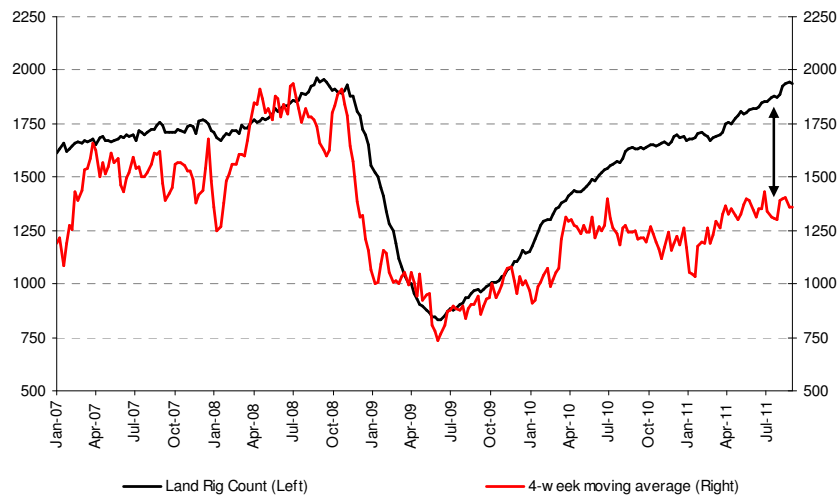


Source: FactSet, Baker Hughes rig count, Macquarie Capital (USA), November 2011

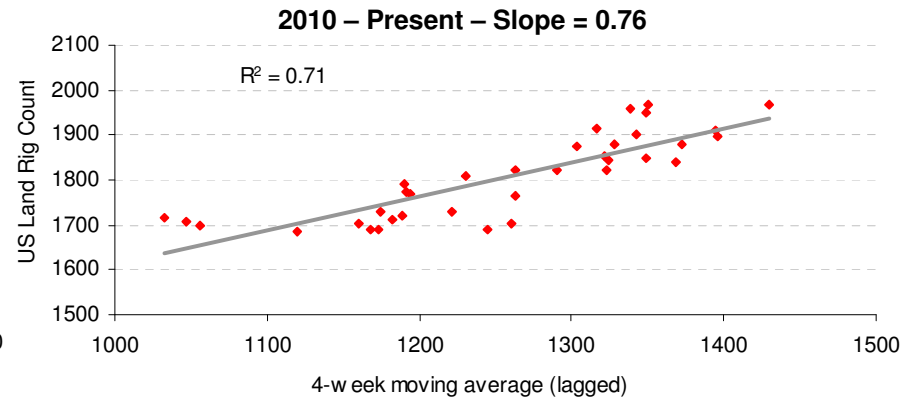
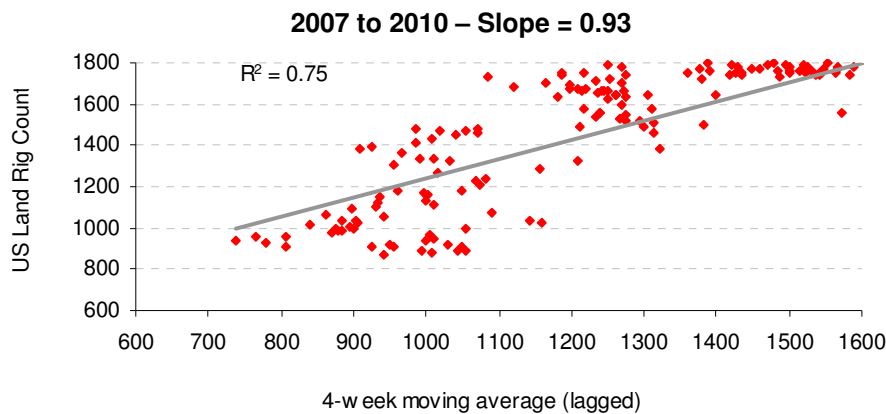


Short term, drilling permits remain best leading indicator

Permitting has been a good indicator of US land rig count, but in 2Q10, the relationship changed



Permitting 4-week moving average and US land rig count shows high correlation



Source: RigData, Baker Hughes, Company data, Macquarie Capital (USA), November 2011



