

U.S. Foreign Policy and its Impact on Oil and Gas Prices

A Global to Regional Analysis

Presentation to:

Uinta Basin Energy Summit
Vernal, UT

By:

John Harpole

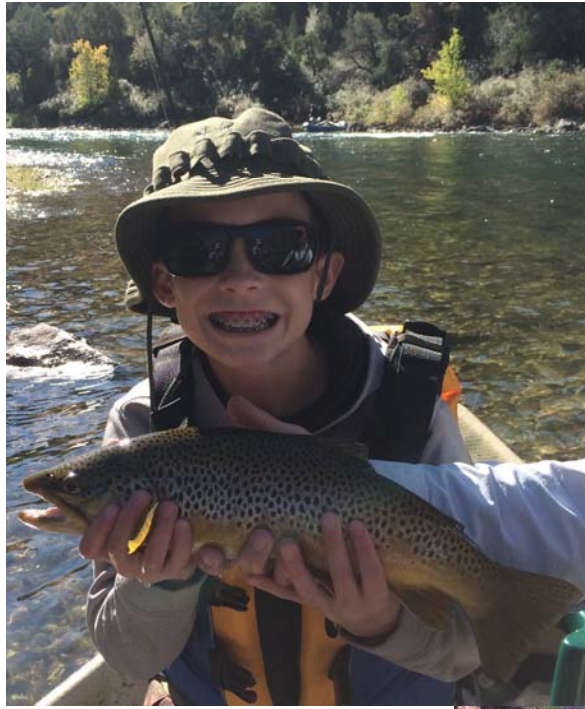


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September 10, 2015







Forward Looking Statement

This presentation contains various statements including those that express belief, expectation or intention. When used in this presentation, the word “could,” “believe,” “anticipate,” “intend,” “estimate,” “expect,” “forecast,” “may,” “predict,” “potential,” and similar expressions are intended to identify perceptions.

Bottom line – I am a simple natural gas broker out of Littleton, Colorado. I do not hold a doctorate in economics. I have knitted together the story that I will share with you today by simple observation. I am also a Catholic and constantly have to read the “Litany of Humility” in order to check my ego when fine audiences like yourself agree to listen to my rants.

Let us begin with a few assumptions and questions.

Assumptions about the current U.S. Administration

- President Obama appears to be concerned about 2 issues which directly impact his foreign policy:
 - Global warming
 - Nuclear proliferation
- Those 2 philosophical issues are material drivers in a global re-evaluation of political alignments.
- Those 2 issues could affect the price of oil and natural gas in the world (and U.S.) for many years.

Questions and Answers That Support My Assertion

- Does the current Administration truly support the U.S. oil and gas industry?
 - Answer: No. Consider:
 - New Federal Regulations (EPA, BLM)
 - Decline of leasing on federal lands
 - Decline in production on federal lands
 - Increase in production on fee lands
 - U.S. export ban
 - “Glacial pace” of the issuance of LNG export licenses

Questions and Answers That Support My Assertion

- Is the current Administration opposed to nuclear proliferation?
 - Answer: Yes. Consider Saudi Arabia's recent announcement of a nuclear arms agreement with Russia

“Saudi Arabia, Russia sign nuclear power cooperation deal” – Reuters.com

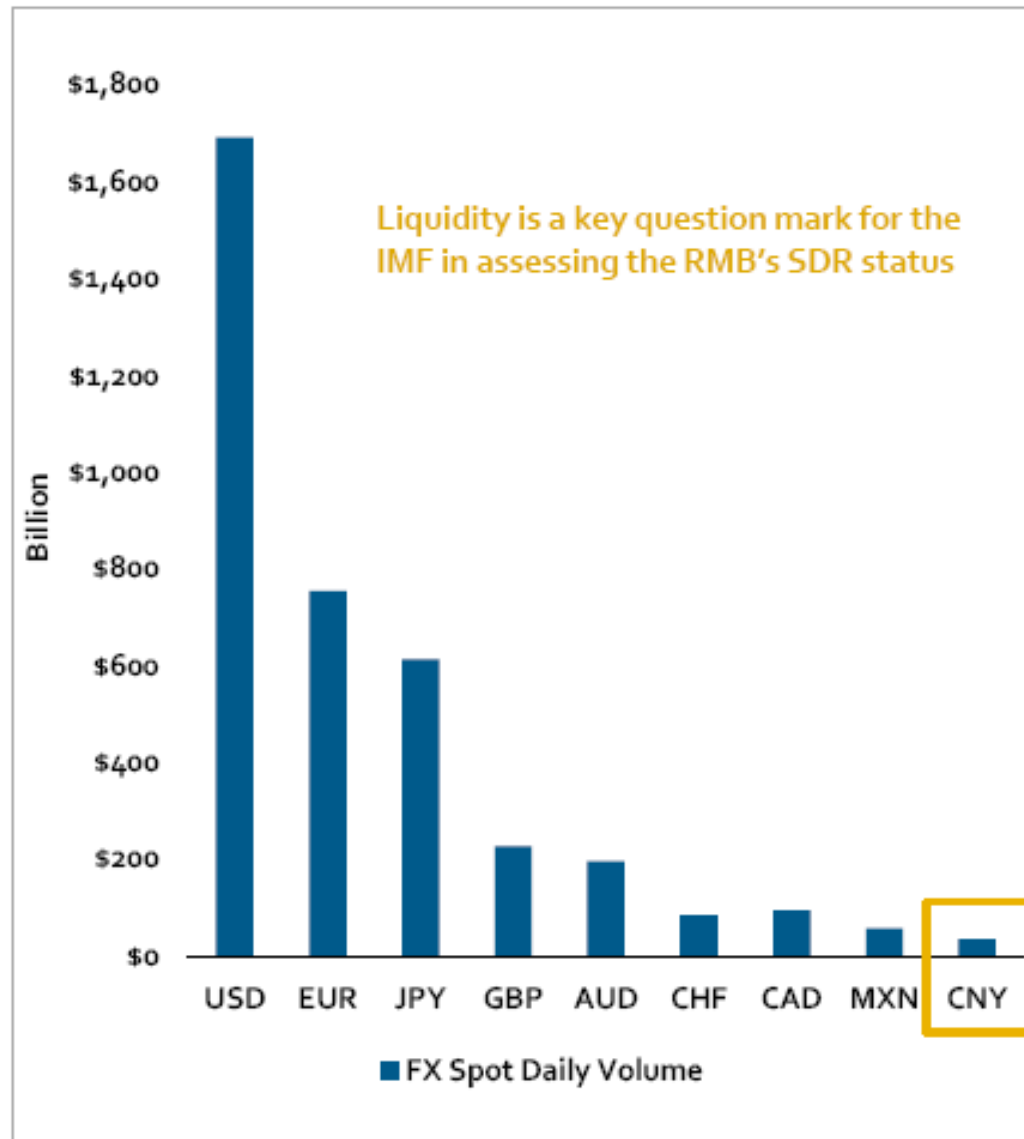
Six deals signed between 2 sides

What impact will the following issues have on the U.S. oil and gas industry?

1. Apparent lack of support for U.S. oil exports from the current administration
2. China has agreed to purchase Russian oil and Russia has agreed to accept the Chinese Yuan in payment.
3. What would be the impact of the Saudis accepting the Yuan rather than the U.S. Dollar in payment for Saudi oil?
4. Is the Petro-Dollar relationship that has existed since 1970 threatened?

Global Foreign Exchange Spot Daily Volume

As of December 31, 2014

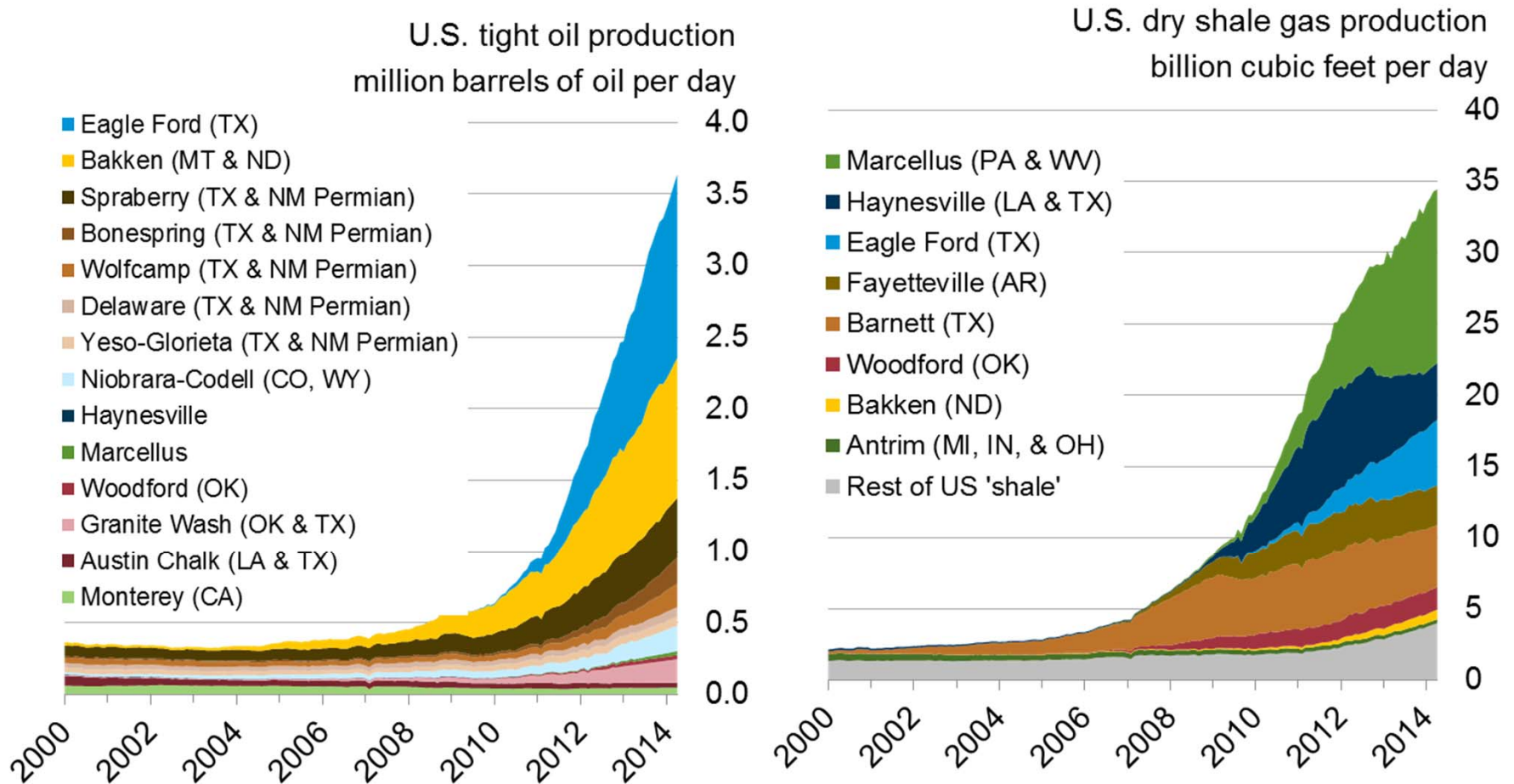


A Little Bit of History

You don't know what you don't know.
Where are they?



The U.S. has experienced a rapid increase in natural gas and oil production from shale and other tight resources

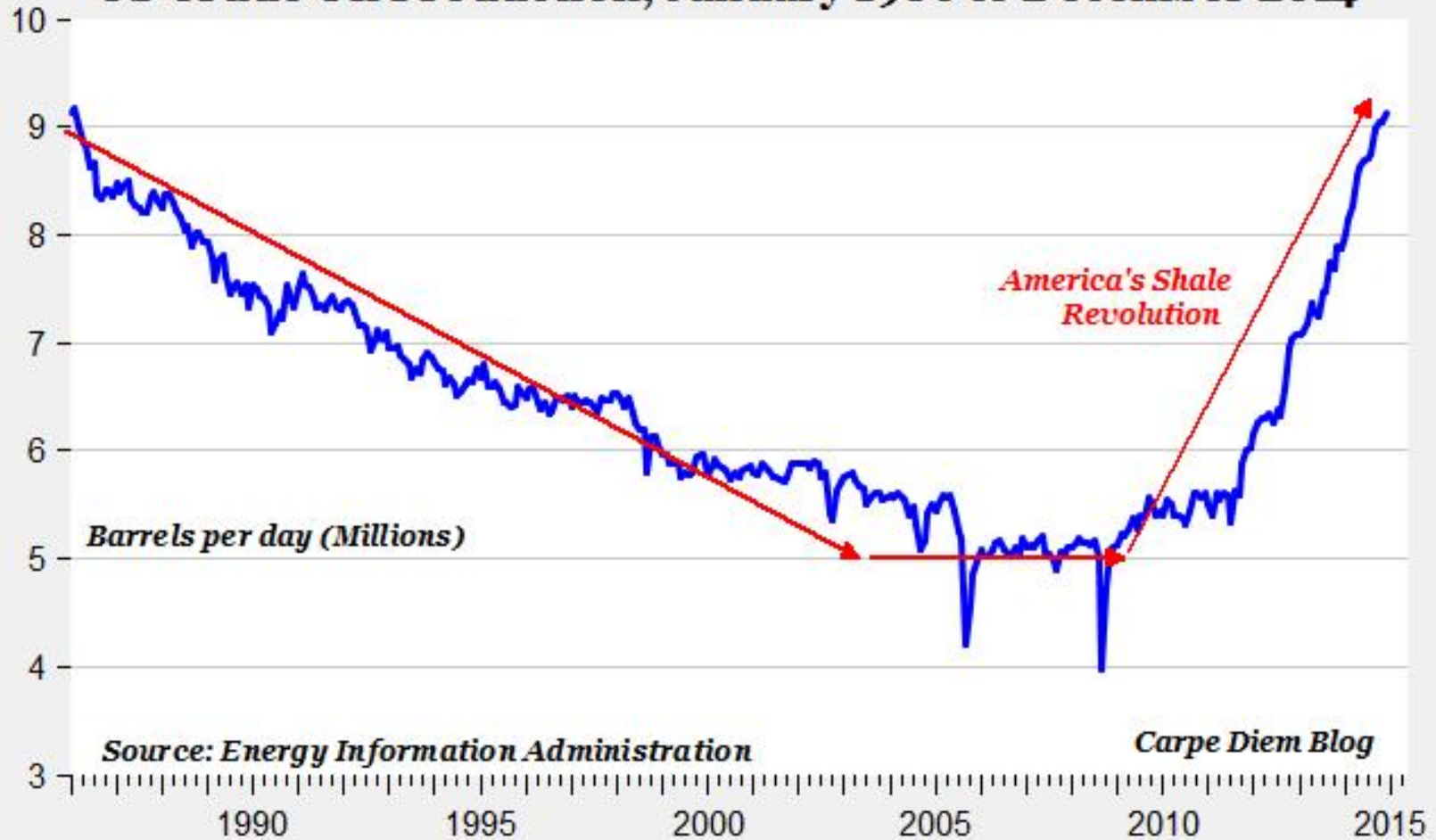


Sources: EIA derived from state administrative data collected by DrillingInfo Inc. Data are through April 2014 and represent EIA's official tight oil & shale gas estimates, but are not survey data. State abbreviations indicate primary state(s).



