Getting Paid for Innovation: How to beat the odds!!

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Barriers to success
History lessons
Beating the odds
E&P “Half-Life” is 30 Years

Compared to other industries, E&P industry takes too long to bring technologies to market.

Source: McKinsey & Co., Houston Technology Center
Barriers to Success

US oil and gas company bankruptcy filings, 2015-present

Cumulative outstanding debt of U.S. E&P companies under Chapter 11 protection ($ million)

$79bn of debt in Chapter 11

Source: Bloomberg New Energy Finance, Havnes and Boone LLP
Markets aren’t helpful

- Market potential is small
- Risk averse customer base
- Slow decision making
- Even slower adoption rates

Source: Altira Group
Funding is small, too!!

Only 1% of all venture capital and private equity has gone into oil and gas exploration, alternative energy, enhanced recovery technology, coal, conservation, and other energy categories. The S&P 500 weighting of energy is 9%.

Source: Venture Economics
3D Seismic Imaging

Source: Baker Hughes
Contribution to Falling E&P Costs

Schroders Oilfield Value Survey

3D Seismic voted #1 (three years running)

“Technology deemed to provide the most value to customer success”

Source: Schroders
Seismic Shareholder Value Destruction

Top 8 Seismic Companies - 1995 to 1999

Revenue - $17.6 B
Net Income - $ 0.4 B
Capital Charge - $ 2.0 B
Value Destroyed - $ 1.6 B

Too many seismic boats
Too much spec seismic

Source: Simmons & Company, Baker Hughes
Big fracs get big results

Source: FTSI
Impact on North American market

Production jumps – price slumps!!

Source: EIA, Annual Energy Outlook 2012
Gas redefines electric power markets
Low cost gas drives power prices lower

Wholesale US Power Prices, $/MWHr (Blue)
Natgas, $/MMCF X 10 (Red)

Source: EIA
Economic impact of gas only

- Power prices down by $40/MWHr since 2008
- Electric Power market is 4 billion MWHr annually
- Users in the supply chain benefit more than $160B
- 65% of Natgas not used for electricity generation
- 2012 price $5.50 cheaper than 2008
- Delivers a direct benefit of $90B
Unconventional wisdom

US imports fall due to production increase and consumption decline. Reduces import bill by $225 Billion.
# US Pressure Pumpers

**Annualized EBITDA per HHP**

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Exit Strategy Matters

- Texaco in house technology
- Offered to seismic industry with no takers
- 1999 startup with Texaco scientists
- Potential to increase productivity and exploration success rates
- Sold to HAL for $100M in 2001

Source: Magic Earth
Startup to IPO in 15 Months: Monetization matters!
How to beat the odds

• Exit strategy – discuss at every BOD/partner meeting, speed matters
• Incentivize everyone who makes a difference
• Proper capitalization – avoid an unwanted second round
• Use greed to your advantage – sponsor wants to get paid
• Just because the technology is great, it doesn’t mean you will make money
• Management team needs to evolve with the business
• IPO is a valuation event – not a liquidity event