

**SUBMISSION COVER SHEET**

**IMPORTANT:** Check box if Confidential Treatment is requested

Registered Entity Identifier Code (optional): 14-364 (1 of 2)

Organization: New York Mercantile Exchange, Inc. ("NYMEX")

Filing as a:  DCM  SEF  DCO  SDR

Please note - only ONE choice allowed.

Filing Date (mm/dd/yy): September 5, 2014 Filing Description: Listing of Crude Oil Option on Semi-Annual Strip Contract, Terms and Conditions, and Analysis of Underlying Market

**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:** Crude Oil Option on Semi-Annual Strip

**Product Terms and Conditions (product related Rules and 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:**

September 5, 2014

**VIA ELECTRONIC PORTAL**

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

**RE: CFTC Regulation 40.2(a) Certification. Notification of Initial Product Listing of the Crude Oil Option on Semi-Annual Strip Contract. NYMEX Submission No. 14-364 (1 of 2)**

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 the Crude Oil Option on Semi-Annual Strip contract (“Contract”) for trading on the NYMEX trading floor, CME Globex, and for submission for clearing through CME ClearPort effective on Sunday, September 21, 2014, for trade date Monday, September 22, 2014.

NYMEX is filing this submission under the new product submission requirements of CFTC Regulation 40.2(a). At the Commission’s request, we are also filing these materials pursuant to CFTC Regulation 40.6(a).

Pursuant to CFTC Regulation 40.6(a), NYMEX is separately self-certifying block trading on the Contract with a minimum threshold of 5 contracts in NYMEX/COMEX Submission No. 14-366.

The contract specifications are as follows:

<b>Rule Chapter Number and Contract Title</b>	Chapter 1244 Crude Oil Option on Semi-Annual Strip
<b>Commodity Code</b>	6Y
<b>Contract Size</b>	6,000 barrels
<b>First Listing</b>	Jan 2015, Jul 2015, Jan 2016, Jul 2016, Jan 2017, Jul 2017, Jan 2018, Jul 2018, Jan 2019, Jul 2019
<b>Listing Period</b>	January/July Cycle; Five consecutive years
<b>Termination of Trading</b>	Options will expire on the business day immediately preceding day prior to the delivery month of the first underlying WTI Financial Futures contract.
<b>Minimum Price Fluctuation</b>	0.01

<b>Value per Tick</b>	\$60.00
<b>Block Trade Minimum Threshold</b>	5 contracts

**Trading and Clearing Hours:**

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

**Fee Schedule:**

**Crude Oil Option on Semi-Annual Strip**

	Member	Cross Division	Non-Member	IIP
<b>Pit</b>	\$2.50	\$3.50	\$3.50	
<b>Globex</b>	\$2.50	\$3.50	\$3.50	\$3.50
<b>ClearPort</b>	\$2.50		\$3.50	
<b>Agency Cross Fee</b>	\$2.50		\$3.50	

<b>Other Processing Fees</b>		
	Member	Non-Member
<b>Options E/A</b>	\$0.40	\$0.85
<b>Facilitation Desk Fee</b>	\$0.20	

The Exchange is also notifying the CFTC that it is self-certifying the insertion of the terms and conditions for the Crude Oil Option on Semi-Annual Strip 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 Contract. The terms and conditions establish the all month/any one month accountability levels, expiration month position limit, reportable level and aggregation allocation for the Contract (See Appendix B, attached under separate cover).

Exchange business staff responsible for the new product and the Exchange Legal Department collectively reviewed the designated contract market core principles (“Core Principles”) as set forth in the Commodity Exchange Act (“CEA” or “Act”). During the review, Exchange staff identified that the new product may have some bearing on the following Core Principles:

- **Prevention of Market Disruption:** Trading in the Contract 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 product will be subject to extensive monitoring and surveillance by CME Group’s Market Regulation Department.

