



# Unconventional Revolution and New Oil Price Environment

Rueil-Malmaison, France

March 16<sup>th</sup>, 2015

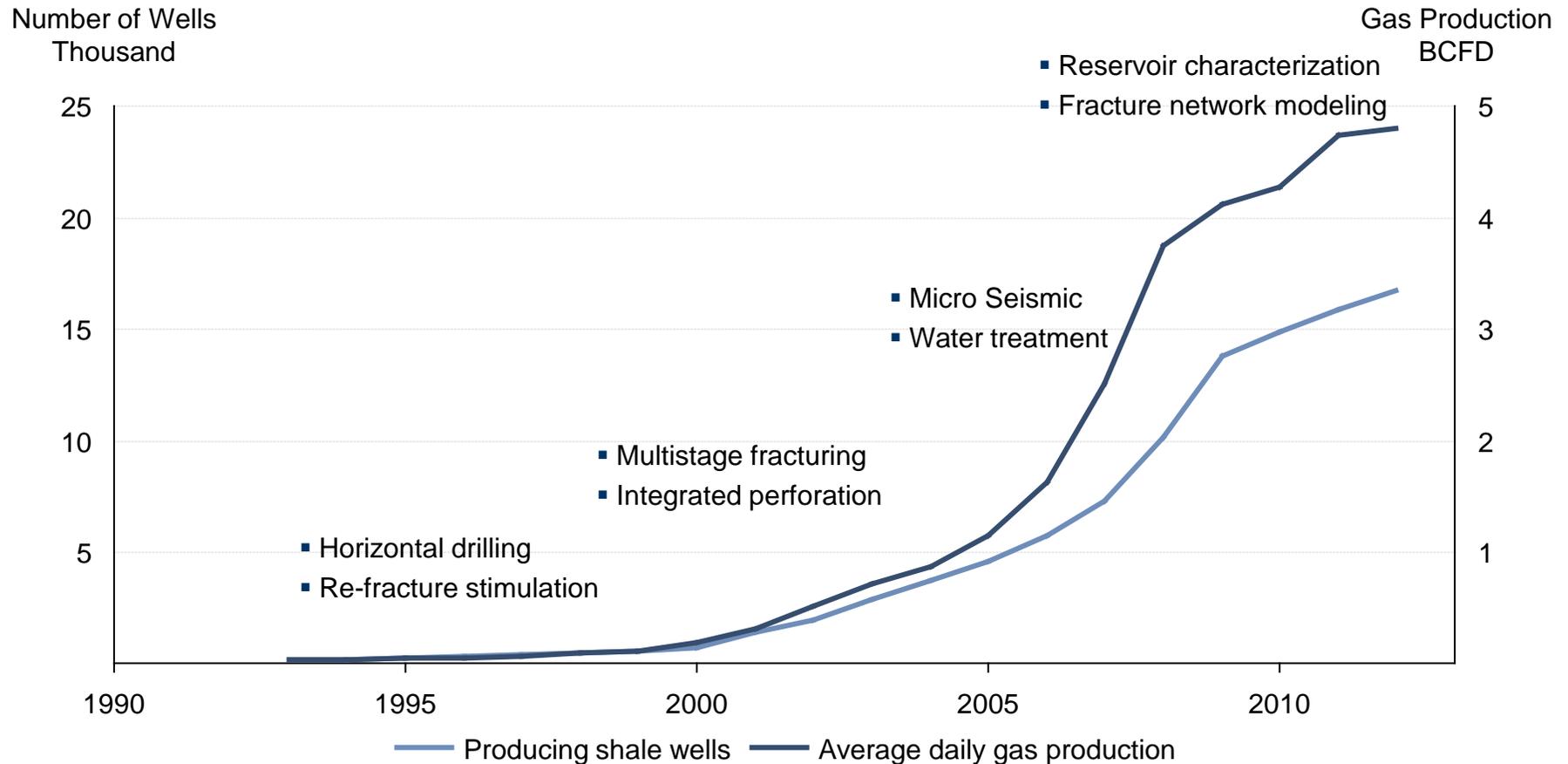
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# US unconventional revolution has been driven by technology and price

