

CRUDE STORAGE ECONOMICS

Crude Markets and Storage Summit

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LUKOIL TODAY

- \$144 billion revenue, \$16 billion EBITDA in 2014
- 13.6 billion boe global oil reserves (#1 among global private companies)
- 2.3 million boepd in global oil production in 2014 (#3)
- 4.1 billion boe global gas reserves; 118 million boe in global gas production

Lukoil operates in 34 countries

- Exploration – 11 countries
- Proven oil reserves – 7 countries
- Proven gas reserves – 5 countries
 - Oil processing – 6 countries
 - Fueling stations – 24 countries



EXPLORATION AND PRODUCTION

- Organic growth of reserves at 815 million boe year over year; 121% hydrocarbon reserve replacement in 2014



MEGA-PROJECT "WEST QURNA-2"

- About 14 billion barrels in recoverable reserves
- Current production 420kbpd, target 1.2 million bpd by 2020

REFINING AND MARKETING

• **1.6% of global oil refining capacity – 1.3 million barrels per day**

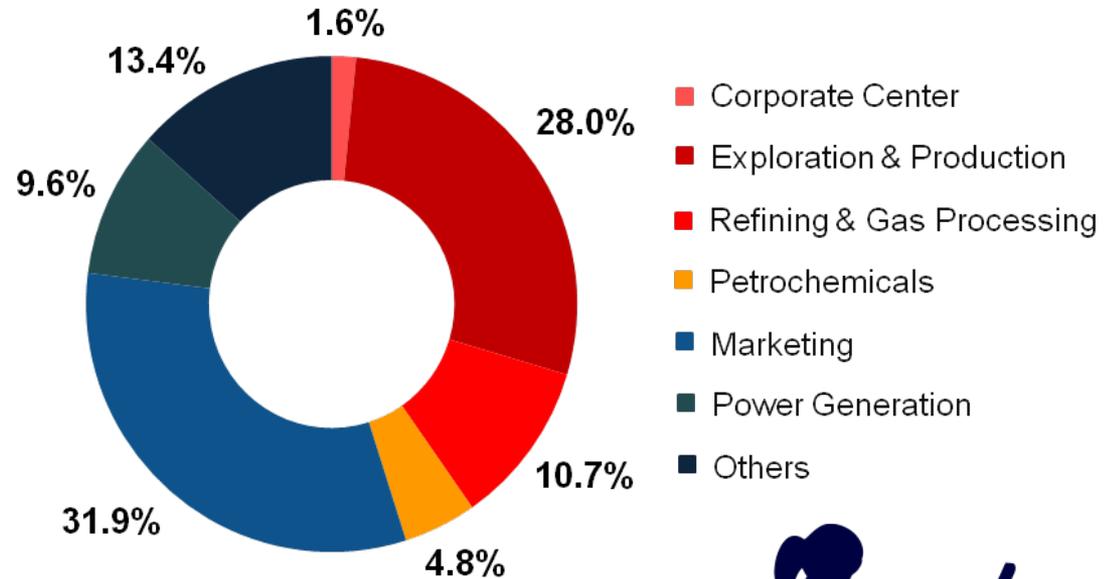
- 918,000 bpd-Russia
- 196,000 bpd-Bulgaria
- 48,000 bpd-Romania
- 320,000 bpd-Italy
- 72,000 bpd-Netherlands



- 5782 petrol stations in 24 countries
- Motor fuels meet North American specs
- 370 types of lubricants

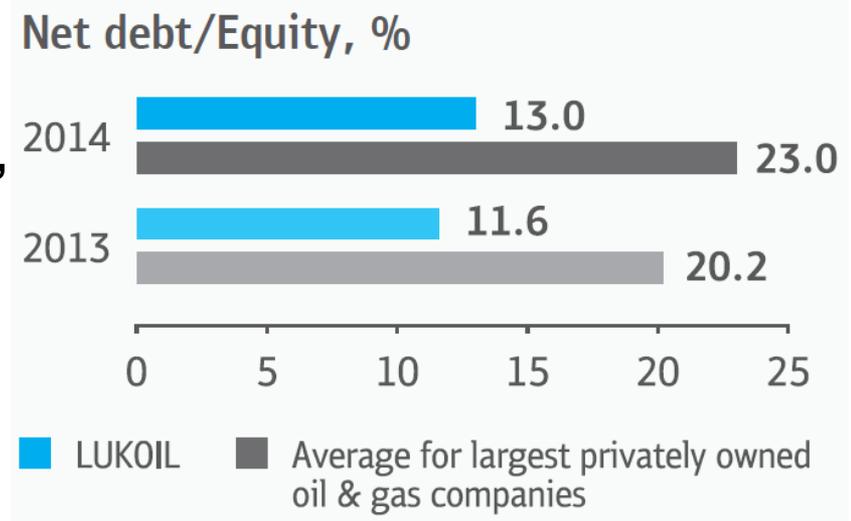
HUMAN CAPITAL

- 110,000 specialists
- 60 Russian regions
- 34 countries of the world:
 - Asia
 - Europe
 - Africa
 - Middle East
 - North America
 - Latin America

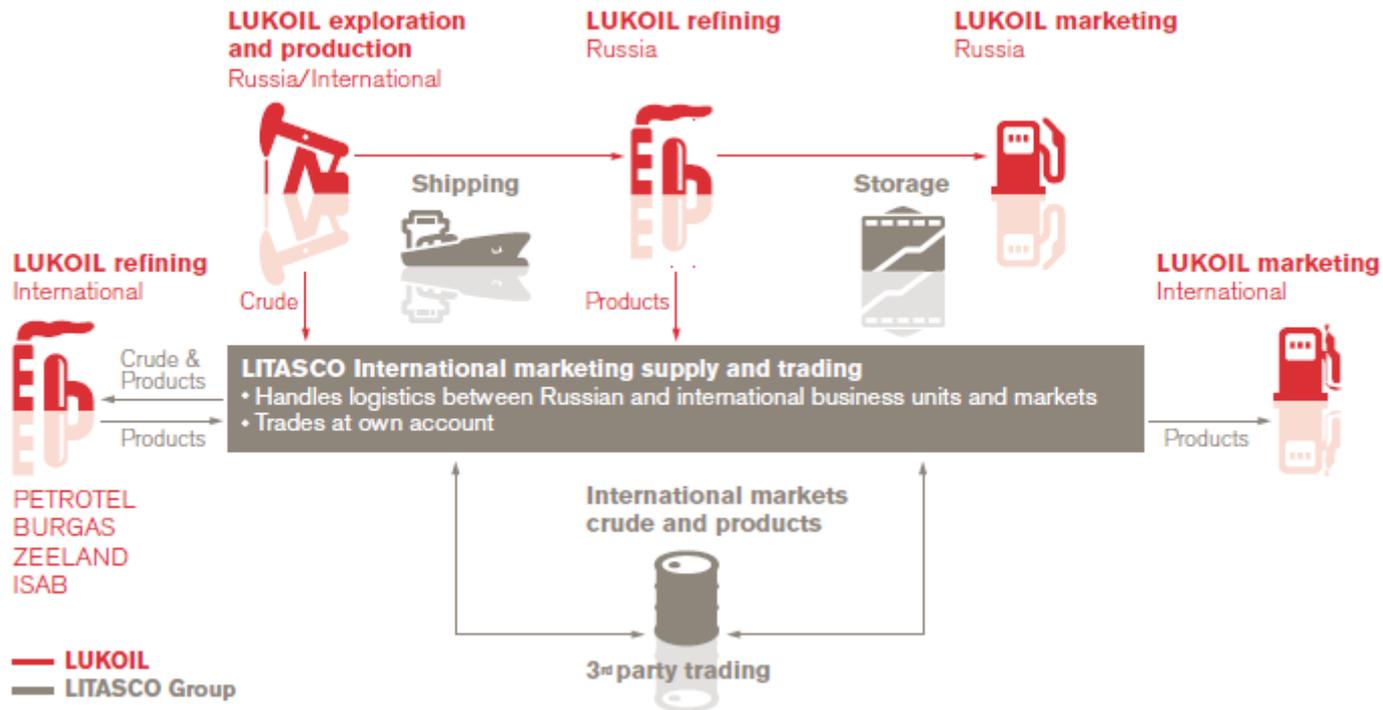


LUKOIL IN THE MARKET

- **Privately-held investment-grade company**
- **Traded on stock exchanges in London, Frankfurt, Moscow, and New York**
- **Lower total debt to equity ratio than most of its peers**
- **Lower ruble and export taxes mute effect of depressed oil prices (~4:1 ratio)**
- **Limited sanctions impact**
 - **None of LUKOIL’s executives have been sanctioned.**
 - **Only named in one sanction which restricts transfers of technology in support of deepwater offshore or shale projects that have the potential to produce oil in the Russian Federation. LUKOIL has no deepwater or shale oil production in Russia.**



LITASCO SA (LUKOIL International Trading and Supply Company) is the exclusive international marketing and trading company of LUKOIL. We manage LUKOIL’s global crude oil and petroleum products supply, refining, marketing and trading needs, moving 2.5 million barrels per day of company and 3rd party barrels.