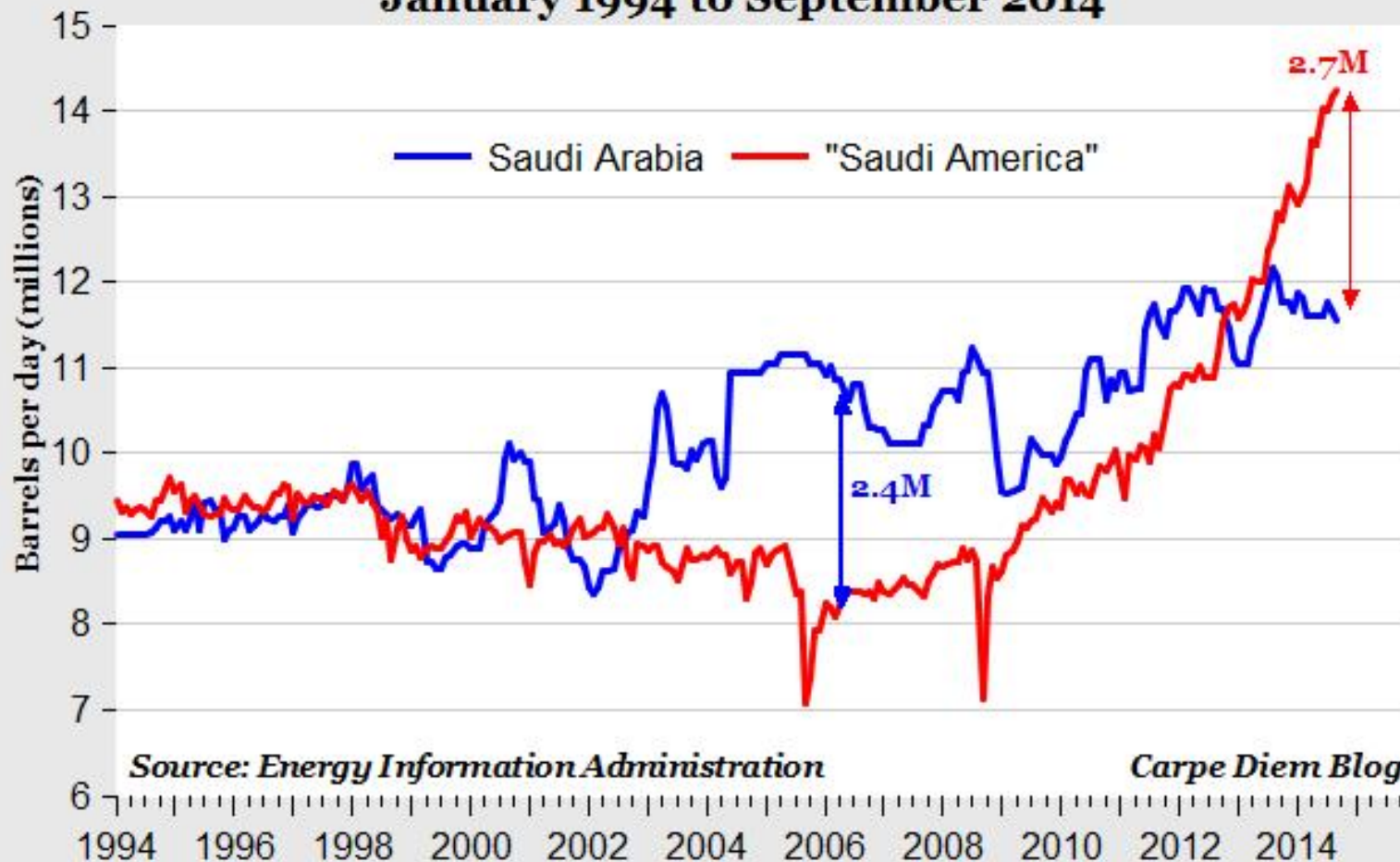
Source: U.S. oil and natural gas outlook, Adam Sieminski, EIA Administrator, Presentation to IAEE International Conference, June 16, 2014

US Crude Oil Production, January 1986 to December 2014



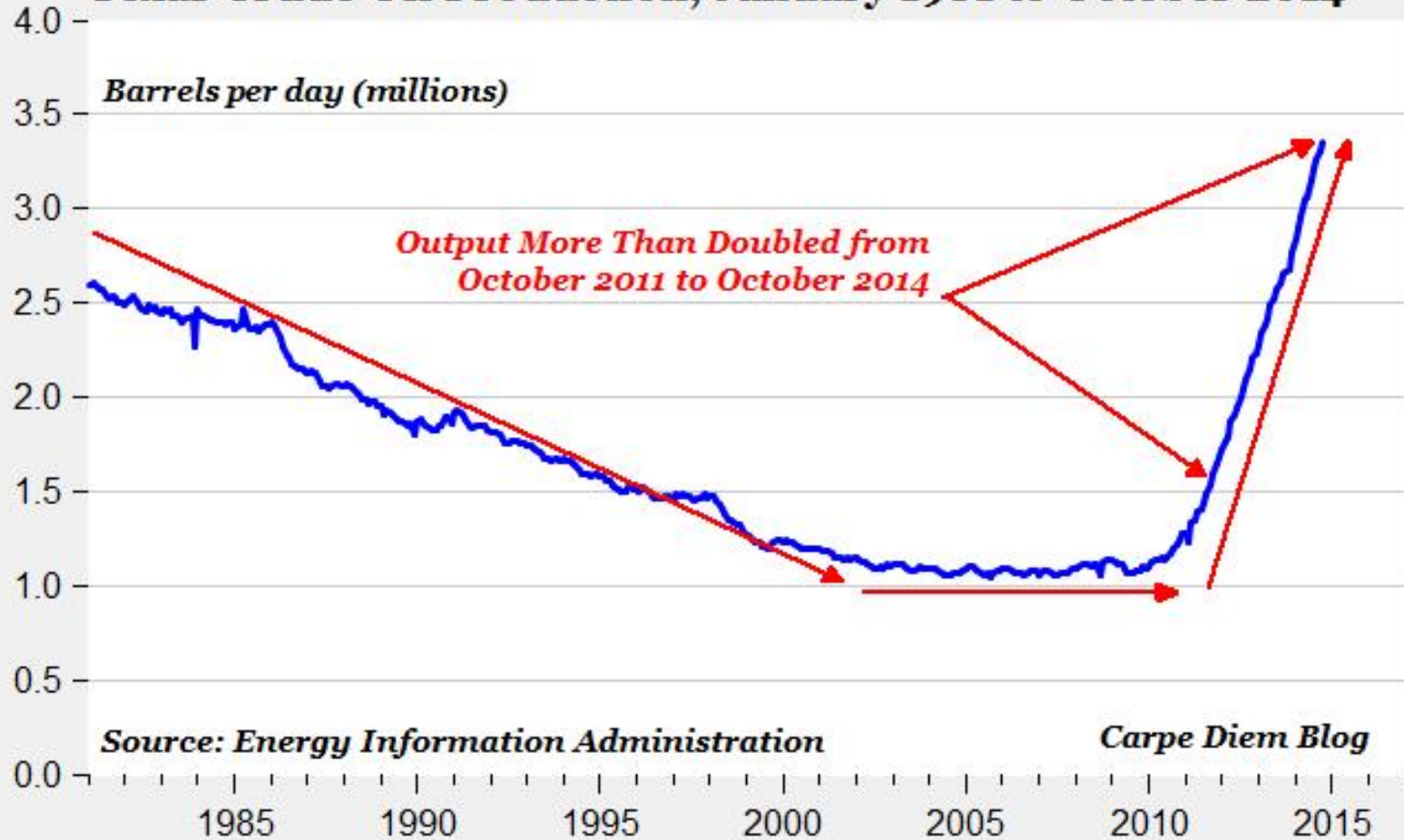
Source: My top ten energy charts of the year for 2014, Mark J. Perry, American Enterprise Institute, January 5, 2015

Total Petroleum Production: Saudi Arabia vs. US January 1994 to September 2014

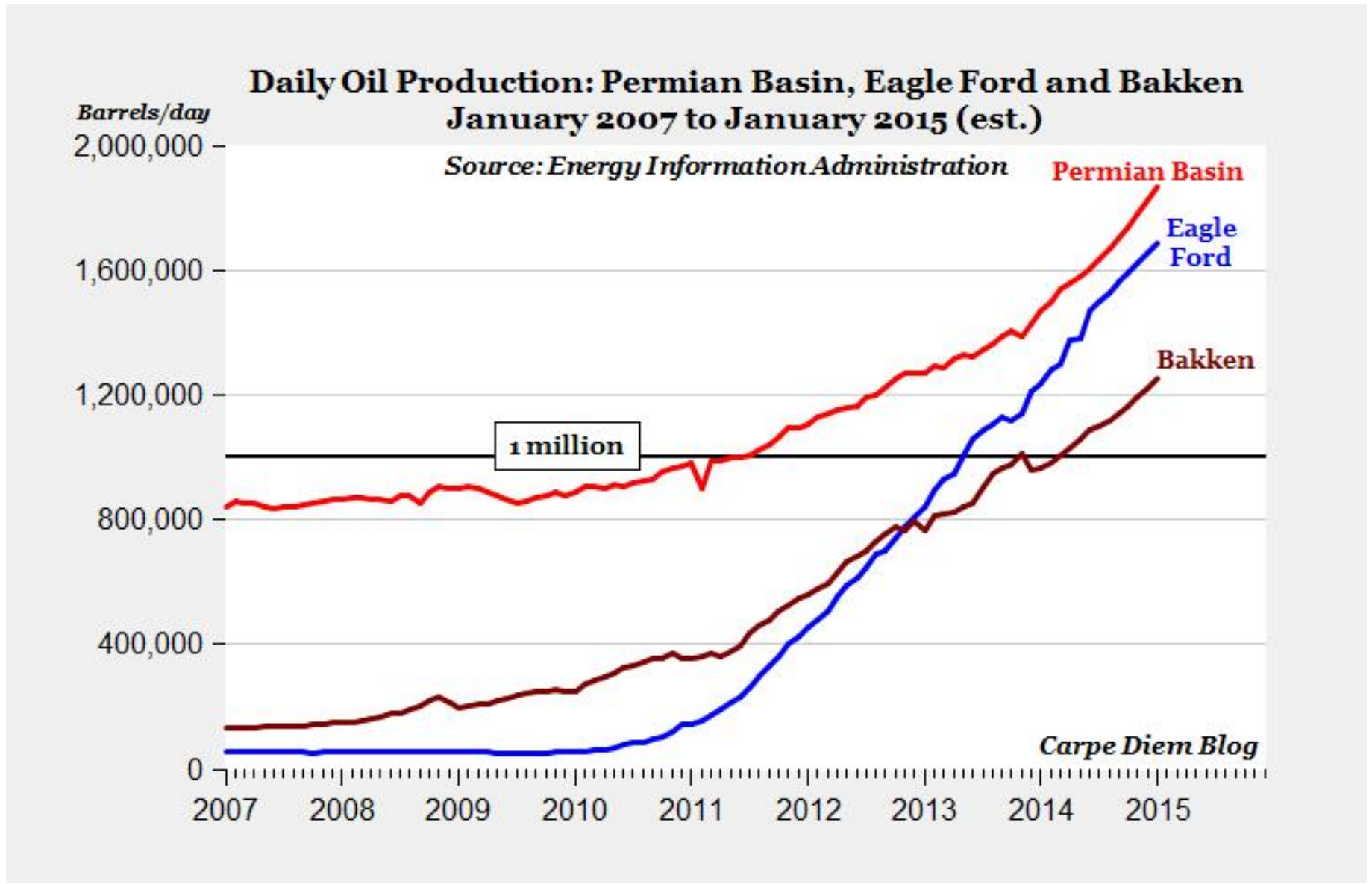


Source: My top ten energy charts of the year for 2014, Mark J. Perry, American Enterprise Institute, January 5, 2015

Texas Crude Oil Production, January 1981 to October 2014

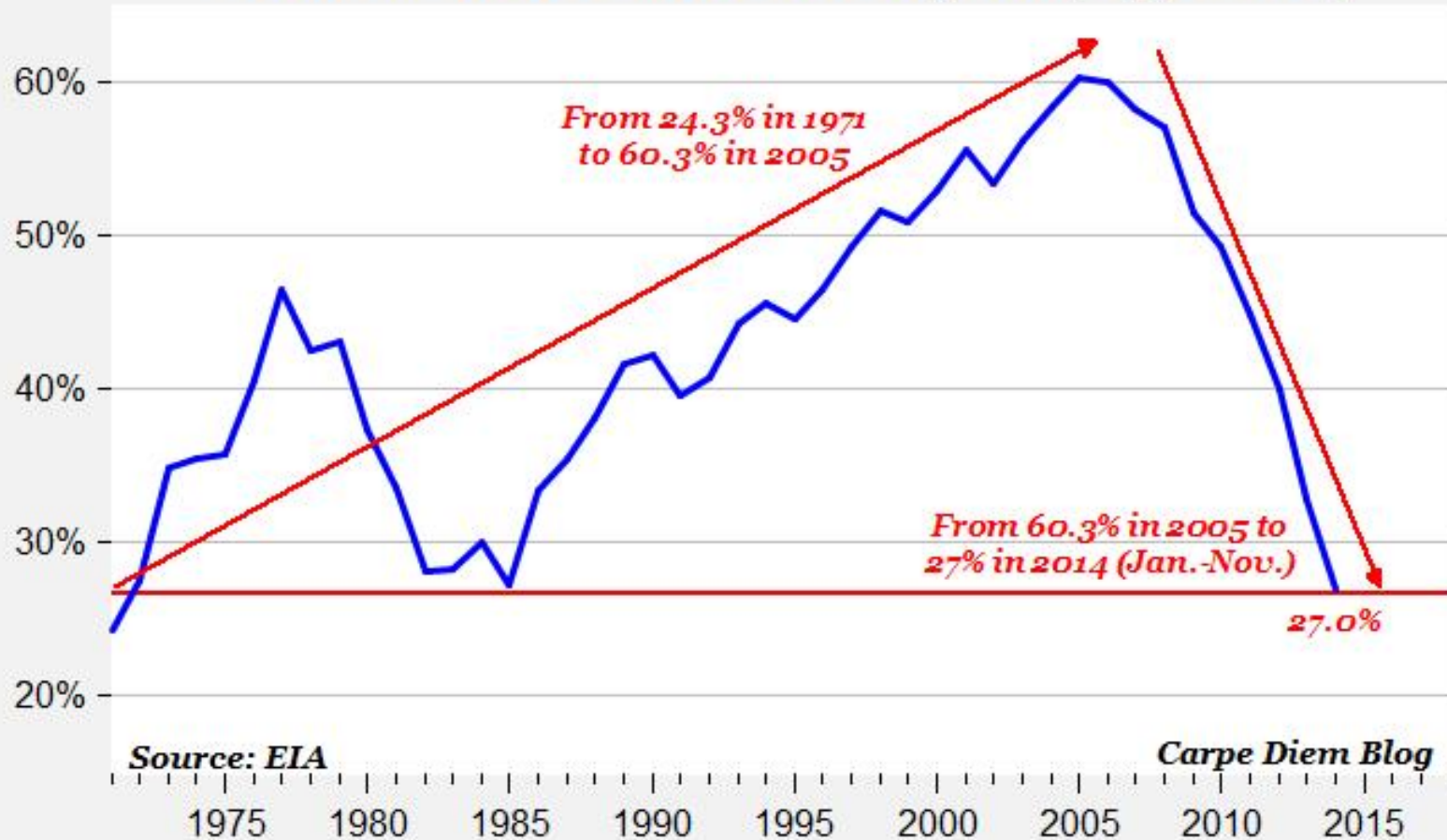


Source: My top ten energy charts of the year for 2014, Mark J. Perry, American Enterprise Institute, January 5, 2015



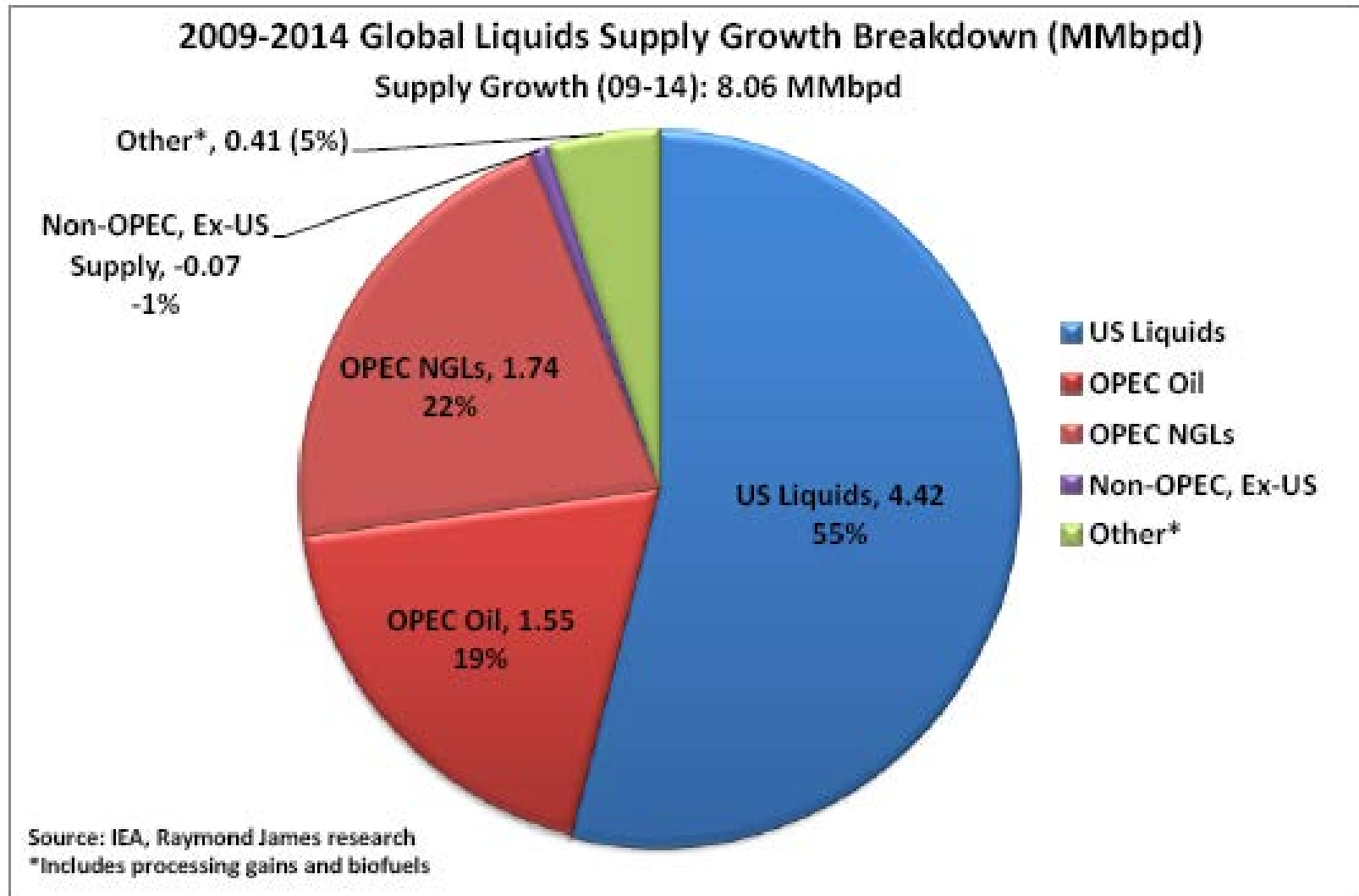
Source: My top ten energy charts of the year for 2014, Mark J. Perry, American Enterprise Institute, January 5, 2015

America's Net Petroleum Imports, 1971-2014



Source: My top ten energy charts of the year for 2014, Mark J. Perry, American Enterprise Institute, January 5, 2015

The House of Saud's Motivation



The Production War is on!

- On November 27, 2014 at an OPEC meeting in Vienna, the Saudis said,

“Yakfee!”

or

“Enough!”

- They resisted calls from OPEC members Iran, Iraq and Venezuela to reduce the production target of 30 million barrels per day.