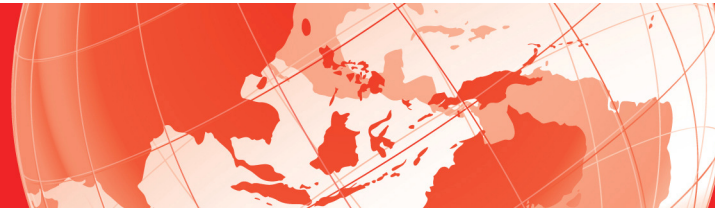
Pressure Pumping Outlook:

→ We expect the pressure pumping market to be still under-supplied in 2011 and estimate will not be in balance until 2013 barring a systemic event

→ Excludes :

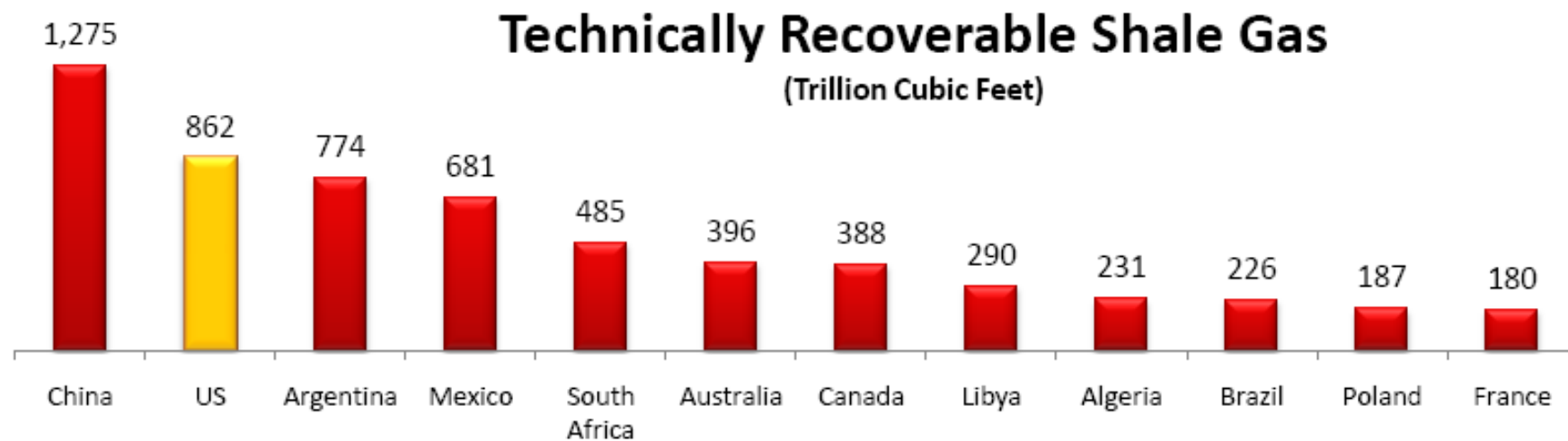
- Difference in service intensity between gas well and oil wells
- Impact of 24/7 and 18-hour crews
- Delays in the supply chain

