

SUBMISSION COVER SHEET

IMPORTANT: Check box if Confidential Treatment is requested

Registered Entity Identifier Code (optional): 17-429

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): 12/1/2017 **Filing Description:** Initial Listing of the WTI vs. Dubai Crude Oil (Platts) Futures Contract

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

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:



Christopher Bowen
Managing Director and Chief Regulatory Counsel
Legal Department

December 1, 2017

VIA ELECTRONIC PORTAL

Mr. Christopher J. Kirkpatrick
Office of the Secretariat
Commodity Future 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 the WTI vs. Dubai Crude Oil (Platts) Futures Contract. NYMEX Submission No. 17-429

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 initial listing of the WTI vs. Dubai Crude Oil (Platts) Futures contract (the “Contract”) for trading on the CME Globex electronic platform, and for submission for clearing via CME ClearPort as noted in the table below, effective on Sunday, December 17, 2017 for trade date Monday, December 18, 2017 as noted in the table below.

Contract Title	WTI vs. Dubai Crude Oil (Platts) Futures
Commodity Code	DCW
Rulebook Chapter	465
Contract Size	1,000 barrels
Price Quotation	U.S. dollars and cents per barrel
Minimum Price Fluctuation	\$0.001 per barrel
Value per Tick	\$1.00
Settlement Method	Financial
Listed Contracts	Monthly contracts listed for the current year and the next five years. Monthly contracts for a new calendar year will be added following termination of trading in the December contract of the current year.
Floating Price	The Floating Price for each contract month is the arithmetic average of the Light Sweet Crude Oil Futures first nearby contract settlement price minus the arithmetic average of the mid-point between the high and low quotations from Platts Crude Oil

	Marketwire for the Dubai front month price for each business day during the contract month (using Non-common pricing).
First Listed Month	January 2018
Termination of Trading	Trading shall cease on the last business day of the contact month
Block Trade Minimum Threshold	10 contracts
CME Globex Matching Algorithm	FIFO

The Exchange is also notifying the CFTC that it is self-certifying the insertion of the terms and conditions for the new contracts 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 new contract. 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. Please see Exhibit B, attached under separate cover.

NYMEX is also self-certifying block trading on the Contracts with a minimum block threshold of ten (10) contracts. This level is consistent with other similar NYMEX contracts.

The Exchange reviewed the designated contract market core principles (“Core Principles”) as set forth in the Commodity Exchange Act (“CEA”) and staff identified that the Contract may have some bearing on the following Core Principles:

Compliance with Rules: Trading in the Contract will be subject to the rules in Rulebook Chapter 4 which includes prohibitions against fraudulent, noncompetitive, unfair and abusive practices. Additionally, trading will also be subject to the full range 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 this 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.

Contracts Not Readily Subject to Manipulation: The Contract is based on cash price series that are reflective of the underlying cash market and are commonly relied on and used as reference prices by cash market brokers and commercial market participants.

Prevention of Market Disruption: Trading in the Contract will be subject to Rulebook Chapter 4, 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 Contract will be subject to extensive monitoring and surveillance by CME Group’s Market Regulation Department.

Position Limitations or Accountability: The speculative position limits for the Contract as demonstrated in this submission are consistent with the Commission’s guidance.

Emergency Authority: As with all CME Group futures and options products, the Exchange shall have full authority to act appropriately and as necessary in emergency situations.

Availability of General Information: The Exchange will publish on its website information in regard to contract specifications, terms, and conditions, as well as daily trading volume, open interest, and price information for the Contract.

Daily Publication of Trading Information: The Exchange will publish contract trading volumes, open interest levels, and price information daily on its website and through quote vendors for the Contract.

Execution of Transactions: The Contract will be listed for trading on the CME Globex electronic trading and for clearing through CME ClearPort. The CME Globex electronic trading venue provides for competitive and open execution of transactions. CME Globex affords the benefits of reliability and global connectivity.

Trade Information: All requisite trade information for the Contracts will be included in the audit trail and is sufficient for the Market Regulation Department to monitor for market abuse.