LUKOIL Pan Americas

Focus of operations

- Trading crude and all products
- Crude, fuel oil and gasoline blending

Main markets served

- North, South and Central America Caribbean
- Arbitrage to Europe and Asia



LITASCO SA Geneva

Focus of operations

- Trading crude, products and petrochemicals

Main markets served

- Europe, FSU, Mediterranean, North & West Africa
- Global arbitrage



LUKOIL Benelux

Focus of operations

- Fuel oil and marine fuels blending and marketing

Main markets served

- ARA, Baltic, Far East, US Europe



LUKOIL Hamburg

Focus of operations

- Trading naphtha and condensate

Main markets served

- Europe, North Africa



LUKOIL Sweden

Focus of operations

- Shipping operations management

Main markets served Globally



LUKOIL Middle East, Dubai

Focus of operations

- Trading all products

Main markets served

- Middle East, India, East & South Africa



Representative offices

LITASCO Moscow

LITASCO Beijing



LITASCO Central Asia

Focus of operations

- Trading crude and all products

Main markets served

- Central Asia



LUKOIL Asia Pacific

Focus of operations

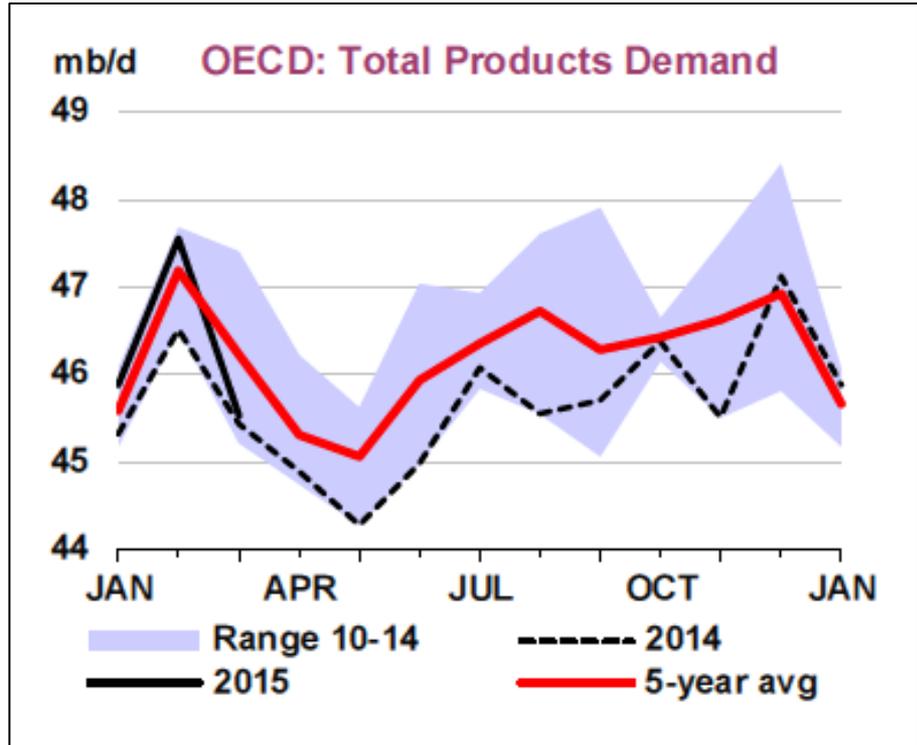
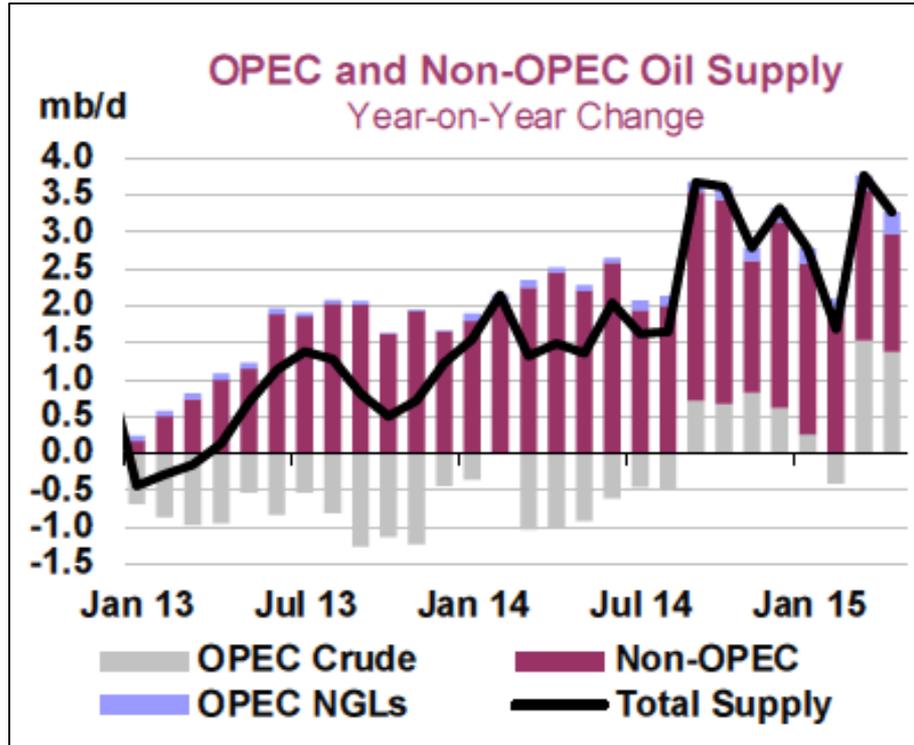
- Trading all products

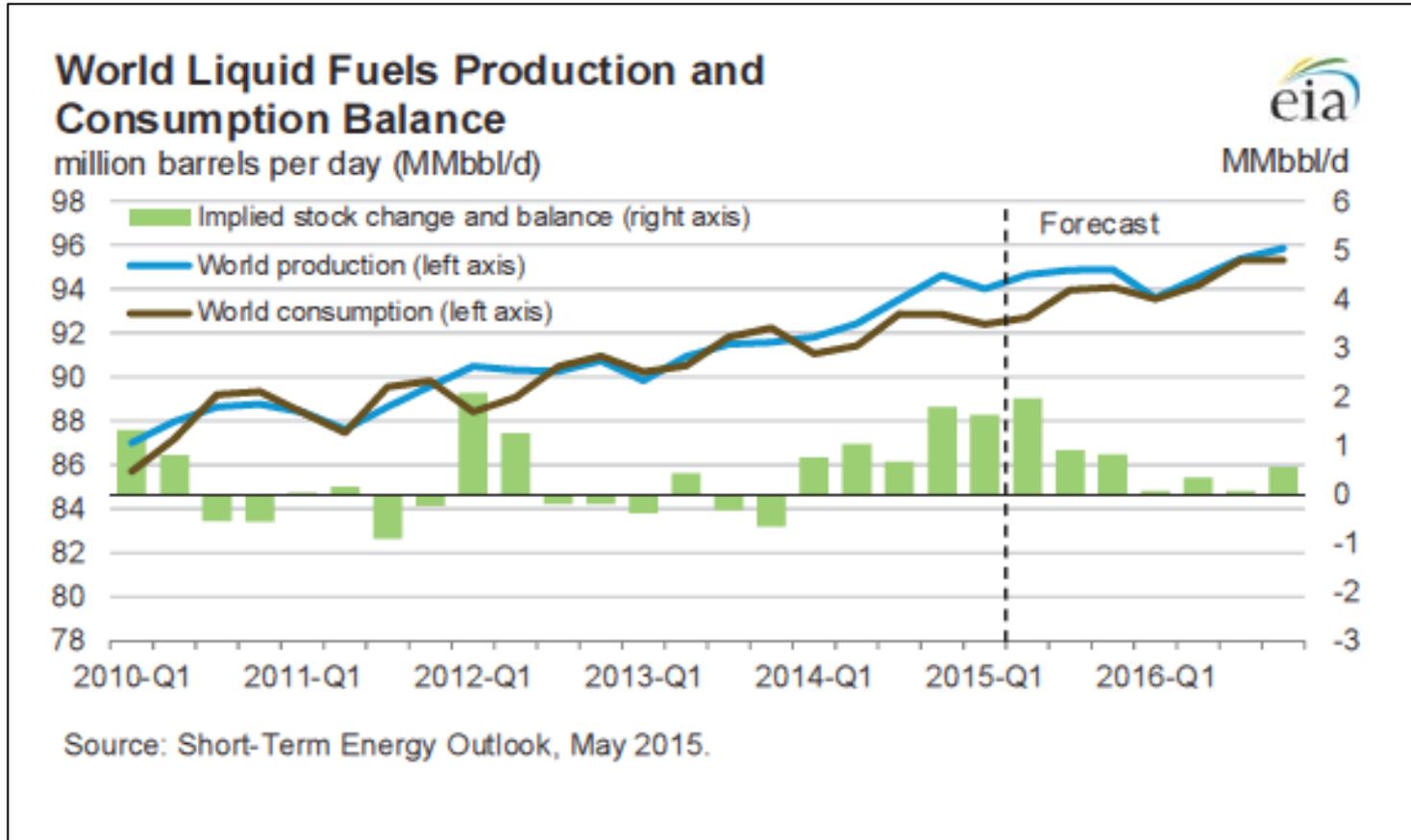
Main markets served

- Singapore, SE Asia

STORAGE CONSTRAINTS IN TODAY'S PETROLEUM MARKETS

- Crude market is global; even though US crude exports are constrained, the international supply/demand balance still ultimately sets world oil prices
- Per most recent IEA report, global oil supply growth was 3.2 Mil b/d YOY in 1Q, while global oil demand growth is projected at 1.1 Mil b/d for 2015

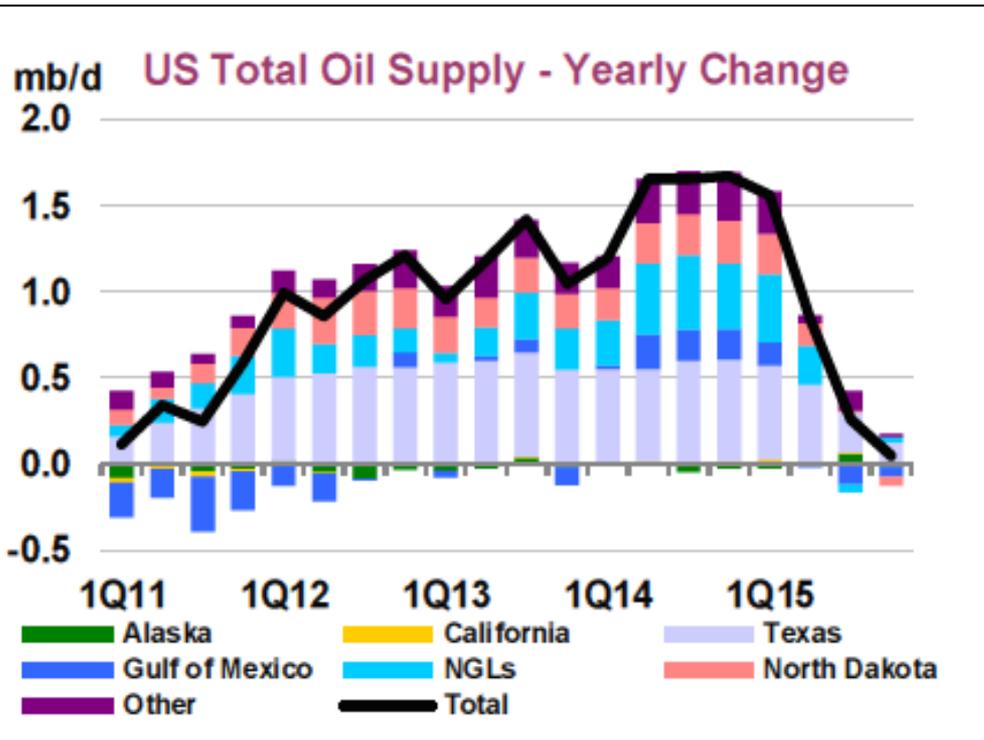




Stock builds should slow after 2Q; some variables to watch:

- **Price changes affecting demand**
- **Unplanned supply outages; Iranian deal**
- **US production growth levels**