- Contracts Not Readily Susceptible to Manipulation: The Contract is not readily susceptible to manipulation due to the liquidity and robustness in the underlying cash markets, which provides diverse participation and sufficient spot transactions to support the final settlement index.
- Compliance with Rules: Trading in this Contract 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 of the Rulebook. As with all products listed for trading on one of CME Group's designated contract markets, activity in this new product 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.
- Position Limitations or Accountability: The spot month position limit for the Contract is set at a conservative level that is less than 25% of the monthly deliverable supply in the underlying market in accordance with the guidelines included in CFTC Part 150.
- Availability of General Information: The Exchange will publish information on the Contract's specification on its website, together with daily trading volume, open interest and price information.
- Daily Publication of Trading Information: Trading volume, open interest and price information will be published daily on the Exchange's website and via quote vendors.
- Financial Integrity of Contracts: All contracts traded on the Exchange will be cleared by the Clearing House of 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 Contract will be listed for trading on CME Globex and the NYMEX trading floor and for clearing through CME ClearPort. The CME Globex platform provides a transparent, open, and efficient mechanism to electronically execute trades on screen. In addition, the NYMEX trading floor continues to be available as a trading venue and provide for competitive and open execution of transactions. The CME ClearPort platform continues to provide a competitive and open execution of transactions by brokers.
- Trade Information: All required trade information is included in the audit trail and is sufficient for the Market Regulation Department to monitor for market abuse.
- Protection of Market Participants: 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 these products.
- Disciplinary Procedures: 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 these 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.
- Dispute Resolution: Disputes with respect to trading in this contract 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.

Pursuant to Section 5c(c) of the Act and CFTC Regulation 40.2(a), the Exchange hereby certifies that the Contract complies with the Act, including regulations under the Act. There were no substantive opposing views to the listing of the Contract.

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

Should you have any questions concerning the above, please contact the undersigned at (212) 299-2200 or [Christopher.Bowen@cmegroup.com](mailto:Christopher.Bowen@cmegroup.com).

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 1244 Crude Oil Option on Semi-Annual Strip**

#### **1244100. SCOPE OF CHAPTER**

This chapter is limited in application to Crude Oil Option on Semi-Annual Strip put and call options on WTI Financial Futures contract. In addition to the rules of this chapter, transactions in the Crude Oil Option on Semi-Annual Strip shall be subject to the general rules of the Exchange insofar as applicable.

#### **1244101. OPTION CHARACTERISTICS**

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

##### **1244101.A. Trading Schedule**

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

##### **1244101.B. Trading Unit**

On expiration of a call option, the long position will be assigned six consecutive long futures months beginning with the underlying month of long WTI Financial futures contracts at the strike price. On exercise of a put option, the long position will be assigned six consecutive short futures months beginning with the underlying month of short WTI Financial futures contracts at the strike price.

##### **1244101.C. Price Increments**

Prices shall be quoted in dollars and cents per barrel. The minimum price increment will be \$.01 per barrel.

##### **1244101.D. Position Limits, Exemptions, Position Accountability and Reportable Levels**

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.

##### **1244101.E. Termination of Trading**

Options will expire on the business day immediately preceding day prior to the delivery month of the first underlying WTI Financial Futures contract.

##### **1244101. F. Type Option**

The option is a European-style option which can only be exercised on expiration day.

#### **1244102. EXERCISE PRICES**

Trading shall be conducted for options with strike prices in increments as set forth below.

(A) On the first business day of trading in an option contract month, trading shall be at the following strike prices: (i) the previous day's average settlement price for the underlying WTI Financial Futures strip of futures rounded off to the nearest fifty cent increment, unless such settlement price is precisely midway between two fifty cent increments in which case it shall be rounded off to the lower fifty cent increment; (ii) the ten strike prices which are ten fifty cent increments higher than the strike price described in section (i) of this Rule 1244102(A); and (iii) the ten strike prices which are ten fifty cent increments lower than the strike price described in section (i) of this Rule 124405(A).

(B) Thereafter, on any business day prior to the expiration of the option, new strike prices for both puts and calls will be added, such that at all times there will be at least ten fifty cent increment strike prices above and below the at-the-money strike price available for trading in all options contract months. The at-the-money strike price will be determined in accordance with the procedures set forth in Subsection (A) of this Rule 1244102.

(C) Notwithstanding the provisions of subsections (A) and (B) of this Rule, if the Exchange determines that trading in Crude Oil Option on Semi-Annual Strip will be facilitated thereby, the Exchange may, by resolution, change the increments between strike prices, the number of strike prices which shall be traded on the first day in any new option contract month, the number of new strike prices which will be introduced on each business day or the period preceding the expiration of a Crude Oil Option on Semi-Annual Strip in which no new strike prices may be introduced.

## **APPENDIX B**

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

(Attached under separate cover)

## APPENDIX C

### Rule 588.H Globex Non-Reviewable Ranges

<b>Instrument</b>	<b>Bid/Ask Reasonability</b>	<b>Non-Reviewable Range (NRR)</b>
Crude Oil Option on Semi-Annual Strip	The greater of the delta times the underlying futures' non-reviewable range or 20% of the fair value premium up to the underlying futures' non-reviewable range with a minimum reasonability of \$0.10	20% of premium up to 1/4 the underlying futures non-reviewable range with a minimum of 1 tick.