## EVOLUTION OF THE US SHALE GAS INDUSTRY: BARNET SHALE EXAMPLE

Thousand of Wells, Billion Cubic Feet per Day, 1990-2012



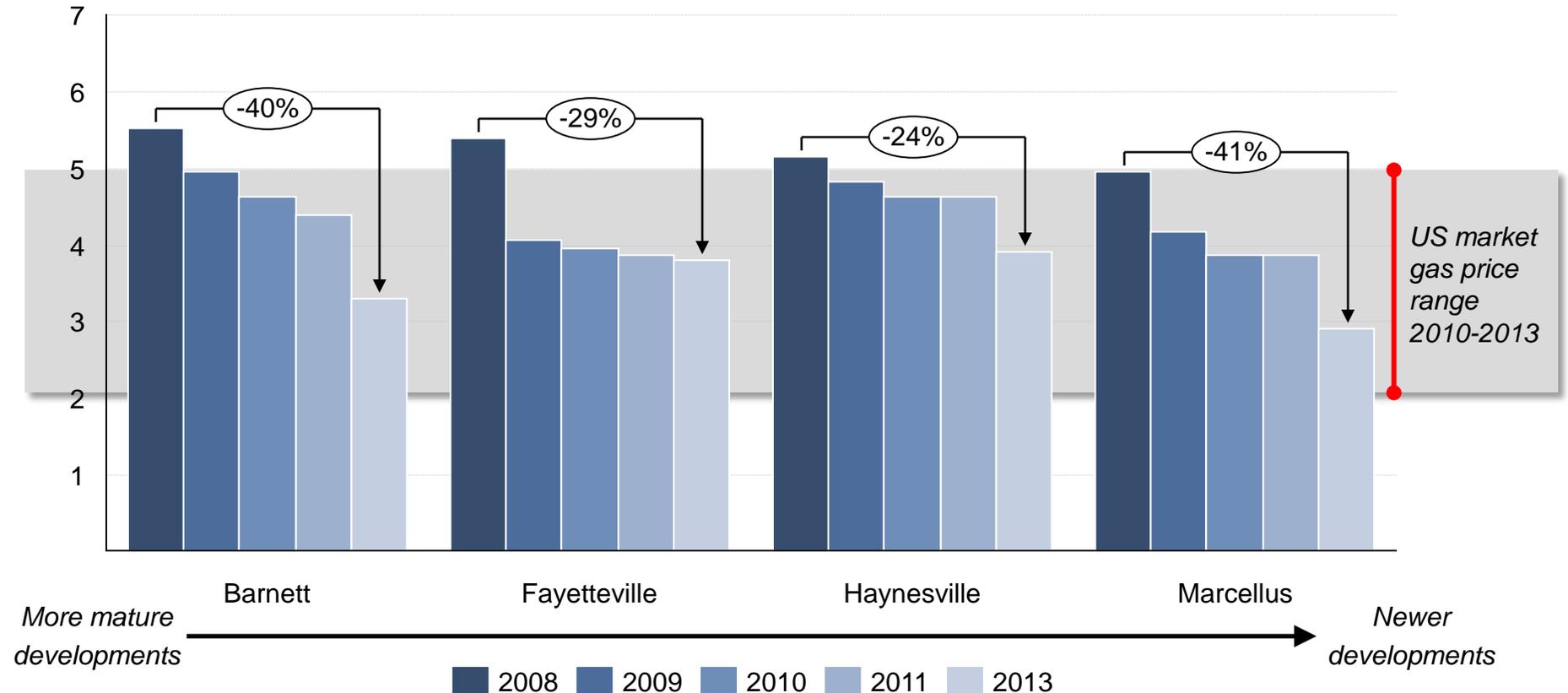
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# North America operators significantly improved their breakeven economics