| | | Rig count | | PP Demand (HHP) | | |
|---|----------------------|----------------------|--------------|-----------------|-------------|-----|
| | | 3Q11 | 4Q11 | 3Q11 | 4Q11 | |
| Gas | Dry gas - Horizontal | Gas rig count | | | | |
| | | Haynesville | 118 | 100 | 1.0 | 0.8 |
| | | Barnett | 59 | 55 | 0.4 | 0.4 |
| | | Marcellus | 141 | 135 | 1.1 | 1.0 |
| | | Fayetteville | 30 | 25 | 0.2 | 0.1 |
| | | Arkoma Woodford | 16 | 15 | 0.0 | 0.1 |
| | | Piceance | 30 | 25 | 0.1 | 0.1 |
| | | Uinta | 14 | 15 | 0.0 | 0.0 |
| | | Other Hor. | 31 | 26 | 0.1 | 0.1 |
| | | Niobrara-Vert. | 13 | 11 | 0.0 | 0.0 |
| | Liquids rich - Hor. | Eagle Ford | 195 | 205 | 1.9 | 2.5 |
| | | Niobrara | 4 | 5 | 0.0 | 0.0 |
| | | Cana Woodford | 38 | 40 | 0.2 | 0.2 |
| Oil | Crude oil - Hor. | Oil rig count | | | | |
| | | Granite Wash | 107 | 115 | 1.1 | 1.0 |
| | | Dir/Vert. | 193 | 170 | 0.4 | 0.3 |
| | | Bakken | 185 | 175 | 0.7 | 0.7 |
| | | Granite Wash | 34 | 40 | 0.3 | 0.4 |
| | | Niobrara/PRB | 1 | 3 | 0.0 | 0.0 |
| | | Permian - Horizontal | 68 | 75 | 0.3 | 0.4 |
| | | Other Hor. | 74 | 75 | 0.3 | 0.3 |
| | | Permian - Vertical | 192 | 200 | 1.3 | 1.7 |
| | | Dir/Vert. | 218 | 205 | 0.4 | 0.4 |
| Total | | 1,761 | 1,715 | 9.7 | 10.5 | |
| <i>Change (from 3Q11)</i> | | | <i>(3%)</i> | | <i>8%</i> | |
| Gross PP supply | | | | 9.7 | 11.5 | |
| <i>Gross utilization</i> | | | | <i>100%</i> | <i>92%</i> | |
| Effective supply (cut 15% for R&M) | | | | 8.6 | 10.1 | |
| Effective utilization (%) | | | | 114% | 104% | |



Pressure Pumping Outlook (cont'd)

- NPC estimates global unconventional resources at 32,560tcf
- Also, Saudi Arabia, Australia, China, Argentina, India and North Africa seeing unconventional drilling
- International market primarily comprises cementing/acidization currently; a shift toward stimulation would boost per-well demand dramatically

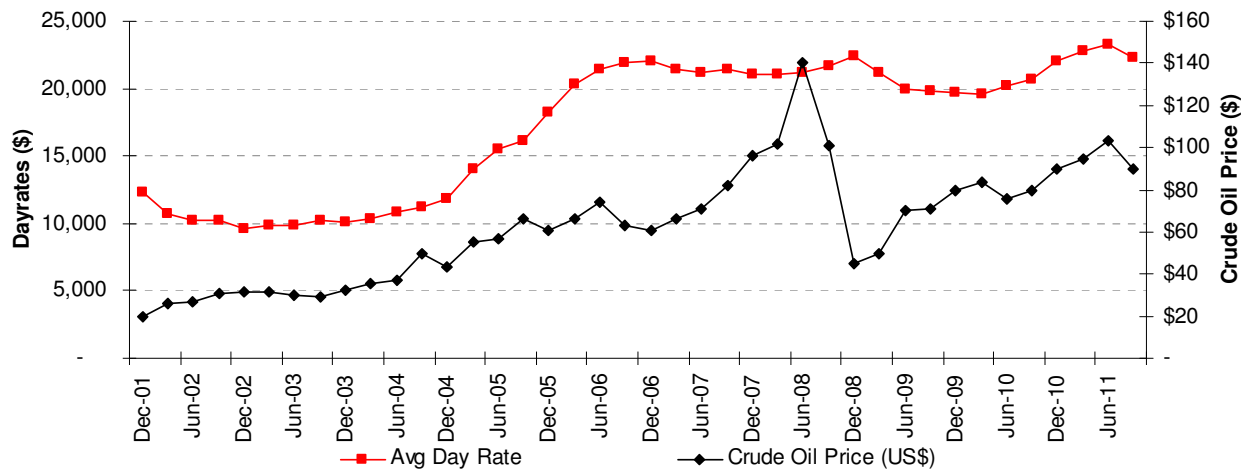
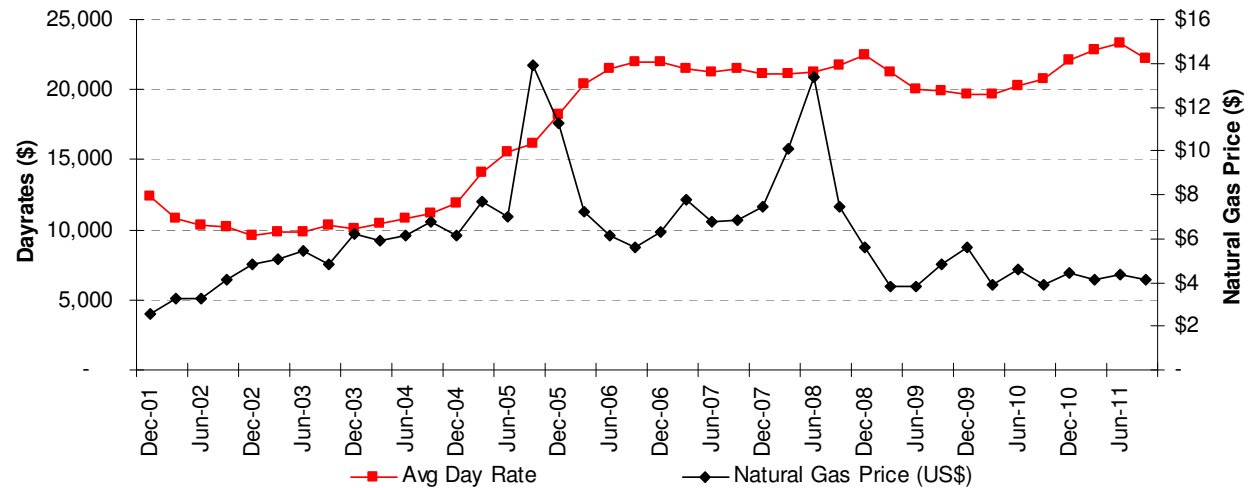