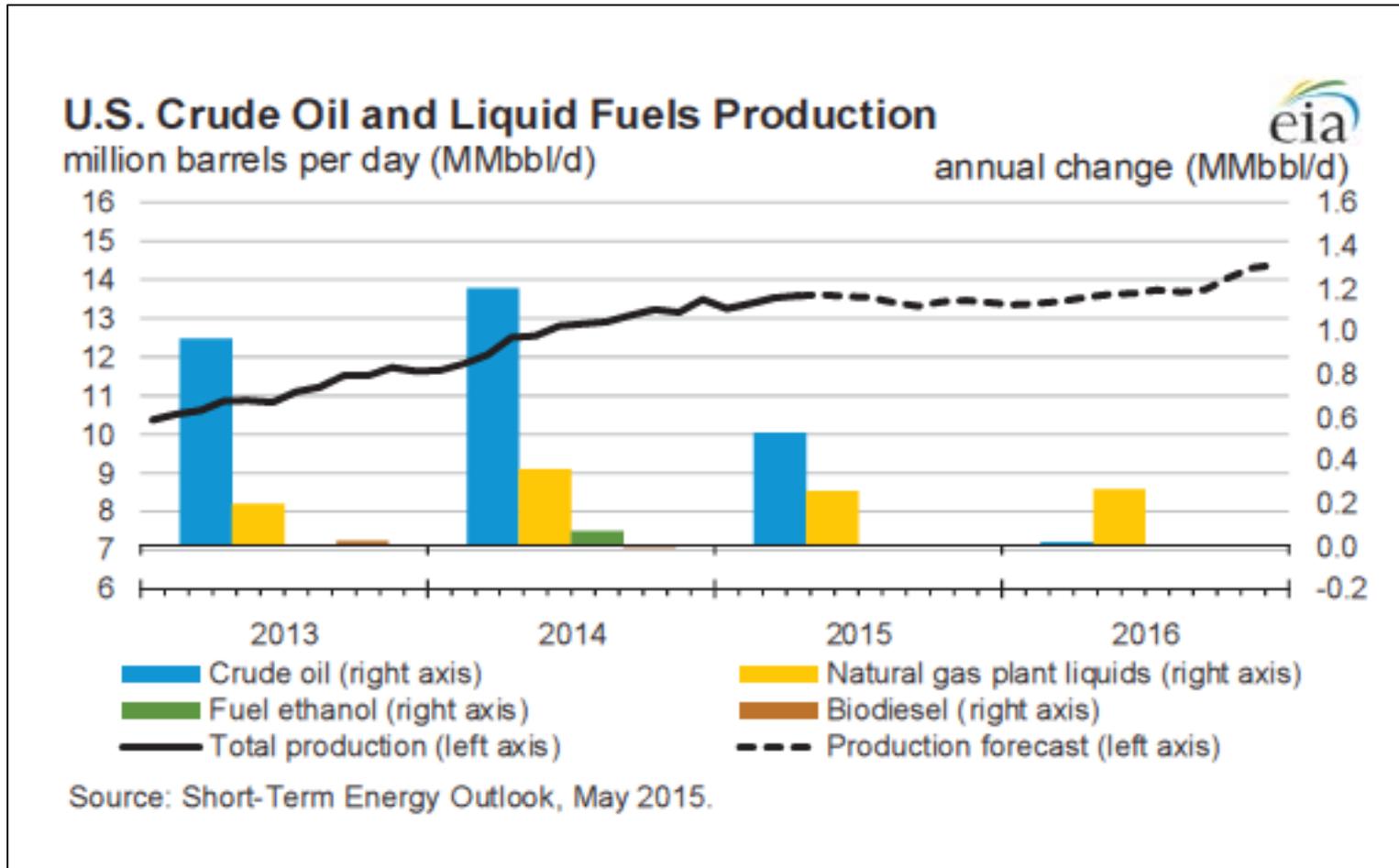
RAPIDLY DROPPING RIG COUNTS LEADS TO DROP IN SUPPLIES



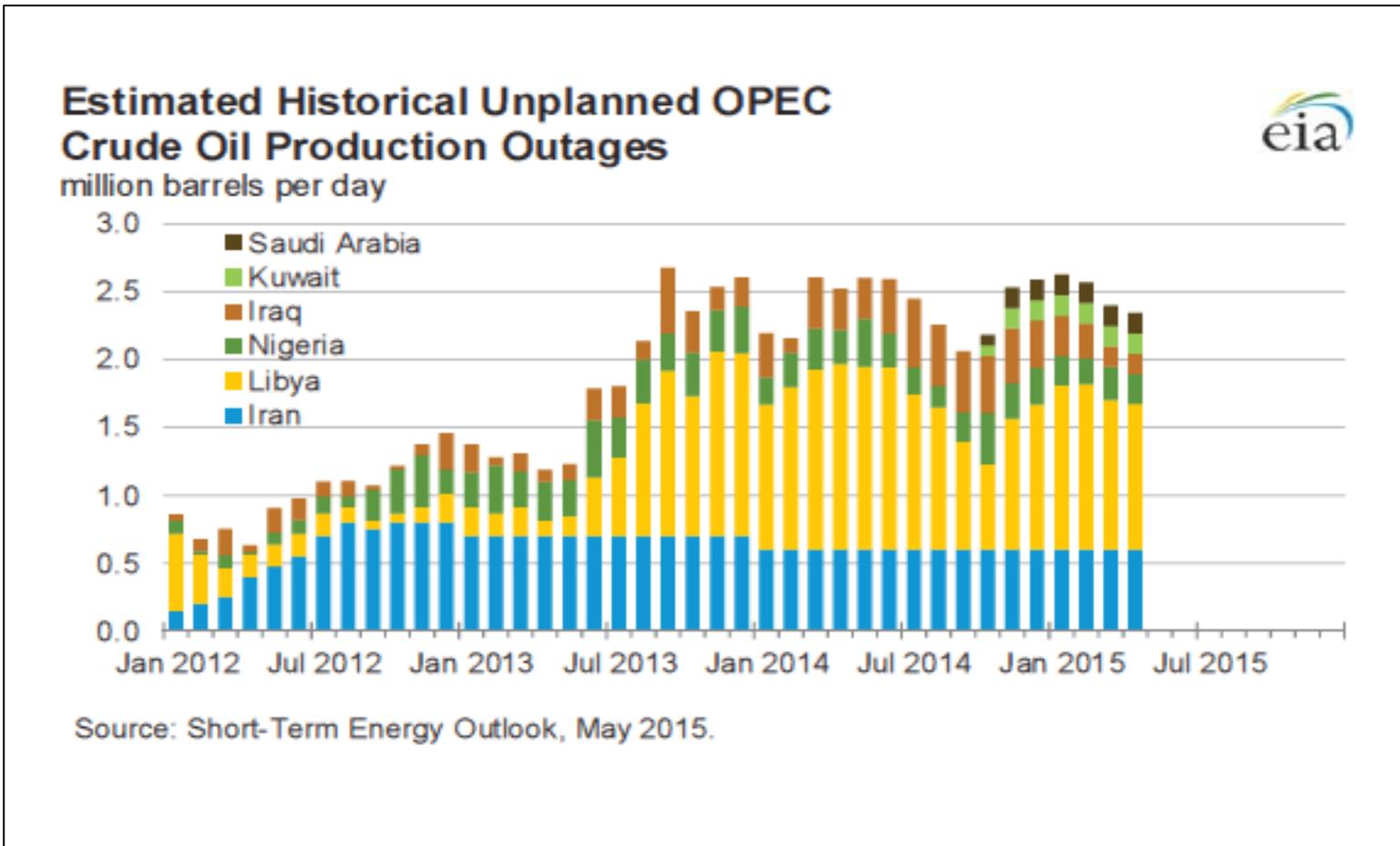
TOO PESSIMISTIC?

- Recent price increase led to a lot of producer hedging in '15/'16
- 30% lower production costs have lowered breakeven levels
- 4000 “fracklog”; completion costs should also come down
- Struggling producers finding money from private equity, relaxed debt covenants from banks as price rise seen as “inevitable”
- Takeaway capacity continuing to grow in most areas with long lead pipeline projects still to come