## BREAK EVEN PRICES IN MAJOR US SHALE GAS PLAYS

USD per Million Cubic Feet, 2008-2013

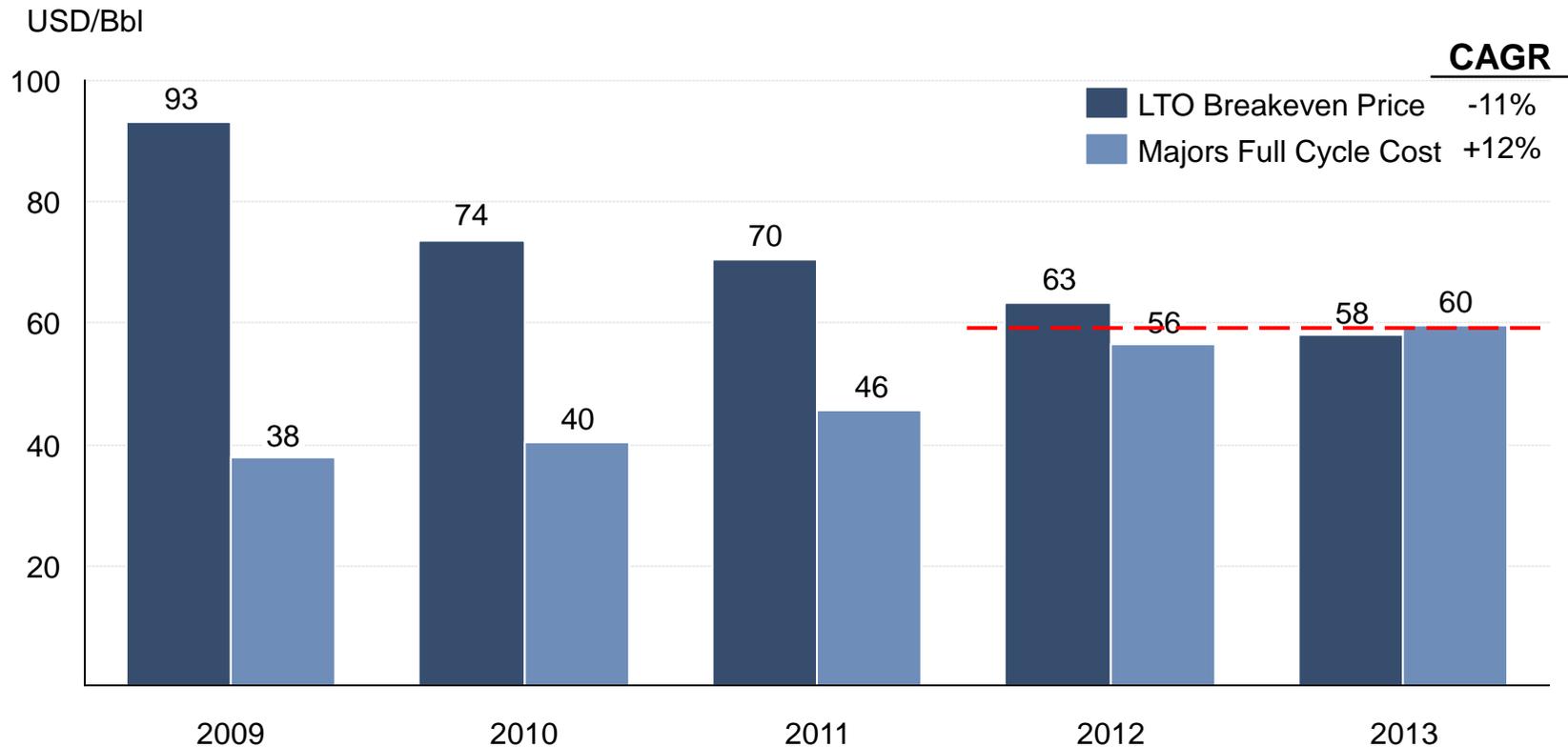
Breakeven price  
USD/MMCF



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# Light Tight Oil (LTO) breakeven price have reached majors' full cycle cost

**LTO BREAKEVEN PRICE<sup>1</sup> AND MAJORS FULL CYCLE COST<sup>2</sup>**  
 USD per Barrel of Oil Equivalent, 2009-2013



1: F&D + Lifting costs. Pure unconventional NAM players

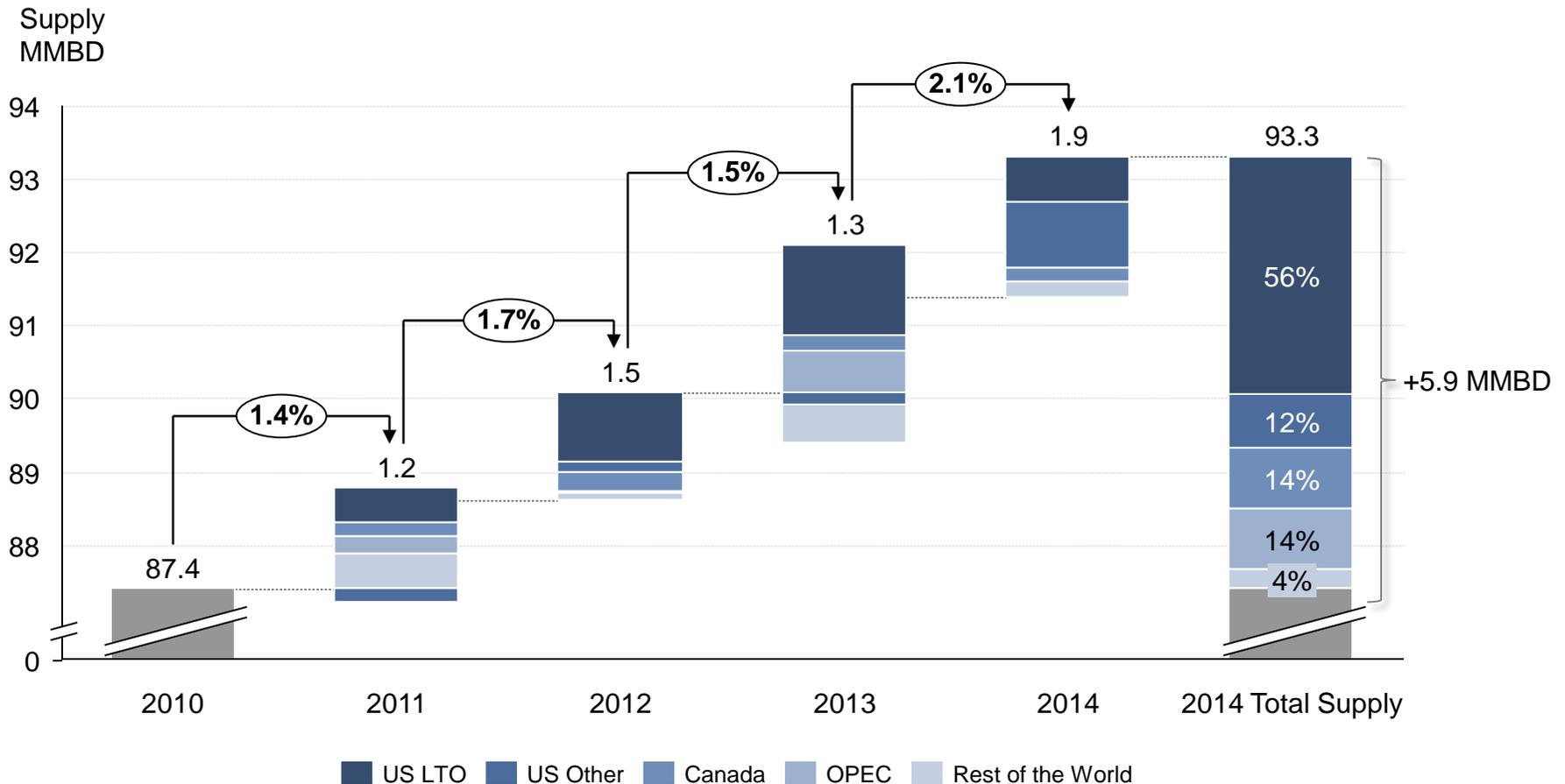
2: S&GA + F&D + Total Production + WACC. Majors

