SUBMISSION COVER SHEET							
IMPORTANT: Check box if Confidential Treatment is red	quested						
Registered Entity Identifier Code (optional): <u>14-467 (3 of 3)</u>							
Organization: New York Mercantile Exchange, Inc. ("NYMI							
Filing as a: SEF DCO	SDR						
Please note - only ONE choice allowed.	4 4 A T						
Filing Date (mm/dd/yy): 11/20/2014 Filing Description: Listing of Three (3) New Crude Oil Futures Contracts							
SPECIFY FILING TYPE							
Please note only ONE choice allowed per Submission.							
Organization Rules and Rule Amendments							
Certification	§ 40.6(a)						
Approval	§ 40.5(a)						
Notification	§ 40.6(d)						
Advance Notice of SIDCO Rule Change	§ 40.10(a)						
SIDCO Emergency Rule Change	§ 40.10(h)						
Rule Numbers:							
New Product Please note only ONE	product per Submission.						
Certification	§ 40.2(a)						
Certification Security Futures	§ 41.23(a)						
Certification Swap Class	§ 40.2(d)						
Approval	§ 40.3(a)						
Approval Security Futures	§ 41.23(b)						
Novel Derivative Product Notification	§ 40.12(a)						
Swap Submission	§ 39.5						
Official Product Name: <u>LLS (Argus) vs. Brent BALMO Futures, LLS (Argus) vs. Brent Financial Futures</u>	LS (Argus) vs. WTI BALMO						
<b>Product Terms and Conditions (product related Rules and </b>	Rule Amendments)						
Certification	§ 40.6(a)						
Certification Made Available to Trade Determination	§ 40.6(a)						
Certification Security Futures	§ 41.24(a)						
Delisting (No Open Interest)	§ 40.6(a)						
Approval	§ 40.5(a)						
Approval Made Available to Trade Determination	§ 40.5(a)						
Approval Security Futures	§ 41.24(c)						
Approval Amendments to enumerated agricultural products	§ 40.4(a), § 40.5(a)						
"Non-Material Agricultural Rule Change"	§ 40.4(b)(5)						
Notification	§ 40.6(d)						
Official Name(s) of Product(s) Affected:							
Rule Numbers:							



November 20, 2014

#### **VIA ELECTRONIC PORTAL**

Christopher J. Kirkpatrick Office of the Secretariat Commodity Futures Trading Commission Three Lafayette Centre 1155 21st Street, N.W. Washington, DC 20581

Re: CFTC Regulation 40.2(a) Certification. Notification Regarding the Initial

Listing of Three (3) New Crude Oil Futures Contracts.

NYMEX Submission No. 14-467 (3 of 3)

Dear Mr. Kirkpatrick:

New York Mercantile Exchange, Inc. ("NYMEX" or "Exchange") is notifying the Commodity Futures Trading Commission ("CFTC" or "Commission") that it is self-certifying the listing of three (3) new cash-settled crude oil futures contracts (the "Contracts") for trading on the NYMEX trading floor and CME Globex and for submission for clearing via CME ClearPort effective on Sunday, December 7, 2014 for trade date Monday, December 8, 2014.

Pursuant to Commission Regulation 40.6(a), NYMEX is separately self-certifying block trading on these Contracts with a minimum threshold of five (5) contracts in NYMEX/COMEX Submission No. 14-482.

The Contract specifications are as follows:

Product Code CPC/ Globex	Product Name	Rule Chapter	Listing Schedule All Venues	Contract Size	Minimum Price Fluctuation	First Listed Contract Month	Value per Tick
LBB/LBB	LLS (Argus) vs. Brent BALMO Futures	314	One month and the following month listed 10 business days prior to the start of the contract month.	1000 barrels	\$0.01	Jan-15	\$10
LWB/LWB	LLS (Argus) vs. WTI BALMO Futures	315	One month and the following month listed 10 business days prior to the start of the contract month.	1000 barrels	\$0.01	Jan-15	\$10
LLR/LLR	LLS (Argus) vs. Brent Financial Futures	317	30 consecutive months	1000 barrels	\$0.01	Jan-15	\$10

### **Trading and Clearing Hours:**

**CME Globex and CME ClearPort:** Sunday – Friday 6:00 p.m. – 5:15 p.m. (5:00 p.m. – 4:15 p.m. Chicago Time/CT) with a 45-minute break each day beginning at 5:15 p.m. (4:15 p.m. CT). **NYMEX Trading Floor:** Monday – Friday 9:00 a.m. – 2:30 p.m. (8:00 a.m. – 1:30 p.m. CT)

#### Fee Schedule:

Exchange Fees							
	Member	Cross Division	Non-Member	IIP			
Pit	\$0.85	\$1.10	\$1.35				
Globex	\$0.85	\$1.10	\$1.35	\$1.10			
ClearPort	\$0.85		\$1.35				
Agency Cross	\$0.85		\$1.35				

Other Processing Fees		
	Member	Non-Member
Cash Settlement	\$0.50	\$0.50

Additional Fees and Sur	charges
Facilitation Desk Fee	\$0.25

The Exchange is also notifying the CFTC that it is self-certifying the insertion of the terms and conditions for the new futures contract into the Position Limit, Position Accountability and Reportable Level Table and Header Notes located in the Interpretations and Special Notices Section of Chapter 5 of the NYMEX Rulebook in relation to the listing of the Contracts. These terms and conditions establish the all month/any one month accountability levels, expiration month position limit, reportable level, and aggregation allocation for the new contract.

NYMEX reviewed the designated contract market core principles ("Core Principles") as set forth in the Commodity Exchange Act ("CEA"). During the review, NYMEX staff identified that the new product may have some bearing on the following Core Principles:

- <u>Prevention of Market Disruption</u>: Trading in the Contracts will be subject to the NYMEX rules ("Rulebook") Chapters 4 and 7 which include prohibitions on manipulation, price distortion and disruptions of the delivery or cash-settlement process. As with all products listed for trading on one of CME Group's designated contract markets, activity in the new products will be subject to extensive monitoring and surveillance by CME Group's Market Regulation Department.
- Contracts not Readily Subject to Manipulation: The Contracts are not readily subject to manipulation due to the deep liquidity and robustness of the underlying cash market, which provides diverse participation and sufficient transactions to support the final settlement.
- Compliance with Rules: Trading in the Contracts will be subject to the rules in Rulebook Chapter 4 which includes prohibitions against fraudulent, noncompetitive, unfair and abusive practices. Additionally, trading in these contracts will also be subject to the full panoply of trade practice rules, the majority of which are contained in Chapter 5 and Chapter 8 of the Rulebook. As with all products listed for trading on one of CME Group's designated contract markets, activity in the new products will be subject to extensive monitoring and surveillance by CME Group's Market Regulation Department.

The Market Regulation Department has the authority to exercise its investigatory and enforcement power where potential rule violations are identified.

- <u>Position Limitations or Accountability</u>: The spot month position limits for the new products are set at a conservative level that is less than 25% of the monthly deliverable supply in the cash market in accordance with the guidelines included in CFTC Part 151.
- <u>Availability of General Information</u>: The Exchange will publish information on the Contracts' specifications on its website, together with daily trading volume, open interest and price information.
- <u>Daily Publication of Trading Information</u>: Trading volume, open interest and price information will be published daily on the Exchange's website and via quote vendors.
- <u>Financial Integrity of Contracts</u>: All contracts traded on the Exchange will be cleared by the Clearing House of the Chicago Mercantile Exchange Inc. which is a registered derivatives clearing organization with the Commission and is subject to all Commission regulations related thereto.
- Execution of Transactions: The Contracts are listed for trading on CME Globex and for submission for clearing through CME ClearPort. The CME ClearPort platform provides a competitive, open and efficient mechanism for novating transactions that are competitively executed by brokers. The CME Globex electronic trading platform provides for a competitive and open execution of transactions due to its advanced functionality, high reliability and global connectivity. It runs continuously, so it is not restricted by borders or time zones. CME Globex remains among the fastest global electronic trading systems.
- <u>Trade Information</u>: All required trade information is included in the audit trail and is sufficient for the Market Regulation Department to monitor for market abuse.
- <u>Protection of Market Participants</u>: Rulebook Chapters 4 and 5 contain multiple prohibitions precluding intermediaries from disadvantaging their customers. These rules apply to trading on all of the Exchange's competitive trading venues and will be applicable to transactions in this product.
- <u>Disciplinary Procedures</u>: Chapter 4 of the Rulebook contains provisions that allow the Exchange to discipline, suspend or expel members or market participants that violate the Rulebook. Trading in the new contracts will be subject to Chapter 4, and the Market Regulation Department has the authority to exercise its enforcement power in the event rule violations in this product are identified.
- <u>Dispute Resolution</u>: Disputes with respect to trading in the new contracts will be subject to the arbitration provisions set forth in Chapter 6 of the Rulebook. Chapter 6 allows all nonmembers to submit a claim for financial losses resulting from transactions on the Exchange to arbitration. A member named as a respondent in a claim submitted by a nonmember is required to participate in the arbitration pursuant to Chapter 6. Additionally, the Exchange requires that members resolve all disputes concerning transactions on the Exchange via arbitration.