Source:

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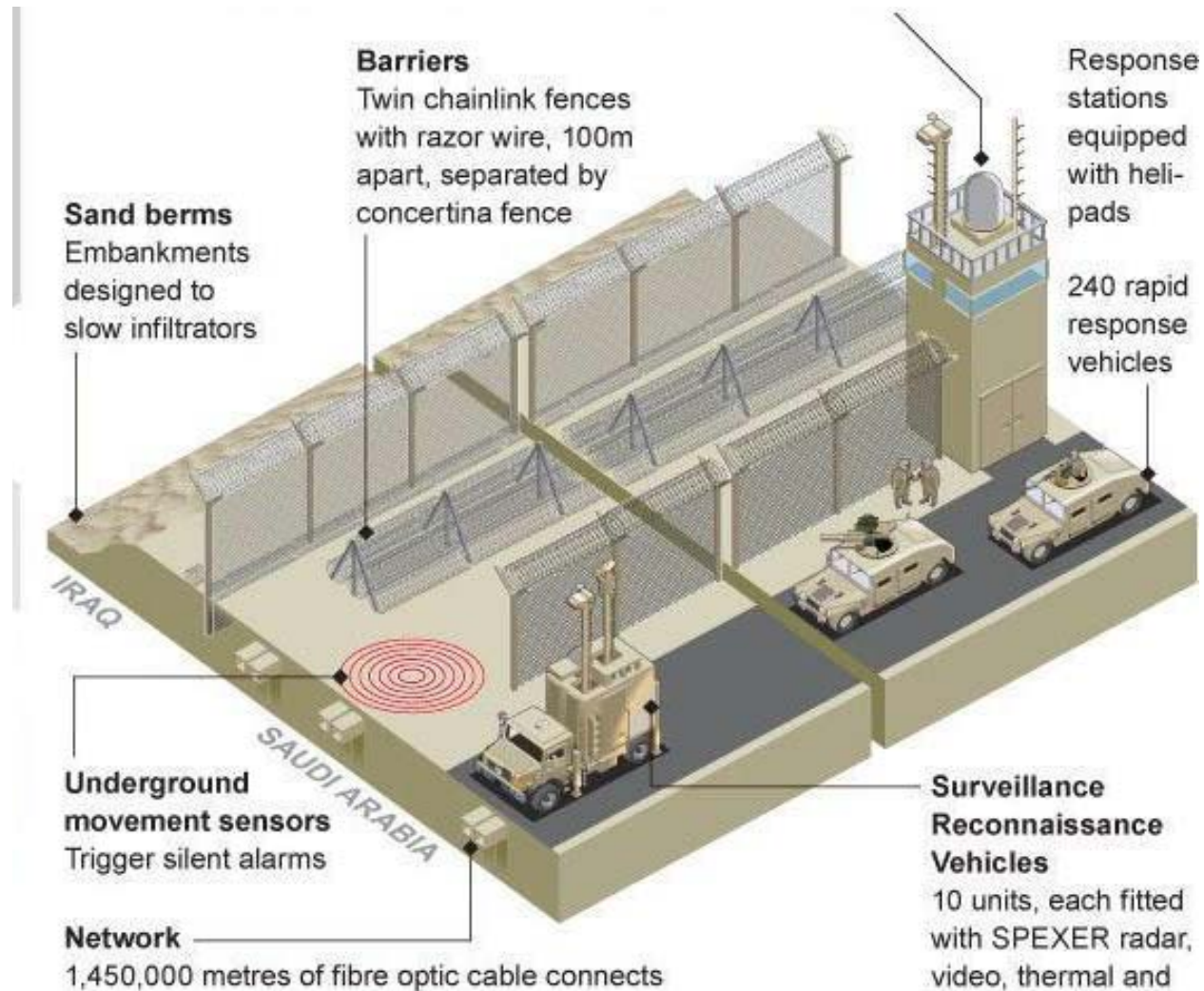
Saudi Arabia to Erect a 600 Mile “Great Wall” to Fend off ISIS



Saudi Arabia Builds Giant Yemen Border Fence – 1,100 miles



Fortress Saudi Arabia



OPEC's Strategy?

“In 2016, when OPEC completes this objective of cleaning up the American marginal market, the oil price will start growing again,” said Fedun, who’s made a fortune of more than \$4 billion in the oil business, according to data compiled by Bloomberg. “The shale boom is on a par with the dot-com boom. The strong players will remain, the weak ones will vanish.”

- Leonid Fedun, VP and Board Member at OAO Lukoil (LKOD)



Source: *OPEC Policy Ensures U.S. Shale Crash, Russian Tycoon Says*, Asst Natl Dir Melony B. DeFord, Tea Party Command Center, November 28, 2014

Prince Alwaleed bin Talal

Saudi Prince: \$100-a-barrel oil 'never' again



Saudi Crown Prince
Abdullah bin Abdul Aziz

Saudi Foreign Minister
Prince Saud al-Faisal (C)

Saudi billionaire Prince
Alwaleed bin Talal



Source: *The Fabulous Life of Prince Alwaleed Bin Talal Alsaud*, Forbes and Maria Bartiromo for USA Today, January 11, 2015

Oil at \$65 Until Mid-2015: Kuwait Official













“The reason, according to Iranian Oil Minister, Bijan Namdar Zanganeh, was to keep prices low enough and long enough to threaten the U.S. shale oil industry and restore OPEC’s market share in America. Shale extraction requires expensive methods such as fracking and horizontal drilling, and many observers say it isn’t profitable if the price of oil drops below \$65 per barrel.”



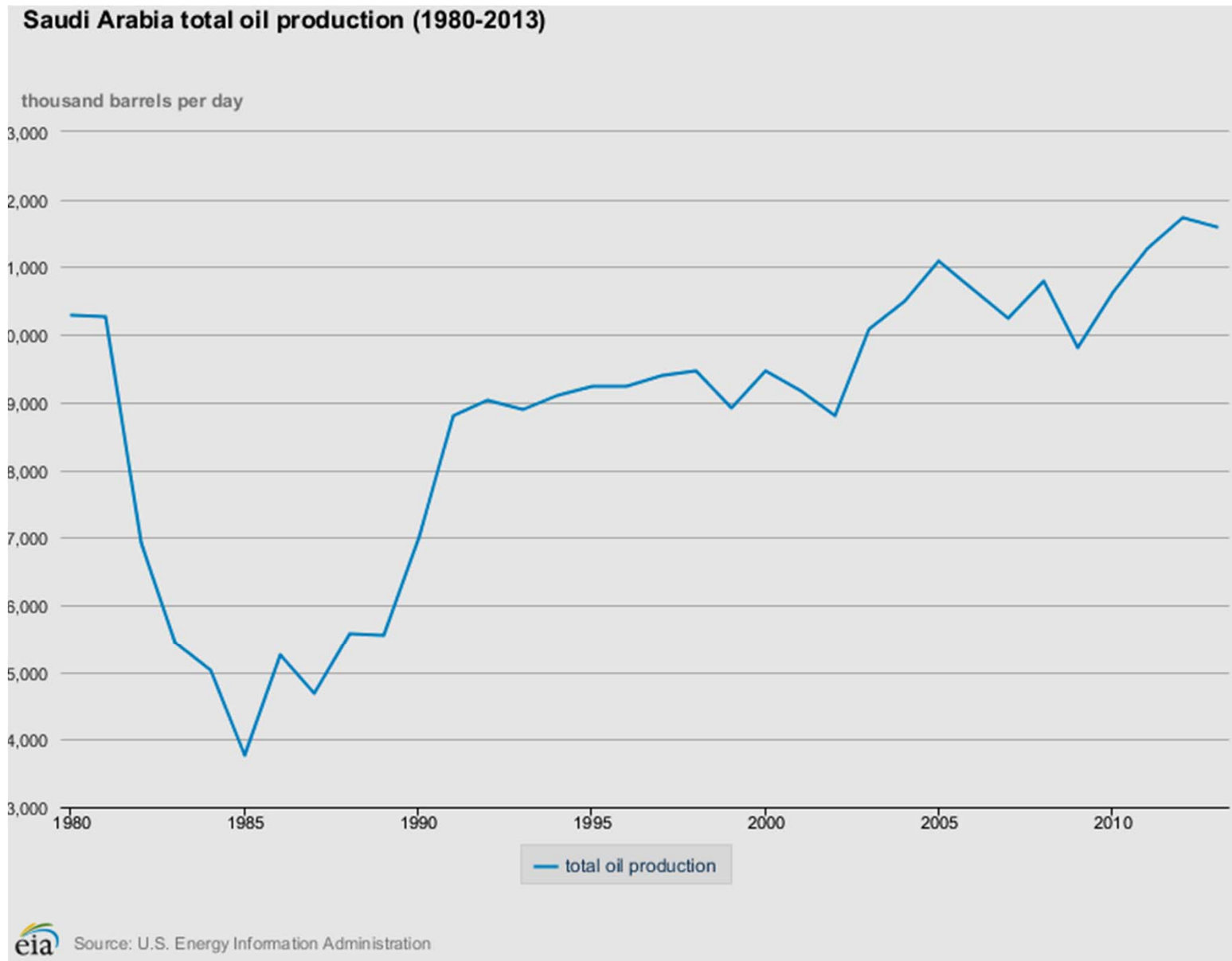
Source: Real Money, The Street Ratings, By: Oilprice.com, December 11, 2014

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OPEC Member States

Country		Region	Joined OPEC ^[1]	Population (July 2008) ^[2]	Area (km ²) ^[3]
Algeria		Africa	1969	33,779,668	2,381,740
Angola		Africa	2007	12,531,357	1,246,700
Ecuador		South America	2007 ^[A.1]	13,927,650	283,560
Iran		Middle East	1960 ^[A.2]	75,875,224	1,648,000
Iraq		Middle East	1960 ^[A.2]	28,221,180	437,072
Kuwait		Middle East	1960 ^[A.2]	2,596,799	17,820
Libya		Africa	1962	6,173,579	1,759,540
Nigeria		Africa	1971	146,255,300	923,768
Qatar		Middle East	1961	824,789	11,437
Saudi Arabia		Middle East	1960 ^[A.2]	28,146,656	2,149,690
United Arab Emirates		Middle East	1967	4,621,399	83,600
Venezuela		South America	1960 ^[A.2]	26,414,816	912,050
Total				369,368,429	11,854,977 km²

It's About Geopolitical Power & Market Share for the Saudis



A Game of Chicken?

Nation	Oil price per barrel required to break even or balance budget
US producers	\$38-\$77
Qatar	\$58
Kuwait	\$59
UAE	\$90
Saudi Arabia	\$92
Angola	\$94
Russia	\$101
Iraq	\$116
Venezuela	\$117
Algeria	\$119
Ecuador	\$122
Nigeria	\$124
Iran	\$136

According to data compiled by Bloomberg, “prices have dropped below the level needed by at least 9 OPEC member states to balance their budgets.”

Source: Reuters, *The Saudi Arabian Oil Conspiracy and What it Might Mean for Your Portfolio*, The Motley Fool, Adam Galas, January 18, 2015

Survival of fittest as oil tumbles below \$65, Bloomberg News, December 1, 2014

CLV10 - Crude Oil WTI (NYMEX)

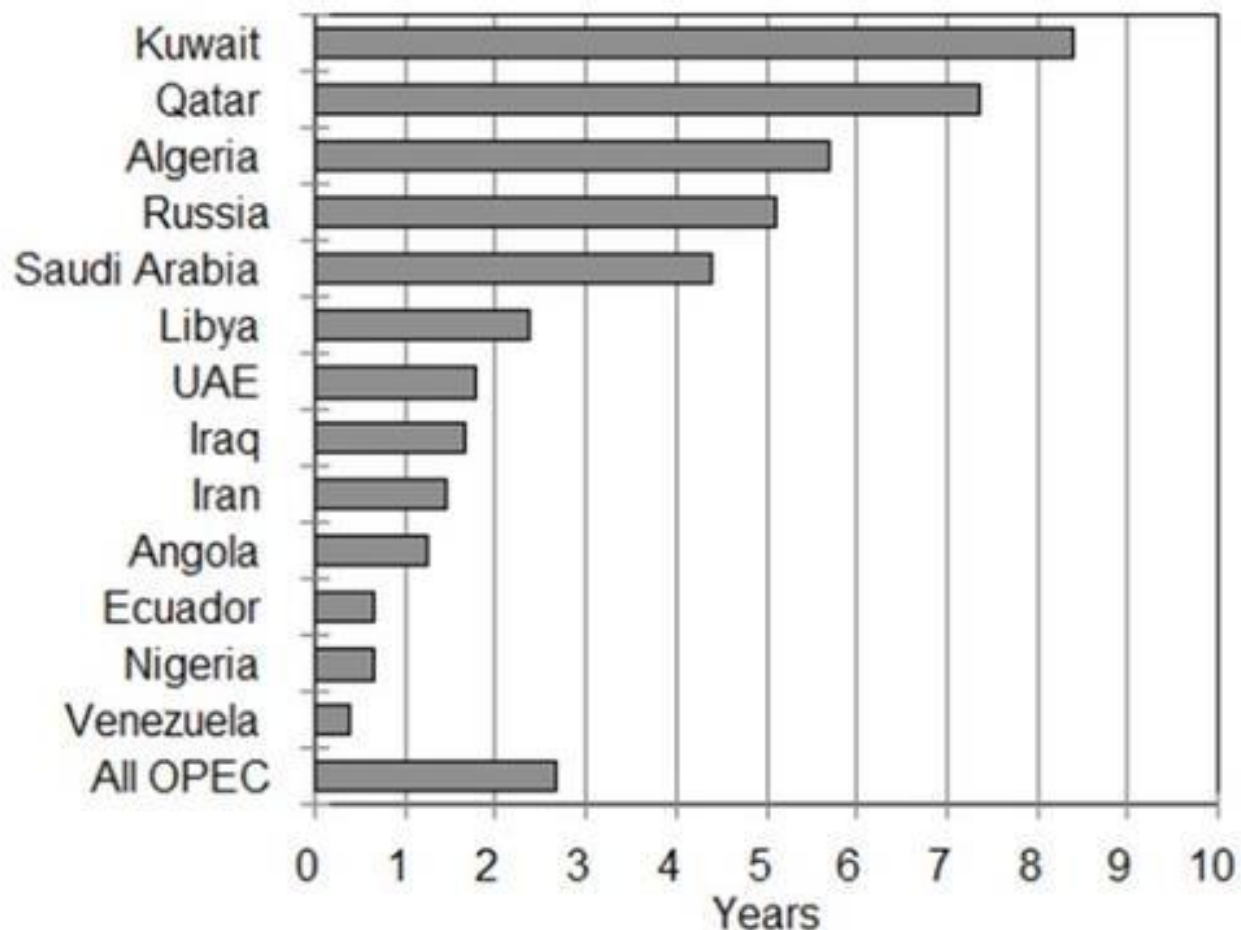


Source: Nasdaq.com, End of day Commodity Futures Price Quotes for Crude Oil WTI (NYMEX)

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Survival of the Fittest?

DURATION OF FOREIGN RESERVES @ \$50/BBL DEFICIT



Saudis have staying power; \$750 billion in foreign country reserves



Source: Oilprice.com, *The Saudi Arabian Oil Conspiracy and What it Might Mean for Your Portfolio*, The Motley Fool, Adam Galas, January 18, 2015

Iran Wary of Oil 'Shock Therapy' as OPEC Vies for Market

Iran relies on oil sales for 60% of its foreign revenue.



President of Iran Hassan Rouhani

OPEC: Iran blames falling oil price on ‘political plot’

Will their response be 1) war-like resistance or 2) the pursuit of a nuclear settlement?



Iran Oil Minister Bijan Namdar Zanganeh

“High prices are a disadvantage to OPEC’s market share,” he said. “If you want to increase your share, you have to reduce prices, but you can’t do it through ‘shock therapy’ over the course of three months if you want to change everything.”

Source: Andrew Critchlow, Commodities Editor, Telegraph.co.uk/newsbysector

Iran Wary of Oil ‘Shock Therapy’ as OPEC Vies for Market, Golnar Motevalli, Bloomberg, December 1, 2014

But what happened? The U.S. Energy Story



“Game over” for OPEC?

- U.S. E&P’s adjusting – “Resetting the Bar”
–May become one of the world’s low-cost producers

- Forbes, July 2015:
“(OPEC has) lost this war by inadvertently making the U.S. shale oil industry leaner and meaner.”

- The Telegraph, August 2015:
“Saudi Arabia may go broke before the U.S. oil industry buckles.”

“It is too late for OPEC to stop the shale revolution.”

“Each rise in price will be capped by a surge in U.S. output.”

COUNTRY	EST. OIL PRICE REQUIRED TO BALANCE 2015 BUDGET
Russia	\$105
Saudi Arabia	\$106
Nigeria	\$122
Iran	\$131
Algeria	\$131
Venezuela	\$160

The Telegraph, August 2015

- Bank of America:
“OPEC is now ‘effectively dissolved’.”

“The Genie” cannot be put back in the bottle.