Financial Integrity of Contracts: The Contract will be cleared by the CME Clearing House, a derivatives clearing organization registered with the Commodity Futures Trading Commission and subject to all CFTC regulations related thereto.

Protection of Market Participants: Rulebook Chapters 4 and 5 set forth multiple prohibitions that preclude intermediaries from disadvantaging their customers. These rules apply to trading in all of the Exchange's competitive trading venues.

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 the contract 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 the product are identified.

Dispute Resolution: Disputes with respect to trading in the 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.

Pursuant to Section 5c(c) of the Act and CFTC Regulation 40.2(a), the Exchange hereby certifies that listing 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 e-mail CMEGSubmissionInquiry@cmegroup.com.

Sincerely,

/s/Christopher Bowen
Managing Director and Chief Regulatory Counsel

Attachments: Exhibit A: NYMEX Rulebook Chapter
Exhibit B: Position Limit, Position Accountability, and Reportable Level Table in
Chapter 5 of the NYMEX Rulebook (attached under separate cover)
Exhibit C: NYMEX Rule 588.H. – (“Globex Non-Reviewable Trading Ranges”)
Exhibit D: Cash Market Overview and Analysis of Deliverable Supply

Exhibit A
NYMEX Rulebook Chapter

Chapter 465
WTI Crude Oil vs. Dubai Crude Oil (Platts) Futures

465100. SCOPE OF CHAPTER

The provisions of these rules shall apply to all 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.

465101. CONTRACT SPECIFICATIONS

The Floating Price for each contract month is the arithmetic average of the Light Sweet Crude Oil Futures first nearby contract settlement price minus the arithmetic average of the mid-point between the high and low quotations from Platts Crude Oil Marketwire for the Dubai front month price for each business day during the contract month (using Non-common pricing).

465102. TRADING SPECIFICATIONS

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

465102.A. Trading Schedule

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

465102.B. Trading Unit

The contract quantity shall be 1,000 U.S. barrels. Each contract shall be valued as the contract quantity (1,000) multiplied by the settlement price.

465102.C. Price Increments

Prices shall be quoted in U.S. dollars and cents per barrel. The minimum price fluctuation shall be \$0.001 per barrel. There shall be no maximum price fluctuation.

465102.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.

465102.E. Termination of Trading

Trading terminates on the last business day of the contract month.

465103. FINAL SETTLEMENT

Delivery 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 contract month.

465104.

DISCLAIMER

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Exhibit B

Position Limit, Position Accountability, and Reportable Level Table in Chapter 5

of the NYMEX Rulebook

(Attached under separate cover.)

Exhibit C

NYMEX Rule 588.H. – (“Globex Non-Reviewable Trading Ranges”) Table
(Additions are underscored.)

Instrument Name	Globex Symbol	Globex Non-Reviewable Ranges (NRR)	NRR: Globex Format	NRR: Ticks
<u>WTI vs. Dubai Crude Oil (Platts) Futures</u>	<u>DCW</u>	<u>\$1.00 per barrel</u>	<u>1000</u>	<u>1000</u>

Exhibit D

Cash Market Overview and Analysis of Deliverable Supply

Introduction

Exchange staff conducted a review of the underlying cash markets and deliverable supply of U.S. and Middle East crude oil to determine the position limits for the WTI vs. Dubai Crude Oil (Platts) Futures contract.

In estimating deliverable supply for the WTI Crude Oil Futures, the Exchange relied on long-standing precedent, which provides that the key component in estimating deliverable supply is the portion of typical production and supply stocks that could reasonably be considered to be readily available for delivery.

For the Dubai Crude Oil (Platts) Futures, the Exchange based its analysis of the deliverable supply, that is eligible for inclusion in Platts' assessment, primarily on data available in the U.S. Energy Information Administration, and supplemented information published by Joint Oil Data Initiative (JODI) and producers.