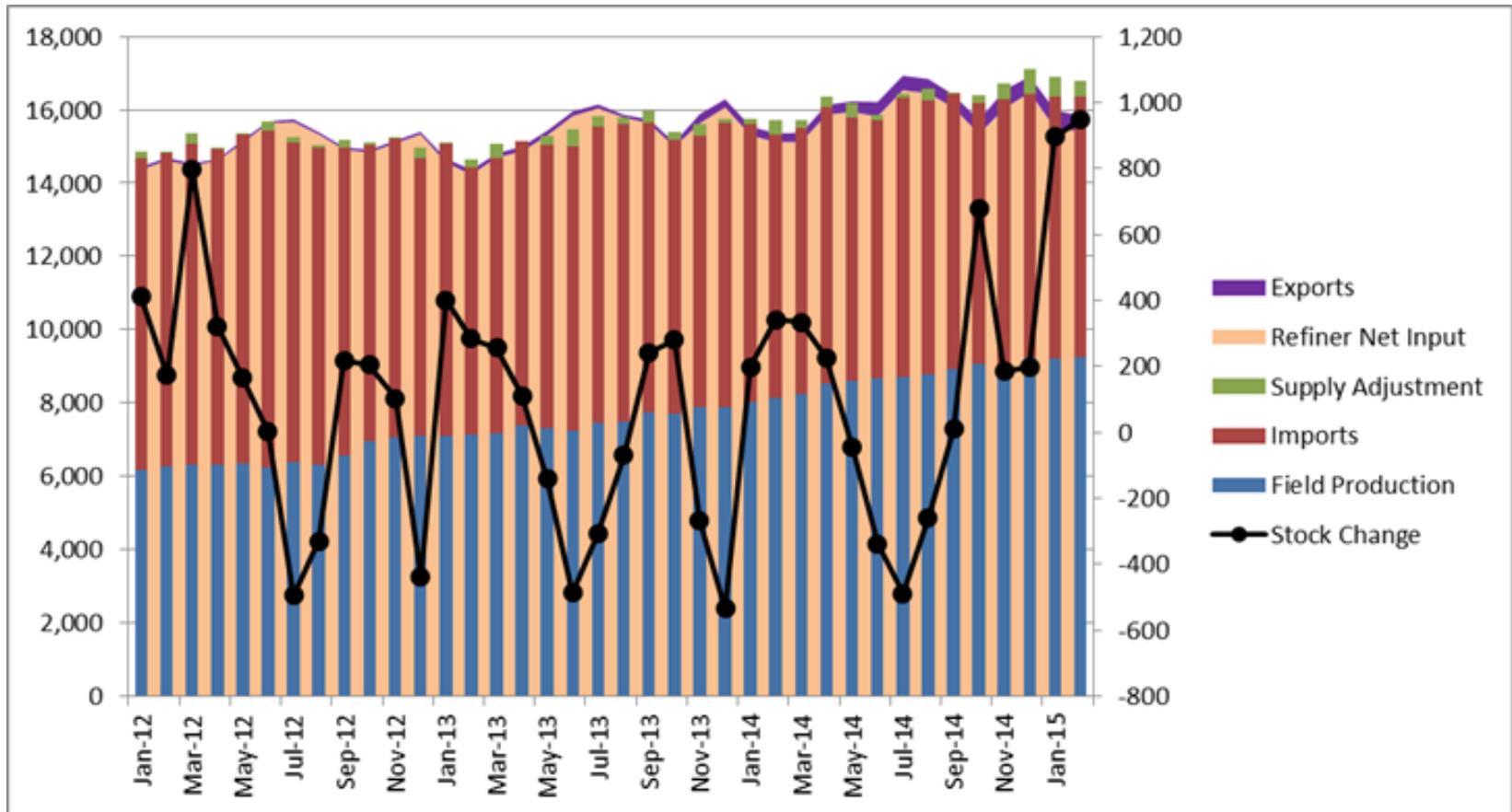
BOTH EIA AND IEA SHOW US PRODUCTION GROWTH FLATTENING



**MOST FORECASTS BUILDING IN UNPLANNED OUTAGES
CAN ALSO BE BEARISH IF PERFORMANCE BETTER THAN EXPECTED**



**SOURCES OF CRUDE FOR REFINERIES:
 PRODUCTION + IMPORTS – RUNS - EXPORTS = STOCK CHANGE**

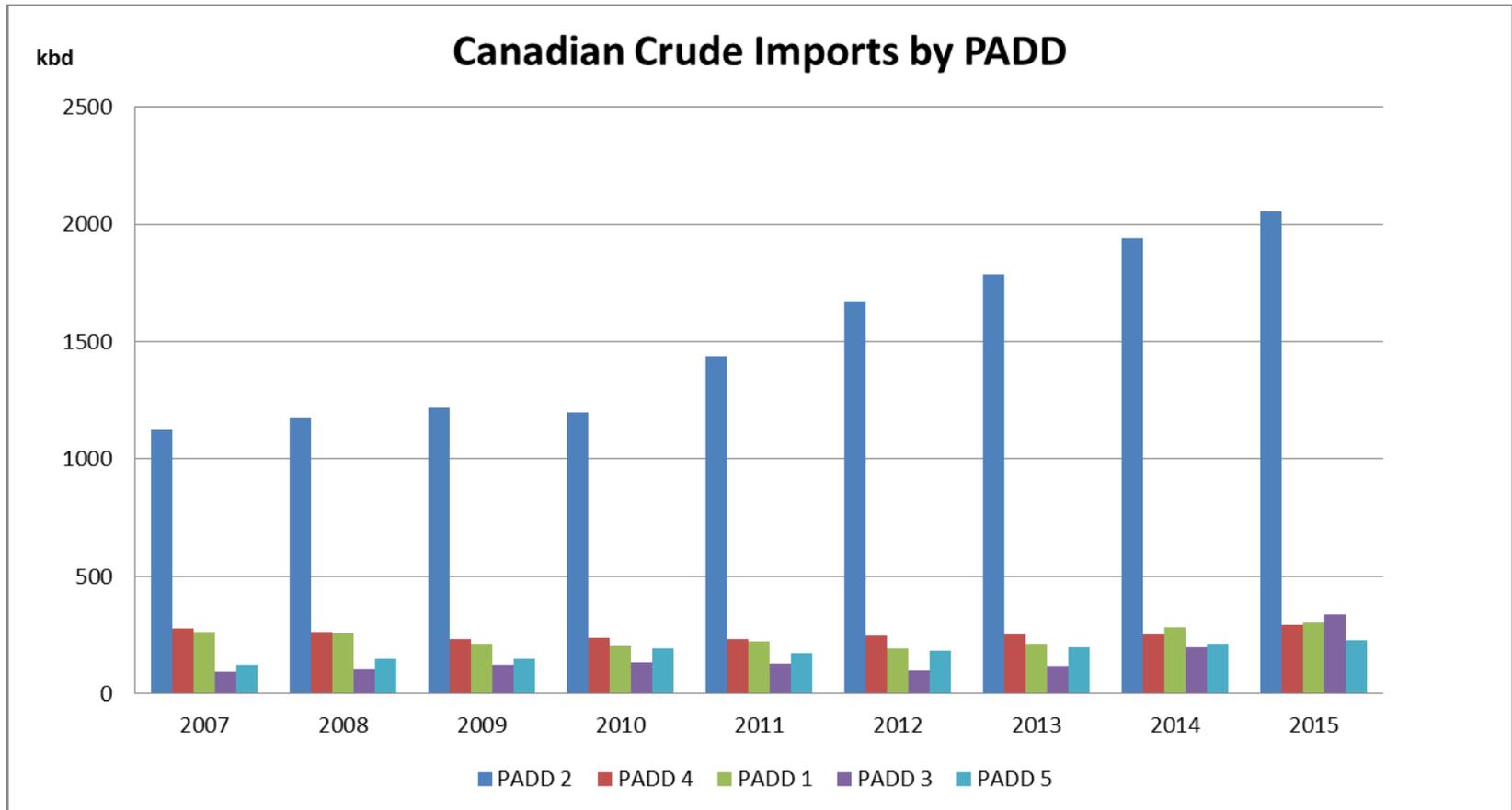


Rising production continued to force out imports, refineries running flat out

(Lag in reported import data; stock change already negative)