Source: *Repeal the Ban on U.S. Crude Oil Exports Presentation*, Domestic Energy Producers Alliance, August 13, 2015

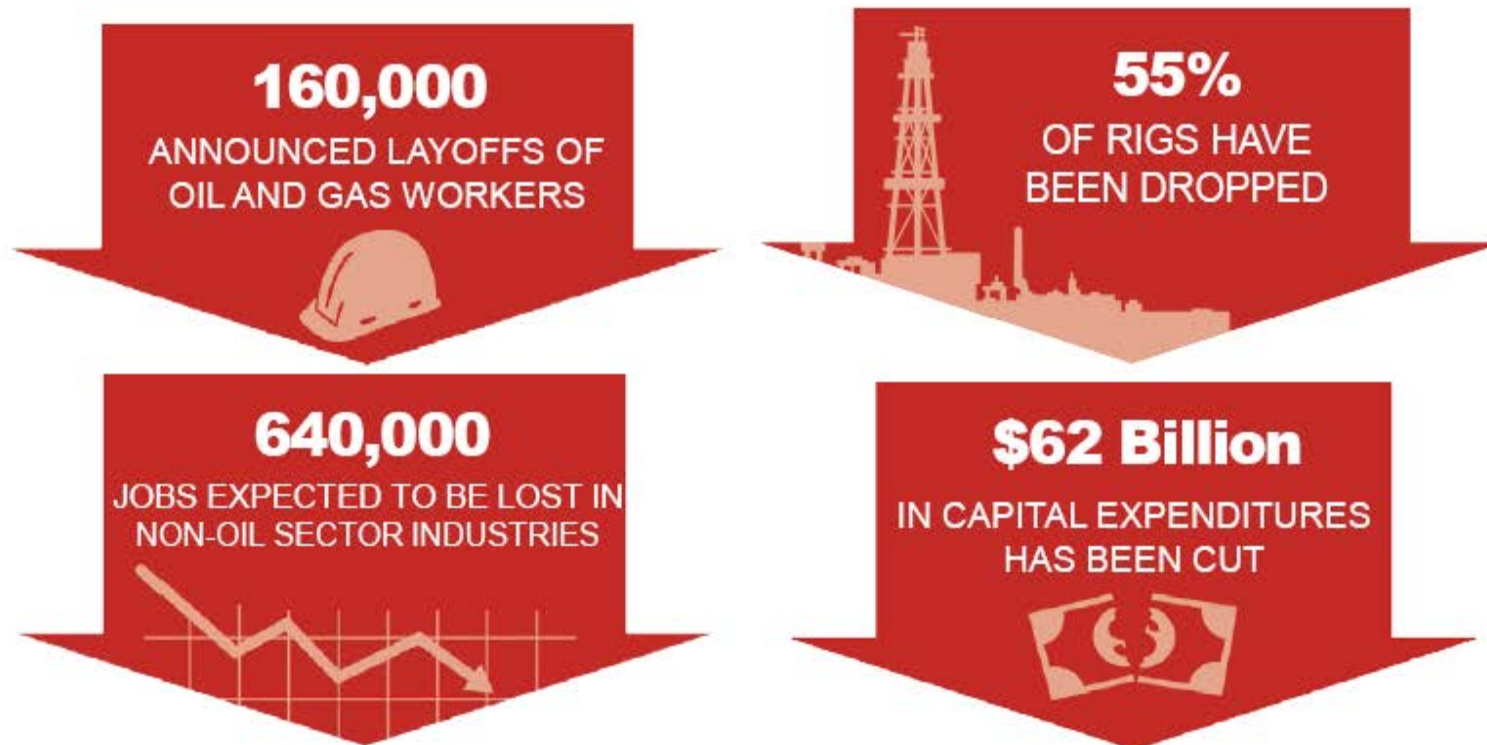
#1 Effects of predatory pricing by OPEC

TIME Magazine, April 20, 2015:

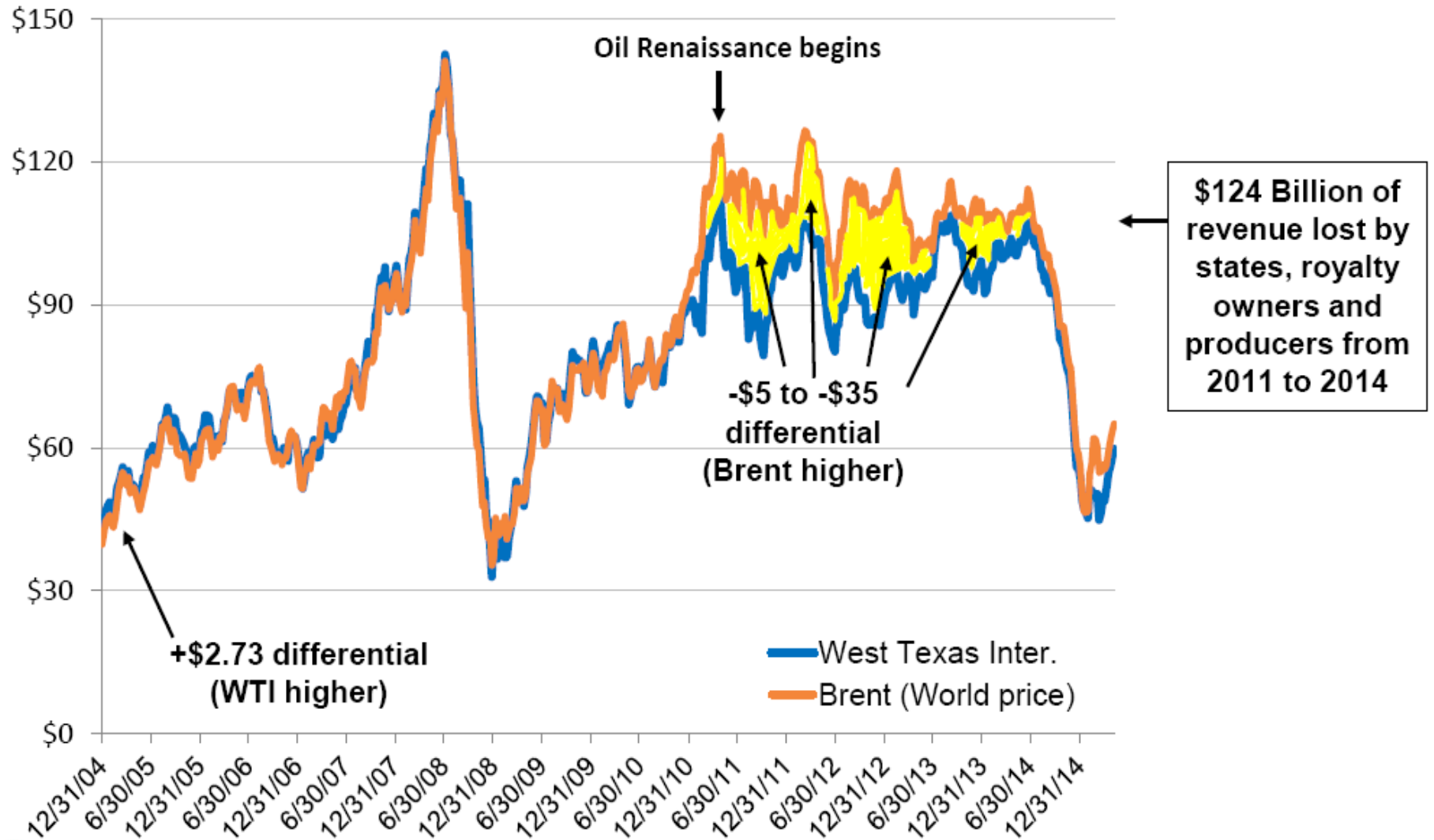
“OPEC says the cartel is winning its price war against U.S. by driving them out of business.”

The Wall Street Journal, March 8, 2015:

“OPEC’s decision to continue pumping crude in the face of collapsing prices is hurting the U.S. shale-oil industry.”

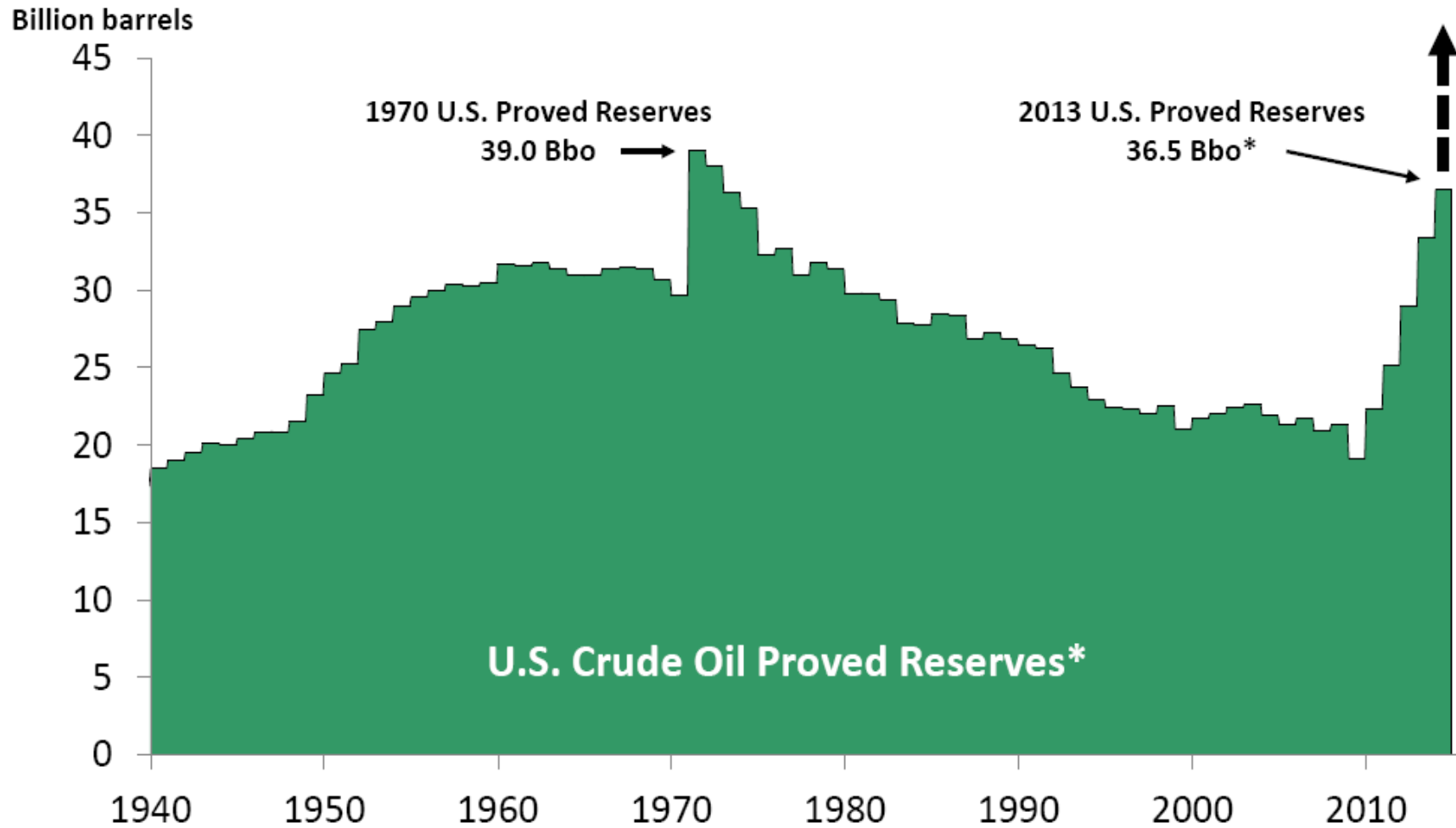


#2 Effect of export ban on domestic price

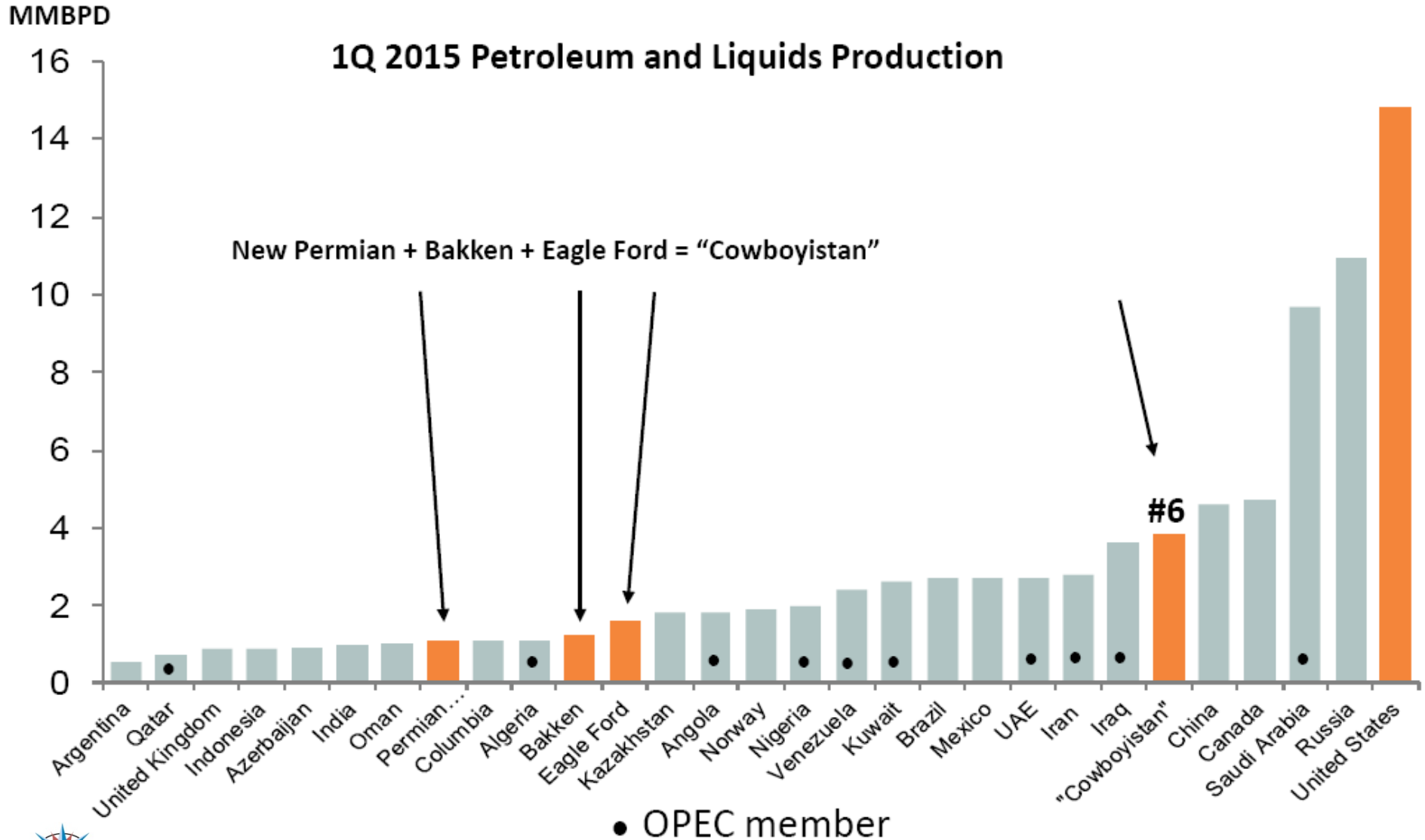


Securing our energy future

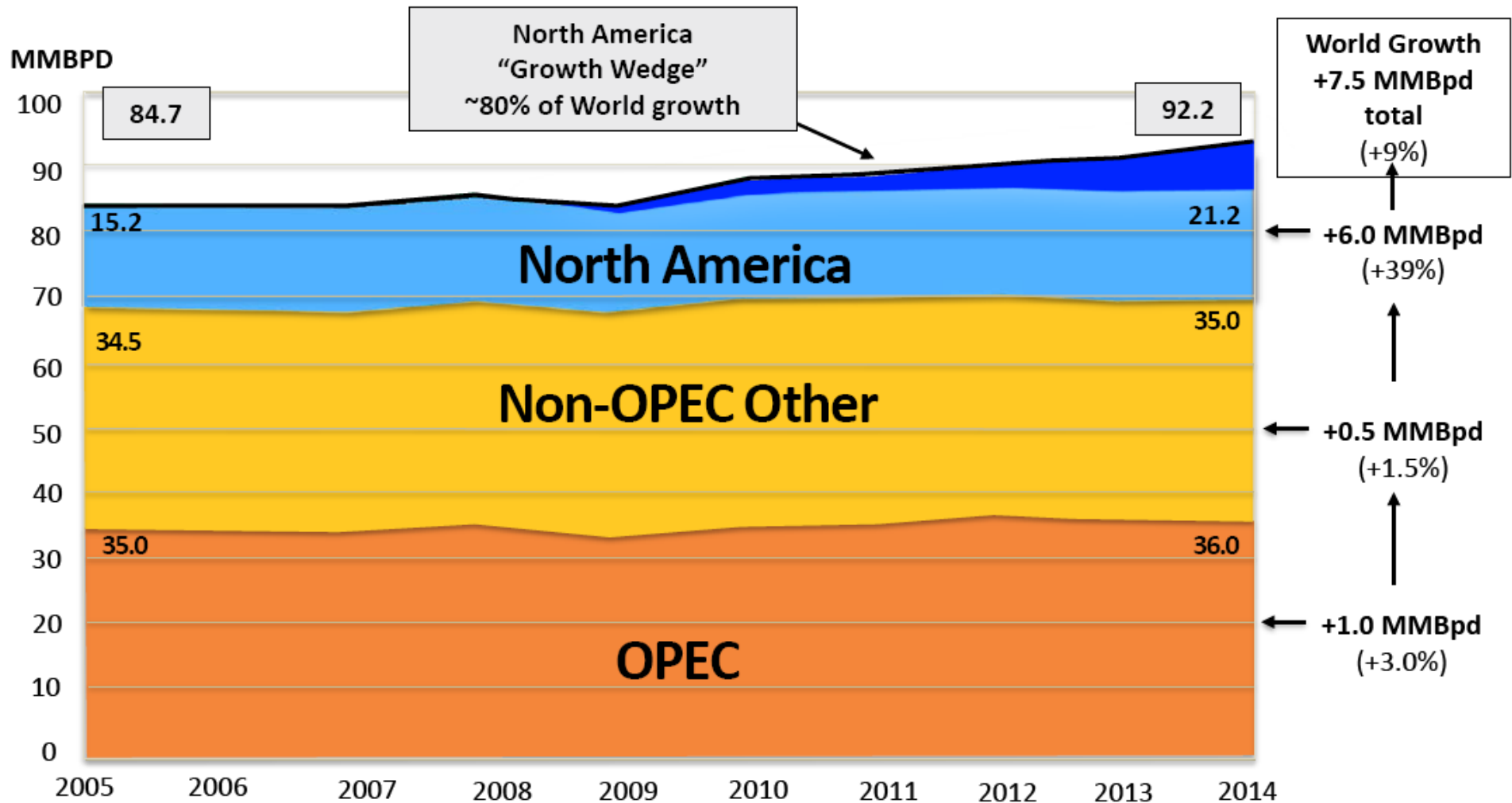
Proved reserves approaching record levels