Source: EIA, "Worldwide Shale Gas Resources: An Initial Assessment of 14 Regions Outside the United States", Halliburton, Macquarie Securities (USA), April 2011.



Land Drilling Outlook

- ➔ We expect land drilling rates to remain flat into 2012; adjusting for seasonal effects weather in Q4 and Q1
- ➔ Top three drillers are each deploying 2-4 rigs per month into the market
- ➔ Almost all of this new capacity is to target unconventional demand, yet capacity is barely keeping up

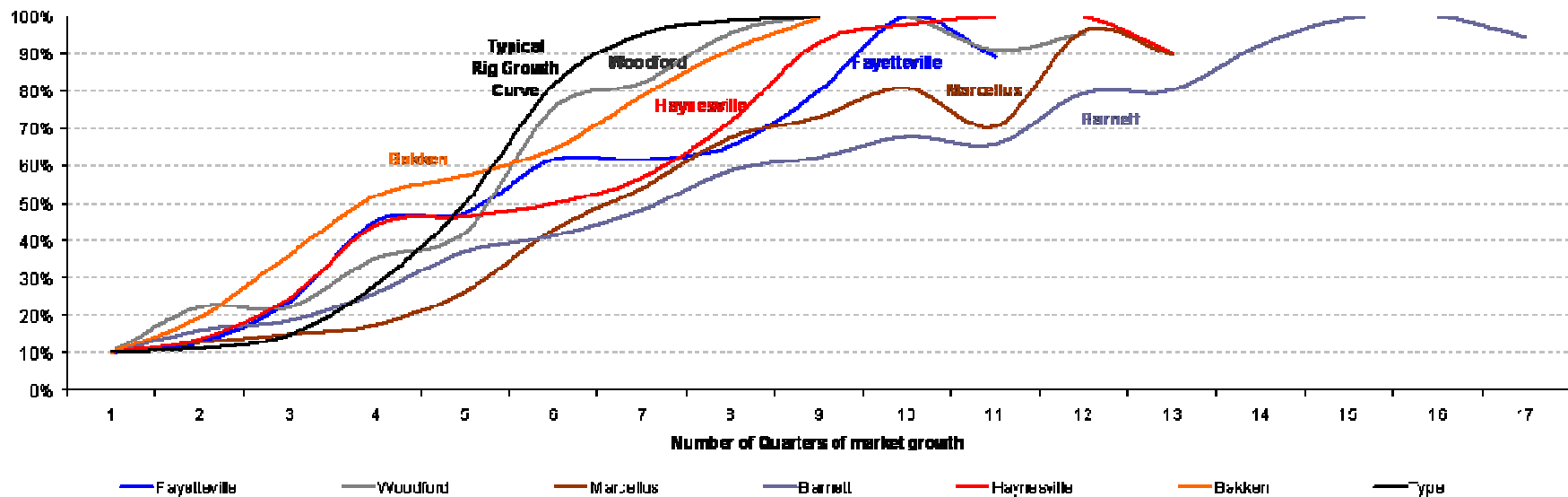


Source: Company data, Macquarie Capital (USA), November 2011



Land Drilling Outlook (cont'd)

