

11/18/15 3pm


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MidFirst Bank


I grew up in Tulsa and graduated from Cascia Hall. Then I went to Northwestern for undergraduate and I double majored in Psychology and Economics. After that I went to Baylor and obtained a JD/MBA. After working as a landman for six months after law school I started working at Heritage Trust Company in OKC for three years as an oil and gas property manager. I now have had the same position at MidFirst Bank since 2014.

I am on the board for Second Century (the youth board of the Gaylord-Pickens Museum), and the Oklahoma Foundation for the Disabled. I am also involved with the United Way, Alliance of Emerging Professionals, Northwest Young Professionals, and the Oklahoma City Mineral Lawyers Society.

Management Continued Active Approach

- Lease Negotiations
 - In "hot" areas, look for potential leases
 - Combine multiple clients' tracts
 - Use OUR lease form
 - High Closes
 - Continuous Drilling
 - Shut-In Limitation
 - Gross Proceeds
 - Good Price Available
 - Good Information
- Surface Negotiations
 - Rights of way
 - Pad sites
 - Pipelines
 - Crop damage




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Questions?


Thank you for your time. Please contact us with further questions:

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Strategies for Management In and Uncertain Pricing Environment

- Add value in other areas
 - Tax accounting
 - TIE cleanup
 - Examine entity structure
 - Long term planning
- Client communication
 - Explain the market
 - Explain their options



What is Mineral Management?


Three Main Areas of Focus

Accounting	Administration	Management
<ul style="list-style-type: none"> • Deposit monthly revenue and track detail • Examine and categorize working interest expenses • Prepare annual tax reports for CPAs, as well as customized client reports 	<ul style="list-style-type: none"> • Maintain records of account documents • Review all legal documents for accuracy • Track regulatory activity as it relates to client assets 	<ul style="list-style-type: none"> • Track and review client assets • Understand important lease terms and current market conditions • Review and evaluate all expenses • Hold oil companies accountable




Accounting as a Mineral Manager

- Three types of Interests
 - RI - track revenue, deductions
 - WI - track revenue, deductions, expenses
 - DRRI - track revenue, deductions, lease
- Software requirements
 - Options are expensive
- Reporting
 - By well, asset, state, month
 - Customized for CPA, client or internally





Accounting as a Mineral Manager

- Work with CPA's on Tax Issues
 - Intangible Drilling Costs
 - Capitalize gains / losses
 - Ad Valorem Taxes
 - Quarterly Income Tax Estimates
- Balance as we go
- Keep updated on tax / case law / legislative




Administration

- Organizing client files, keeping them organized
- Review division orders
 - Net Acres, Lease, Unit Size
- Respond when necessary - poolings, class actions, AFE's, other notices

Management Where the Rubber Meets the Road

- Review each account as a whole
 - It's profitable?
 - Leases expiring?
- Research the market - varies across the state / country
 - Lease offers
 - Participation
 - Auction
 - Credit Review
 - Play International
- Miscellaneous
 - Title requirements
 - Mineral interests
 - Insurance requirements



Future of Oil Demand

- Growth continues steady upward trend
- 2015 expected to grow by 1.4 MM BO/day, fastest in 5 years
- Estimated growth of 1.4 MM BO/day in 2016
- Growth supported by consumers, economic recovery, US strength
- World GDP growth of 2.3% in 2015; 2.7% in 2016

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Price Projections

- Slow growth projected
- Natural gas more cyclical
- Warm winter projected
- Average of \$3.0/MCF in 2016

- Slow growth projected
- Low in March, bump in May
- Back down in August
- Range down to \$20's

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So, how do we help our clients make the most of a tough situation?