## APPENDIX D

### **Cash Market Overview and Analysis of Deliverable Supply**

New York Mercantile Exchange, Inc. (“NYMEX” or “Exchange”) is intending to launch a Crude Oil Option on Semi-Annual Strip contract for trading on CME Globex and the NYMEX trading floor, and for clearing through CME ClearPort.

<b>Contract</b>	<b>Commodity Code</b>	<b>Rule Chapter</b>
Crude Oil Option on Semi-Annual Strip	6Y	1244

#### **I. Methodology and Data Sources: Key Components of Estimated Deliverable Supply**

In estimating deliverable supply for the WTI contract and relying on Commission long-standing precedent, the key component of estimated deliverable supply is the portion of typical production and supply stocks that could reasonably be considered to be reliably available for delivery. Most recently, the Commission stated in its final position limit rulemaking that:

[t]he term "deliverable supply" generally means the quantity of the commodity meeting a derivative contract's delivery specifications that can reasonably be expected to be readily available to short traders and saleable by long traders at its market value in normal cash marketing channels at the derivative contract's delivery points during the specified delivery period, barring abnormal movement in interstate commerce.<sup>1</sup>

Accordingly, there are three components NYMEX considered in updating the existing deliverable supply estimates of the Domestic Light Sweet Common Stream Crude Oil for the Cushing, Oklahoma delivery location:

- (1) Crude Oil Production;
- (2) Crude Oil Flows to the delivery area; and

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<sup>1</sup> Position Limits for Futures and Swaps, Unofficial Notice of Final Rulemaking, p. 28 (publication in Federal Register forthcoming).

(3) Crude Oil Storage in the delivery area.

**A. Crude Oil Production**

For production, NYMEX used information collected by the U.S. Department of Energy (“DOE”) Energy Information Administration (“EIA”), which is a definitive source for this information. Other information is, in part, available from other sources as well, particularly at the state level from either energy or tax revenue authorities. We have chosen to rely on the EIA data alone because it constitutes a single source, employing common standards, across each state. The EIA data are highly regarded but they do not provide sufficient breakdown on the quality characteristics of the oil production to determine the subset of total production that would qualify as Domestic Light Sweet under the terms of the futures contract.

**B. Crude Oil Flows to the Cushing Delivery Area**

To determine the flows of Domestic Light Sweet 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>2</sup>

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<sup>2</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 throughput, such departure seems to introduce no material impairment in determining a reasonable deliverable supply that supports the physical delivery needs of the

### **C. 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.

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%).

### **II. The Cushing Physical Delivery Mechanism: Scope of Deliverable Oil**

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.<sup>3</sup> Physical volumes delivered against the WTI Contract 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. Detailed information about the inflowing and outflowing pipelines is contained below in Table 2.

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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.

<sup>3</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.

Terminating obligations in the WTI Contract 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.

### **III. Physical Market Trading Structure and Term Contracts**

#### **A. *Physical Market Trading Structure***

Typically, there is a chronology of sales and purchases of crude oil in the onshore U.S. market that starts with a sale from producer and finishes with a purchase by an end-user to consume the crude oil. First-sales are from producers to aggregators or other middleman-type firms with delivery at the property where it is produced. The first-sale buyer transports oil downstream from the point of sale. Usually the first-sale buyer resells the oil to someone other than the end-user but sometimes sells directly to the end-user.

Final sales are sales to end-users who when they consume the oil remove it from the supply chain. End-users, however, also resell oil. Such end-user re-sales sometimes occur during the same commercial cycle in which they purchased it; other times, they occur during a later commercial cycle after the oil has been stored for a period of time. Like end-users, other buyers of oil also can either resell it immediately or store it first for some period of time and then resell it later. Thus, it is a common commercial practice that the first-sale and multiple subsequent re-sales occur in the same delivery cycle.

As discussed above, the Cushing delivery market is essentially a major reseller market where buyers either: resell the oil to someone else; store the oil and resell it later; store the oil and then consume it later; or transport it to consume it. The Cushing market is essentially downstream of first-sales. Most of the sales in the Cushing market are for resale and not for either storage or final-sale; in fact, the physical market in “WTI,” in which the standard form of delivery is within the pipeline system at Cushing, is

estimated to be 10-20 times the multiple of “WTI” oil that flows to Cushing. As such, it is clear that most sales are for resale because they constitute the selling, over-and-over (thus, *re-selling*), of the base physical oil that flows to Cushing. *Argus Media* documents about 5-8 times the flow in “WTI” sales but does not capture all of the sales.<sup>4</sup>