The Exchange certifies that this submission has been concurrently posted on the Exchange's website at <a href="http://www.cmegroup.com/market-regulation/rule-fillings.html">http://www.cmegroup.com/market-regulation/rule-fillings.html</a>.

Should you have any questions concerning the above, please contact the undersigned at (212) 299-2200 or <a href="mailto:Christopher.Bowen@cmegroup.com">Christopher.Bowen@cmegroup.com</a>.

Sincerely,

/s/ Christopher Bowen Managing Director and Chief Regulatory Counsel

Attachments: Appendix A: Rule Chapters

Appendix B: Position Limit, Position Accountability, and Reportable Level Table in

Chapter 5 of the NYMEX Rulebook (attached under separate cover)

Appendix C: Rule 588.H - Non-reviewable Range Table

Appendix D: Cash Market Overview and Analysis of Deliverable Supply

## Appendix A

# Chapter 314 LLS (Argus) vs. Brent BALMO Futures

#### 314100. SCOPE OF CHAPTER

The provisions of these rules shall apply to all futures contracts bought or sold on the Exchange for cash settlement based on the Floating Price. The procedures for trading, clearing and cash settlement of this contract, and any other matters not specifically covered herein shall be governed by the general rules of the Exchange.

#### 314101. CONTRACT SPECIFICATIONS

- (A) The Floating Price for each contract month is the balance-of-month arithmetic average of the LLS (1st month) weighted average price from Argus Media minus the Brent Crude Oil (ICE) Futures first nearby contract settlement price from the selected start date through the end of the contract month, inclusive, except as set forth in Section (B) below.
- (B) The settlement price of the first nearby contract month will be used except on the last day of trading for the expiring Brent Crude Oil Futures contract when the settlement price of the second nearby contract will be used.

The Floating Price is calculated using the non-common pricing convention. In calculating the spread differential, the monthly average for each component leg of the spread shall be calculated by using all trading days in the month for each component leg of the spread, followed by the calculation of the spread differential between the two averages.

#### 314102. TRADING SPECIFICATIONS

The number of months open for trading at a given time shall be determined by the Exchange.

#### 314102.A. Trading Schedule

The hours of trading for this contract shall be determined by the Exchange.

#### 314102.B. Trading Unit

The contract size shall be 1000 U.S. barrels. Each contract shall be valued as the contract quantity (1000) multiplied by the settlement price.

#### 314102.C. Price Increments

Prices shall be quoted in U.S. dollars and cents per barrel. The minimum price fluctuation shall be \$0.01 per barrel.

#### 314102.D. Position Limits and Accountability

The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.

A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.

Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

#### 314102.E. Termination of Trading

Trading shall cease on the last business day of the contract month.

#### 314103. FINAL SETTLEMENT

Final settlement under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each month.

#### 314104. DISCLAIMER

NEITHER THE NEW YORK MERCANTILE EXCHANGE, INC. NOR ARGUS GUARANTEES THE ACCURACY AND/OR COMPLETENESS OF THE INDEX OR ANY OF THE DATA INCLUDED THEREIN. NYMEX AND ARGUS MAKE NO WARRANTIES, EXPRESS OR IMPLIED, AS TO THE RESULTS TO BE OBTAINED BY ANY PERSON OR ENTITY FROM USE OF THE INDEX, TRADING BASED ON THE INDEX, OR ANY DATA INCLUDED THEREIN IN CONNECTION WITH THE TRADING OF THE CONTRACTS, OR, FOR ANY OTHER USE. NYMEX AND ARGUS MAKE NO WARRANTIES, EXPRESS OR IMPLIED, AND HEREBY DISCLAIMS ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE WITH RESPECT TO THE INDEX OR ANY DATA INCLUDED THEREIN. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL NYMEX OR ARGUS HAVE ANY LIABILITY FOR ANY LOST PROFITS OR INDIRECT, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES (INCLUDING LOST PROFITS), EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES.

# Chapter 315 LLS (Argus) vs. WTI BALMO Futures

#### 315100. SCOPE OF CHAPTER

The provisions of these rules shall apply to all futures contracts bought or sold on the Exchange for cash settlement based on the Floating Price. The procedures for trading, clearing and cash settlement of this contract, and any other matters not specifically covered herein shall be governed by the general rules of the Exchange.

#### 315101. CONTRACT SPECIFICATIONS

The Floating Price for each contract month is the balance-of-month arithmetic average of the LLS (1st month) differential weighted average (Diff wtd avg) price from Argus Media, which is based on the weighted average floating price of LLS minus the "WTI Formula Basis" price from Argus Media, from the selected start date through the end of the contract month, inclusive.

#### 315102. TRADING SPECIFICATIONS

The number of months open for trading at a given time shall be determined by the Exchange.

#### 315102.A. Trading Schedule

The hours of trading for this contract shall be determined by the Exchange.

#### 315102.B. Trading Unit

The contract size shall be 1000 U.S. barrels. Each contract shall be valued as the contract quantity (1000) multiplied by the settlement price.

#### 315102.C. Price Increments

Prices shall be quoted in U.S. dollars and cents per barrel. The minimum price fluctuation shall be \$0.01 per barrel.

#### 315102.D. Position Limits and Accountability

The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.

A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.

Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

#### 315102.E. Termination of Trading

Trading shall cease on the last business day of the contract month.

#### 315103. FINAL SETTLEMENT

Final settlement under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each month.

#### 315104. DISCLAIMER

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## Chapter 317

#### LLS (Argus) vs. Brent Financial Futures

#### 317100. SCOPE OF CHAPTER

The provisions of these rules shall apply to all futures contracts bought or sold on the Exchange for cash settlement based on the Floating Price. The procedures for trading, clearing and cash settlement of this contract, and any other matters not specifically covered herein shall be governed by the general rules of the Exchange.

#### 317101. CONTRACT SPECIFICATIONS

- (A) The Floating Price for each contract month is the arithmetic average of the LLS (1st month) weighted average price from Argus Media minus the Brent Crude Oil (ICE) Futures first nearby contract settlement price for each business day that it is determined during the contract month (using non-common pricing), except as set forth in Section (B) below.
- (B) The settlement price of the first nearby contract month will be used except on the last day of trading for the expiring Brent Crude Oil Futures contract when the settlement price of the second nearby contract will be used.

The Floating Price is calculated using the non-common pricing convention. In calculating the spread differential, the monthly average for each component leg of the spread shall be calculated by using all trading days in the month for each component leg of the spread, followed by the calculation of the spread differential between the two averages.

#### 317102. TRADING SPECIFICATIONS

The number of months open for trading at a given time shall be determined by the Exchange.

#### 317102.A. Trading Schedule

The hours of trading for this contract shall be determined by the Exchange.

#### 317102.B. Trading Unit

The contract size shall be 1000 U.S. barrels. Each contract shall be valued as the contract quantity (1000) multiplied by the settlement price.