Source: Rystad; IHS; Evaluate Energy; Goldman Sachs

# 2014 has seen the largest supply increase since 2010 mainly due to North America LTO

## SUPPLY GROWTH BY SOURCE

Million Barrels per Day, Percentage of total increase, 2010-2014



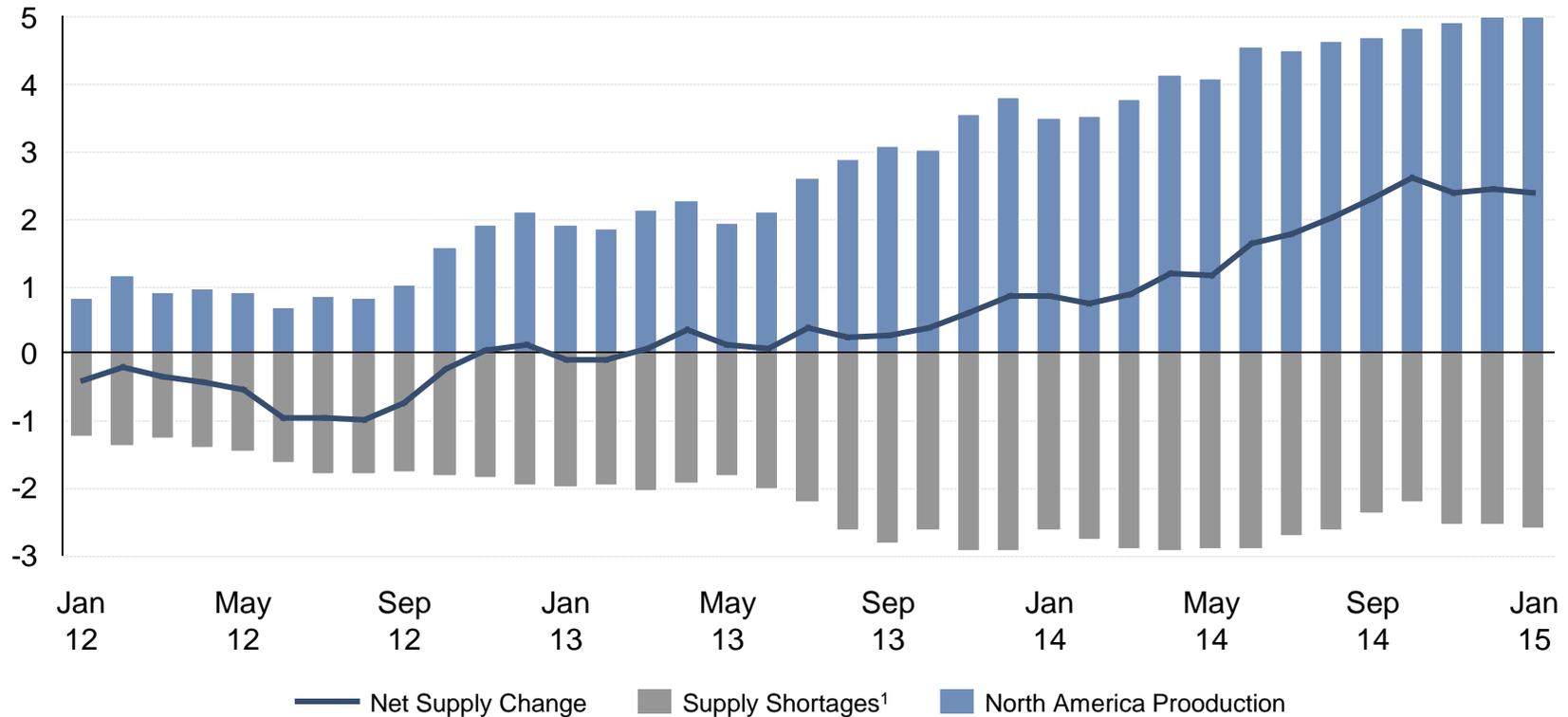
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# The increase in North America production outstripped supply shortages

## WORLDWIDE NET SUPPLY CHANGE

Million barrels per day, 2012-2015

Net Supply Change  
MBD



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1: Includes Iran, Libya, Sudan & South Sudan and Syria