## **B. Term Contracts**

The Exchange has spoken with and interviewed a number of market participants regarding common commercial practices with respect to the use of term contracts in the U.S. onshore crude oil market.<sup>5</sup>

The responses we received were consistent and they can be summarized as follows:

- Almost all first-sales of production are sold term; as discussed in the previous section, typically for delivery on the property where it is produced (or nearest gathering pipeline or holding tank), and typically to middleman-firms or aggregators. These middleman-firms typically resell the crude oil to other middleman-firms (or participants performing that function) or to end-users. Typically, the first-sales contracts are “evergreen” contracts that can be discontinued by either party with notice. NYMEX is including evergreen contracts in the “term contracts” category.
- There are no restrictions applied to the resale of crude oil bought first-sale on a term basis from producers. In fact, that would clearly not be applicable because sales are typically to aggregators or others acting in a middleman-firm role with the expressed responsibility of reselling the oil.
- The Cushing market is downstream of first-sales; in other words, Cushing is downstream of any term sales from producers. Thus, even if barrels were sold term by the producer, in the Cushing market those barrels are re-sold and re-delivered by either the purchaser from the producer or a

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<sup>4</sup> The commercial market for physical delivery of light sweet crude oil in Cushing is a *secondary* (or *spot*) market mechanism. The number of physical deliveries in this market each month is 240 million barrels and higher (240,000 futures contracts equivalent and higher).

<sup>5</sup> These include: Plains All America, a major Midcontinent aggregator and marketer and operator of pipeline and storage terminals including in Cushing; Enterprise, a Midcontinent aggregator and marketer and operator of pipeline and storage terminals, including in Cushing; 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; a major international oil aggregator, marketer and refiner who is heavily active in the Cushing market and has requested anonymity; and an Energy Market Participant Group of several dozen market participants organized through Hunton & Williams LLP to discuss and comment on Regulatory issues.

subsequent purchaser from that original purchaser. The Cushing market mechanism, which consists of trading and physical delivery of light sweet crude oil, is a commercial secondary (or *spot*) market which is extremely liquid, comprised of broad participation and results in a substantial quantity of physical delivery of crude oil.

- Terms sales do not result in reducing the deliverable supply for Cushing. Market participants all agreed that crude oil purchased on a term sale is available for resale, including in the Cushing market, and that all market participants downstream of first-sales participate in the market for resale.
- Our sources expressly advised us that any production sold long-term was available for re-sale and this is especially the case in the Cushing market.

### **C. Data for Crude Oil Production**

In the five-year of 2008-2012, the average production of crude oil available to the U.S. Midcontinent<sup>6</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 1A in the Appendix provides monthly production data available to the U.S. Midcontinent from January 2008 through 2013. 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>7</sup>. EIA estimates that total U.S. oil production will increase from 6.89 million b/d in November 2012 to 8.15 million b/d in December 2014.

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<sup>6</sup> The production listed here includes: North Dakota, South Dakota, Montana, Wyoming, Colorado, New Mexico, Onshore Texas, Oklahoma, Kansas, Nebraska and Missouri.

<sup>7</sup> [http://www.eia.gov/forecasts/steo/special/pdf/2013\\_sp\\_02.pdf](http://www.eia.gov/forecasts/steo/special/pdf/2013_sp_02.pdf)

In addition to growing production over the past five years onshore in the U.S., production has also increased in Canada over the past decade. Canadian oil is not currently deliverable under the Domestic Light Sweet Crude Oil futures contract and we have not included any of it in any of our deliverable supply estimates. However, Canadian oil flows to the U.S. Midcontinent, including Cushing, and this flow is anticipated to increase over the foreseeable future. It is entirely foreseeable that, in the near future, industry practice will lead to Canadian Syncrude, which is sweet, becoming part of the Domestic Common Stream. In such a circumstance, it could be deliverable under the WTI Contract and become part of deliverable supply.

Production in Canada is expected to grow substantially over the next decade. Table 1B in the Appendix provides production data for Western Canada. Alberta is the predominant producer and the predominant Canadian source for oil that has been delivered to Cushing. Light sweet crude oil from Canada is predominantly synthetic crude and its production rose from about 500,000 barrels per day in 2005 to 804,000 barrels per day in 2012.

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.

#### ***D. 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>8</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 2010. Phase 2 of the Keystone pipeline, which extended the pipeline from Steele City to Cushing, was completed in February 2011.

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<sup>8</sup> [http://www.eia.gov/forecasts/steo/special/pdf/2013\\_sp\\_02.pdf](http://www.eia.gov/forecasts/steo/special/pdf/2013_sp_02.pdf)

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.<sup>9</sup> 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 2 in the Appendix provides specific details of pipeline flows into and out of Cushing. 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.