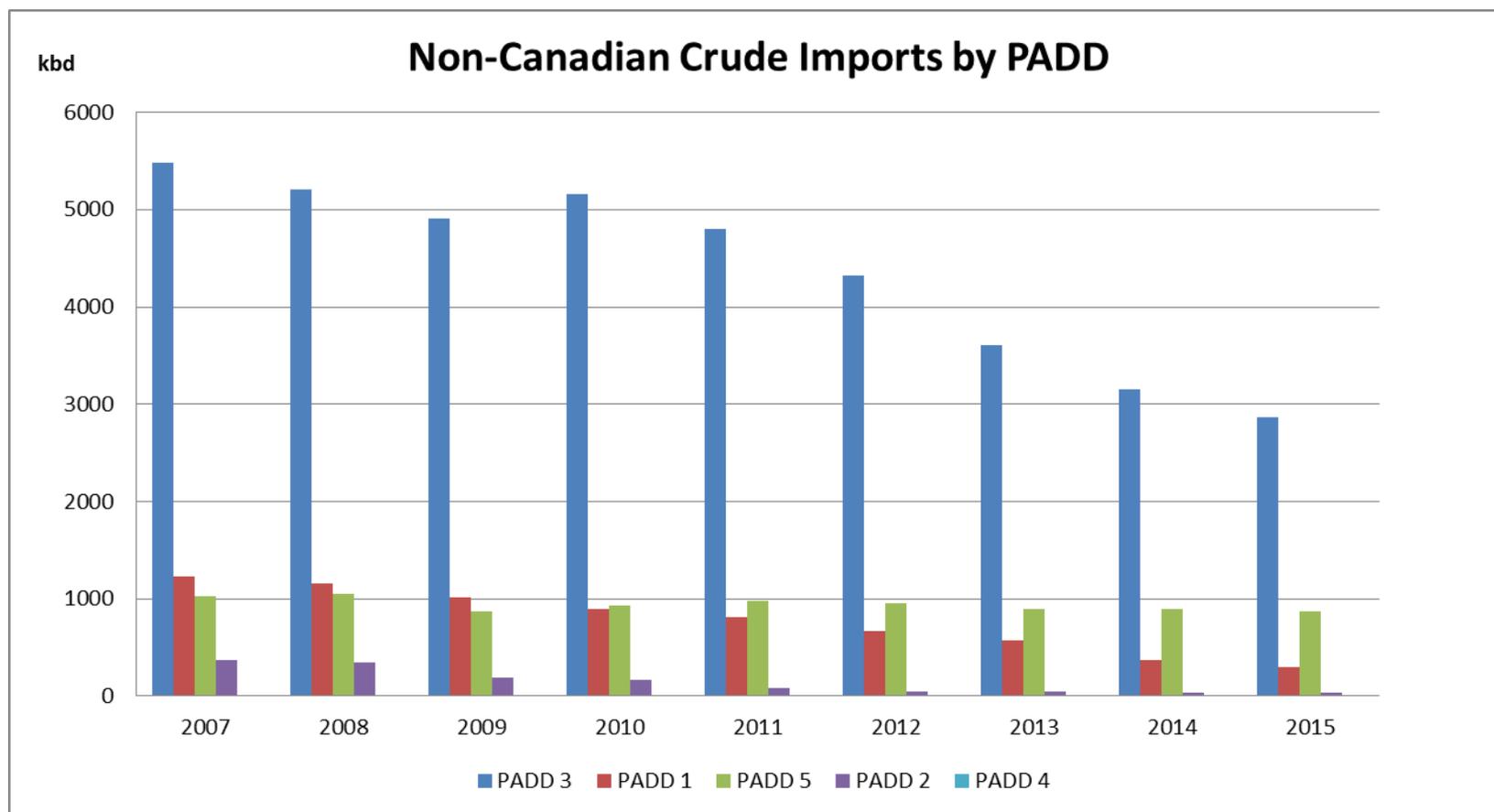
Your global energy partner

CANADA IS LARGEST EXPORTER TO US-ABOUT 3.2 Mil bpd in 2015

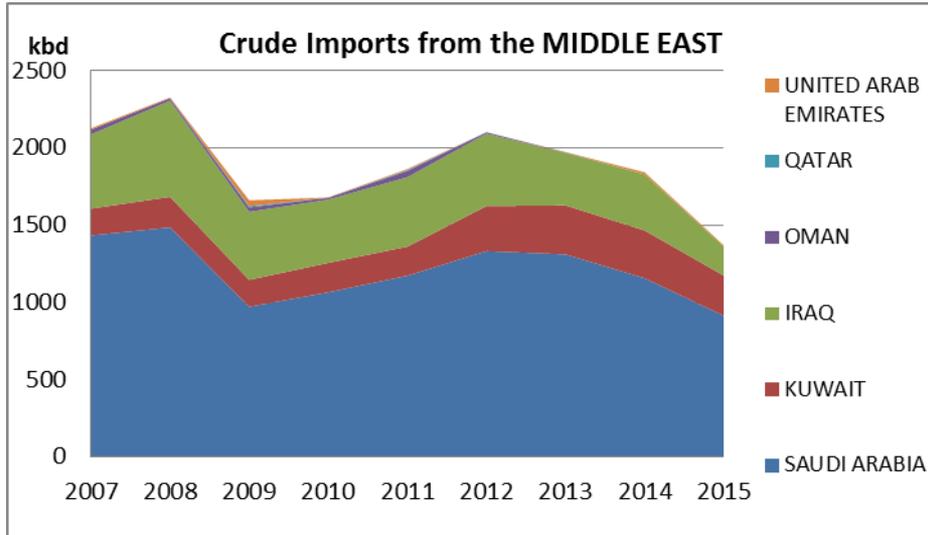


Incremental production goes to U.S. as Canada lacks attractive export options

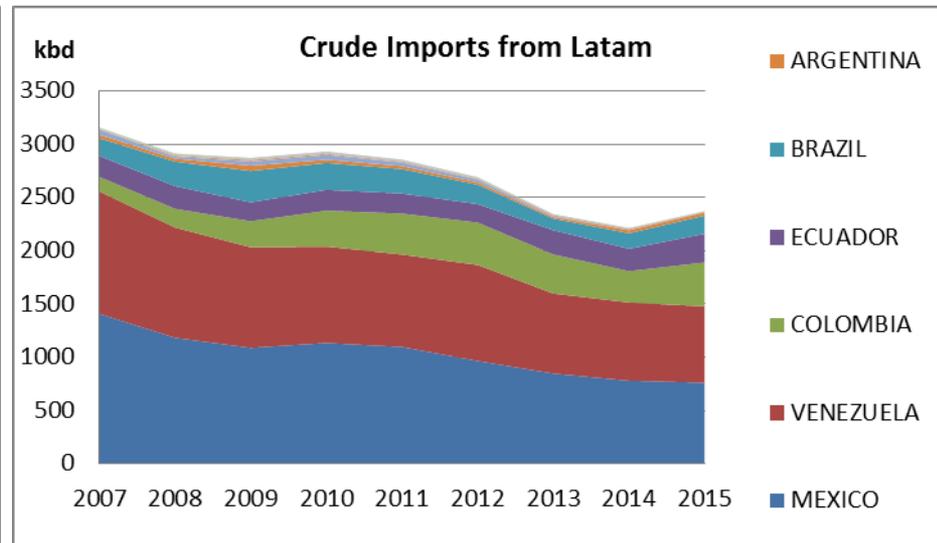
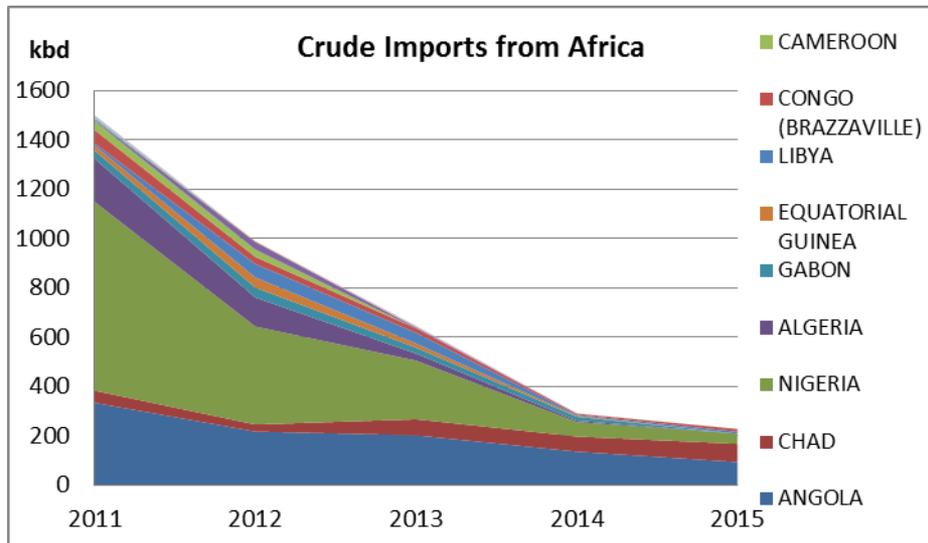
STEADILY DECREASING IMPORTS, ESPECIALLY IN PADD 3, FED BY HUGE GROWTH IN EAGLE FORD & PERMIAN, SOME GOM



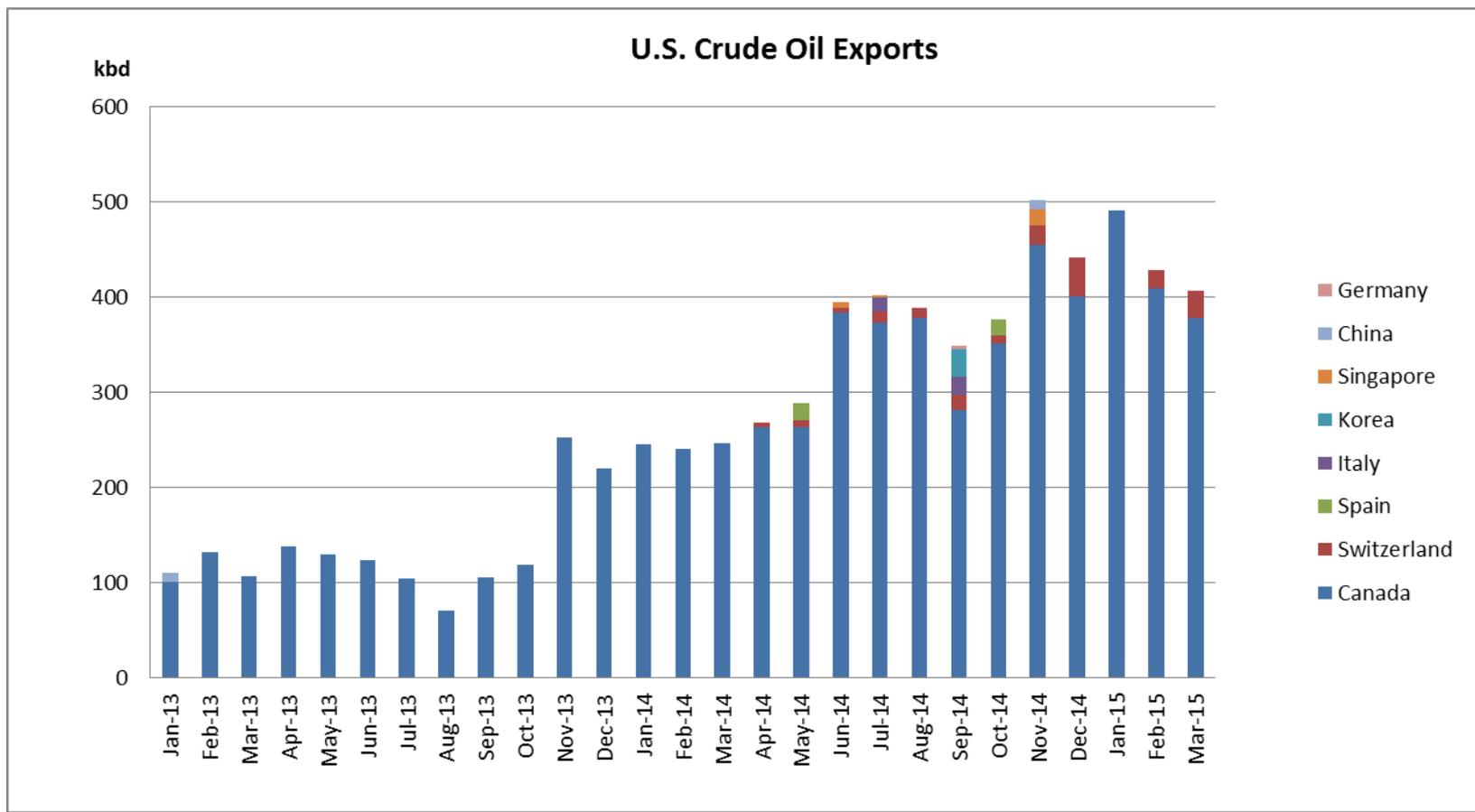
•PADD 5 benefits least, with difficulty permitting rail offloading.



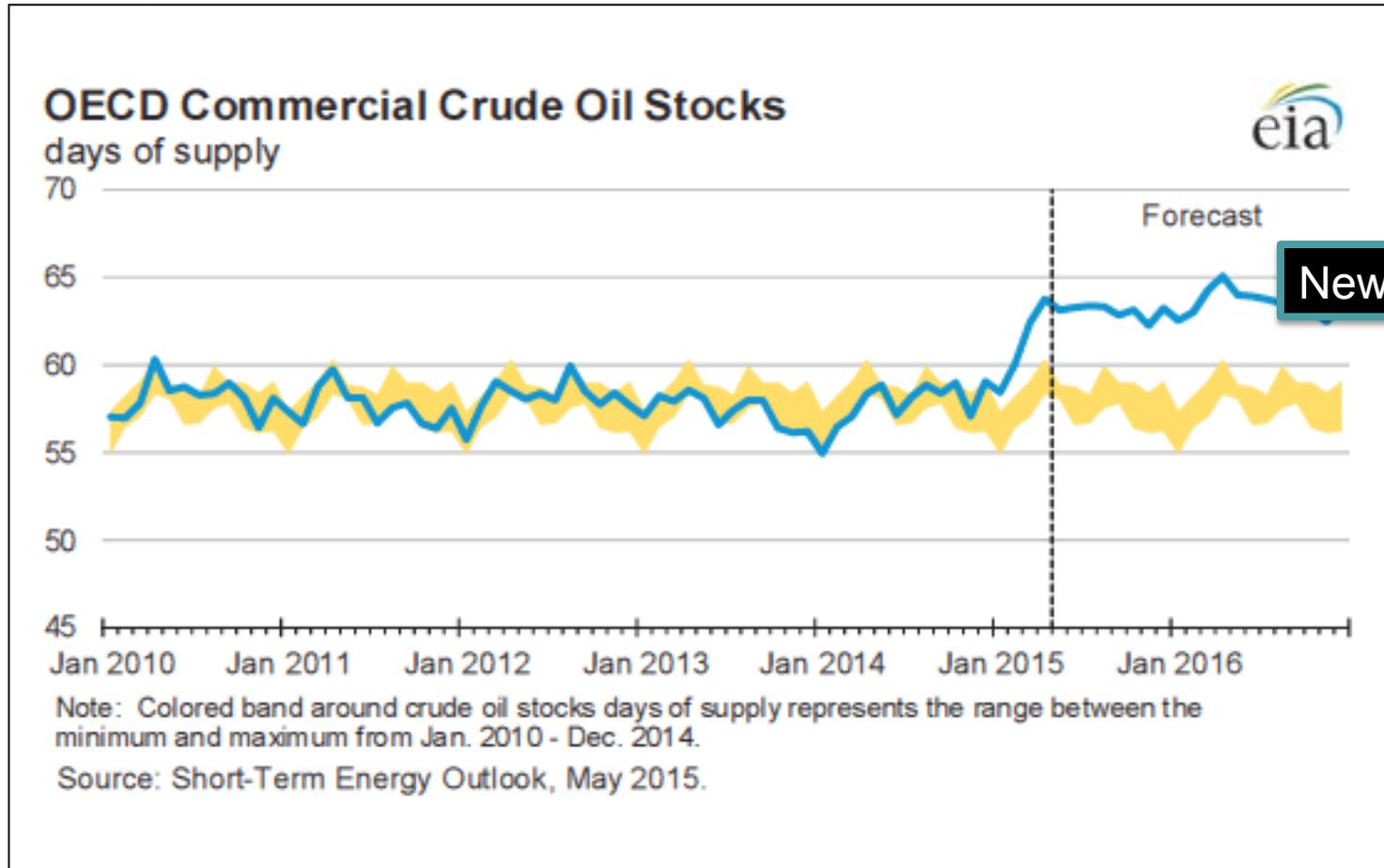
Term sour supplies have tended to be more “sticky” and viewed as strategic for sellers who maintain U.S. pricing formulas, while sweet crudes have been backed out to very low level.