#### 317102.C. Price Increments

Prices shall be quoted in U.S. dollars and cents per barrel. The minimum price fluctuation shall be \$0.01 per barrel.

#### 317102.D. Position Limits and Accountability

The applicable position limits and/or accountability levels, in addition to the reportable levels, are set forth in the Position Limit, Position Accountability and Reportable Level Table in the Interpretations & Special Notices Section of Chapter 5.

A Person seeking an exemption from position limits for bona fide commercial purposes shall apply to the Market Regulation Department on forms provided by the Exchange, and the Market Regulation Department may grant qualified exemptions in its sole discretion.

Refer to Rule 559 for requirements concerning the aggregation of positions and allowable exemptions from the specified position limits.

#### 317102.E. Termination of Trading

Trading shall cease on the last business day of the contract month.

#### 317103. FINAL SETTLEMENT

Final settlement under the contract shall be by cash settlement. Final settlement, following termination of trading for a contract month, will be based on the Floating Price. The final settlement price will be the Floating Price calculated for each month.

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## **Appendix B**

## **NYMEX Rulebook Chapter 5 Position Limit Table**

(Attached under separate cover)

## Appendix C

## NYMEX Rule 588.H Globex Non-reviewable Range Table

Instrument	Non-Reviewable Range (NRR) in Globex format	NRR including Unit of Measure	NRR Ticks
LLS (Argus) vs. Brent BALMO Futures	100	\$1.00 per barrel	100
LLS (Argus) vs. WTI BALMO Futures	100	\$1.00 per barrel	100
LLS (Argus) vs. Brent Financial Futures	100	\$1.00 per barrel	100

## Appendix D

#### CASH MARKET ANALYSIS

The New York Mercantile Exchange, Inc. (NYMEX or Exchange) is self-certifying the listing of three financially-settled Louisiana Light Sweet (LLS) Oil Index Futures contracts: LLS (Argus) vs. WTI BALMO Futures, LLS (Argus) vs. Brent Financial Futures, and LLS (Argus) vs. Brent BALMO Futures

#### **LLS Market Overview**

The LLS market is robust and has an actively traded and transparent spot market. Trade activity on LLS has risen sharply as global crude market participants seek to hedge their physical exposure in the US Gulf Coast. In addition to a flat price, LLS trades as a differential to WTI and Brent crude, both backed by a deep financial market with a robust regulatory structure.

The physical market has a diverse array of buyers and sellers, normally around 40 companies on each side in any given month. The futures market for LLS is also quite active. The NYMEX LLS (Argus) vs. WTI Financial Futures contract (Rule Chapter 840<sup>1</sup>, Code WJ) had an open interest over 40,000 contracts as of November 18, 2014.

#### LLS Price Index

Argus Media is the Price Reporting Agency for the LLS spot market. The Argus index for LLS is based on a volume-weighted average (VWA) of deals done across the trading day. Argus validates physical transactions throughout the trading day. Argus asks for details of counterparties from contacts in order to confirm deals and to avoid double-counting in volume-weighted averages. Argus is completely transparent, publishing the price and volume of every deal that is used in the final index price. Argus crude prices for the Americas are published in the Argus Americas Crude report. Argus publishes the low and the high of deals done throughout the entire trading day. In order to qualify to set the low or high of the day, deals must meet the minimum volumes as specified in methodology.

Argus editors and managers are readily available to discuss their methodology, which can be publicly accessed at:

http://www.argusmedia.com/Petroleum/Crude/~/media/Files/PDFs/Meth/argus\_americas\_crude.ashx

#### **LLS Production**

Crude oil is categorized by reference to its density/API gravity and sulfur content. The quality of crude oil and other feedstocks dictates the level of processing and conversion necessary to achieve what a refiner sees as an optimal mix of products. Light, sweet crude is more expensive than heavier, sourer crude because it requires less processing and produces a slate of products with a greater percentage of value-added products, such as gasoline, diesel, and aviation fuel. Louisiana Light Sweet oil has a 38.7 API and 0.39% sulfur<sup>2</sup> and is considered a light sweet crude oil.

US oil production has grown rapidly in recent years. Recent growth has consisted primarily of lighter, sweet crude from tight resource formations. Roughly 96% of the 1.8 million b/d growth in production between 2011 and 2013 consisted of sweet grades. Additional production of light oil over the past several years has for the most part been absorbed by reducing oil imports of similar grades. Of the total 1.5-million-bbl/d decline in crude oil imports between 2011 and 2013, nearly 50% was light crude (API gravity 35+)<sup>3</sup>.

<sup>3</sup> http://www.eia.gov/analysis/petroleum/crudetypes/pdf/crudetypes.pdf

<sup>1</sup> http://www.cmegroup.com/rulebook/NYMEX/8/840.pdf

<sup>&</sup>lt;sup>2</sup> http://www.caplinepipeline.com/Reports1.aspx

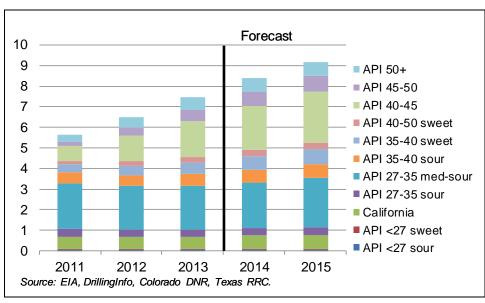
LLS is a blended grade that can be created by mixing crudes. Once field production enters transportation and distribution systems, it is commingled with other crude types (e.g., in rail cars or pipelines) or otherwise blended to capture economic opportunities before being delivered to the refinery. A rich variety of domestic crudes can be blended to make LLS quality oil. A simple example would be to blend relatively lower-value API<27 with API 50+ oil if the price of selling API 35-40 oil exceeded the cost of buying and blending the inputs.

Most LLS streams are produced domestically in the Gulf Coast (Texas), the Midcontinent and Northern Great Plains (North Dakota). Approximately 15% of the West Texas crude Eagle Ford is LLS-quality. Eagle Ford production averaged over 900,000 b/d in the first half of 2014<sup>4</sup>. Oil from the Bakken field in North Dakota is shipped to the Gulf Coast and frequently blended into LLS. Industry reports indicate that most Bakken wells produce relatively uniform quality crude oil between 40 and 45 degrees API gravity. Midcontinent crude oil production is forecast to increase from 560,000 b/d in 2013 to 625,000 b/d in 2015, with API gravity 40-50 crude oil making up 55% of the 2015 estimate.

In estimating the production of LLS, the Exchange relied on crude oil production data from the Energy Information Administration (EIA). The EIA reported production at the well-level by crude quality in a May-2014 report titled "U.S. Crude Oil Production Forecast—Analysis of Crude Type", forming the basis on which the Exchange's estimates for LLS production rely. Accordingly, the three-year average for LLS-quality crude oil ("API 35-40 sweet") production in the US is about 454,000 barrels per day, which is equivalent to 13.5 million barrels per month, or 13,500 contract equivalents.

Further, this supply estimate is confirmed by the data from Purvin & Gertz, as well as other industry sources. The EIA expects this category of crude oil production to grow by 50% in 2014) and 2015 to average 674,000 b/d. The production on the US Gulf Coast alone for the same quality of crude is 151,000 b/d in 2011-2013 according to the EIA, and is expected to grow by 76% to 265,000 b/d through 2015.