- We need survival strategies
 - Talk clients off the ledge
 - Make them some money

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Strategies for Management In an Uncertain Pricing Environment

- Many people buying up leases in a down market
 - Be patient, don't settle
- Focus on high value areas
- Other revenue sources
 - Minimize deductions on leases
 - Suspended funds
 - Interest on old production

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Strategies for Management Interest on Suspended Funds

- In Oklahoma, 12% if withheld w/ good title
 - Even without a signed division order
 - Without good title, still get 8%
 - Better return than the stock market
- In Texas, not as helpful
 - 2% over Fed Reserve of NY loan rate when title is clear (-0.14%)
 - 4% over Fed Reserve of NY loan rate when purchaser hasn't notified
 - Nothing when unclear title
- Many other states with interest requirements, more possible


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Strategies for Management Interest on Suspended Funds


- Ways to find suspended funds
 - Look through ALL client documents
 - Research the locations
 - Go to missingmoney.com, Texas RRC, Oklahoma Sec. of State
 - Call all purchasers
 - *Found over \$100,000 this year
- Sometimes companies make late payments
 - Always review check detail
 - If > 6 months after production, request interest
 - Watch out for adjustments
 - *AEP 50 pages per check, "forgot" to add back to \$16,000

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Future Projections



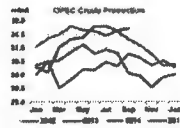
- **Pessimistic Views:**
 - Companies are over-leveraged
 - Continental spent as much on interest as Exxon Mobil (20x larger)
 - SandRidge bought company it owed \$
 - Drillers' debt up 16% from last year
 - S&P lowered outlook / downgraded almost 1/3 of US E&P companies
 - Weekly articles about new price crash
 - Reduced drilling → lower production revenue




Future Projections

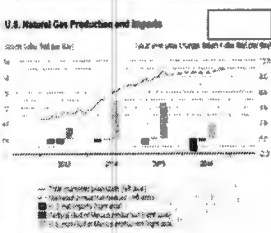


- **Pessimistic Views:**
 - Reduced spending → lower production revenue
 - Cannot service debt without revenue stream
 - Companies drilling wells, not completing
 - Holding leases, bad for landowner
 - When prices recover, surplus comes back
 - Possibly what we saw in Summer 2015
 - OPEC has not slowed like the US
 - Slight increase of 90K B0/day in September
 - Record production in Iraq
 - Even though Saudi Arabia slowed down






Future of Gas Supply



- Increase of 4.7 BCF/day in 2015 & 1.6 BCF/day in 2016
- Better drilling efficiency makes up for lower rig activity
- Growth mostly from Marcellus
 - Backlog of uncompleted wells
 - Pipelines coming online
- Lower demand for Canadian imports
- Exports to Mexico increase
- LNG exports to 0.7 BCF in 2016

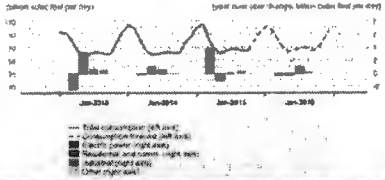



Future of Gas Demand

EIA's forecast consumption of 76.3 BCF/day in 2015; 76.8 in 2016

- Power sector increase by 16.8% in '15, decline by 1.2% in '16
- Industrial sector flat in '15, increase by 4.2% in '16
 - Fertilizers and chemicals
- Decline in residential from warmer winters

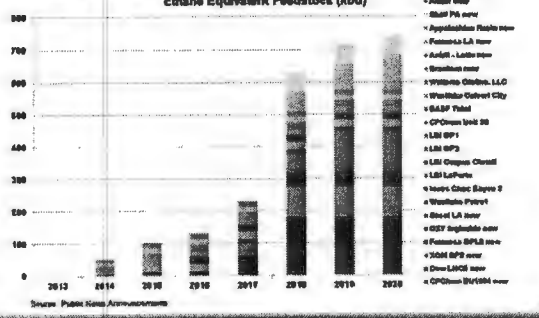
U.S. Natural Gas Consumption






Future Gas Use – Growth from Ethylene

Ethane Equivalent Feedstock (tbd)

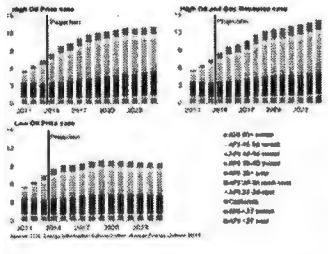


- Alkane wax
- Ethyl PE wax
- Appalachia Feed wax
- Permian LA wax
- Arctic - Lobo wax
- Breakton wax
- Williams, Oklaho, LLC
- Weatherford City
- S&P Feed
- CPDew feed 20
- L&M GP1
- L&M GP2
- L&M Oregon Coast
- L&M Europe
- Newk Creek S&W 2
- Weatherford
- Sweet LA wax
- ODF English wax
- Permian DPLB wax
- S&P GP1 wax
- Dew-L&D wax
- CPDew-BU1604 wax