- ➔ Rig count driven by unconventional plays – but learning curve is shorter
- ➔ As the US shales continue to evolve, geoscientists and operations staff are bringing basins to peak activity much faster.



Source: Smith Bits STATS, Macquarie Capital (USA), March 2011



Questions?



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Recommendation definitions

Macquarie - Australia/New Zealand

Outperform – return > 3% in excess of benchmark return
 Neutral – return within 3% of benchmark return
 Underperform – return > 3% below benchmark return
 Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

Macquarie - Asia

Outperform – expected return >+10%
 Neutral – expected return from -10% to +10%
 Underperform – expected <-10%

Macquarie First South - South Africa

Outperform – return > 10% in excess of benchmark return
 Neutral – return within 10% of benchmark return
 Underperform – return > 10% below benchmark return

Macquarie - Canada

Outperform – return > 5% in excess of benchmark return
 Neutral – return within 5% of benchmark return
 Underperform – return > 5% below benchmark return

Macquarie - USA

Outperform (Buy) – return > 5% in excess of benchmark return
 Neutral (Hold) – return within 5% of benchmark return
 Underperform (Sell) – return > 5% below benchmark return

Volatility index definition*

This is calculated from the volatility of historic price movements.

Very high–highest risk – Stock should be expected to move up or down 60-100% in a year – investors should be aware this stock is highly speculative.

High – stock should be expected to move up or down at least 40-60% in a year – investors should be aware this stock could be speculative.

Medium – stock should be expected to move up or down at least 30-40% in a year.

Low–medium – stock should be expected to move up or down at least 25-30% in a year.

Low – stock should be expected to move up or down at least 15-25% in a year.

*Applicable to Australian/NZ stocks only

Recommendation – 12 months

Note: Quant recommendations may differ from Fundamental Analyst recommendations

Financial definitions

All "Adjusted" data items have had the following adjustments made:

Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

EPS = adjusted net profit /efpowa*

ROA = adjusted ebit / average total assets

ROA Banks/Insurance = adjusted net profit /average total assets

ROE = adjusted net profit / average shareholders funds

Gross cashflow = adjusted net profit + depreciation
 *equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

Recommendation proportions – For quarter ending 30 September 2011

| | AU/NZ | Asia | RSA | USA | CA | EUR | |
|--------------|--------|--------|--------|--------|--------|--------|--|
| Outperform | 57.35% | 65.88% | 56.94% | 46.54% | 74.68% | 47.85% | (for US coverage by MCUSA, 11.63% of stocks followed are investment banking clients) |
| Neutral | 31.99% | 20.68% | 31.94% | 50.00% | 23.42% | 34.66% | (for US coverage by MCUSA, 9.30% of stocks followed are investment banking clients) |
| Underperform | 10.66% | 13.45% | 11.11% | 3.46% | 1.90% | 17.49% | (for US coverage by MCUSA, 0.47% of stocks followed are investment banking clients) |



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Contact Macquarie Capital (USA) Inc.

SALES

US

| | |
|---------------------|----------------|
| Karen Acierno | (303) 952 2730 |
| Karen Blando | (212) 231 2515 |
| Larry Busnardo | (303) 952 2750 |
| Michael Cagney | (312) 660 9144 |
| Will Cape | (312) 660 9051 |
| David Chambers | (212) 231 2505 |
| Brian Cohen | (212) 231 8002 |
| Wes Dalton | (415) 762 5007 |
| Michael D'Arcangelo | (212) 231 2573 |
| Peter Doerr | (312) 660 9052 |
| John Donaldson | (212) 231 8026 |
| Eddie Friedmann | (212) 231 8011 |
| Roni Gudell | (617) 598 2504 |
| Greg Jannetta | (617) 598 2507 |
| Jay Kreske | (312) 660 9041 |
| Heidi Muccifori | (212) 231 2466 |
| Bruce Murdock | (212) 231 8025 |
| Todd Pigott | (212) 231 8007 |
| Susan Reid | (416) 848 3558 |
| Jack Rose | (415) 762 5002 |
| Richard Sears | (212) 231 2489 |
| Blair Smith | (212) 231 8004 |
| Mark Swank | (212) 231 2415 |
| Ben Taylor | (415) 762 5025 |
| Ingrid Willing | (212) 231 8017 |