Table 1: US Crude Oil Production by Type<sup>5</sup>



(in Thousands b/d)	2011	2012	2013	2014	2015
API <27 sour	72	68	69	72	72
API <27 sweet	36	33	34	35	34

<sup>&</sup>lt;sup>4</sup> http://www.rrc.state.tx.us/media/7078/eaglefordproduction\_oil\_perday.pdf

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<sup>&</sup>lt;sup>5</sup> http://www.eia.gov/analysis/petroleum/crudetypes/pdf/crudetypes.pdf

California	586	587	598	635	667
API 27-35 sour	362	348	344	357	363
API 27-35 med-sour	2,228	2,120	2,130	2,214	2,426
API 35-40 sour	537	526	574	628	656
API 35-40 sweet	387	440	536	642	707
API 40-50 sweet	165	229	281	321	346
API 40-45	712	1,266	1,736	2,148	2,448
API 45-50	200	355	528	698	799
API 50+	368	518	621	643	637

#### LLS Trade

The Light Louisiana Sweet ("LLS") crude oil market is traded at the hub in St. James, Louisiana, which consists of storage facilities and major pipelines for distribution of crude oil from the Gulf of Mexico to refineries in Louisiana and in the Midcontinent. The Capline carries 1.1 million barrels of crude oil per day from St. James to Patoka, Illinois. The typical transaction size is 30,000 barrels, with hundreds of separate transactions occurring daily. The volume of spot transactions is more than half of all cash transactions, and the balance of trades are longer-term contracts. There is active trading in forward cash deals on the Capline. In addition, based on conversations with OTC market participants, the OTC market for LLS crude oil swap market is highly liquid. The bid/ask spreads are typically in increments of 10 cents per barrel, which reflects robust liquidity in the LLS crude oil OTC market.

LLS prices are reflective of market economics at the Gulf coast for light sweet grades. The U.S. is divided into five market regions called PADDs (Petroleum Administration of Defense Districts). Louisiana is located in PADD III (Gulf Coast area) along with Alabama, Arkansas, Mississippi, New Mexico and Texas. Louisiana has an extensive pipeline system with approximately 87,764 miles of pipelines onshore and 37,000 miles of pipelines in Louisiana Outer Continental Shelf (OCS) waters. Louisiana Offshore Oil Port (LOOP) is the world's only offshore super-port which allows supertankers to unload crude oil away from shore so that it can be transported via pipeline to onshore terminals.

Table 2: Movement of Crude by Pipeline between PAD Districts<sup>6</sup>, Annual Thousand Barrels

	2009	2010	2011	2012	2013
From PADD 1 to:					
PADD 2	0	0	0	1,352	1,629
PADD 3	3,527	5,488	5,852	1,689	6,405
From PADD 2 to:					
PADD 1	2,469	2,259	2,169	1,992	2,366
PADD 3	19,043	49,630	55,532	81,095	135,723
PADD 4	20,770	22,494	27,587	33,807	25,727
From PADD 3 to:					
PADD 1	4,528	6,460	7,467	3,074	3,377
PADD 2	429,435	439,824	345,197	351,020	331,953
From PADD 4 to:					
PADD 2	59,241	65,278	73,148	81,680	86,565
PADD 3	1,920	2,102	1,356	5,391	5,835

<sup>6</sup> http://www.eia.gov/dnav/pet/pet\_move\_pipe\_a\_epc0\_lmv\_mbbl\_m.htm

#### **WTI Market Overview**

The Argus WTI Trade Month Futures Contract (code V7) is a cash-settled look-alike contract of the NYMEX Light Sweet Crude Oil Futures Contract. This contract represents the WTI leg of the LLS (Argus) vs. WTI BALMO Futures contract. Terminating obligations in the NYMEX Light Sweet Crude Oil Futures are fulfilled by delivering any of six "Domestic Production Streams of crude oil: West Texas Intermediate ("WTI"); Low Sweet Mix ("Scurry Snyder"); New Mexican Sweet; North Texas Sweet; Oklahoma Sweet; and South Texas Sweet. Additionally, a seventh stream, defined as "The Domestic Common Stream" transported by Enterprise Products' (formerly Teppco Pipeline), is also deliverable. Market participants commonly refer to the combination of all of the deliverable streams, including the Domestic Common Stream, as "WTI." Furthermore, the flow of each of these sweet crude streams is also commonly referred to as "Domestic Common Stream" within the complex that comprises the Cushing delivery mechanism, as well as in the WTI physical market which calls for delivery in the Cushing delivery mechanism.

In estimating the deliverable supply of WTI there are two main components that NYMEX considered:

- (1) Crude Oil Flows to the Cushing, Oklahoma delivery area;
- (2) Crude Oil Storage in the Cushing, Oklahoma delivery area.

#### Crude Oil Flows to the Cushing Delivery Area

To determine the flows of WTI crude oil into the delivery area, NYMEX consulted with industry executives and professionals from pipeline and storage terminal operators in Cushing as well as other major industry participants. It is noteworthy that the estimates provided here are materially less than the production that can readily access the delivery mechanism and which *could* be delivered due to the fact that the sources we used were specifically knowledgeable about *actual* Cushing deliveries. Thus, the information provided is not what *could* be delivered — the standard which is in accordance with Commission's policy and precedent — but what actually *is* delivered. The Exchange believes that the Cushing delivery mechanism for light sweet crude oil and corresponding commercial secondary market constitutes such a sophisticated and highly-developed commercial market mechanism that, at any time, the actual flows to and stocks in the delivery area represent precisely the deliverable supply sufficient to support the mechanism. In other words, even though at any time there is additional production that *could* be delivered to the delivery mechanism, we are only including what *actually* flows in our estimate of deliverable supply.<sup>7</sup>

#### Crude Oil Storage in the Cushing Delivery Area

Storage data are provided on a weekly basis by EIA. Details are provided for the U.S., Petroleum Administration for Defense Districts ("PADDs") and Cushing. There are five PADDs and, in some cases, they correspond to broad regions. PADD 2 broadly includes the Midwest; PADD 3 broadly includes U.S. Gulf Coast states and New Mexico; PADD 4 contains the Rocky Mountain States excluding New Mexico. Cushing is the only single location where crude oil official inventory numbers are collected and publicly disseminated on a regular basis anywhere in the world. The actual geographic market that is consistently most applicable to the NYMEX crude oil futures contract would, therefore, include much of PADD 2, not just Cushing.

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<sup>&</sup>lt;sup>7</sup> We recognize that not including all production that could reasonably and readily access the delivery point represents a departure from the Commission's stated methodology; but, since the Cushing secondary market is so sophisticated and highly-developed that it regularly supports physical delivery quantities that are more than 10 times greater than the quantity of physical throughout, such departure seems to introduce no material impairment in determining a reasonable deliverable supply that supports the physical delivery needs of the physical market. We are not suggesting that such departure be regularly applied in estimating deliverable supply for commodity markets; in fact, we can think of no other market where we would recommend doing so.

Nonetheless, NYMEX includes only inventories reported at Cushing, so these underestimate relevant storage. As with production, EIA does not provide details on the quality characteristics of stored crude oil, but the industry experts with whom NYMEX consulted consistently estimated that 60% to 70% of the oil stored at Cushing qualified as Domestic Light Sweet Common Stream, (with a notable leaning towards 70%).

The Cushing physical delivery mechanism is comprised of a network of nearly two dozen pipelines and 10 storage terminals, several with major pipeline manifolds. Two of the storage facilities — Enterprise and Enbridge — and their pipeline manifolds are the core of the Cushing physical delivery mechanism. Physical volumes delivered against the NYMEX Light Sweet Crude Oil Futures contract (Code: CL) within the Enterprise and Enbridge systems are at par value. Any deliveries made on futures contracts elsewhere in Cushing require the Seller to compensate the Buyer for the lower of the transportation netbacks from these facilities to where the delivery occurs

#### Crude Oil Production in the U.S. Midcontinent

In the five-year of 2008-2012 the average production of crude oil available to the U.S. Midcontinent<sup>9</sup> was approximately 75.5 million barrels per month. Based on discussions with industry participants, our estimate of the portion of that average production which would qualify as Domestic Light Sweet Common Stream is 50% and higher— i.e., 37.8 million barrels and higher. The 37.8 million barrels converts into 37,800 contracts equivalent of the WTI Contract.

Table belowprovides monthly production data available to the U.S. Midcontinent from January It shows that production has been steadily growing in recent years and this trend is expected to continue. Overall, US domestic crude oil production increased by 790,000 barrels per day between 2011 and 2012 alone, the largest increase in annual output since the beginning of U.S. commercial crude oil production in 1859. The EIA expects U.S. crude oil production to continue rising on increasing drilling in tight rock formations located in North Dakota and Texas<sup>10</sup>.