Future of Oil Supply

Figure 2. U.S. supply of production by crude type by 2025 (bbl per day)



- EIA: oil not shutting off overnight
 - High price: growth thru '25
 - Low price: stops at '16, returns in '17
 - High resource: high growth
- In all cases, 2015 at record levels of 1970
- Light sweet crude dominates growth



Economic Impact

- Low prices have led to layoffs
 - Energy sector has led the nation in layoff announcements
 - 86,622 job cuts nationally in first 1/2 of 2015
 - Chevron announced 6-7,000 layoffs through end of 2016
- Unemployment in OK started to increase w/ falling prices
 - Actually fell in September to 4.4% (had been increasing)
 - Compared to 5.1% national rate (steadily decreasing)
 - Recent peak of 7.1% in December 2009
 - Remained 0.5% since low on December 2014
 - Number of unemployed in OK is 80,620 (12K more than Dec. 2014)

Unemployment Rate (Oklahoma, % Labor Force)

Source: BLS Bureau of Economic Analysis

Economic Impact

- Impact in Oklahoma particularly hard
 - Going in opposite direction of US economy
 - Nationally, strongest & fastest in the world
 - Inflation in check, latest jobs report was 5.0%
 - Stock market massive rebound in September
 - Consumer spending back up
- Seven downturns where oil prices slipped >30% since '80
 - In 1980's, energy was 6-12% of state savings
 - 1980-2008, energy was 3-5%
 - In 2015, energy back to 12%
- Hitting rural areas, manufacturing sites
- Other sectors remain positive:
 - real estate, banking, etc.

Economic Impact

- All companies are struggling with lower prices
 - Sabine Oil & Gas, Outokumpu, Strategic Resources, BPZ, Dura Energy & American Eagle Energy
- Local companies hit particularly hard
 - Smaller & heavily leveraged
 - CHK reported \$4.1B second quarter loss -> 740 layoffs
 - SandRidge may be forced to leave NYSE
 - Samson filed Chapter 11 in September
- Hedging payments were a major source of income
 - Accounted for 15% of revenue for 1/4 of US companies
 - Contracts expiring, or cashed out

Future Projections

- Optimistic Views:
 - US rig count down 60% from 2014
 - Stalled in May, back down again
 - 572 oil rigs, 199 gas rigs
 - 83 in OK, 340 in TX

OK mirrors US decline

- Rig count down 61.4%
- Bigger slide late 2015

Future Projections

- Optimistic Views:
 - Cost of shale production dropping
 - Client AFE's, JIB's, etc.
 - \$50-60 oil enough to make production profitable
 - Break-even for others much higher when considering social factors
 - Iran \$133; Russia \$107; Iraq \$101
 - Saudi Arabia is running out of money
 - IMF says in 5 years, countries in Middle East will run out
 - \$360 Billion loss in the region this year alone

Future Projections

- Optimistic Views:
 - Price consensus encourages deals
 - 2 of the biggest M&A deals of 2015
 - Royal Dutch Shell buying BG (\$81.5 Billion)
 - Energy Transfer Equity buying Williams (\$70.6 Billion)
 - Leads to more efficient companies
 - Cheaper gasoline -> more consumption
 - Turmoil in Middle East is reliable disruption
 - China and Greece not enough to offset demand increase

Demand Side Economics - Oil

Global oil consumption grew 0.8 MM BO / day (0.8%) in past year


- Slowest growth for 14 years outside of US recessions
- All increases came from non-OECD countries (non-developed)
- Oil consumption in developed countries dropped 1.2%
- 8th year in the past 9 where consumption has decreased
- Down 5MM BO/day since 2005
- Domestic consumers still wary of high gas prices
 - Fuel efficient cars still in high demand
 - Gasoline consumption did rise by 210,000 BO/day (2.3%) in early 15
- Chinese consumption increased 390,000 BO / day
 - Slower increase than in years past