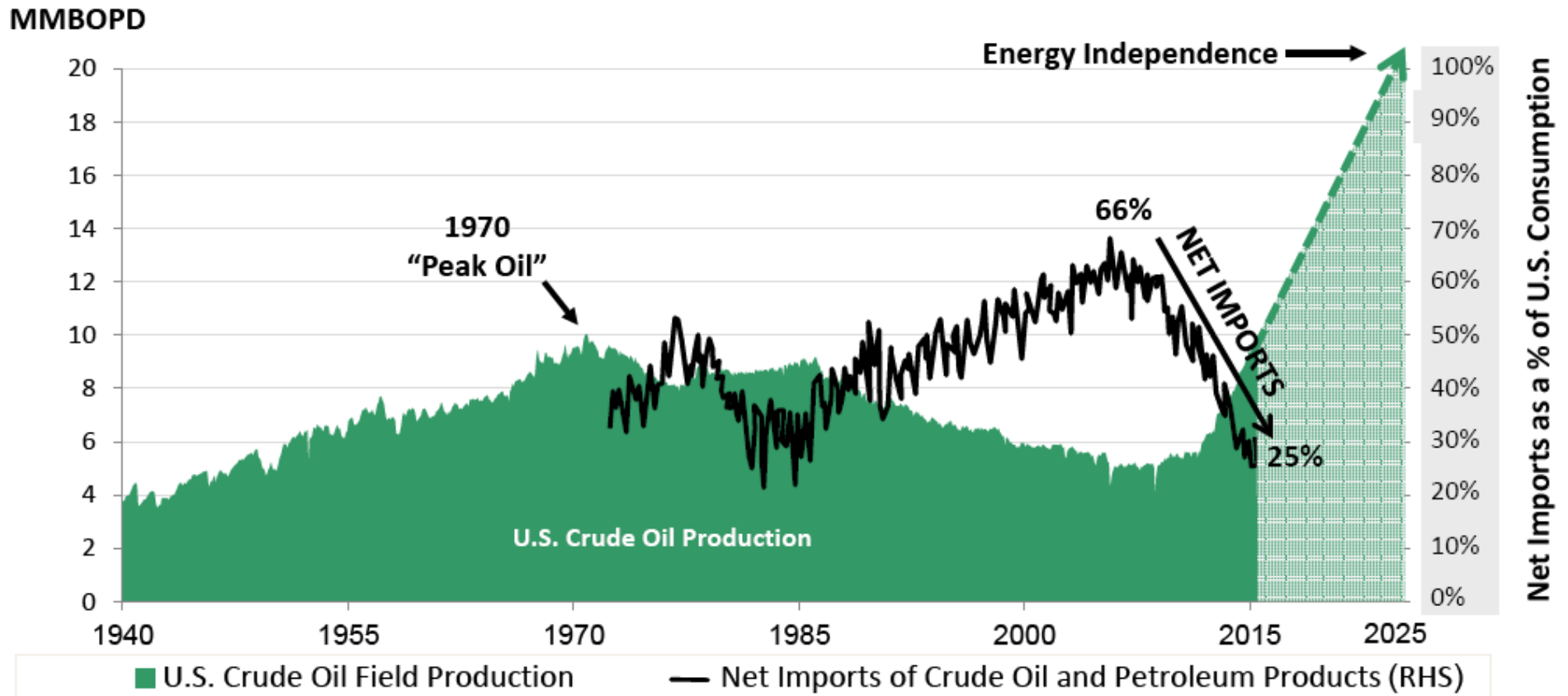
Three U.S. plays = World's #6 liquids producer



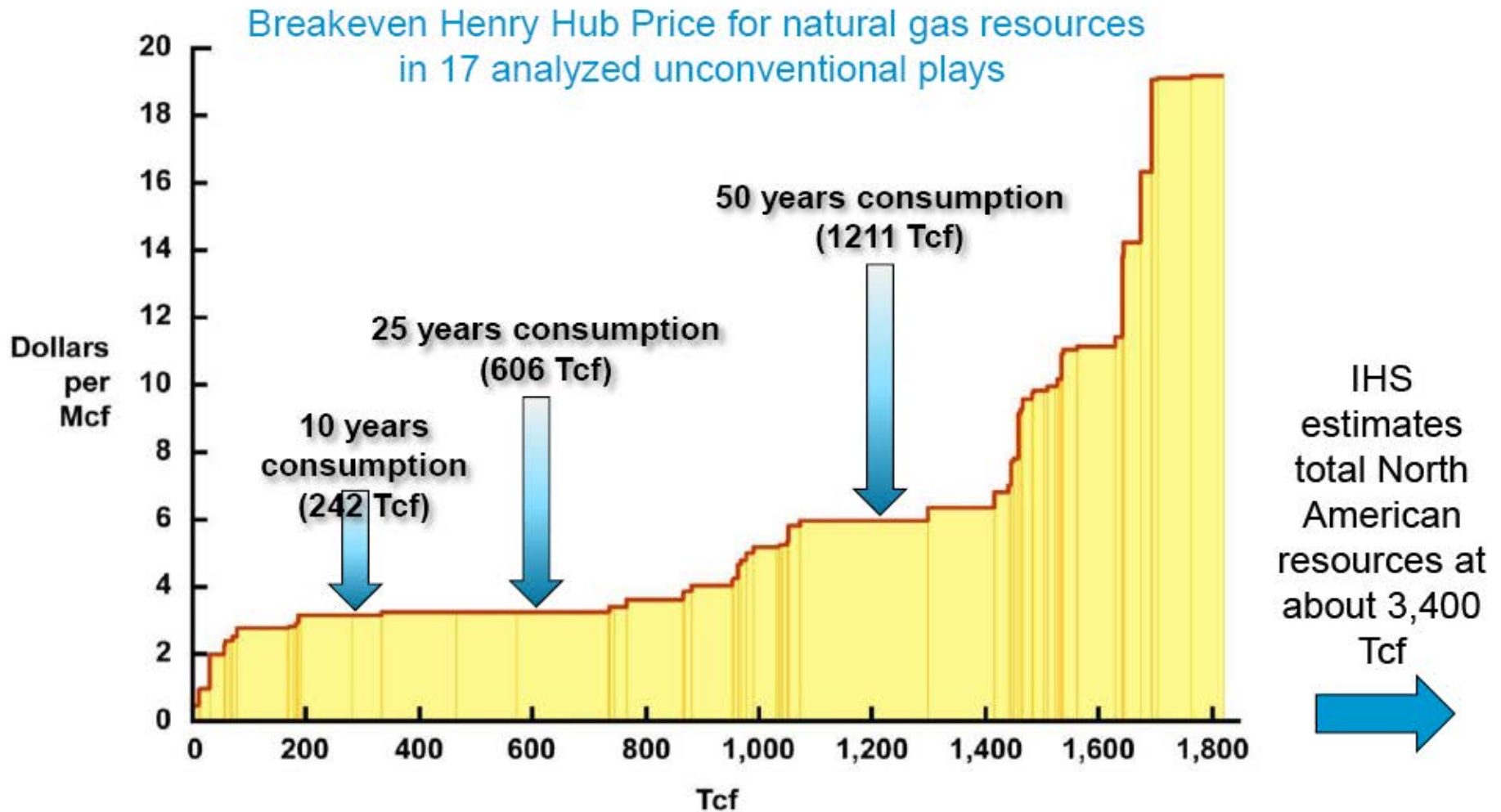
World petroleum/liquids production growth 2005 - 2014



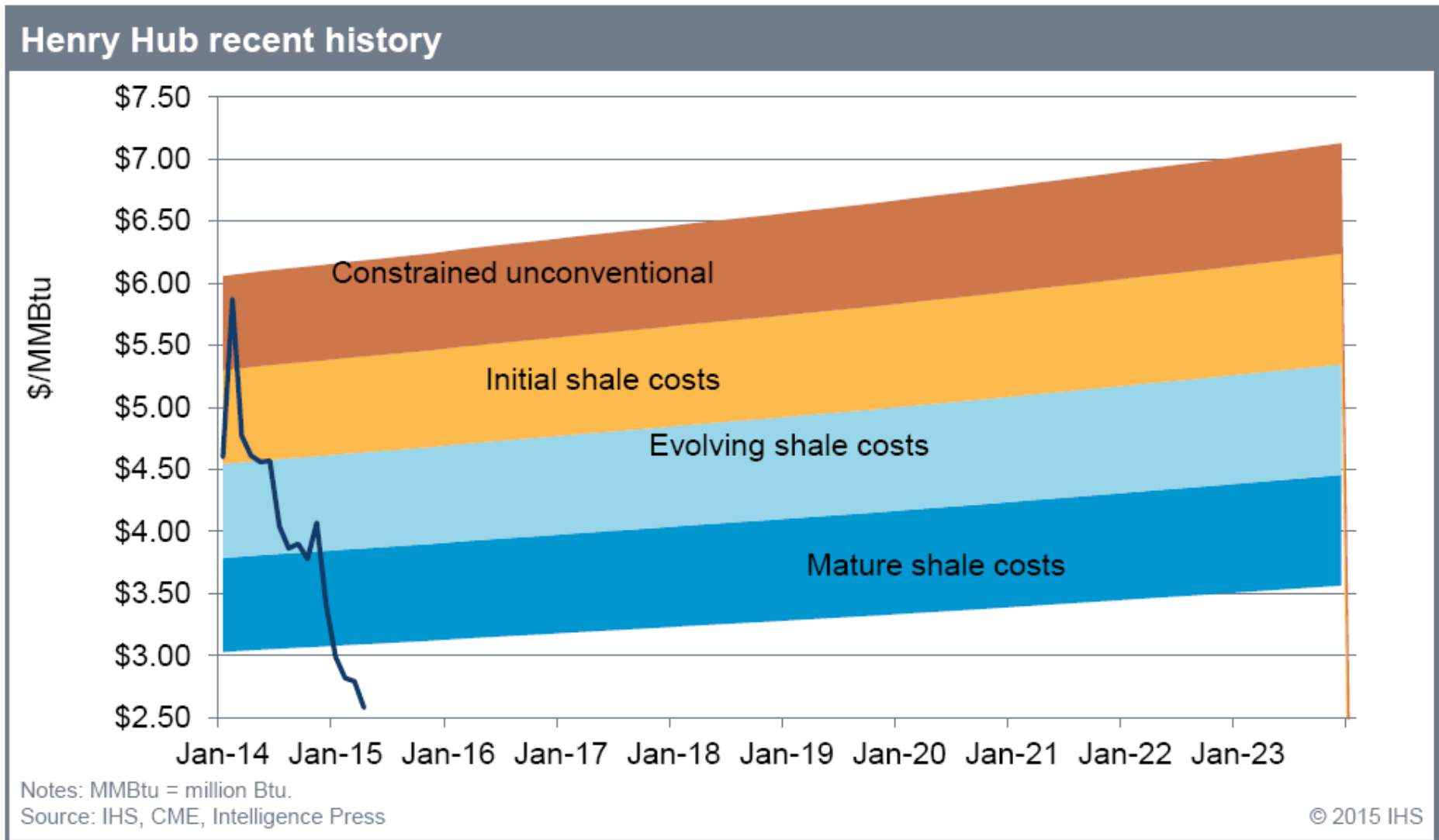
From scarcity to energy abundance in America



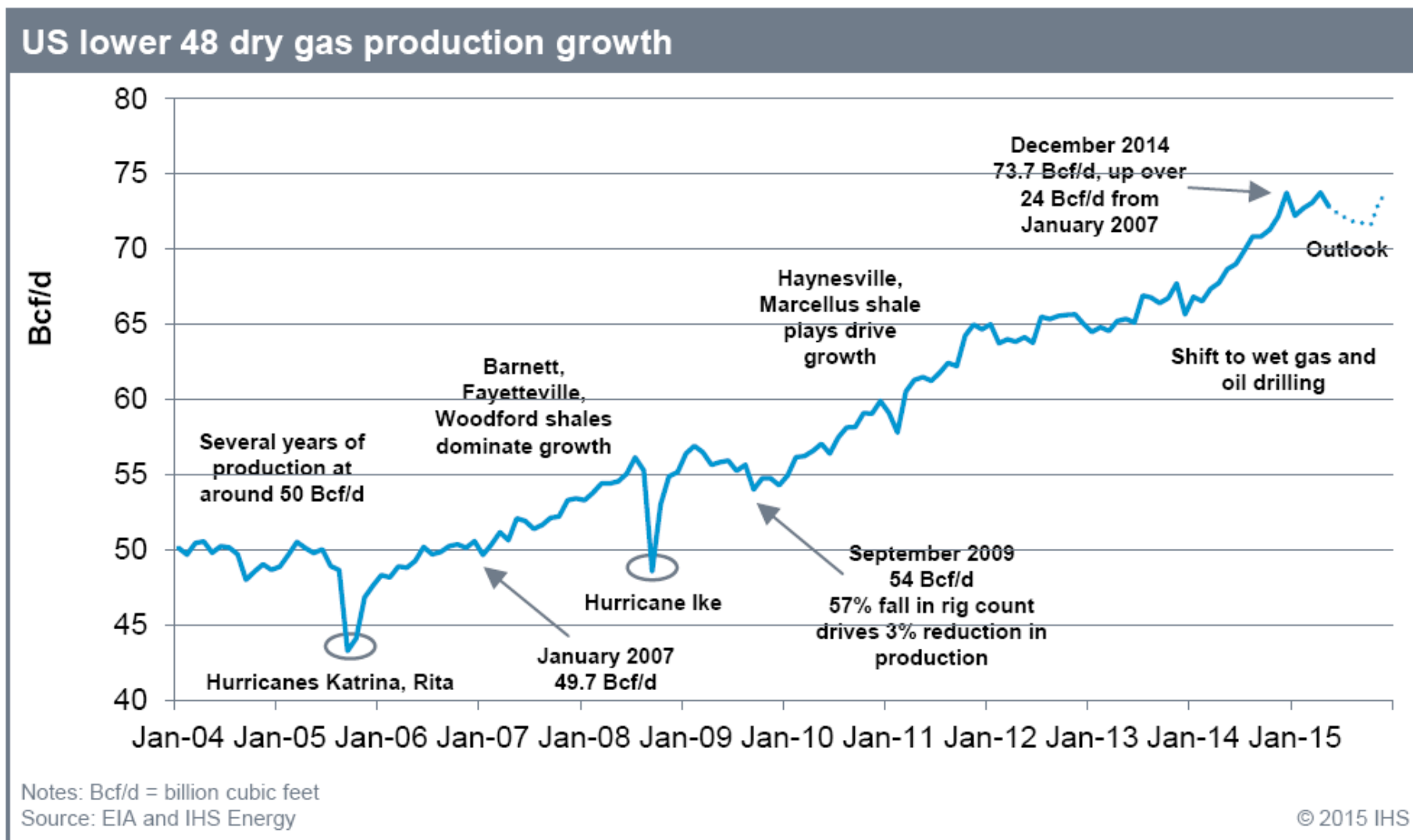
North American gas supply is plentiful and low cost



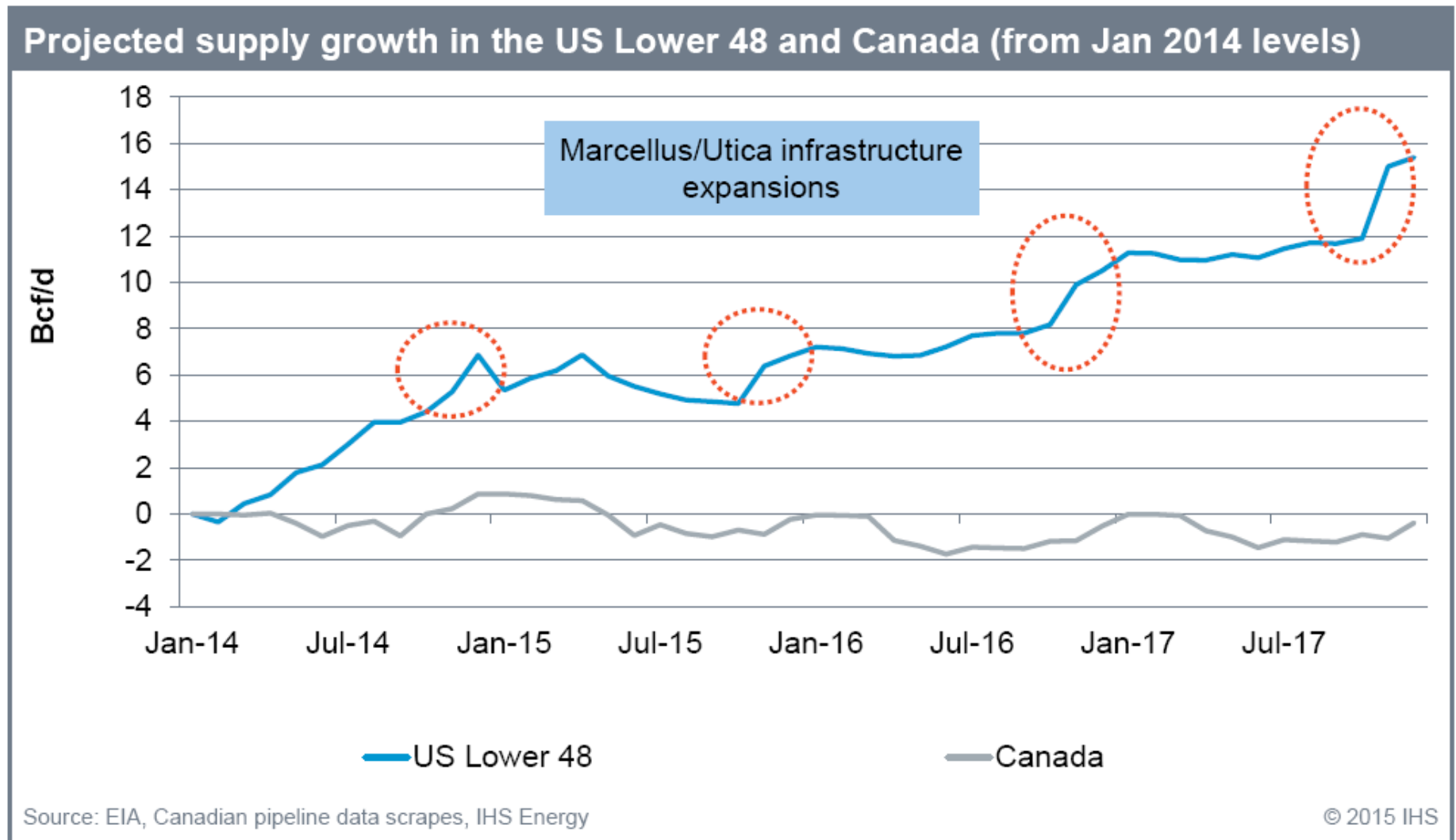
Unit costs have fallen as the shale boom has evolved