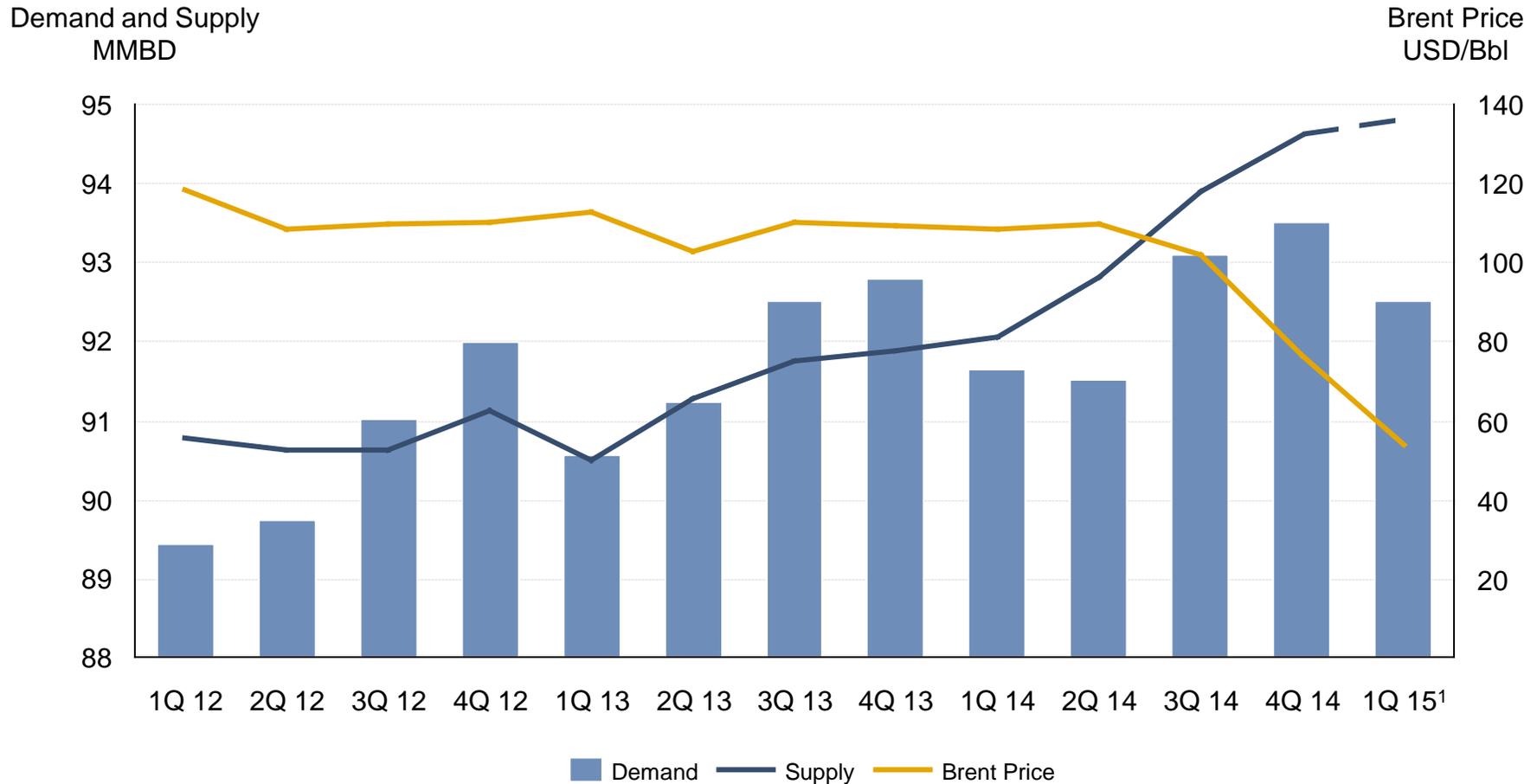
Note: vis-à-vis production change based on Jan 2011