EXPORTS TO CANADA HAVE PLAYED AN IMPORTANT ROLE IN BALANCING SUPPLIES; EXPORTS ELSEWHERE QUITE SMALL

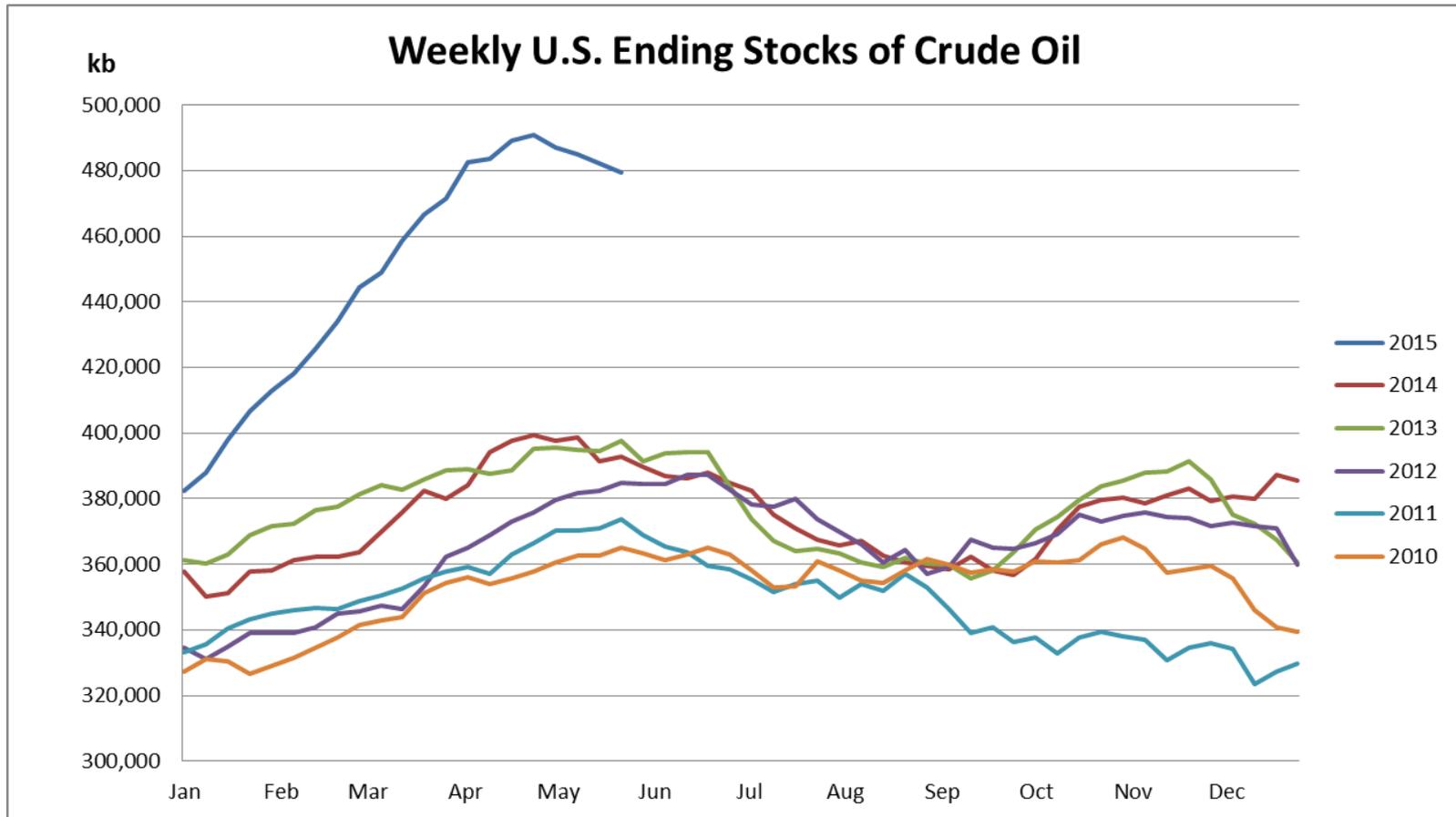


EIA EXPECTING RELATIVELY FLAT BUT HISTORICALLY HIGH STOCKS; COULD BRING LOWER PRICE RANGE & VOLATILITY



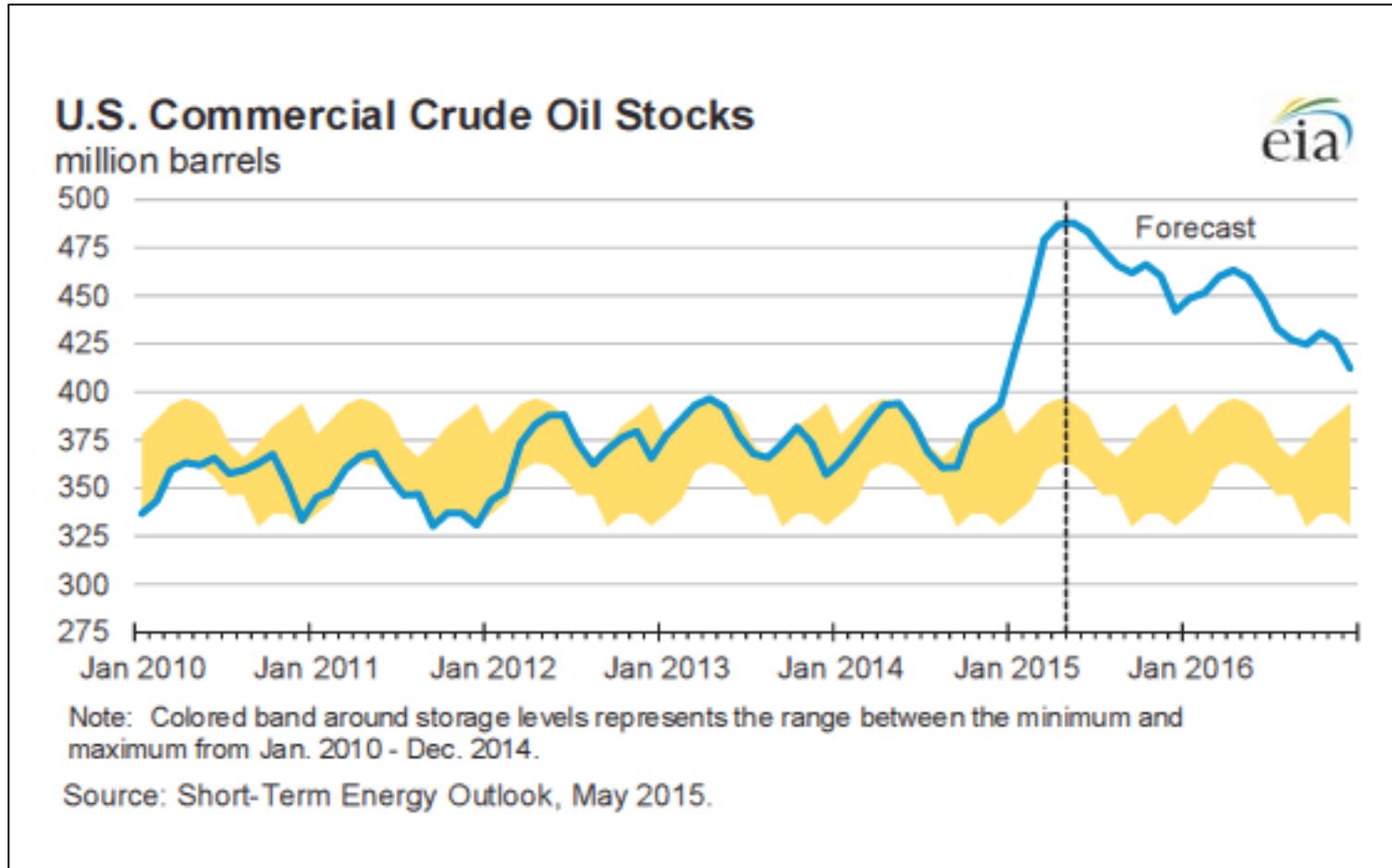
Implies lingering contango; interest rate will impact absolute level

HAVE US OIL STOCKS PEAKED ALREADY FOR 2015?