Demand Side Economics - Gas

Natural gas consumption grew 0.4% in 2014

- 10 year average increase was 2.4%
- Growth in consumption steady across all sectors last 4 years
- Fleet vehicles continue to change to natural gas
- Mild winter did not exhaust supply
- Power generation from coal to natural gas continues
 - Still cheaper option than other sources
- Other countries still waiting for LNG terminals to be operational
 - 5 are in construction

Demand Side Continued

Chinese economy has been slowing down

- Stock market lost 40% in July
- Government devalued currency 2x
- GDP growth from 5-7%, down from 12% in 2010

Greek Eurozone crisis created current & future concerns


Russian recession even as they ramp up production

US slower to adapt to changing gasoline prices

- Fuel efficient cars still in high demand

Strong dollar undercuts increased demand

- As other countries struggle, US dollar is safe haven
- Take fewer valuable \$US to buy a BO / MCF





Demand Side Continued

Rise of renewable energy sector

- Investment from US government
- New wind turbines in NW Oklahoma
 - Now 4th in nation in wind power
- Global increase
 - Renewables made up 1/4 of world's new power plants in 2014
 - "Green energy" is 2nd largest electricity source in the world
 - Morocco's Noor Ouarzazate
 - India's Cochin Int'l Airport
 - Denmark wind power 140%

IEA estimates of world electricity generation in 2040
Percentage of world demand generated by type, based on IEA's best estimate

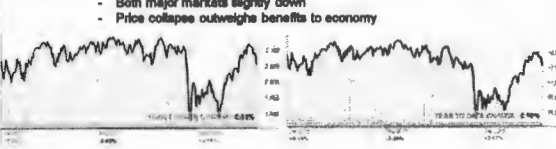
Taken Together → Price Collapse

- Cushing WTI \$41.62
- Brent Crude \$44.14
- NYMEX gas \$2.29
- Lowest oil prices since financial crisis
- Global crude has fallen 80% since June 2014; major slide this time last year
- Gas rebounded from lows of 2012, now almost back to 5 year low





Economic Impact

- US produced 90% of the energy it consumed in 2014
 - Most since the 70's when switched policy
- Imports were 1% of GDP in 2014; down from 2.5% in 2007 (before Financial Crisis)
- Shale drillers spent \$120 billion in the US
- Stock market is flat for the year
 - Both major markets slightly down
 - Price collapse outweighs benefits to economy



S&P DJIA



Supply in the US - Gas

Natural gas storage below 5 year avg through late 2014

- Allowed for a small rebound in gas prices last year

Source: EIA Last Modified 10/19/2014

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Supply in the US - Gas

Natural gas storage hit an inflection point in early 2015

- Reached 5 year average, in summer back over average

Working gas in underground storage (excluding the 5-year maximum and minimum)

Source: U.S. Energy Information Administration

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Supply in the US - Gas

- Production has been trending up especially since Marcellus in 2008

US Total Marcellus Natural Gas Production (Bcf/d)

- August 2015, inventories 4% over 5 year average, 10% higher than 2014
- US continues to be net exporter, Eagle Ford to Mexico
- Non-gulf production led by Marcellus
- Offsets long term production declines in gulf wells
- August 2015, total production hit record high of 81.3 BCF/day

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Oil & Gas Supply: a Global Issue

Chart of OPEC Oil Production (Million Barrels per Day)

- US now producing > 11 of 12 OPEC countries
- Saudi Arabia not happy
- November 27, 2014 declares price war on US shale
- Decision not to cut back production
- Goal is to win back market share from US
- Poorer countries resisted
- Canada and Brazil also reported record production in 2014

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Oil & Gas Supply: a Global Issue

IRAN NUCLEAR TALKS

- Not ratified by Congress yet
 - Probably won't be
- Can move forward without approval
 - Deal with UN Security Council in July
 - Approval of International Atomic Energy Agency needed
- Unsure how much oil will enter market at full capacity
 - Tehran produced 4MM B/D in 2008
 - Output has fallen to 2.8 MM B/D now
 - Sanctions cut exports in 1/2 to 1MM B/D/day
- Effect on OPEC
 - No one would cut but Saudi Arabia
 - Unlikely since in religious proxy war
 - So... NO CUTS
- Timing is uncertain, but likely to be a lag after deal is done
 - Possibly by second half of 2016

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Oil & Gas Supply: a Global Issue

World oil surplus could be longest in 30 years

- If OPEC continues current production → surplus of 1MM BO/day in third quarter & 600K BO/day in 4th

Record-Breaking Oil

Today's oil supply surplus is as thick as the biggest on record, surpassing both the Asian economic crisis of 1997-1998 and the global recession of 2009-2009.