Source: IEA Oil Market Reports; SBC Analysis

# Supply exceeded demand which led to oil price drop

## DEMAND AND SUPPLY IMBALANCE PRODUCED OIL PRICE DROP

Million Barrels per Day, USD per Barrel, 2012-2015



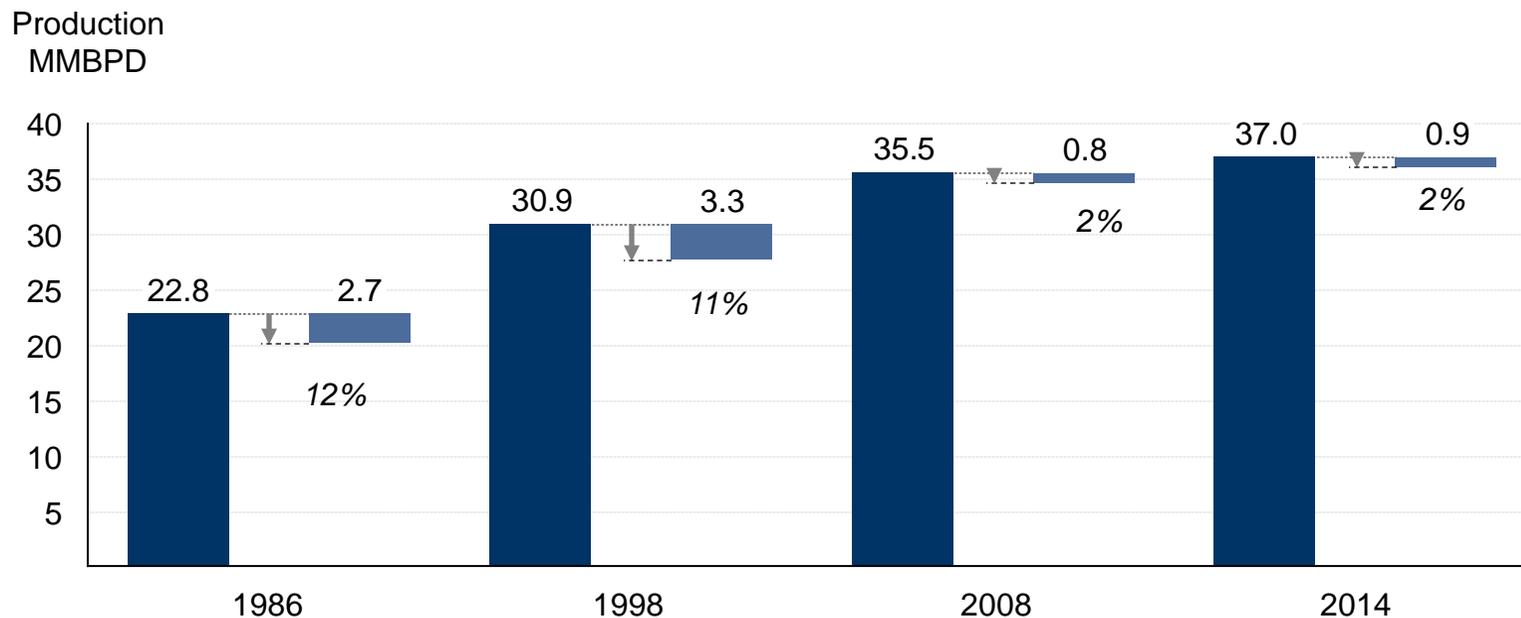
1: 1Q 15 Year-to-date price average - March 9<sup>th</sup>, 2015

Source: IEA Oil Market Reports; EIA Europe Brent Spot Price; SBC Analysis

# Surplus is not as large as previous price crisis

## SUPPLY AND DEMAND GAP IN PREVIOUS OIL PRICE CRISIS RELATIVE TO OPEC PRODUCTION

Million Barrels per Day, Percentage of OPEC Production, 1986-2014



Price decrease	65 to 21 USD/bbl	35 to 15 USD/bbl	144 to 44 USD/bbl	112 to 48 USD/bbl
	-68%	-58%	-70%	-57%
Months to recover <sup>1</sup>	12	7	14	??

■ OPEC Production ■ Supply Surplus

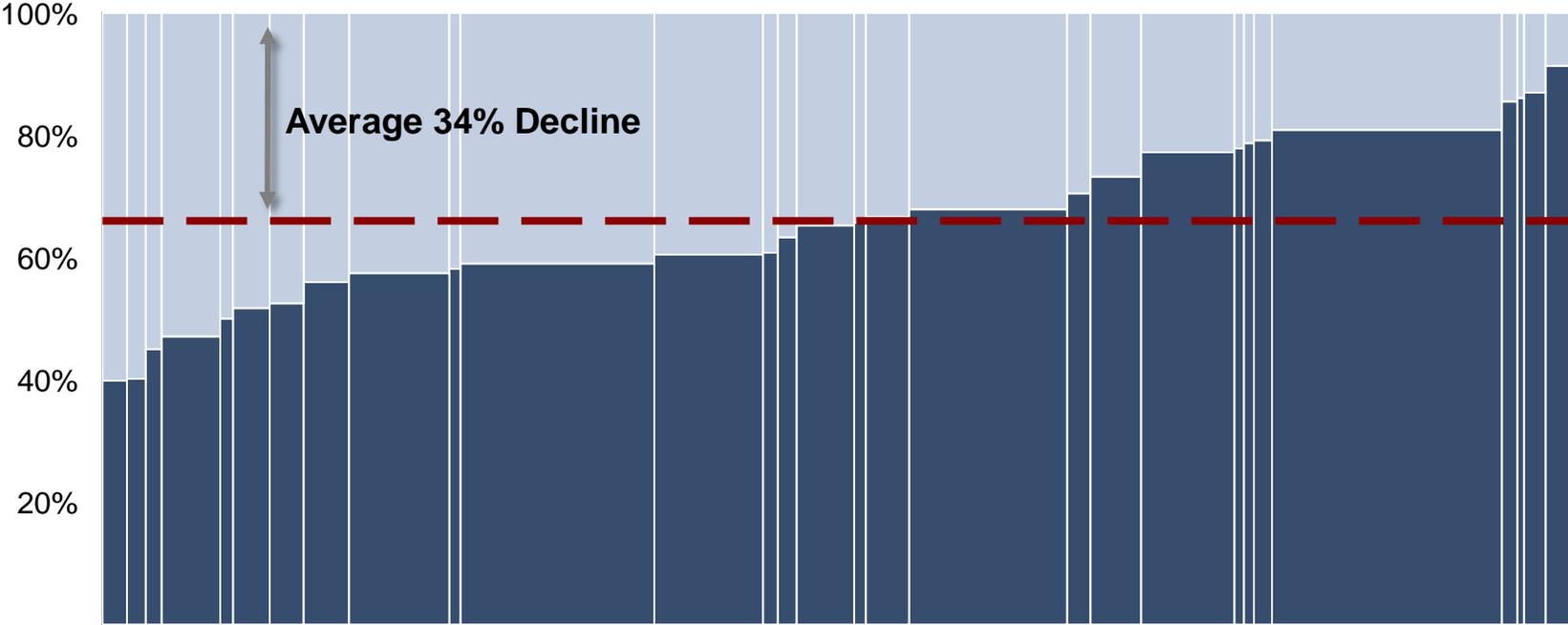
1: Time to reach 70% of peak price before a largely continuous downward trend