Email Addresses

firstname.surname@macquarie.com
eg karen.acierno@macquarie.com

Australia/NZ

| | |
|--------------------|----------------|
| Eric Roles | (212) 231 2559 |
| Michael Burguieres | (212) 231 2506 |
| Rowland Hirst | (212) 231 2553 |
| Daniel Pittorino | (212) 231 2552 |
| Lucy Taylor | (212) 231 2571 |

Asia-Ex

| | |
|-------------------|----------------|
| Rachel An | (212) 231 2422 |
| Darrin Blumenthal | (212) 231 2562 |
| Mark Lawrence | (212) 231 2516 |
| Mehvish Mirza | (212) 231 2519 |
| Sheila Schroeder | (415) 762 5003 |
| Jean Zhang | (212) 231 6397 |

Europe

| | |
|----------------|----------------|
| Martin Pommier | (212) 231 8054 |
| Will Allen | (617) 598 2518 |
| David Bain | (415) 762 5008 |
| Doug Stone | (212) 231 2606 |

India Specialist

| | |
|---------------|----------------|
| Anumeha Pande | (212) 231 2483 |
|---------------|----------------|

South Africa Specialist

| | |
|---------------|----------------|
| Russell Fryer | (212) 231 2504 |
|---------------|----------------|

Japan

| | |
|--------------|----------------|
| Paul Colaco | (212) 231 2496 |
| Todd Narter | (415) 762 5005 |
| Michael Nuss | (212) 231 2517 |
| Peter Slater | (617) 598 2502 |

Corporate Access

| | |
|------------------|----------------|
| Lauren Osterweil | (212) 231 2557 |
|------------------|----------------|

SALES TRADING

US

| | |
|------------------|----------------|
| Austin Graham | (212) 231 2494 |
| Greg Calvino | (212) 231 0902 |
| Pat Caufield | (212) 231 2581 |
| Matt Coleman | (212) 231 2534 |
| Bill Durand | (212) 231 2413 |
| Tom Durand | (212) 231 8024 |
| Tom Fletcher | (617) 598 2515 |
| Chris Gilmore | (617) 598 2505 |
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| Robert Redfield | (212) 231 8071 |
| Chris Richards | (212) 231 0902 |
| William Schuh | (212) 231 2594 |
| Peter Schwartz | (212) 231 6381 |
| John Strack | (212) 231 8067 |
| Jess Wilson | (617) 598 2509 |
| Lance Wood | (415) 762 5009 |

International

| | |
|--------------|----------------|
| Chris Reale | (212) 231 2555 |
| Guy Devereux | (212) 231 0900 |
| Ed Eng | (212) 231 0900 |
| James Henry | (212) 231 0900 |
| Kai Keller | (212) 231 2555 |
| Adam Ritter | (212) 231 6613 |
| Marc Rosa | (212) 231 2555 |

Macquarie Capital (USA) Inc. Macquarie Capital (USA) Inc.
125 W. 55th Street, Level 23 2 Embarcadero Center, Suite 200
New York, NY 10019 San Francisco, CA 94111
(212) 231 1000 (415) 762 5000

Macquarie Capital (USA) Inc. Macquarie Capital (USA) Inc.
225 Franklin Street, Suite 1740 1 North Wacker Drive, 9th Floor
Boston, MA 02110 Chicago, IL 60606
(617) 598 2500 (312) 660 9215

Macquarie Capital (USA) Inc. Macquarie Capital (USA) Inc. 24 Hour Toll-Free
1225 17th Street, Suite 1600 1-888 MAC STOCK
Denver, CO, 80202 1-888 622 7862
(303) 952 2800