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<sup>9</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.



**E. Data for Crude Oil Storage in the Cushing Delivery Area**

Table 3 in the Appendix 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 record-high of 48.18 million barrels. 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.<sup>10</sup> 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

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<sup>10</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.

minimums.<sup>11</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.

With respect to commercial practices, the Exchange specifically sought whether storage customers were expressly allotting any stored barrels at Cushing for refining and was, therefore, unavailable for secondary market delivery. We consistently heard from market participants that was not the case; that barrels stored at Cushing are not specifically targeted for scheduled refining. Rather, refiners typically store barrels targeted for scheduled refining in tanks on the premises at their respective refineries or at other storage facilities. However, 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.

### **ANALYSIS OF DELIVERABLE SUPPLY**

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

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<sup>11</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.

averages for physical flows and storage, is 48,100 contract equivalents, which is our estimated deliverable supply.

Therefore, the current spot month position limit for the WTI Financial Futures contract of 3,000 contracts is equivalent to 6% of the total monthly deliverable supply. It is requested that the spot month position limit for the Crude Oil Option on Semi-Annual Strip contract aggregate into the WTI Financial Futures contract.

## APPENDIX

**Table 1A**  
**U.S. Midcontinent Oil Production<sup>1213</sup>**  
**(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
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

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<sup>12</sup> The production listed here includes North Dakota, South Dakota, Montana, Wyoming, Colorado, New Mexico, Onshore Texas, Oklahoma, Kansas, Nebraska and Missouri.

<sup>13</sup> [http://www.eia.gov/dnav/pet/pet\\_crd\\_crpdn\\_adc\\_mbb1\\_m.htm](http://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbb1_m.htm)

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
Feb-2011	67,222
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
<b>Average</b>	<b>75,487</b>

**Table 1B**  
**Western Canada Crude Oil Production**  
**(Thousand Barrels per Day)<sup>14</sup>**

CONVENTIONAL	2008	2009	2010	2011	2012
<b>Total Light and Medium</b>	589	563	569	606	702
<b>Net Conventional Heavy to Market</b>	350	308	309	312	323
<b>TOTAL CONVENTIONAL</b>	<b>939</b>	<b>871</b>	<b>878</b>	<b>917</b>	<b>1025</b>
OIL SANDS					
<b>Upgraded Light (Synthetic)<sup>1</sup></b>	557	646	660	705	804
<b>Oil Sands Heavy<sup>2</sup></b>	916	996	1,162	1,296	1,310
<b>TOTAL OIL SANDS AND UPGRADERS</b>	<b>1,473</b>	<b>1,642</b>	<b>1,822</b>	<b>2,001</b>	<b>2,115</b>
Total Light Supply	1,146	1,209	1,229	1,311	1,506
Total Heavy Supply	1,266	1,304	1,471	1,608	1,633
<b>WESTERN CANADA OIL SUPPLY</b>	<b>2,412</b>	<b>2,513</b>	<b>2,700</b>	<b>2,918</b>	<b>3,139</b>

Notes:

1. Includes upgraded conventional

2. Includes: a) imported condensate b) manufactured diluent from upgraders and c) upgraded heavy volumes coming from upgraders

<sup>14</sup> <http://www.capp.ca/forecast/Pages/default.aspx>

**Table 2  
Crude Oil Flows to Cushing  
(Barrels/Day)<sup>15</sup>**

<b>Outgoing Pipelines</b>	<b>Capacity (B/D)</b>	<b>Owner</b>
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
<b>TOTAL ESTIMATE</b>	<b>1.455 Million B/D</b>	

<b>Incoming Pipelines</b>	<b>Capacity</b>	<b>Owner</b>	<b>Estimated Flows (in Barrels/Day)</b>
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)
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)
<b>TOTAL ESTIMATE</b>	<b>1.820 Million B/D</b>		<b>1,125,000 to 1,275,000</b>

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

<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.



**Table 3 Cushing Storage<sup>16</sup>**

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

<sup>16</sup> [http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=W\\_EPC0\\_SAX\\_YCUOK\\_MBBL&f=W](http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=W_EPC0_SAX_YCUOK_MBBL&f=W)

	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
	Dec	30,339
2012	Jan	29,037
	Feb	32,237
	Mar	38,651
	Apr	41,619
	May	45,725
	Jun	47,596
	Jul	46,162
	Aug	44,895
	Sep	43,874
	Oct	43,912
	Nov	44,657
	Dec	48,177
<b>Average</b>		<b>32,486</b>