Source: IEA Oil Market Reports; SBC Analysis

# US operators have begun to slash Capex

## NORTH AMERICA CAPEX REDUCTIONS

Percentage, 2015 relative to 2014<sup>1</sup>



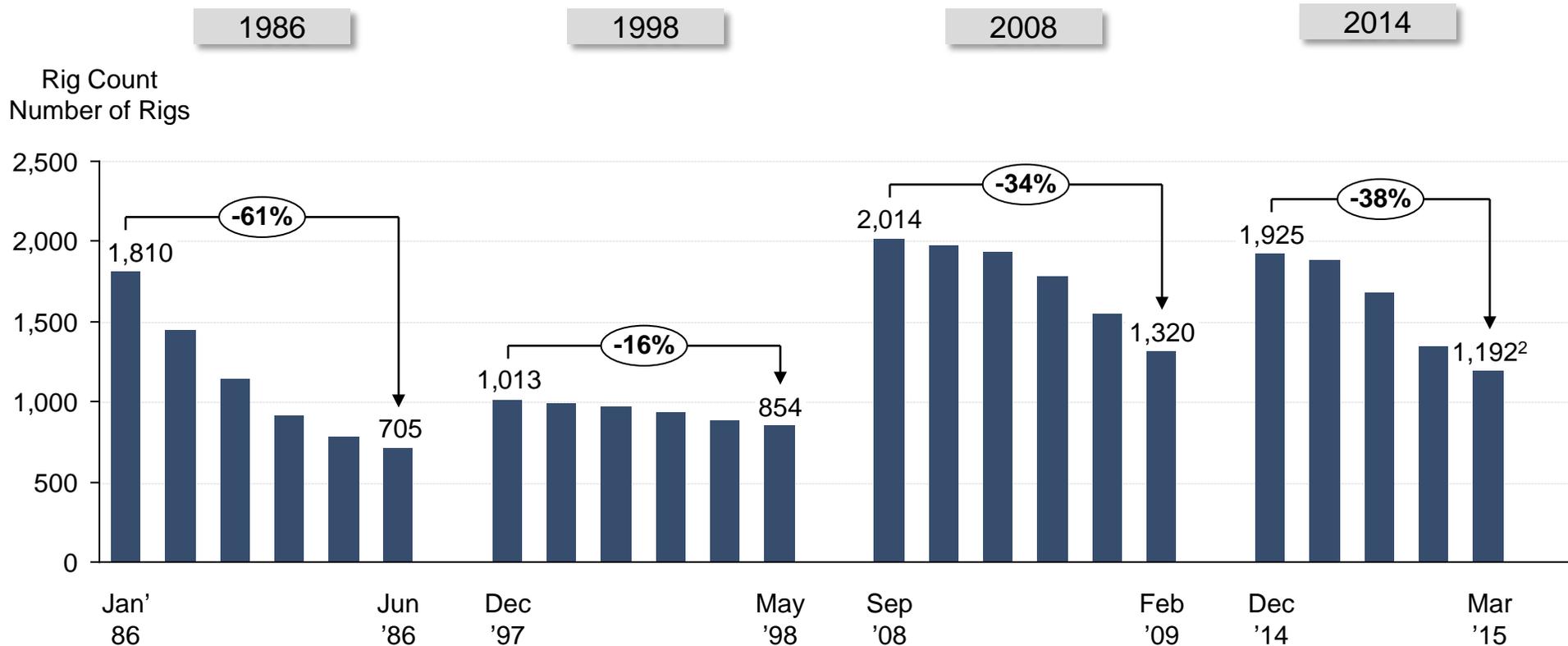
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1: As of Q4, 2014  
Source: IHS; SBC Analysis