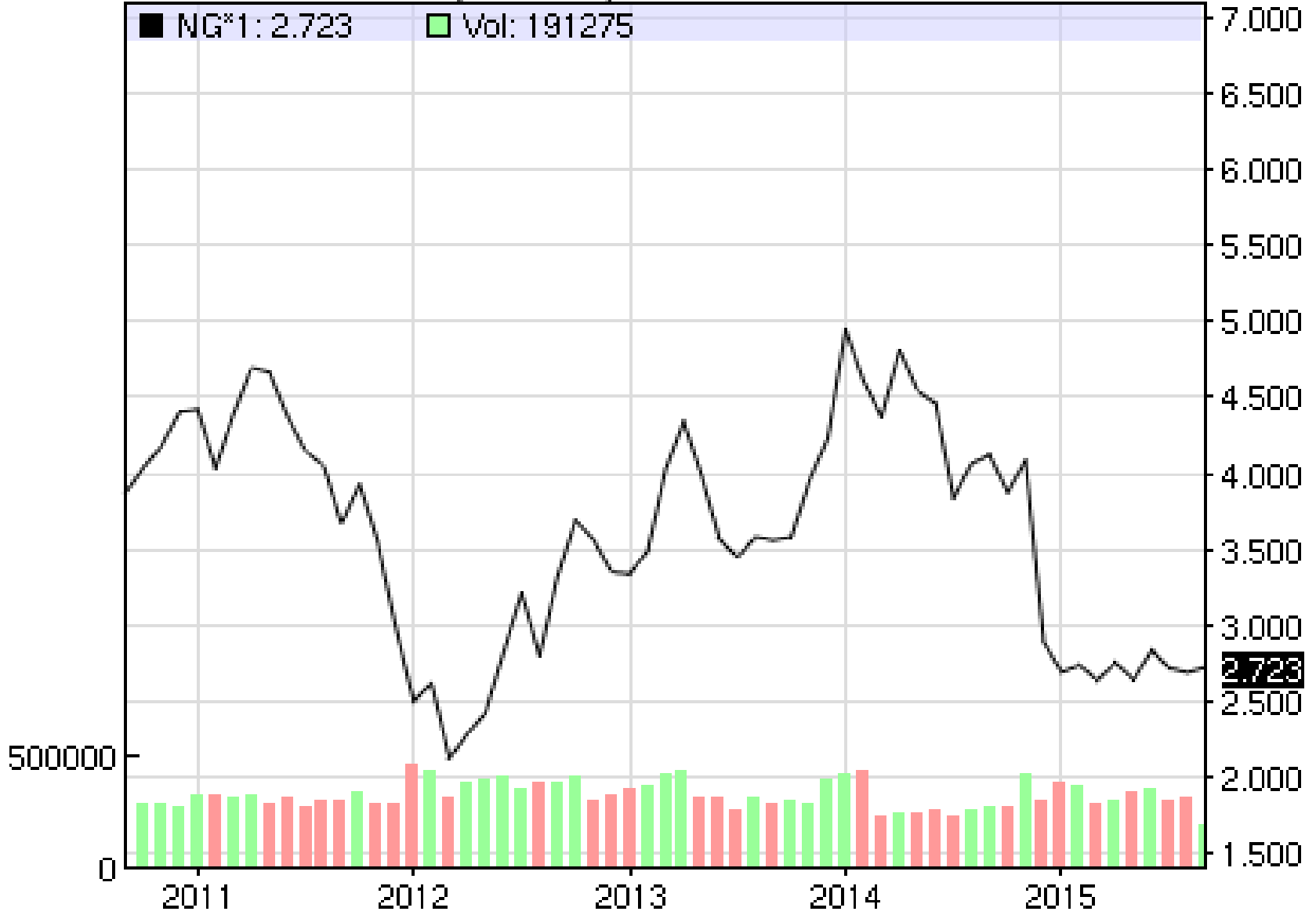
US lower-48 gas production growth



US and Canadian growth is expected to be relatively flat through late 2016



NGV10 - Natural Gas (NYMEX)

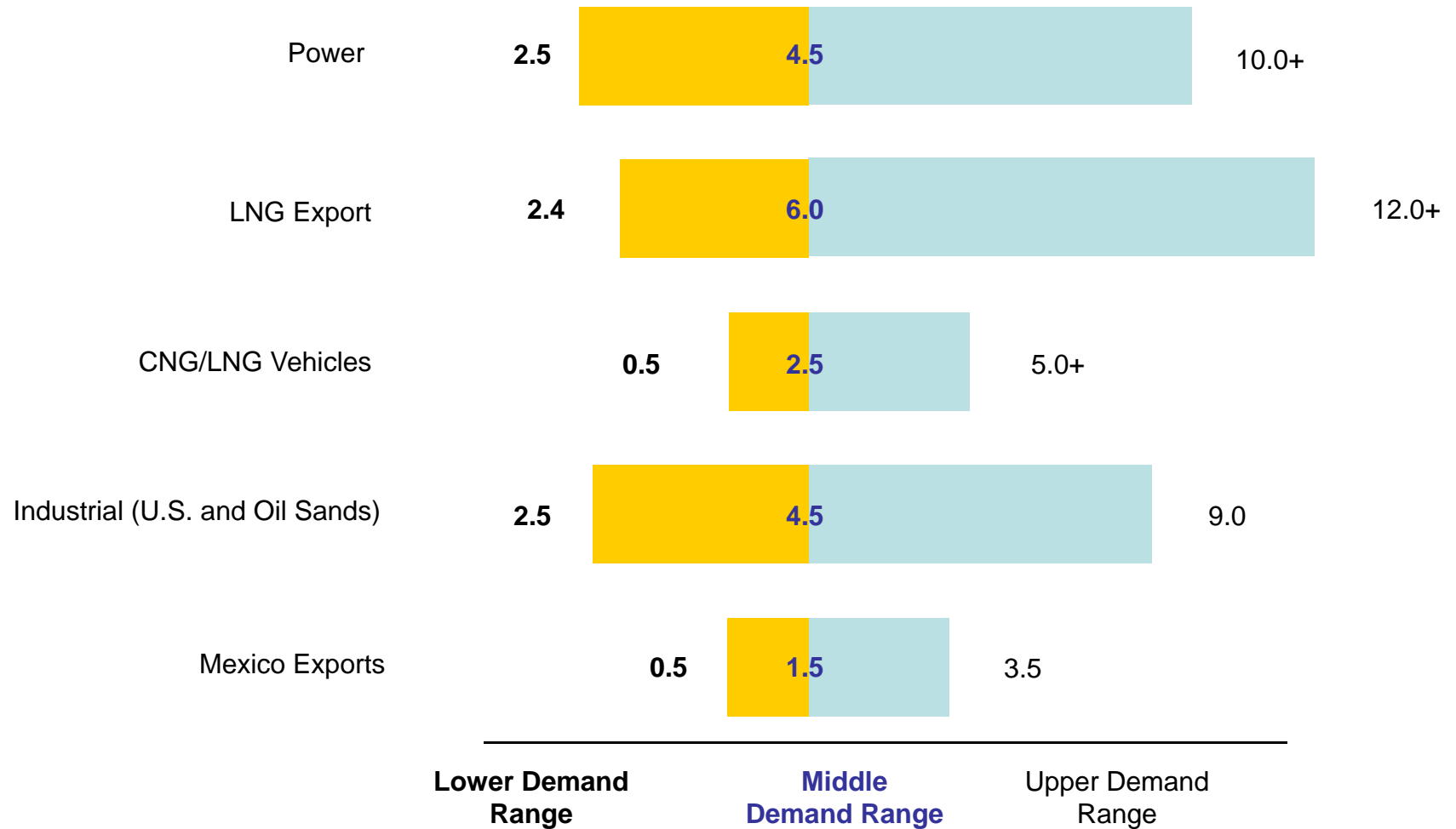


Source: Nasdaq.com, End of day Commodity Futures Price Quotes for Natural Gas (NYMEX)

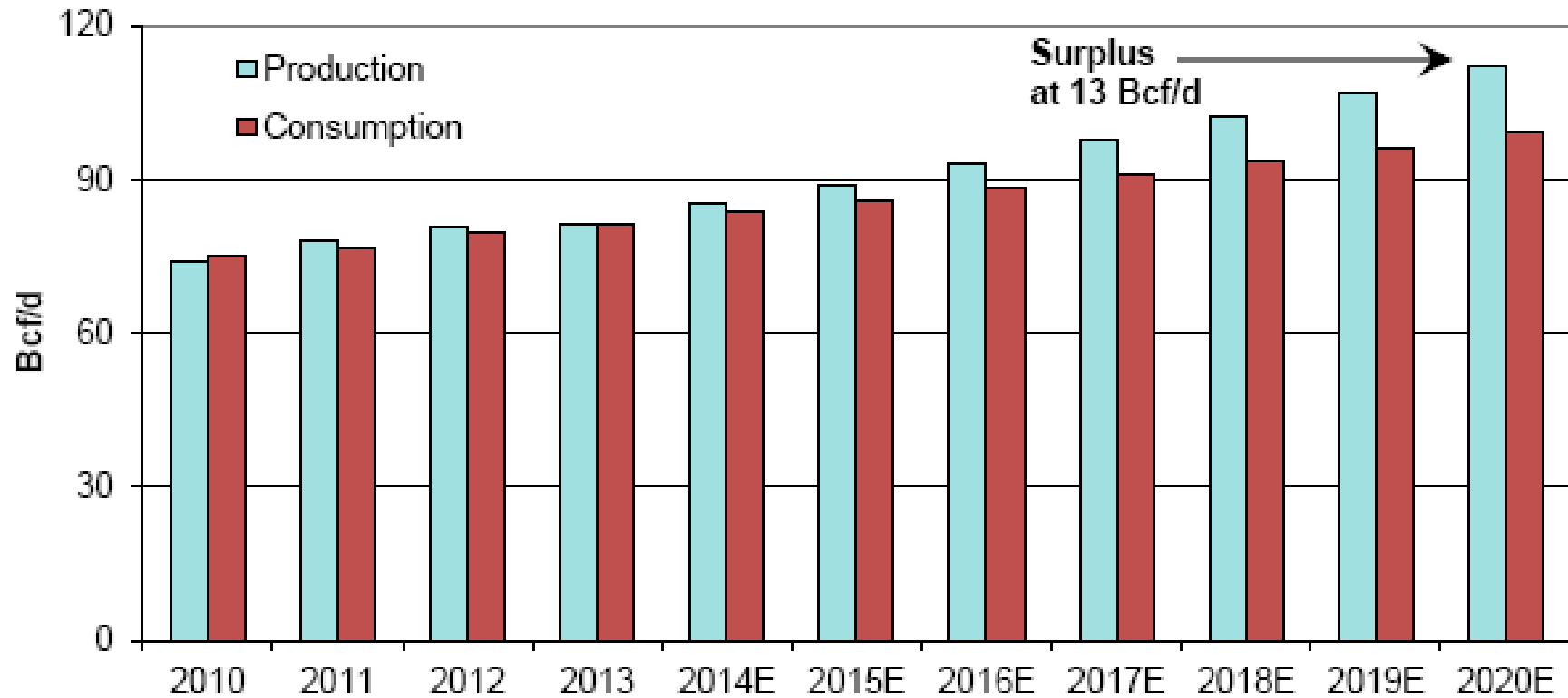
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North American Natural Gas Demand Ranges by Selected Sector

Significant demand growth is possible in the LNG, transportation/HHP and power sectors through 2020 in Bcf per day.



U.S. and Canada: Natural Gas Production vs. Consumption



Source: BP Statistical Review, Raymond James research

World LNG Estimated October 2014 Landed Prices



Source: Waterborne Energy, Inc. Data in \$US/MMBtu

World LNG Estimated June 2015 Landed Prices (\$U.S./MMBtu)

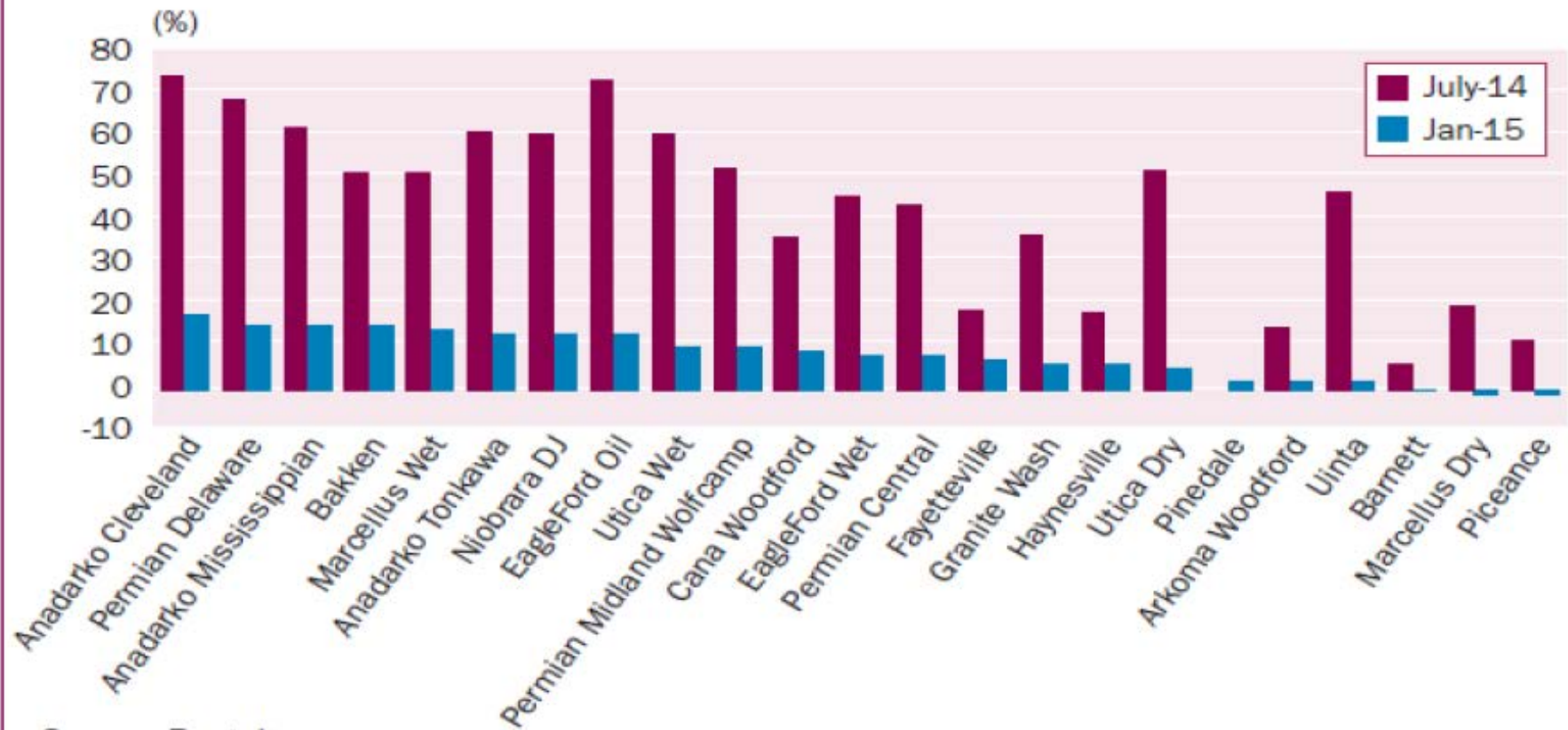


Source: Waterborne Energy, Inc. Data in \$US/MMBtu

Note: Includes information and Data supplied by IHS Global Inc. and its affiliates ("IHS")

Focus on Utah

Internal Rates of Return per Well by Basin/Play (January 2015 versus July 2014)