U.S. Midcontinent Oil Production 1112 (Thousands of Barrels per Month)

Jan-2008	62,115
Feb-2008	57,884
Mar-2008	63,368
Apr-2008	60,737
May-2008	63,303
Jun-2008	61,145
Jul-2008	63,687

<sup>&</sup>lt;sup>8</sup> Three of the major sources for the cash-market information we provide in this analysis come from Plains All America, Enterprise and Enbridge. Enterprise oversees the vast majority of deliveries in the Cushing Delivery Market and, as indicated, Enterprise and Enbridge are the core delivery mechanism operators. Plains and Enbridge account for about 60% of the storage available at Cushing.

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<sup>&</sup>lt;sup>9</sup> The production listed here includes: North Dakota, South Dakota, Montana, Wyoming, Colorado, New Mexico, Onshore Texas, Oklahoma, Kansas, Nebraska and Missouri.

<sup>&</sup>lt;sup>10</sup> http://www.eia.gov/forecasts/steo/special/pdf/2013 sp 02.pdf

<sup>&</sup>lt;sup>11</sup> The production listed here includes North Dakota, South Dakota, Montana, Wyoming, Colorado, New Mexico, Onshore Texas, Oklahoma, Kansas, Nebraska and Missouri.

http://www.eia.gov/dnav/pet/pet\_crd\_crpdn\_adc\_mbbl\_m.htm

Aug-2008	64,283
Sep-2008	61,180
Oct-2008	65,749
Nov-2008	64,707
Dec-2008	65,225
Jan-2009	64,590
Feb-2009	59,749
Mar-2009	64,066
Apr-2009	62,737
May-2009	64,009
Jun-2009	62,204
Jul-2009	63,419
Aug-2009	62,484
Sep-2009	62,924
Oct-2009	64,284
Nov-2009	63,738
Dec-2009	64,321
Jan-2010	64,386
Feb-2010	60,927
Mar-2010	67,554
Apr-2010	66,603
May-2010	68,783
Jun-2010	67,465
Jul-2010	70,386
Aug-2010	71,112
Sep-2010	70,248
Oct-2010	73,126
Nov-2010	72,872
Dec-2010	75,731
Jan-2011	76,474
<u>l</u>	

Mar-2011       78,673         Apr-2011       76,850         May-2011       80,717         Jun-2011       79,793         Jul-2011       84,127         Aug-2011       87,187         Sep-2011       86,987         Oct-2011       92,475         Nov-2011       93,326         Dec-2011       96,650         Jan-2012       91,735         Feb-2012       87,799         Mar-2012       95,468         Apr-2012       95,516         May-2012       101,190         Jun-2012       99,688         Jul-2012       104,498         Aug-2012       107,508         Sep-2012       106,831         Oct-2012       112,296         Nov-2012       109,604         Average       75,487	Feb-2011	67,222
May-2011       80,717         Jun-2011       79,793         Jul-2011       84,127         Aug-2011       87,187         Sep-2011       86,987         Oct-2011       92,475         Nov-2011       93,326         Dec-2011       96,650         Jan-2012       91,735         Feb-2012       87,799         Mar-2012       95,468         Apr-2012       95,516         May-2012       101,190         Jun-2012       99,688         Jul-2012       104,498         Aug-2012       107,508         Sep-2012       106,831         Oct-2012       112,296         Nov-2012       109,604	Mar-2011	78,673
Jun-2011       79,793         Jul-2011       84,127         Aug-2011       87,187         Sep-2011       86,987         Oct-2011       92,475         Nov-2011       93,326         Dec-2011       96,650         Jan-2012       91,735         Feb-2012       87,799         Mar-2012       95,468         Apr-2012       95,516         May-2012       101,190         Jun-2012       99,688         Jul-2012       104,498         Aug-2012       107,508         Sep-2012       106,831         Oct-2012       112,296         Nov-2012       109,604	Apr-2011	76,850
Jul-2011       84,127         Aug-2011       87,187         Sep-2011       86,987         Oct-2011       92,475         Nov-2011       93,326         Dec-2011       96,650         Jan-2012       91,735         Feb-2012       87,799         Mar-2012       95,468         Apr-2012       95,516         May-2012       101,190         Jun-2012       99,688         Jul-2012       104,498         Aug-2012       107,508         Sep-2012       106,831         Oct-2012       112,296         Nov-2012       109,604	May-2011	80,717
Aug-2011       87,187         Sep-2011       86,987         Oct-2011       92,475         Nov-2011       93,326         Dec-2011       96,650         Jan-2012       91,735         Feb-2012       87,799         Mar-2012       95,468         Apr-2012       95,516         May-2012       101,190         Jun-2012       99,688         Jul-2012       104,498         Aug-2012       107,508         Sep-2012       106,831         Oct-2012       112,296         Nov-2012       109,604	Jun-2011	79,793
Sep-2011       86,987         Oct-2011       92,475         Nov-2011       93,326         Dec-2011       96,650         Jan-2012       91,735         Feb-2012       87,799         Mar-2012       95,468         Apr-2012       95,516         May-2012       101,190         Jun-2012       99,688         Jul-2012       104,498         Aug-2012       107,508         Sep-2012       106,831         Oct-2012       112,296         Nov-2012       109,604	Jul-2011	84,127
Oct-2011       92,475         Nov-2011       93,326         Dec-2011       96,650         Jan-2012       91,735         Feb-2012       87,799         Mar-2012       95,468         Apr-2012       95,516         May-2012       101,190         Jun-2012       99,688         Jul-2012       104,498         Aug-2012       107,508         Sep-2012       106,831         Oct-2012       112,296         Nov-2012       109,604	Aug-2011	87,187
Nov-2011       93,326         Dec-2011       96,650         Jan-2012       91,735         Feb-2012       87,799         Mar-2012       95,468         Apr-2012       95,516         May-2012       101,190         Jun-2012       99,688         Jul-2012       104,498         Aug-2012       107,508         Sep-2012       106,831         Oct-2012       112,296         Nov-2012       109,604	Sep-2011	86,987
Dec-2011 96,650  Jan-2012 91,735  Feb-2012 87,799  Mar-2012 95,468  Apr-2012 95,516  May-2012 101,190  Jun-2012 99,688  Jul-2012 104,498  Aug-2012 107,508  Sep-2012 106,831  Oct-2012 112,296  Nov-2012 109,604	Oct-2011	92,475
Jan-2012 91,735  Feb-2012 87,799  Mar-2012 95,468  Apr-2012 95,516  May-2012 101,190  Jun-2012 99,688  Jul-2012 104,498  Aug-2012 107,508  Sep-2012 106,831  Oct-2012 112,296  Nov-2012 109,604	Nov-2011	93,326
Feb-2012       87,799         Mar-2012       95,468         Apr-2012       95,516         May-2012       101,190         Jun-2012       99,688         Jul-2012       104,498         Aug-2012       107,508         Sep-2012       106,831         Oct-2012       112,296         Nov-2012       109,604	Dec-2011	
Mar-2012       95,468         Apr-2012       95,516         May-2012       101,190         Jun-2012       99,688         Jul-2012       104,498         Aug-2012       107,508         Sep-2012       106,831         Oct-2012       112,296         Nov-2012       109,604	Jan-2012	91,735
Apr-2012 95,516  May-2012 101,190  Jun-2012 99,688  Jul-2012 104,498  Aug-2012 107,508  Sep-2012 106,831  Oct-2012 112,296  Nov-2012 109,604	Feb-2012	87,799
May-2012 101,190  Jun-2012 99,688  Jul-2012 104,498  Aug-2012 107,508  Sep-2012 106,831  Oct-2012 112,296  Nov-2012 109,604	Mar-2012	95,468
Jun-2012       99,688         Jul-2012       104,498         Aug-2012       107,508         Sep-2012       106,831         Oct-2012       112,296         Nov-2012       109,604	Apr-2012	95,516
Jul-2012       104,498         Aug-2012       107,508         Sep-2012       106,831         Oct-2012       112,296         Nov-2012       109,604	May-2012	101,190
Aug-2012 107,508  Sep-2012 106,831  Oct-2012 112,296  Nov-2012 109,604	Jun-2012	99,688
Sep-2012       106,831         Oct-2012       112,296         Nov-2012       109,604	Jul-2012	104,498
Oct-2012 112,296 Nov-2012 109,604	Aug-2012	107,508
Nov-2012 109,604	Sep-2012	106,831
,	Oct-2012	112,296
Average 75,487	Nov-2012	109,604
	Average	75,487

As indicated above, the production data are provided not as direct inputs to deliverable supply, but to: 1) demonstrate that production levels are more than sufficient to support the actual flows of deliverable product to the delivery location; and 2) demonstrate that deliverable supply is likely to be increasing in the near future because of the on-going increases in both production that is currently eligible to deliver and that is qualitatively close to eligible product but not currently eligible to deliver.