# Rig count activity decrease rate is the second largest compared to previous crisis

## US ACTIVE RIG COUNT IN OIL PRICE CRISIS - FIRST 6 MONTHS OF CONTINUOUS DROP

Number of rigs<sup>1</sup>, 1986 - 2015



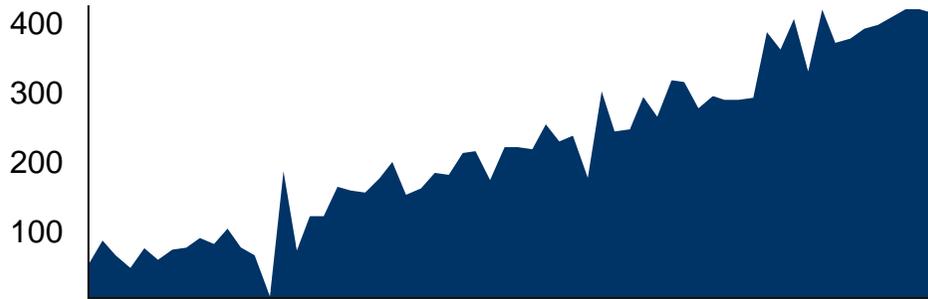
1: US active rig counts includes all Oil & Gas Rigs; Monthly average rig count

2: Rig count reported for the week of February 28 to March 6, 2015

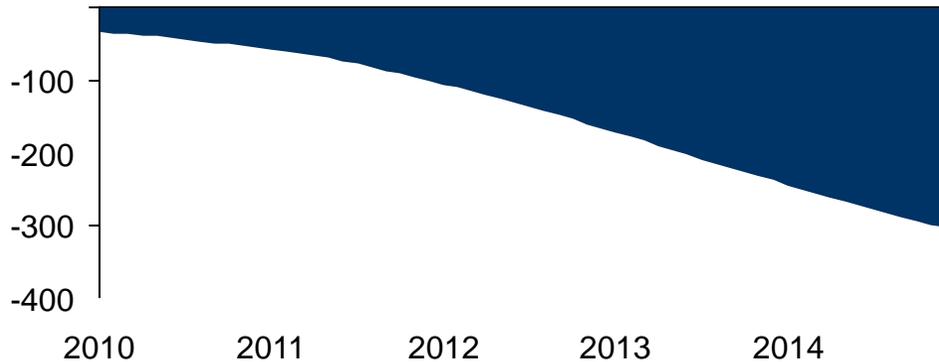
Source: IHS; Baker Hughes North America Rotary Rig Count; SBC Analysis

# Time to recovery depends mostly on North America LTO decline

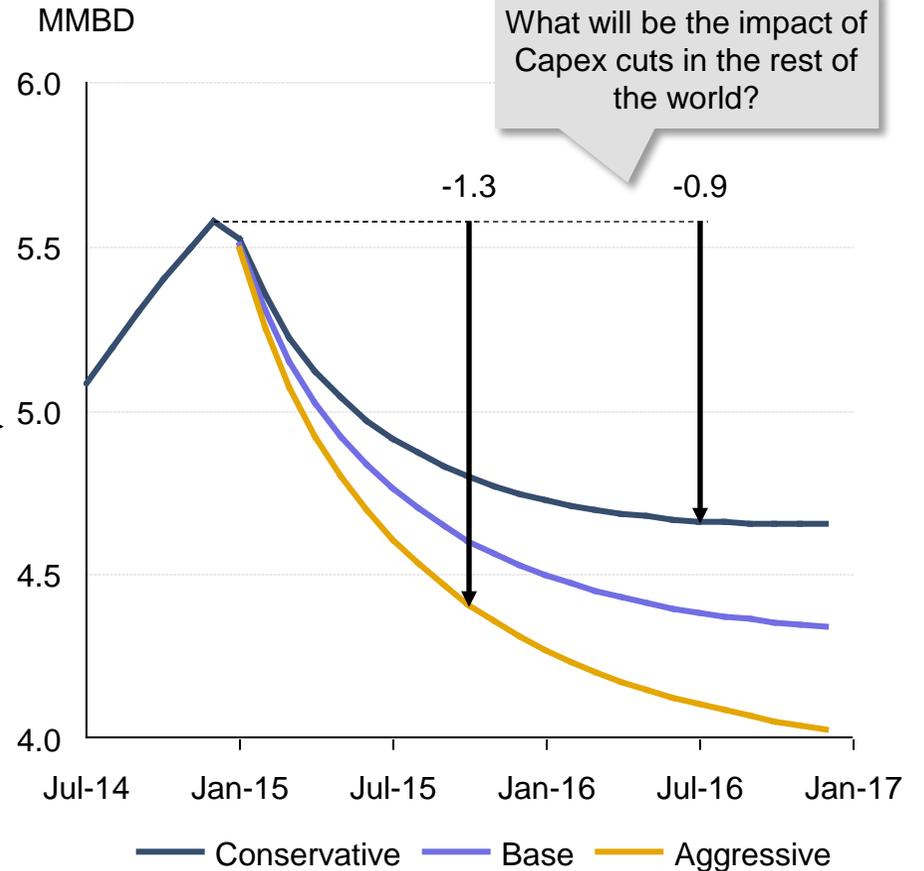
**NEW PRODUCTION – 400 KBPD/MONTH<sup>1</sup>**  
 Thousand Barrels per Day, Month Over Month



**NATURAL DECLINE – 300 KBPD/MONTH<sup>1</sup>**  
 Thousand Barrels per Day, Month Over Month



**ESTIMATED TIME TO REMOVE EXCESS SUPPLY**  
 Million Barrels per Day, Month Over Month



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1: Includes Niobara, Permian, Bakken and Eagle Ford  
 Source: IEA; SBC Analysis