Source: The International Energy Agency, Bloomberg

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US Oil & Gas Production Overview:

Market Response to Pricing Changes

- As ratios change, production shifts
 - Less gas plays, more oil plays

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US Oil & Gas Production Overview:

Production Increases Locally

- Mississippi, Woodford, SCOOP, Springer (OK)
- Eagle Ford, Permian, Hogshooter, Wolfberry (TX)

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US Oil & Gas Production Overview:

Increased Production Lead to Growth in Oil Supply

US Oil and Liquids Supply

US Import Quality Type

- Domestic production increasing % of US supply
- US production mostly light sweet crude
- Displaced imports, then overtaken

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Supply in the US - Oil

- Increased production → above the 5 yr range in supply in 2014

	2014	Change from last year
Crude Oil	260.0	-0.09
Gasoline	210.5	0.44
Diesel	138.8	0.84
Propylene	70.177	1.2704

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Supply in the US - Oil

- Production continues to increase through 2015
 - 8.7MM BO/day in 2014 to 9.3MM BO/day in 2015
 - Rate of growth slowed in 2015 with price shock
 - 9.4 MM BO/day first 8 months; 9.1MM BO/day in October
- Should decline in 2016 (8.8 MM)
 - Even then, supply will be unprecedented

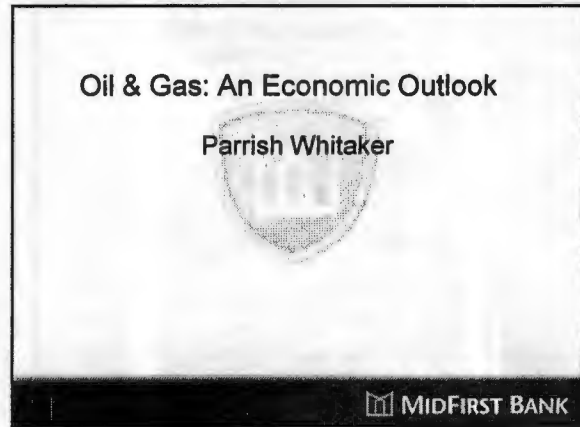
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Supply in the US - Oil

- Crude Oil Stock Increase
- In 2015, uncharted territory
 - 5 year average left in the dust
 - Crude oil up 108.8 PERCENT from '14
 - Inventory builds slowed in 3Q

	2014	Change from last year
Crude Oil	260.0	-0.09
Gasoline	210.5	0.44
Diesel	138.8	0.84
Propylene	70.177	1.2704

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Oil & Gas: An Economic Outlook

- US Oil & Gas Production Overview
 - US Oil & Gas Supply
 - Global Concerns
 - Demand Economics
 - Economic Impact
- Future Projections – Positive / Negative
 - Survival Strategies

US Oil & Gas Production Overview:
History of Shale Plays in the US

- US Shale a relatively new phenomenon
 - Barnett in 1998
 - Marcellus in 2004
 - Bakken in 2004
 - Haynesville in 2007
 - Woodford in 2008
 - Utica in 2009
 - SCOOP in 2012

US Oil & Gas Production Overview:
Success of Shale Plays in the US

- In 2012, EIA projected best case of 8MM Barrels/Day by 2020
- In 2014, US produced 8.7MM Barrels/Day
 - Highest ever was 8.6MM Barrels/Day in 1970
 - 2015 Projected to be 8.4MM Barrels/Day
- Dry gas production was 25.7TCF in 2014
 - Last 4 years highest on record

US Oil & Gas Production Overview:
Changing Price Environment