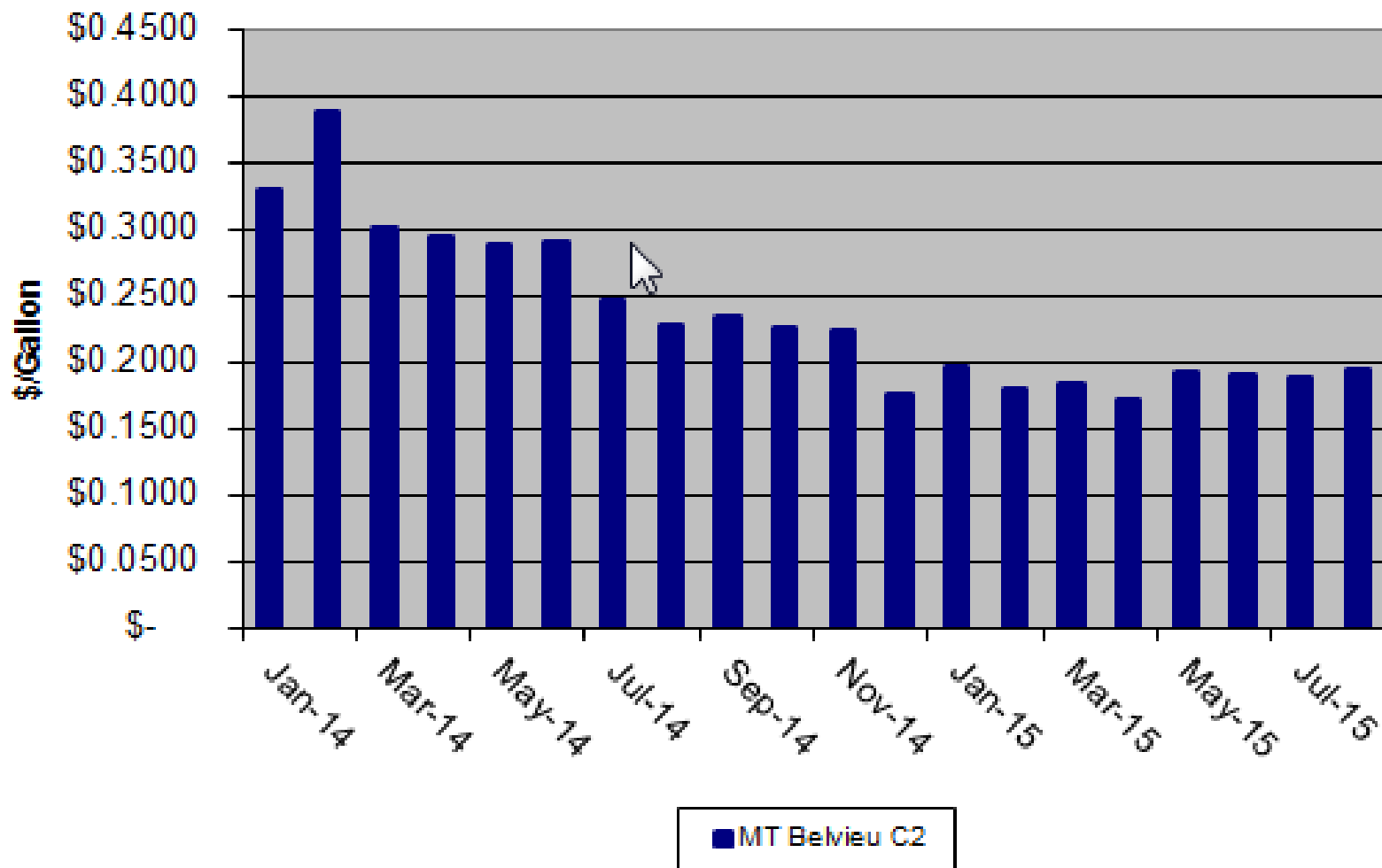


Source: Bentek

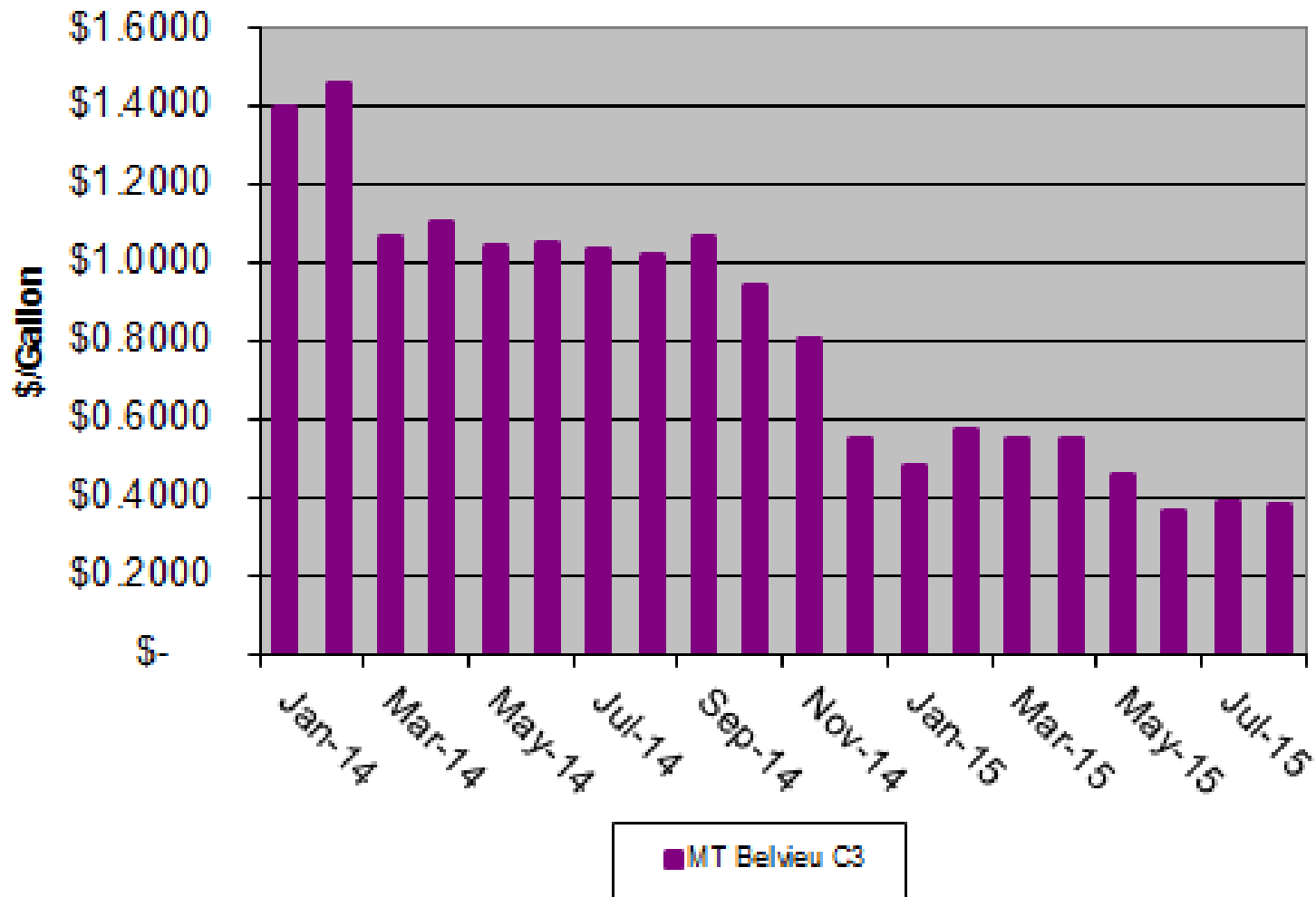


Source: *Shale economics challenged as prices plummet*, Arjun Sreekumar, Platts Gas Daily Volume 32 / Issue 7 / Monday, January 12, 2015

2014-Current Ethane Prices



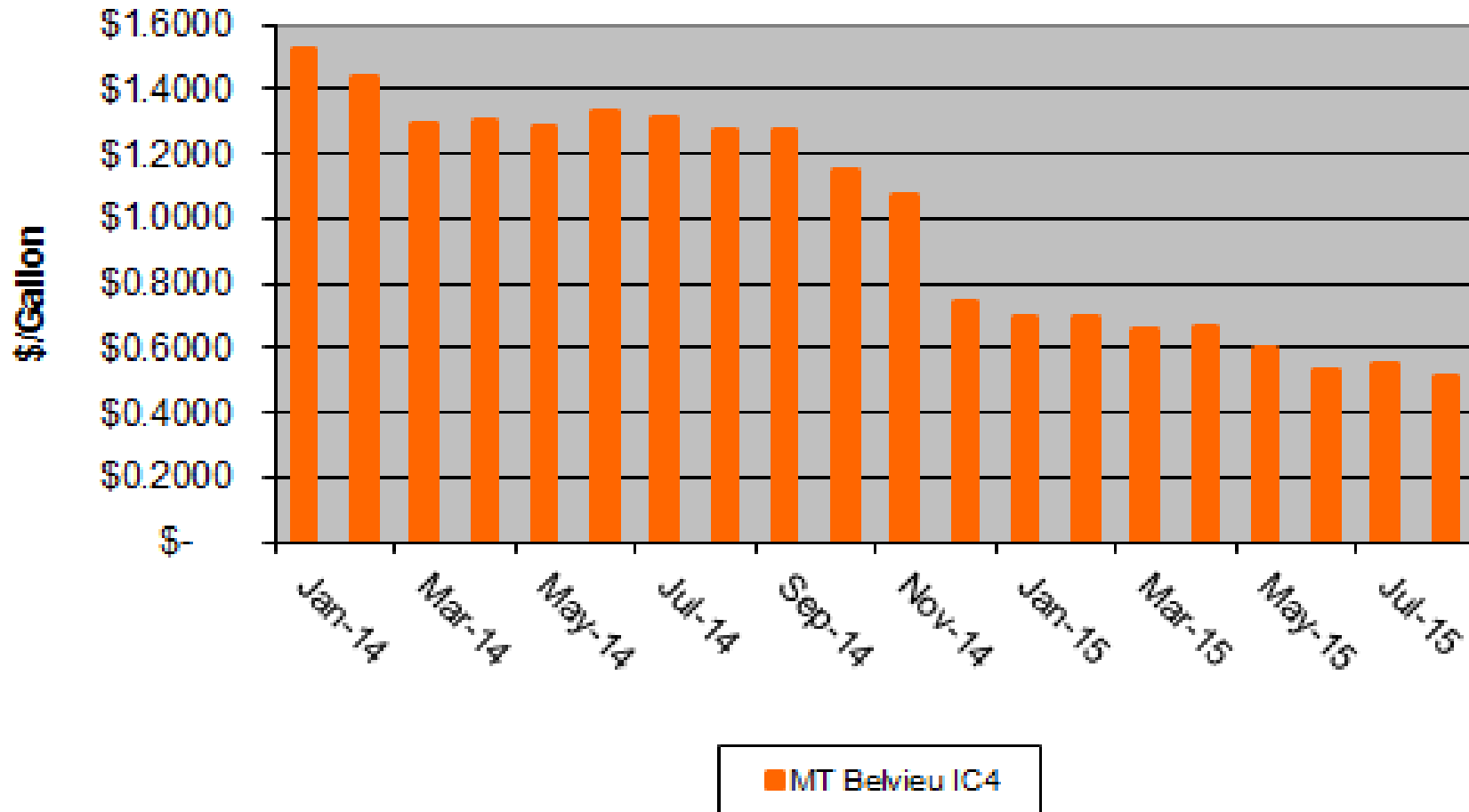
2014-Current Propane Prices



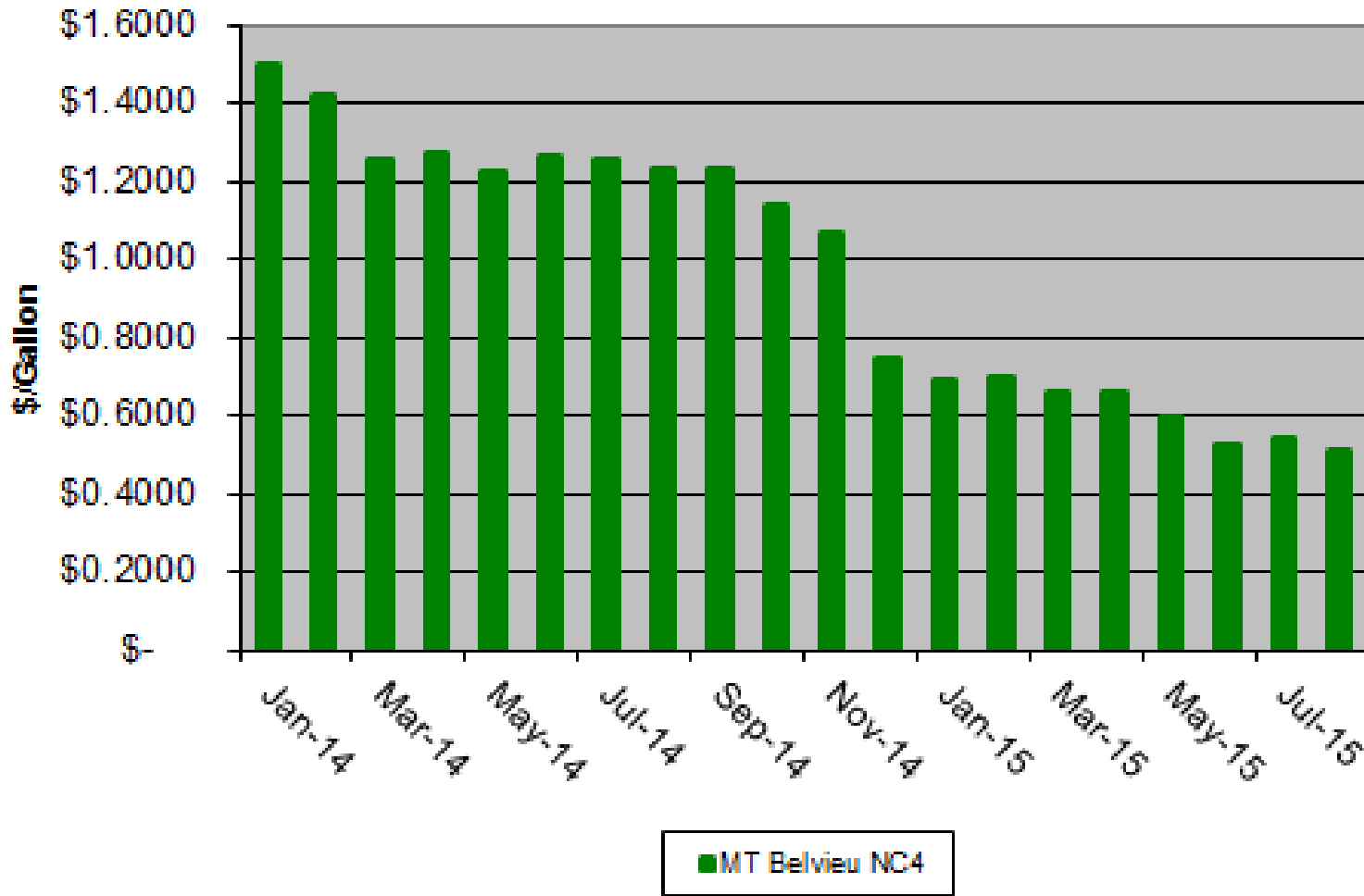
Source: OPIS

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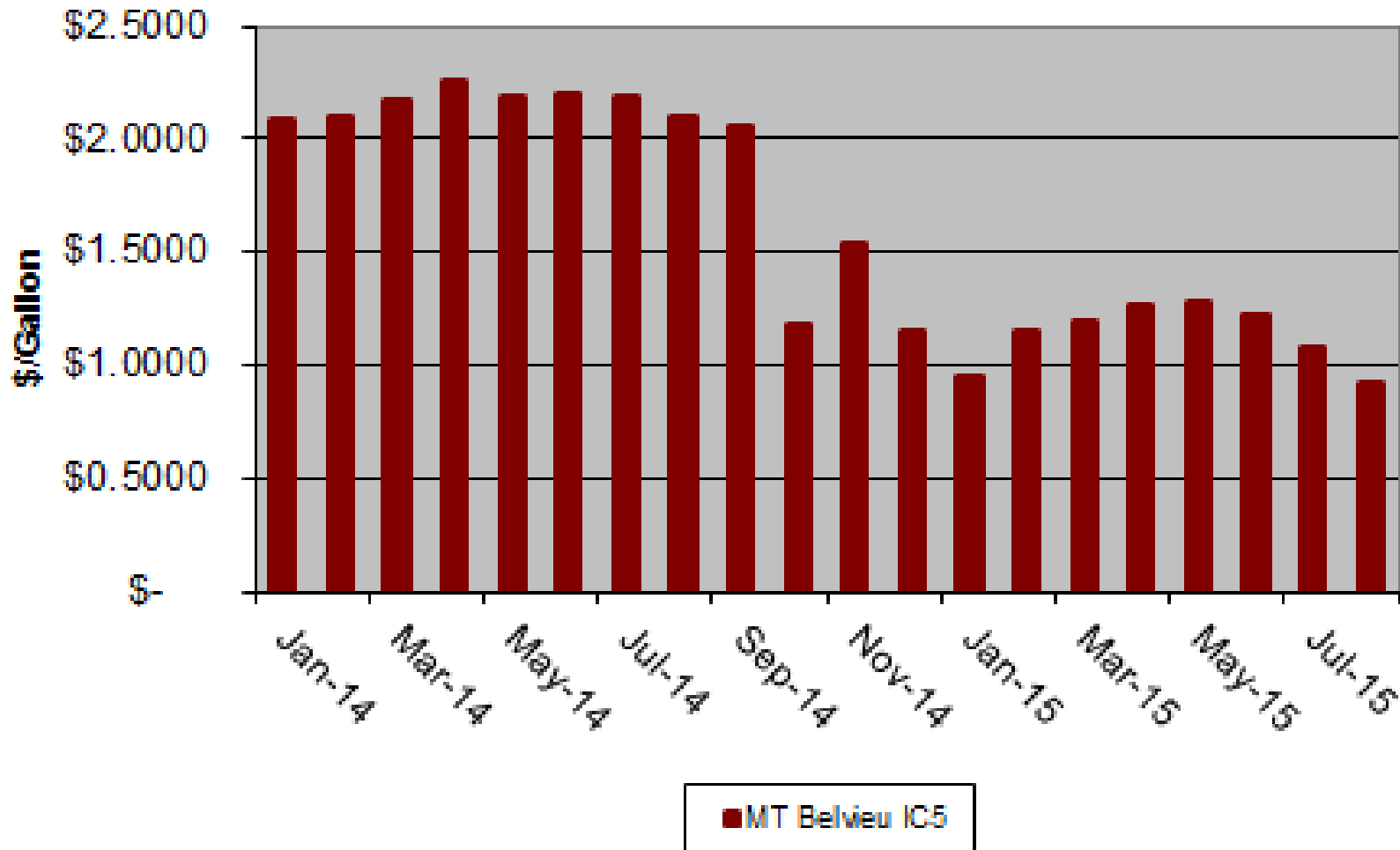
2014-Current Isobutane Prices