## Data for Crude Oil Flows to the Cushing Delivery Area

Over the last three years, pipeline capacity for delivering crude oil to Cushing increased by about 815,000 b/d according to the EIA<sup>13</sup>. The key development was the construction of the 590,000 b/d TransCanada Keystone pipeline that originates in Hardisty, Alberta, Canada. Phase 1 of the Keystone pipeline, which runs from Hardisty to Steele City, Nebraska, and on to Patoka, Illinois, was completed in June

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<sup>&</sup>lt;sup>13</sup> http://www.eia.gov/forecasts/steo/spe<u>cial/pdf/2013</u> sp 02.pdf

2010. Phase 2 of the Keystone pipeline, which extended the pipeline from Steele City to Cushing, was completed in February 2011.

Until mid-2012, there was only one pipeline that could deliver crude oil from the Midwest to the Gulf Coast. The 96,000-bbl/d ExxonMobil Pegasus pipeline between Patoka, Illinois and Nederland, Texas originally shipped crude oil northward. The pipeline was reversed in 2006 in order to ship Canadian heavy oil to the Gulf Coast

Currently, there is approximately 1.8 million b/d of inflow pipeline capacity to Cushing and 1.455 million barrels per day of outflow capacity. In addition, 77.8 million barrels of storage capacity exists in the Cushing area which continues to grow steadily. It is anticipated that the outflow capacity will increase by 500,000 to 1 million barrels per day over the next several years with the construction of pipeline additions flowing oil to the U.S. Gulf.

Based on information provided by pipeline and storage terminal operators, actual flows of oil to Cushing have ranged from 1.125 to 1.275 million barrels per day in recent years, with Domestic Light Sweet Common Stream Crude Oil averaging between 665,000 and 750,000 barrels per day. On a 30-day monthly basis, this computes into 19.95 to 22.5 million barrels per month which converts into 19,950 to 22,500 of WTI contract equivalents of deliverable supply. Table belowprovides specific details of pipeline flows into and out of Cushing.

# Crude Oil Flows to Cushing (Barrels/Day)<sup>15</sup>

Outgoing Pipelines	Capacity (B/D) Owner	
Seaway Pipeline	400,000	Enterprise
BP (to Chicago)	200,000	BP
Occidental Centurion	60,000	Occidental
Ozark (to Wood River, IL)	225,000	Enbridge
Osage (to Eldorado, KS)	135,000	Magellan / NCRA
Plains (to Coffeyville, KS)	125,000	Plains
ConocoPhillips (to Ponca City, OK)	102,000	ConocoPhillips
ConocoPhillips (to Borger, TX)	53,000	ConocoPhillips
PAA Red River Pipeline	30,000	Plains All America
Sun (to Tulsa)	55,000	Sunoco
West Tulsa (to Tulsa)	50,000	Enbridge
Eagle	20,000	Blue Knight

Incoming Pipelines	Capacity	Owner	Estimated Flows (in Barrels/Day)
Keystone XL Pipeline	590,000	Transcanada	200,000 to 225,000 BD (Heavy sour)
Basin Pipeline	450,000	Plains	400,000 to 440,000 (75% WTI)
Occidental Pipeline	120,000	Occidental	100,000 to 120,000 (100% WTI)
Spearhead Pipeline	240,000	Enbridge	120,000 to 140,000 (Canadian sour)
White Cliffs Pipeline	70,000	SemGroup	65,000 to 70,000 (100% WTI)

1.455 Million B/D

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TOTAL ESTIMATE

<sup>&</sup>lt;sup>14</sup> The sources were: Plains All America, an aggregator and marketer of crude oil production and pipeline and storage terminal operator at Cushing; Enterprise, an aggregator and marketer of crude oil production and pipeline and storage terminal operator at Cushing; Enbridge, a pipeline and storage terminal operator at Cushing; and JSK Consulting, the principal of which is a seasoned Midcontinent oil market participant and professional with 40 years of experience in trading, operating transportation and storage in Cushing, and refining.

<sup>&</sup>lt;sup>15</sup> Sources: Enterprise Products, Plains All American Pipeline Company, JSK Consulting, and other industry sources. Please note, this table was prepared in February 2013.

Plains Oklahoma Pipeline	100,000	Plains	90,000 to 100,000 (100% WTI)
Cherokee Pipeline	50,000	Plains	40,000 to 50,000 (100% Sour)
Ark City Pipeline	30,000	SemGroup	25,000 to 30,000 (100% WTI)
MV Magellan Pipeline	30,000	SemGroup	25,000 to 30,000 (100% WTI)
Midcontinent Pipeline	50,000	Sunoco	45,000 to 50,000 (100% WTI)
Bakken Crude via Rail	90,000	Various	15,000 to 20,000 (100% WTI)

TOTAL ESTIMATE 1.820 Million B/D 1,125,000 to 1,275,000

Pipeline WTI flows of 665,000 B/D to 750,000 B/D (Monthly 19.95 to 22.5 Million Barrels)

We note that we asked operators of pipeline terminals in Cushing if they would share specific data on flows of Domestic Light Sweet Common Stream Crude Oil stored at their facilities and they responded that such data were confidential. The Exchange collects this information periodically but not on either an on-going or scheduled basis. As indicated above, we did collect it when we updated the deliverable supply estimates in 2006 and 2011; and we collected it again in February 2013. Consequently, we are unable to provide a five year average of these data but we believe that an average of the 2006, 2011 and 2013 actual flows data would be very close to an actual five year average (if we were able to calculate it). The average of the 2006, 2011 and 2013 data is 17,850 to 21,800 contract equivalents.

#### Data for Crude Oil Storage in the Cushing Delivery Area

Table below provides the weekly Cushing storage calculation starting with January 2008 and continuing through January 2013. During that time period, inventories averaged over 32 million barrels and ranged from about 16 to 48 million barrels. Inventories ended 2012 at a re<u>cord-high of 48.18</u> million barrels.

Average of Weekly Stocks Thousand Barrels		
Year	Month	
2008	Jan	16,416
	Feb	16,660
	Mar	17,752
	Apr	18,588
	May	20,864
	Jun	20,864
	Jul	19,658
	Aug	18,113
	Sep	15,864
	Oct	15,594
	Nov	20,067
	Dec	26,778
2009	Jan	33,239
	Feb	34,560
	Mar	32,509
	Apr	29,628
	May	29,773
	Jun	28,697
	Jul	31,449
	Aug	32,471

	Sep	28,366
	Oct	25,547
	Nov	28,923
	Dec	34,177
2010	Jan	33,780
	Feb	30,451
	Mar	30,477
	Apr	33,668
	May	37,621
	Jun	36,950
	Jul	36,807
	Aug	36,692
	Sep	34,895
	Oct	34,274
	Nov	33,256
	Dec	36,272
2011	Jan	37,546
	Feb	37,769
	Mar	40,592
	Apr	41,154
	May	40,409
	Jun	38,049
	Jul	36,882
	Aug	33,754
	Sep	31,585
	Oct	31,324
	Nov	31,621
2010	Dec	30,339
2012	Jan	29,037
	Feb	32,237
	Mar	38,651
	Apr	41,619
	May	45,725
	Jun Jul	47,596 46,162
	Aug	46,162 44,895
	Sep	43,874
	Oct	43,912
	Nov	43,912
	Dec	48,177
Average	1 000	32,486
/ troi ago		52,700

Based on the lower end of the estimates, since January 2008, the contract equivalent of the WTI Contract stored in the delivery location was 15,594. NYMEX asked operators of storage in Cushing if they would share specific data on quantities of Domestic Light Sweet Common Stream Crude Oil stored at their facilities and they responded that such data were confidential.