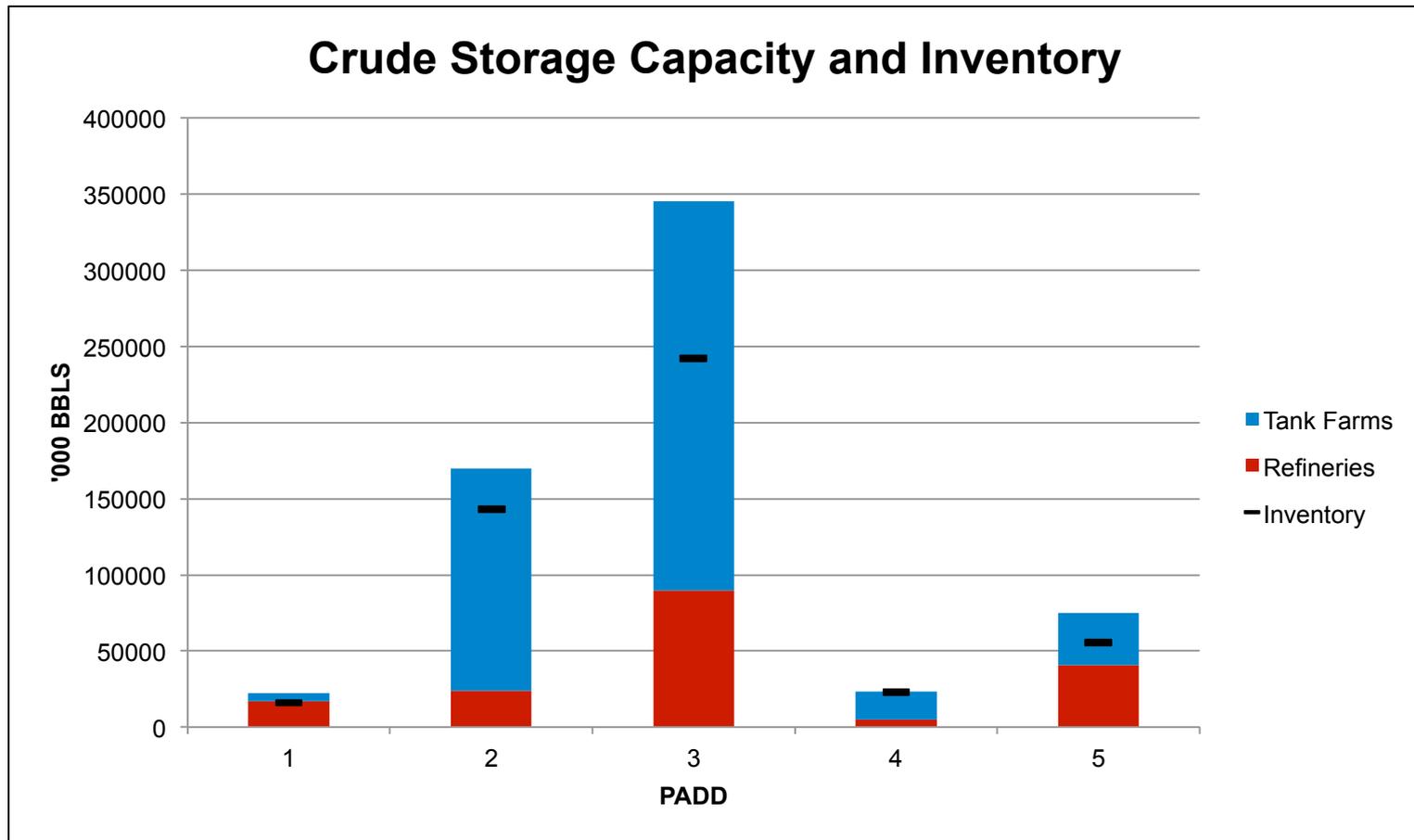


Date (through May 22)

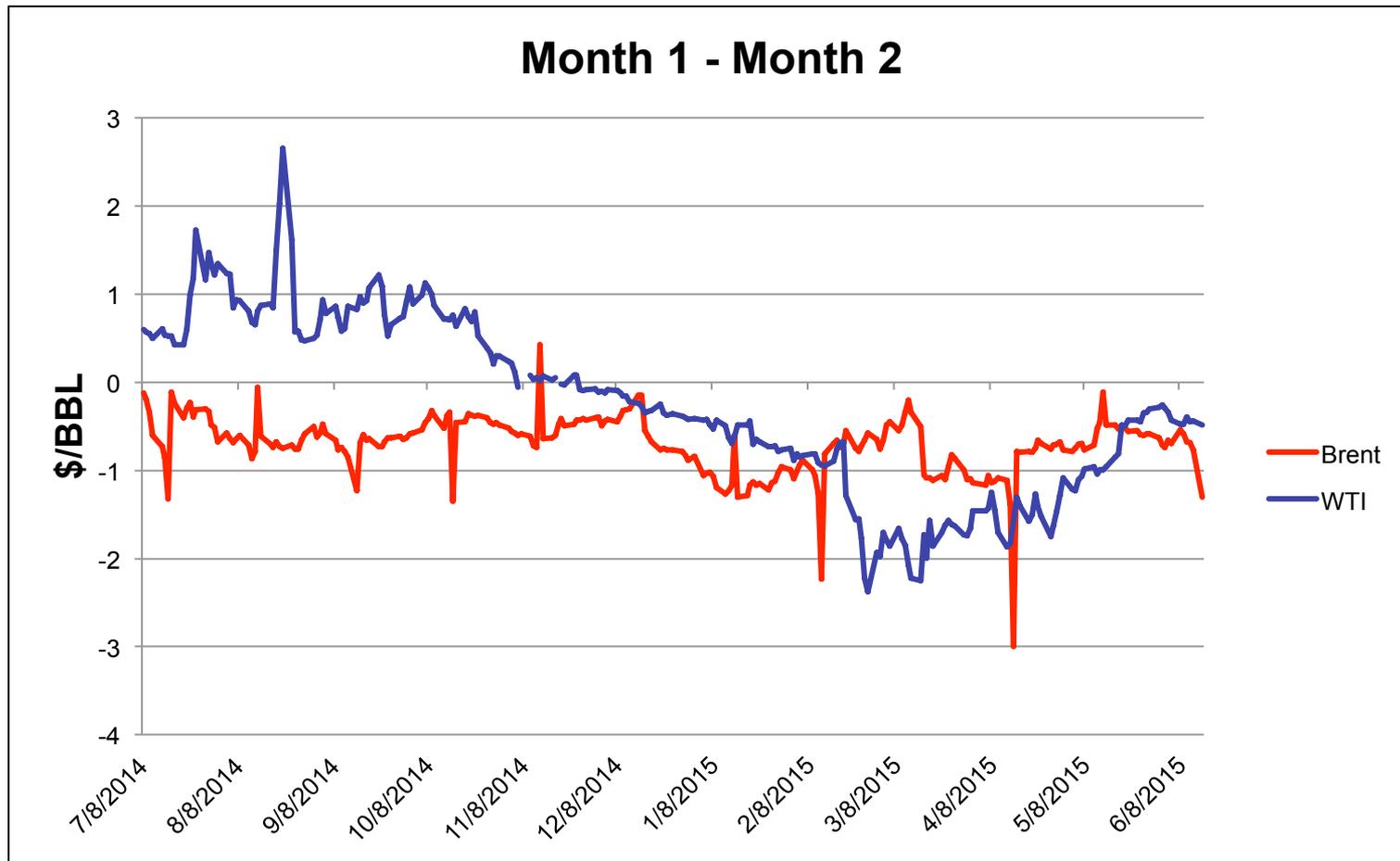
EIA SAYS “YES!”



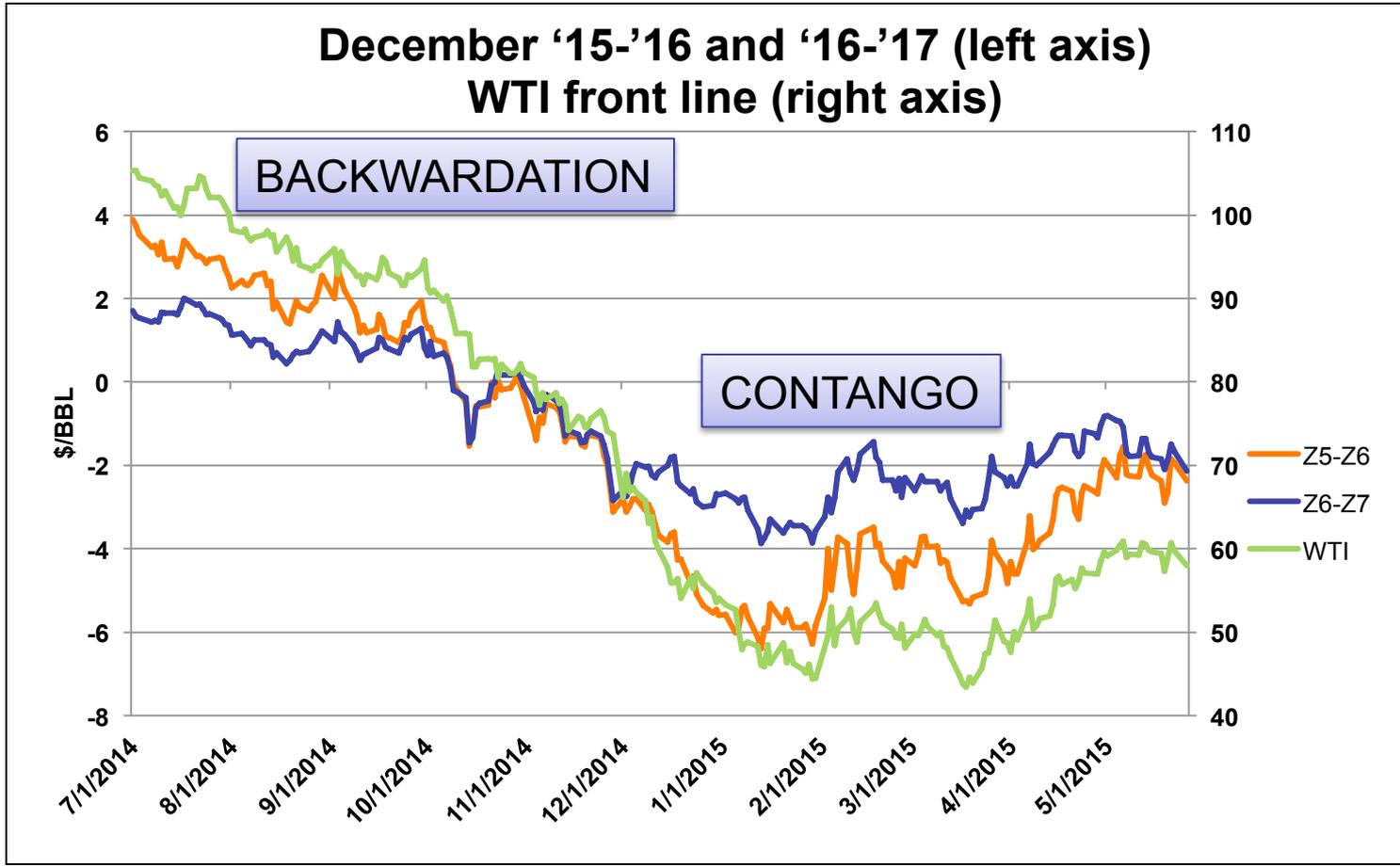
OIL STOCKS GROWING MOSTLY OUTSIDE US AND EUROPE IN 2Q AS TANKS WERE MOSTLY FULL ALREADY; CUSHING GOT VERY CLOSE TO CAPACITY; GULF COAST CAPACITY NUMBER IN QUESTION