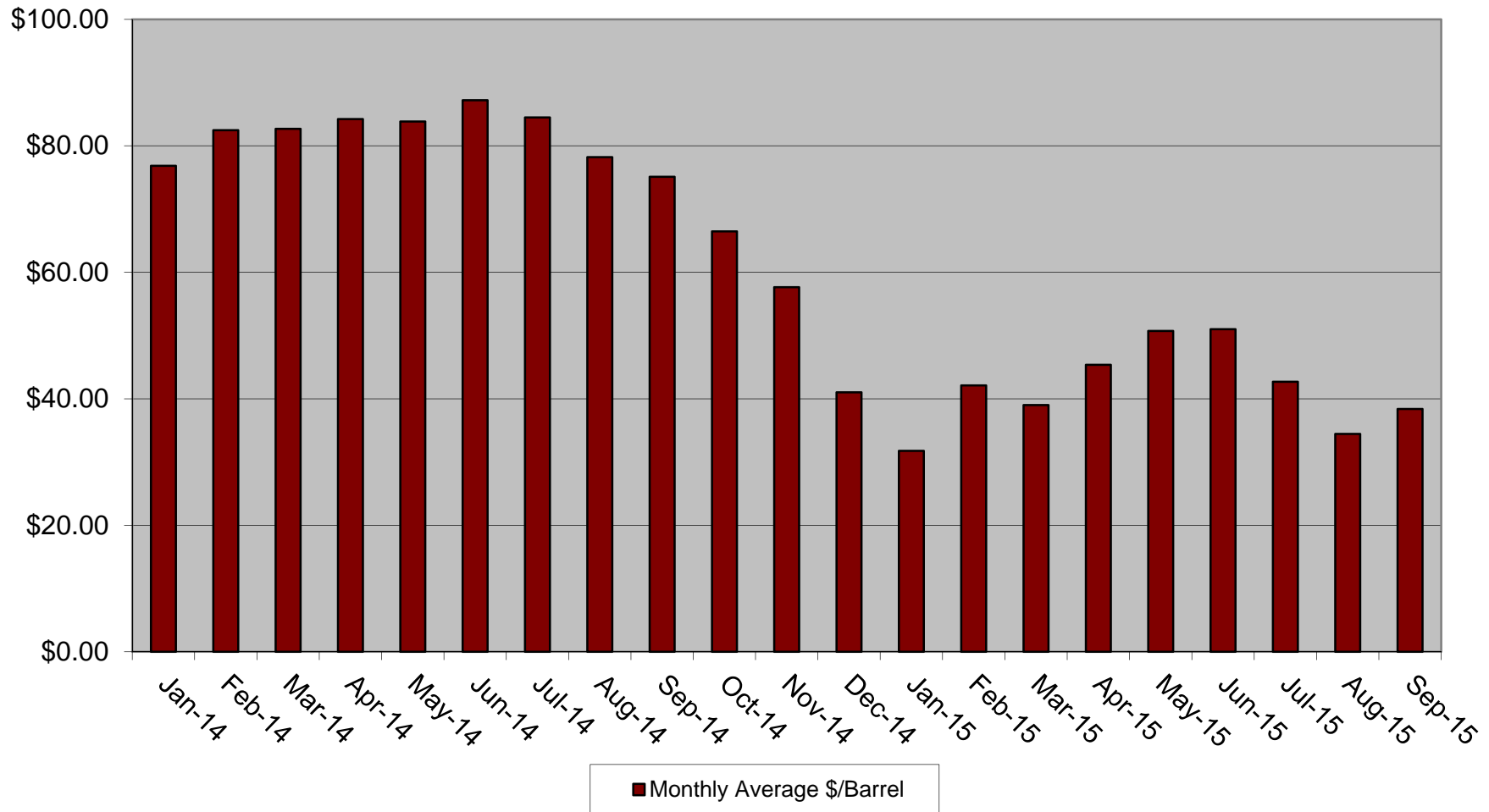
2014-Current Butane Prices



2014-Current Iso-pentane Prices



Uinta Basin Black Wax



Source: Chevron Crude Oil Marketing, Chevron Posting

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Wyoming Crude Oil Pricing Comparison

	August 1, 2014 (price per barrel)	September 3, 2015 (price per barrel)
Asphalt Sour	\$68.50	\$18.00
General Sour	\$69.50	\$19.00
Heavy Sour	\$74.34	\$24.03
Medium Sour	\$75.59	\$25.03
Southwest	\$85.88	\$37.75
Sweet (Other)	\$82.88	\$37.75



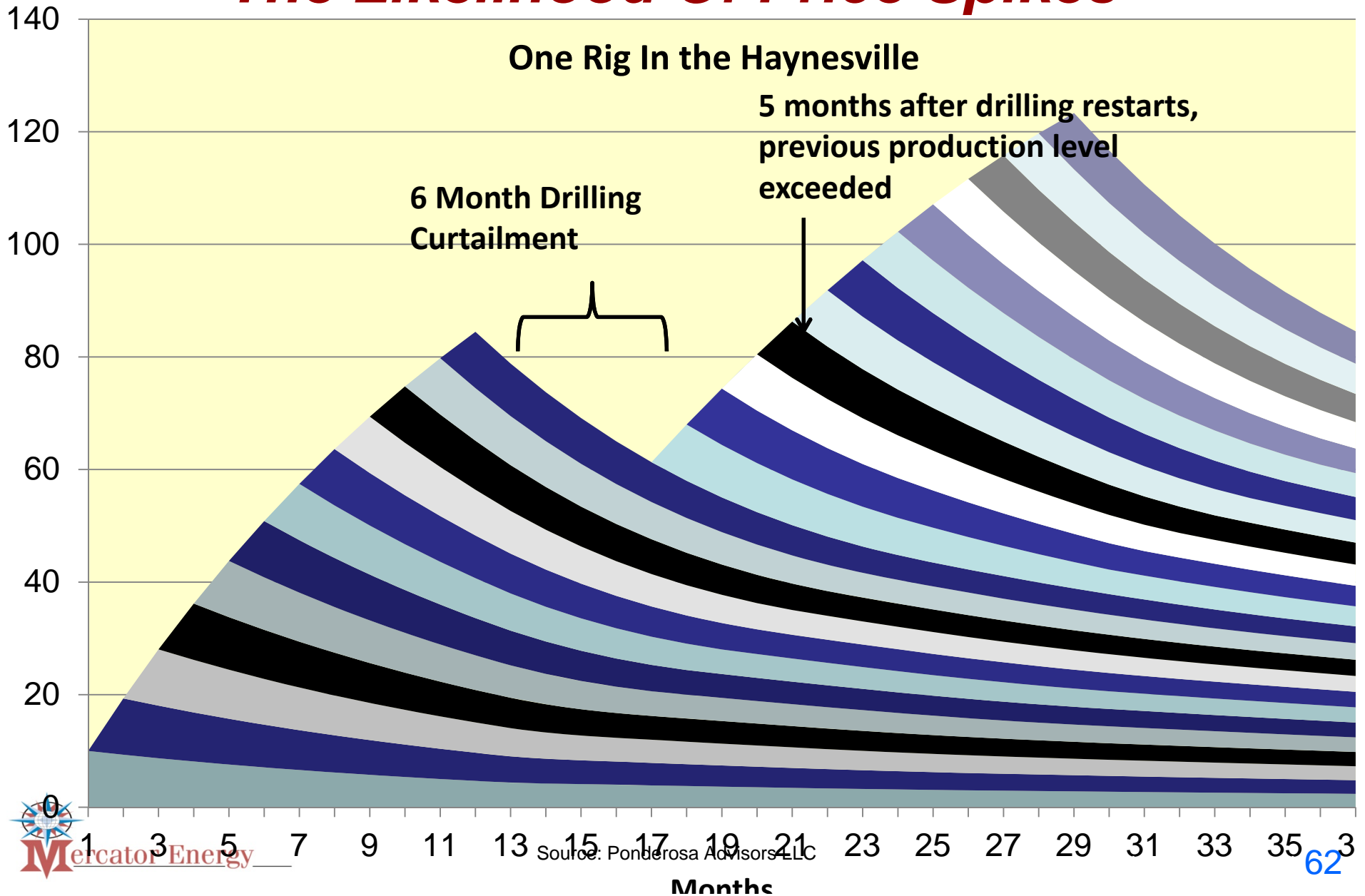
Source: Shell Energy Connect, Shell Trading (US) Company posted prices

Uinta Basin Rig Count

Date	APC	BBG	BRY	COP	DPTR	EPE	EOG	LINE	MDU	NFX	QEP	UPL	Others	Total Uinta Basin
Q1'12	8	4	0	1	0	2	1	2	1	9	2	0	5	35
Q2'12	9	5	0	1	0	2	1	3	1	10	3	0	4	38
Q3'12	6	5	0	1	0	2	0	4	1	10	3	0	6	38
Q4'12	4	4	0	1	0	2	0	3	1	7	4	0	6	32
Q1'13	4	6	0	1	0	2	0	3	1	8	3	0	4	31
Q2'13	4	6	0	1	0	3	0	2	1	10	2	0	6	35
Q3'13	4	4	0	1	0	2	0	2	1	10	2	0	5	31
Q4'13	5	1	0	1	0	4	0	3	1	10	1	0	5	31
Q1'14	5	2	0	1	0	4	0	3	2	9	1	0	3	28
Q2'14	4	2	0	1	0	3	0	3	2	7	1	1	5	30
Q3'14	1	2	0	0	0	3	0	3	1	5	1	1	7	25
Q4'14	1	3	0	1	0	3	0	1	1	8	1	1	8	27
Q1'15	1	2	0	1	0	2	0	0	0	3	1	1	3	14
Q2'15	1	1	0	1	0	2	0	0	0	0	1	0	2	8
Q3'15	1	0	0	1	0	1	0	0	0	1	1	0	3	7
4 Wks Ago	1	0	0	1	0	1	0	0	0	1	1	0	2	7
Prior Wk	1	0	0	1	0	1	0	0	0	1	1	0	3	8
8/28/15	1	1	0	1	0	1	0	0	0	1	1	0	3	9

Source: Tudor Pickering Holt & Co.

The "Ferrari" Affect Substantially Reduces The Likelihood Of Price Spikes



Winners

- Consumer growth; consumer spending
- U.S. nitrogen fertilizer industry
- Steel producers
- Refiners
- Chemical producers
- Aluminum smelters
- Natural gas fired electric generators
- Promoters of an increase in the Federal/State gasoline tax

Losers

- U.S. Energy Security
- State and local governments in oil & gas producing states
- Oil & gas E&P's
- Oil & gas employment
- Oil & gas service companies
- LNG exporters
- MLP's
- Retirement funds
- Renewable energy sector – cheap energy will destroy the “Green Revolution”
- Russia, Iran, Venezuela

Conclusions

- Crude and NGL prices won't recover for at least 2 years
- U.S. crude, NGL & natural gas production won't decline as quickly as OPEC expects
- U.S. producers are allocating capital to their highest IRR projects
- Low NGL prices create a problem for MLP's
- U.S. "short cycle" drilling (dependent on near term quarter cash flow) will result in U.S. drillers feeling most of the pain
- The "recovery time" will exceed any hedge terms
- The supply response will eventually materialize but it will take longer than expected

Congressional action underway to lift the ban on crude exports

- Bill introduced by both the House and the Senate
- Bi-partisan support
- U.S. Senate Bill S.1312
 - U.S. Senator Heidi Heitkamp (D-ND) and U.S. Senator Lisa Murkowski (R-AK)
 - Multiple Senate hearings
 - Language voted out of Energy and Natural Resources Committee
 - Expect floor vote soon
- U.S. House Bill H.R.702
 - Rep. Joe Barton (R-TX)
 - Expect House vote in September
 - Support from Speaker of the House John Boehner:
 - ↳ "Lifting the ban would create 1 million jobs... bring down prices at the pump... be good for our allies."
 - ↳ "If the administration wants to lift the ban for Iran, certainly the United States should not be the only country left in the world with such a ban in place."

Citations for Report

All of the information utilized for this report is a compilation of information pulled from the following data sources:

Energy Information Administration (EIA)

Bentek Energy, Jack Weixel

Ponderosa Advisors LLC

Office of Energy Projects

Bloomberg

U.S. Department of Energy

Raymond James and Associates, Inc.

Wikipedia

LNG Blog

Platts Gas Daily Report, A McGraw Hill Publication

Platts Inside FERC Gas Market Report, A McGraw Hill Publication

American Enterprise Institute

Oilprice.com

Rueters

LNG World News

The Motley Fool

Chevron

Encana Corporation

Waterborne Energy, Inc.

King & Spalding

Midwest Energy Logistics, LLC

National Energy Board

NERA Economic Consulting

LNG Business Review

Colorado Interstate Gas, George Wayne

Tea Party Command Center

Tudor Pickering Holt & Co.

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Why *Were* Prices So High For So Long?

- A historically high rate of unplanned supply outages has been a key feature of the global oil market since 2011.
- In fact, outside of the US, net non-OPEC production has actually declined over the past several years — despite several years of elevated prices. Similarly, outside of Saudi Arabia, Kuwait, and the UAE, net production in the rest of OPEC also floundered.
- Even during a period of very sluggish oil demand growth — which it has been since the recession — *and* exponential growth in US oil production, until recently the Saudis still had to produce at record levels for months at a time to keep the market balanced.
- In other words, until recently, Saudi's main concern was how to supply enough oil to the market, not how to maintain market share.

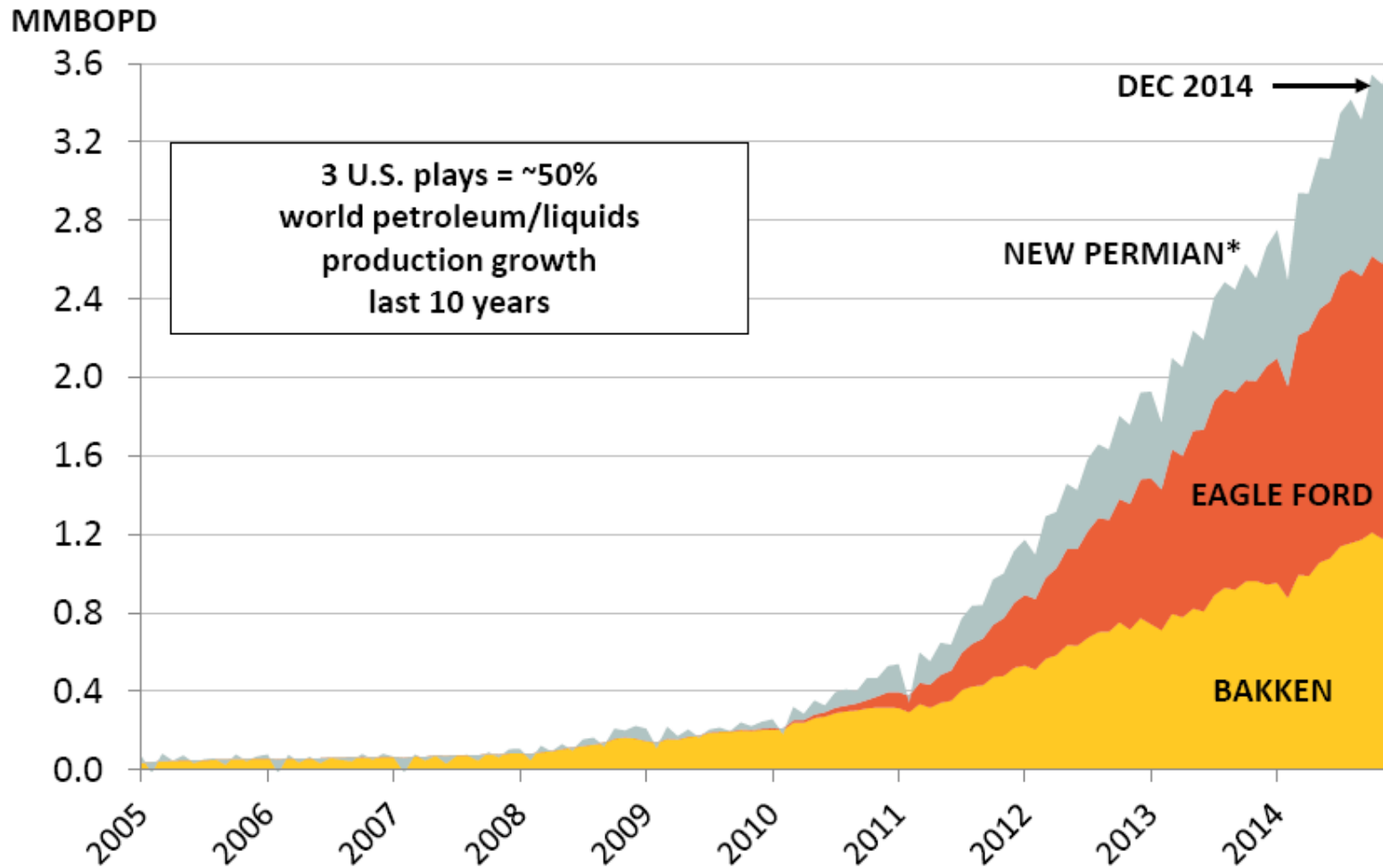


What Now?

- The Call on OPEC should *gradually* recover through 2016, the problem is that the improvement is no match for current rates of Saudi/OPEC overproduction. In other words, the market *will* “need” more crude from OPEC in the second half of the year than it did in the first, just not as much as OPEC is currently producing.
- We do not anticipate any near-term change in the Saudi strategy, but also question the “sheik versus shale” thesis...
- Global oil demand looks quite good year-to-date, led by the US and China. The demand side of the balance probably won’t make or break out market view, but could add a kicker to the upside (or moderate an oversupplied market).
- US producers will be “fast off, fast on” and won’t balance this market in the medium-term. Other non-OPEC (and maybe some non-Gulf OPEC) producers will “fast off, slow (or never) on” and are ultimately more important.
- If Saudi Arabia won’t manage the market, nothing else will do the job as quickly. That means more price volatility.



Bakken + Eagle Ford + New Permian 2005 - 2015 Production Growth



Estimated recoverable reserves

Billion barrels