As of September 30, 2012, EIA reports that shell storage capacity at Cushing was 77.8 million barrels and working capacity was 55.008 million barrels. Based on additional information from industry sources, we expect total shell capacity to increase to more than 80 million barrels by year-end 2013.

Currently, there is substantial excess working capacity at Cushing (nearly 18 million barrels) and, based on growth rates in the use of storage since 2009, there would be even more excess working capacity after the additions are completed in 2013. Finally, it should be noted that, at least on a temporary basis that can last several months, storage can exceed working capacity and it is common for an individual tank to reach 85-90% of shell capacity (which exceeds the 83% average underlying the EIA estimates).

The Exchange has estimated the average weekly storage of Domestic Light Sweet crude oil in Cushing for the 5-year period beginning January 1, 2008 and ending December 31, 2012; it is 32,486,000 barrels of oil, which converts into 32,486 contract equivalents of WTI contracts. The Exchange has further evaluated both operational practices at storage facilities as well as commercial practices by customers of storage facilities to determine if some components of inventoried product could rightfully be considered not to be readily deliverable.

With respect to operational practices, based on discussions with some industry experts, the Exchange conservatively estimates that 6.75% of stored product, on average, is required for operational minimums.<sup>17</sup> This converts into an estimated 2,193,000 barrels of Domestic Light Sweet crude oil based on the 5 year average storage level (2,193 contract equivalents); so we subtract this amount from the estimated average storage from 2008 through 2012. The adjusted estimate due to subtracting operational minimums is 30,293 contract equivalents.

Further, we did hear from one refiner that they keep barrels stored at Cushing for the contingency that there could be some unexpected interruption in their refinery supply; and, rather than refine the barrels stored at Cushing, they use them to trade for other barrels they would refine. We are adjusting for this contingency storage in our estimate of deliverable supply by subtracting it. We estimate this quantity to be 2 million barrel (or 2,000 contract equivalents) of Domestic Light Sweet crude oil. Therefore, the corresponding adjustment to the average Domestic Light Sweet crude oil stored from 2008 through 2012 (adjusted for operational minimums and contingency storage) is 28,293 contract equivalents.

#### Deliverable Supply Estimate for the WTI-Related Futures

The Argus WTI Trade Month Futures Contract (code V7) is a cash-settled look-alike contract of the NYMEX Light Sweet Crude Oil Futures Contract. Consequently, the spot month position limit for this financially-settled contract is identical to the position limits for the NYMEX Light Sweet Crude Oil Futures Contract. Combining the average for 2006, 2011 and 2013 of industry-based estimates of physical flow of deliverable oil to the delivery area each month with the average industry-based estimates of deliverable oil stored in the delivery area between 2007 and 2012 (adjusted downwards for operational minimums and *contingency* storage) yields: 17,850 to 21,800 contracts equivalent plus 28,293 which ranges from 46,143 to 50,093 contract equivalents. The mid-point of this range, which is based on estimated 5-year averages for physical flows and storage, is 48,100 contract equivalents, which is our estimated deliverable supply for the NYMEX Light Sweet Crude Oil Futures contract. The existing spot month limit for the Argus WTI Trade Month Futures Contract (code V7) is 3,000 contracts, which is 6% of the monthly deliverable supply of WTI of 48,100 contract equivalents.

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<sup>&</sup>lt;sup>16</sup> http://www.eia.gov/petroleum/storagecapacity/table2.pdf Shell capacity is defined by EIA as the design capacity of a petroleum storage tank which is always greater than or equal to working storage capacity.

<sup>&</sup>lt;sup>17</sup> We have been advised that, for older tanks, the operational minimum is 9% and, for newer tanks, it is 4.5%. Our assessment is that the majority of tanks at Cushing would qualify as newer. Nonetheless, to be conservative, we have applied the mid-point percentage—6.75%-- for all of Cushing.

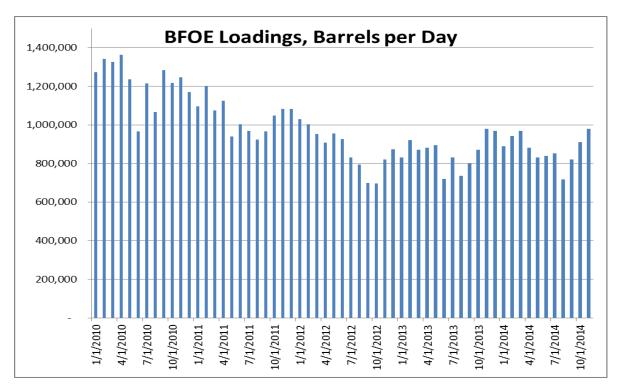
#### **Brent Market Overview**

The Brent market is comprised of four North Sea crude oil grades: Brent, Forties, Oseberg, and Ekofisk ("BFOE" or "Brent"). The standard cargo size in the BFOE market is 600,000 barrels. These four North Sea grades are segregated blends delivered at different locations in the North Sea, and each can be substituted by the seller in the 25-Day BFOE cash market. The four BFOE fields lie in the North Sea. Brent and Forties are in the UK sector, whilst Ekofisk and Oseberg are in the Norwegian sector.

#### **Brent Production**

Bloomberg LP ("Bloomberg") provides details of the BFOE loading programs for the four grades that comprise the Brent market. Based on the most recent three-year average of the Bloomberg data on BFOE loadings (from January 2011 through November 2014), the total loadings of Brent (BFOE) crude oil was approximately 913,000 barrels per day, which is equivalent to approximately 27.4 million barrels per month, or 27,400 contract equivalents.

Table 1: Bloomberg Monthly Loadings of Brent, Forties, Oseberg, Ekofisk



Date	Quantity (b/d)
November-14	980,000
October-14	909,677
September-14	820,000
August-14	716,129
July-14	851,613
June-14	840,000
May-14	832,258
April-14	880,000
March-14	967,742
February-14	942,857

January-14	890,323			
December-13	967,742			
November-13	980,000			
October-13	870,968			
September-13	800,000			
August-13	735,484			
July-13	832,258			
June-13	720,000			
May-13	893,548			
April-13	880,000			
March-13	870,968			
February-13	921,429			
January-13	832,258			
December-12	872,581			
November-12	819,667			
October-12	696,774			
September-12	700,000			
August-12	793,548			
July-12	832,258			
June-12	926,667			
May-12	956,452			
April-12	906,667			
March-12	951,613			
February-12	1,003,448			
January-12	1,030,645			
December-11	1,082,258			
November-11	1,081,667			
October-11	1,048,387			
September-11	965,000			
August-11	922,581			
July-11	969,355			
June-11	1,003,333			
May-11	938,710			
April-11	1,125,000			
March-11	1,074,194			
February-11	1,201,786			
January-11	1,095,161			
Average (2011-Nov2014)	913,468			

Production of BFOE-related crude oil in the North Sea far outnumbers actual loadings. The US Department of Energy's Energy Information Administration ("EIA") publishes data for crude oil production at a country level. The country levels below encompass more than the four BFOE fields. However, they are indicative of the amount of oil production from the region that is traded with reference to the Dated Brent price benchmark.

Table 2: Oil Production (thousand barrels per day)<sup>18</sup>

	2009	2010	2011	2012	2013	Average
Norway	2,353	2,135	2,007	1,902	1,826	2,045
United Kingdom (Offshore)	1,422	1,319	1,084	922	827	1,115
United Kingdom	87	87	83	86	89	86

#### **Brent Trading**

Brent crude oil has active over-the-counter ("OTC") physical and paper markets. The liquidity in the cash and OTC swaps market is robust. The OTC market participation is deep and diverse, and includes both cash market and OTC market players. The Brent cash and OTC market participants include many commercial companies, refiners, end users, brokers and financial institutions with over 50 participants. The Brent physical market is comprised of two main components: 1) the "Dated Brent" market for cargo transactions in the spot market for delivery in the next of 10 to 25 days; and 2) the forward market, for cargo transactions for delivery in the timeframe beyond 25 days, i.e., the forward month 25-day Brent cash market.