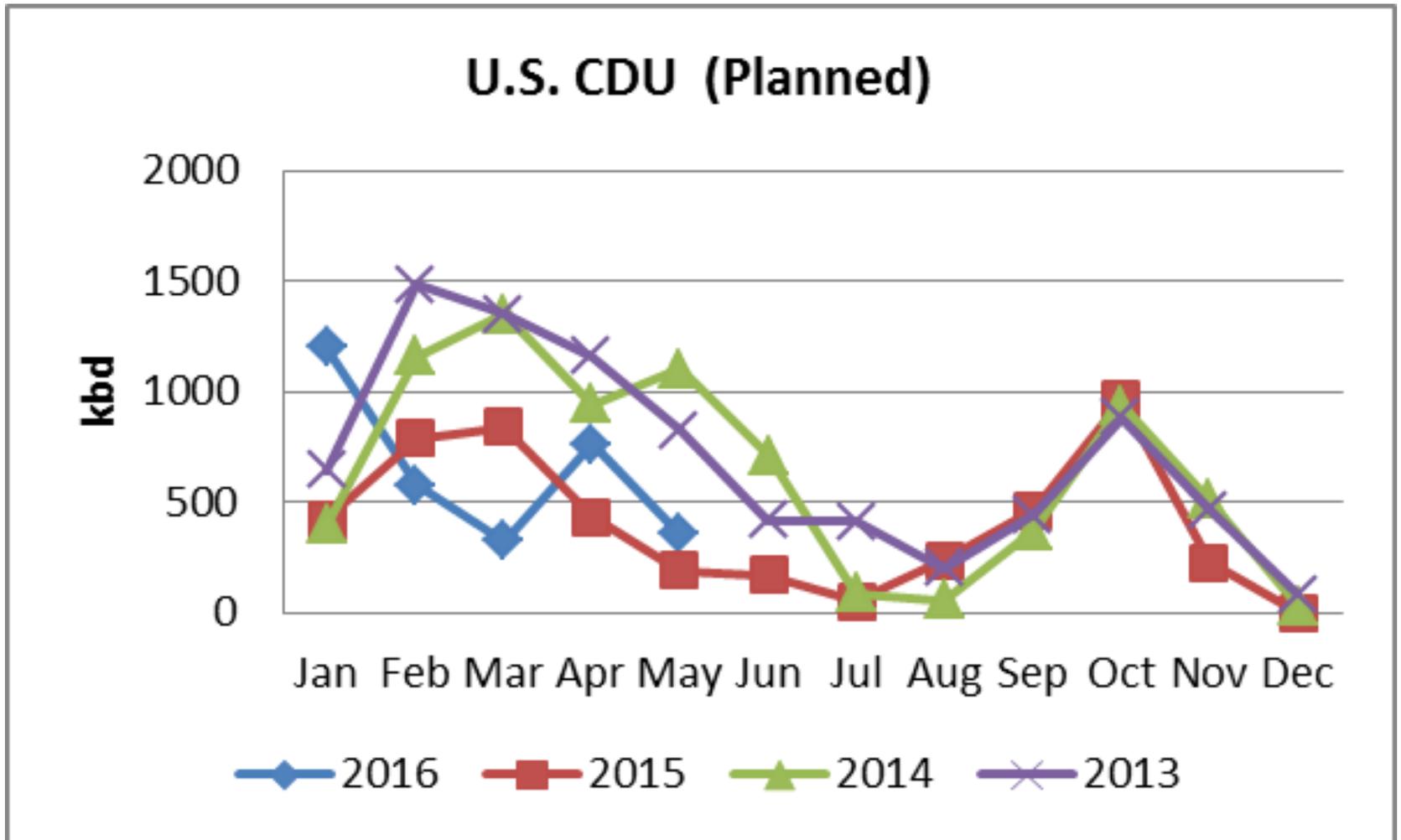
WTI SPREADS FELL AS INVENTORIES ROSE TO PAY MARKET TO STORE OIL; TODAY, SPREAD DOESN'T COVER TANK RENTAL & OTHER EXPENSES BUT DOES COVER INCREMENTAL FINANCING COSTS



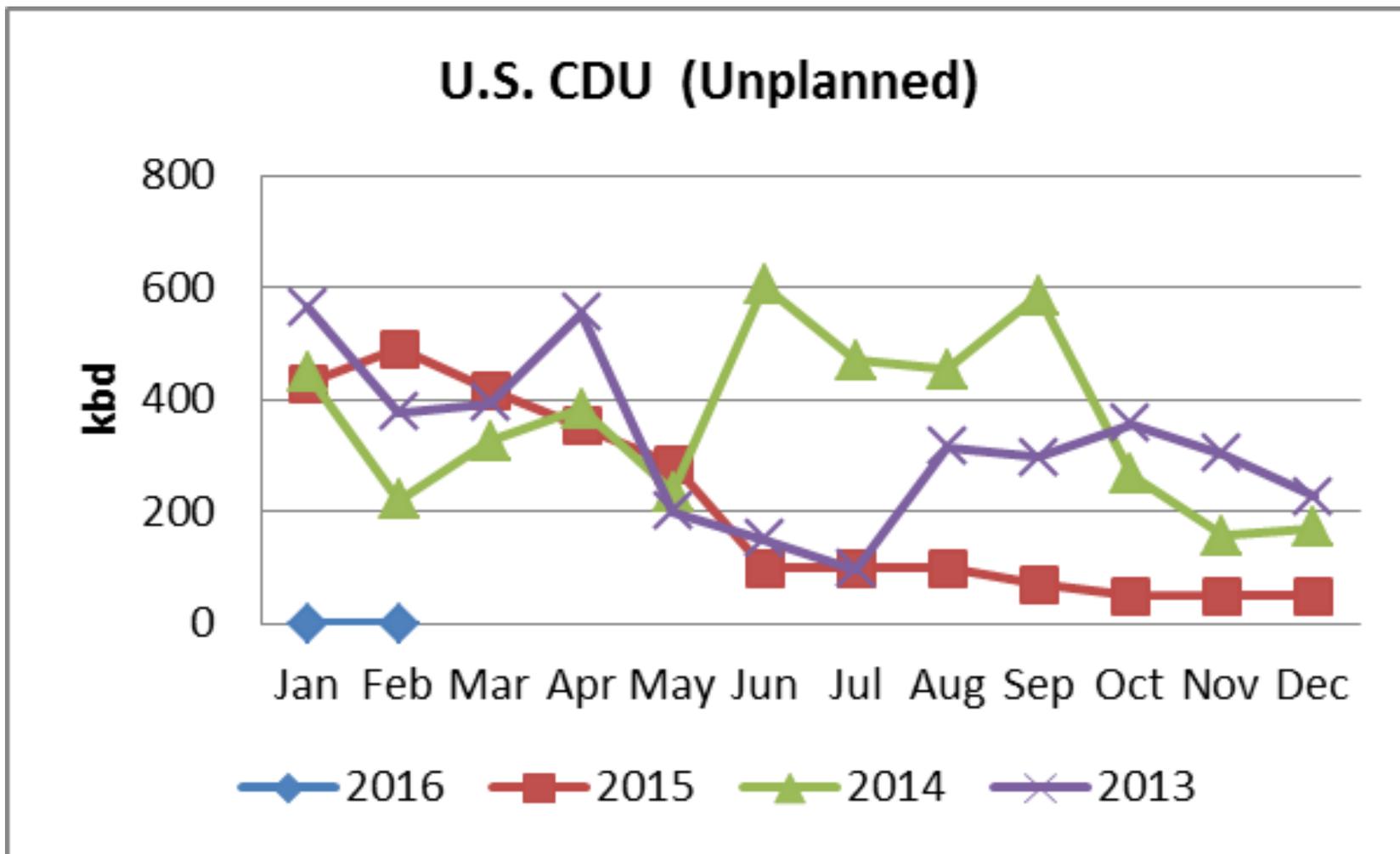
SPREADS AND OUTRIGHT PRICE IMPROVED WELL BEFORE INVENTORIES STOPPED BUILDING; HIGHER PRICE BROUGHT RENEWED PRODUCER HEDGING



FALL TURNAROUNDS COULD PRESSURE PRICE/SPREADS



...ESPECIALLY IF UNPLANNED OUTAGES ARE HIGH



ON SHORE STORAGE ECONOMICS

Monthly storage rate	\$0.60
Pumping fee	\$.08 /bbl
Crude Price, \$/bbl	\$60 /bbl
Interest rate	2.50%
Insurance cost	\$.02 /bbl
Monthly Interest cost, \$/bbl	\$.12 /bbl
TOTAL BASE COST	\$.898 /bbl
TOTAL BASE COST-3 months	\$.79 /bbl
(Amortizes pumping fees in and out)	



- Monthly storage rates affected by timing of contract (market spreads), connectivity of terminal, flexibility of tanks, term, and ancillary fees; pump fees in and out do not always apply; fees to water can vary greatly
- Monthly storage rates can vary between ~\$.20-\$1.20/month, Caribs typically more expensive than US, Canada higher still; reflects higher building costs

FLOATING STORAGE ECONOMICS

- Rates about \$40-\$50k/day in Singapore; \$65-\$70k for USG
- We think only about 10 ships storing oil in Singapore area; none in USG; total VLCC fleet in oil trade about 665 ships
- Iran has 12-15 storage ships
- ECA regs have very little impact; not much bunker burned while idle anyway
- On average, about 100 million barrels in-transit on ships; recently (mid May) as high as 175 million per Bloomberg

VLCC TC Rate	\$60,000
Auxiliary Engine Consumption Rate	10 tons/day
MGO Cost	\$575/mt
Vessel Capacity	2,000,000 bbl
Crude Price, \$/bbl	\$60 /bbl
Interest rate	2.50%
Monthly Vessel Storage Expense	\$1,972,500
Vessel Cost	\$.99 /bbl
Insurance cost	\$.02 /bbl
Monthly Interest cost, \$/bbl	\$.12 /bbl
TOTAL BASE COST	\$1.11 /bbl

\$/BBL Monthly Storage Rate - VLCC								
VLCC Time Charter Rate								
		\$40,000	\$45,000	\$50,000	\$55,000	\$60,000	\$65,000	\$70,000
MGO Cost	\$450	0.668	0.743	0.818	0.893	0.968	1.043	1.118
	\$500	0.675	0.750	0.825	0.900	0.975	1.050	1.125
	\$550	0.683	0.758	0.833	0.908	0.983	1.058	1.133
	\$600	0.690	0.765	0.840	0.915	0.990	1.065	1.140
	\$650	0.698	0.773	0.848	0.923	0.998	1.073	1.148
	\$700	0.705	0.780	0.855	0.930	1.005	1.080	1.155

FLOATING STORAGE ECONOMICS

Other factors to consider....

- **LOCATION OF VESSEL**
 - *Many companies have moratorium on floating storage in certain locations due to large potential liabilities*
 - *Consider likely disposition of oil; economics on previous page did not include any re-positioning costs*
- **DIFFERENTIAL TO BRENT**
 - *If storing crudes other than Brent, this creates exposure to the differential as well; may not be hedgeable*
- **OPTION TO RESPOND TO PROMPT NEEDS**
 - *Having oil close to a market can create opportunities if schedules change, ships slip and refiners need prompt oil*
- **FLOATING STORAGE RARELY WORKS AS LESS EXPENSIVE ONLINE STORAGE FILLS FIRST**
 - *Worked in 2008 after financial crisis and again in early 1Q*
 - *Weak July Brent opened window as well*

CONCLUSIONS*

- Current forward spreads indicate that market participants believe on-land US stocks will continue to draw modestly or at least remain at today's levels
- Prompt July/August WTI spread covers TVM but not all of the “sunk cost” tank rental
- July/Aug Brent expired at levels that support floating storage but spreads in Aug/Sept and Sept/Oct Brent or WTI are not wide enough for floating storage but encourage on land inventory builds for those with contractual storage commitments
- Brent spreads are weaker, may bleed over to WTI; WTI market likely to pull back in next 30-60 days as we approach fall turnarounds but flat price lows probably in for the year

*On June 15