The core of the Brent market is the forward cash market. The Brent forward market consists of the trading of cargoes of any of the Brent, Forties, Osberg or Ekofisk streams, for delivery beyond 25 days with no specific date assigned for loading. The cargoes are 600,000 barrels and, in the forward market, the precise loading date is not provided, only the delivery month—i.e., August BFOE Cargo. However, the commercial contracts, which are standardized, underlying the forward market specify the minimum timing the Seller must provide the Buyer to notify them as to the specific cargo loading date—currently 25 days in advance. After the Seller of a BFOE forward cargo notifies the Buyer as to the loading date and which stream is being loaded, the contract now is considered to move from the forward-market to the Dated-Market; historically, this moment has been referred as the cargo "going wet". Dated cargoes (or wet cargoes) are distinguished from forward cargoes simply because the loading dates (and the stream) are known. Dated cargoes are also traded in the cash market, and those transactions are reported by price reporting agencies.

The Brent cash market is essentially a reseller market where buyers either: resell the oil to someone else; transport the cargo and resell it later; or transport the cargo to consume it. Most of the sales in the Brent market are conducted as spot-market transactions; in fact, Brent cargoes in the physical market are estimated to trade 10 or more times. Typically, there is a chronology of sales and purchases of crude oil in the Brent cash market that starts with a sale from the equity producer in a spot market transaction, and finishes with a purchase by an end-user to consume the crude oil. Equity producers typically utilize the robust spot market to sell their BFOE production at the cargo loading terminal, as a "Free on Board" (FOB) delivery. Traders play an active role in the Brent market as middlemen with the expressed responsibility of reselling the oil. Further, the refiners typically rely on the spot market to purchase Brent crude oil, because there is vibrant liquidity in the spot market, and hence, the refiners have developed a preference for short-term spot market purchases, rather than long-term contracts. This applies to refiners affiliated with equity producers as well as those not affiliated; this is the standard practice, established and institutionalized over the past 34 years.

The Exchange has spoken with a number of market participants regarding common commercial practices with respect to the use of spot versus term contracts in the Brent crude oil market. The responses we received were consistent and they can be summarized as follows:

http://www.eia.gov/cfapps/ipdbproject/iedindex3.cfm?tid=5&pid=53&aid=1&cid=NO,UK,UKO,&syid=2009&eyid=2014&unit=TBPD

<sup>18</sup> 

- The majority of BFOE production is sold on a spot market or short-term basis, rather than on a long-term basis; as discussed in the previous section, equity producers typically utilize the robust spot market to sell their BFOE production, while refiners prefer to purchase in the spot market, because there is vibrant liquidity in the cash market.
- There are no restrictions applied to the resale of BFOE cargoes bought in the cash market. In fact, traders play an important role as middleman with the responsibility of reselling the oil. Hence, given the robust liquidity in the Brent cash market, market participants have preferred to transact their commercial contracts in the spot market, rather than via long-term contracts.
  - There is one refinery located in Grangemouth, UK that is connected directly via pipeline to the Forties loading terminal. This refinery, which runs 210,000 barrels per day, was formerly owned by BP, and is currently owned by Petrolneos, a 50:50 joint venture between PetroChina and INEOS. According to market participants, the Grangemouth refinery sources crude oil directly via the Forties pipeline, as well as from imported cargoes. The refinery does not publicly disclose its crude oil purchases, but the market sources with whom the Exchange consulted indicated that BFOE barrels refined there are typically sourced via the spot-market. Notwithstanding that practice, in the interest of erring on the side of underestimating deliverable supply, the Exchange is assuming that approximately 50% of its crude oil are delivered directly from the Forties crude oil stream -bypassing the spot market, and the deliverable supply of Forties crude oil is being reduced accordingly. Therefore, we assume that the deliverable supply of Forties is reduced by 105,000 barrels per day, which is equivalent to 3.2 million barrels per month.

#### **Deliverable Supply**

In its analysis of deliverable supply, the Exchange concentrated on the actual loadings of Brent-related (BFOE) crude oil. In addition, the Exchange has reduced the deliverable supply of Forties to account for the crude oil purchases by the Grangemouth refinery. Based on the most recent 3-year averages of the Bloomberg data on BFOE loadings (from January 2011 through November 2014), the total loadings of Brent (BFOE) crude oil was approximately 913,000 barrels per day, which is equivalent to approximately 27.4 million barrels per month, or 27,400 contract equivalents (contract size: 1,000 barrels). To account for the crude oil purchases by the Grangemouth refinery, the deliverable supply would be reduced by 3.2 million barrels per month (to approximately 807,000 b/d). Therefore, the total deliverable supply of BFOE is approximately 24.2 million barrels per month, which is equivalent to 24,200 contracts. The existing spot month position limit for the Brent Crude Oil Futures Contract (code BB) is 4,000 contracts, which is 24.8% of the monthly deliverable supply of BFOE of 24,200 contract equivalents.

#### **Analysis of Spot-Month Position Limits**

In its estimate of deliverable supply for LLS, the Exchange relied on crude oil production data from the Energy Information Administration (EIA). Accordingly, the three-year average for LLS-quality crude oil ("API 35-40 sweet") production in the US is approximately 450,000 barrels per day, which is equivalent to 13.5 million barrels per month, or 13,500 contract equivalents. For purposes of calculating compliance with position limits, the spread contracts that are based on a differential with LLS will aggregate into the existing outright LLS (Argus) Financial Futures Contract (code XA). The existing spot month position limit for the LLS (Argus) Financial Futures Contract (code XA) of 3,000 contracts is approximately 22% of the estimated monthly supply of 13,500 contract equivalents.

For purposes of calculating compliance with position limits, the LLS (Argus) vs. WTI BALMO Futures (code LWB) aggregates into the two underlying outright contracts: the LLS (Argus) Financial Futures Contract (code XA) and the Argus WTI Trade Month Futures Contract (code V7). The existing spot month position limit for the Argus WTI Trade Month Futures Contract (code V7) is based on the deliverable supply of WTI crude oil in Cushing, Oklahoma of 3,000 contracts, which is approximately 6% of the estimated monthly supply of WTI in Cushing of 48 million barrels (equivalent to 48,000 contracts).

As mentioned above, the existing spot month position limit for the LLS (Argus) Financial Futures Contract (code XA) of 3,000 contracts is approximately 22% of the estimated monthly supply of 13,500 contract equivalents.

In its analysis of deliverable supply for Brent crude oil, the Exchange concentrated on the actual loadings of Brent-related (BFOE) crude oil, adjusted downward to account for crude oil purchases by the Grangemouth refinery. The total deliverable supply of BFOE is approximately 24.2 million barrels per month, which is equivalent to 24,200 contracts. The existing spot month position limit for the Brent Crude Oil Futures Contract (code BB) is 4,000 contracts, which is 24.8% of the monthly deliverable supply of BFOE of 24,200 contract equivalents.

For purposes of calculating compliance with position limits, the LLS (Argus) vs. Brent Financial Futures (code LLR) and the LLS (Argus) vs. Brent BALMO Futures (code LBB) aggregate into the two underlying outright contracts: the LLS (Argus) Financial Futures Contract (code XA) and the Brent Crude Oil Futures Contract (code BB). As mentioned above, the existing spot month position limit for the LLS (Argus) Financial Futures Contract (code XA) of 3,000 contracts is approximately 22% of the estimated monthly supply of 13,500 contract equivalents. Further, the existing spot month position limit for the Brent Crude Oil Futures Contract (code BB) is 4,000 contracts, which is 24.8% of the monthly deliverable supply of BFOE of 24,200 contract equivalents.

Finally, for purposes of position limits and position accountability levels, contracts shall diminish ratably as the contract month progresses toward month end.