The Commission defines deliverable supply as 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.¹

Cash Market Overview

WTI Crude Oil Market

I. Data Source for West Texas Intermediate Light Sweet (WTI) Crude Oil

The Exchange considered three components in evaluating deliverable supply estimates of the Domestic Light Sweet Common Stream Crude Oil for the Cushing, Oklahoma delivery location of the Light Sweet Crude Oil Futures contract:

- (1) Crude Oil Production;
- (2) Crude Oil Flows to the delivery area; and
- (3) Crude Oil Storage in the delivery area.

(1) Crude Oil Production

While crude oil production information is, in part, available from other sources, particularly at the state level from energy or tax revenue authorities, the Exchange determined to use production information collected by the U.S. Department of Energy ("DOE") Energy Information Administration ("EIA"). Specifically, the Exchange has chosen to rely on the EIA production data because it constitutes a single source, employing common standards, across all states. 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.

(2) 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

¹ See Appendix C to 17 CFF part 38 http://www.ecfr.gov/cgi-bin/text-idx?SID=74959c3dbae469e2efe0a42b45b8dfae&mc=true&node=ap17.1.38_11201.c&rgn=div9

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.

(3) 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 crude oil stored at Cushing qualified as Domestic Light Sweet Common Stream (to be conservative, the Exchange will discount 40% of inventory in its calculation of deliverable supply estimates).

II. The Cushing Physical Delivery Mechanism: Scope of Deliverable Crude 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.² Physical volumes delivered against the Light Sweet Crude Oil Futures 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 of Appendix I.

Terminating obligations in the Light Sweet Crude Oil Futures contract are fulfilled by delivering any of six “Domestic Production Streams” of crude oil: (i) West Texas Intermediate (“WTI”); (ii) Low Sweet Mix (“Scurry Snyder”); (iii) New Mexican Sweet; (iv) North Texas Sweet; (v) Oklahoma Sweet; or (vi) 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.” In addition, the Domestic Common Stream includes a fungible blend of light sweet streams produced in the U.S. shale oil areas, including the Bakken, Niobrara, and Permian producing areas. Furthermore, each of these light sweet crude oil streams is fungibly blended and included as part of the “Domestic Common

² Three of the major sources for the cash-market information provided herein are 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.

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

(1) 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.³

(2) 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.⁴ 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.

³ 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 or higher (240,000 futures contracts equivalent or higher).

⁴ These include: Plains All America, a major 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; and an Energy Market Participant Group of several dozen market participants organized through Hunton & Williams LLP to discuss and comment on Regulatory issues.

- 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 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.
- Some end-user refiners in the Cushing market purchase specific light sweet crude oil streams, such as Bakken or Niobrara Light Sweet crude oil, on a term basis, and these refiners tend to segregate a portion of the specific light sweet crude streams for processing at their refineries. Based on conversations with refiners in the Cushing market, the Exchange estimates that approximately 10% of the deliverable supply for Cushing is segregated and designated for use by end-user refiners, and therefore is not available for re-sale in the Cushing market. Consequently, the Exchange will reduce its estimate of deliverable supply in Cushing by 10% to account for the specific light sweet streams that are designated for processing and segregated by the end-user refiners.
- Our sources expressly advised us that any production sold long-term was available for potential re-sale, such as during periods of refinery maintenance, and this is especially in the Cushing market.

IV. Crude Oil Production and Storage in Cushing Area

(1) Crude Oil Production

The production area that supplies crude oil to Cushing via pipeline and rail is comprised of the following eight (8) states: North Dakota, Montana, Wyoming, Colorado, New Mexico, Onshore Texas, Oklahoma, and Kansas.

In the three-year period of 2013 through 2015, the average production of crude oil available in the eight states was approximately 5.5 million barrels per day. 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% or higher— i.e., 2.7 million barrels per day. The 2.7 million barrels per day of crude oil production is equivalent to approximately 80 million barrels per month, or 80,000 futures contracts equivalents (contract size: 1,000 barrels).

Table 1 in the Appendix provides annual production data available for production in the eight states that supply the Cushing crude oil market for the period of 2013 through 2015. The data show that production has been steadily growing in recent years and this trend is expected to continue. As indicated above, the production data are provided not as direct inputs to deliverable supply, but to demonstrate that production levels are more than sufficient to support the actual flows of deliverable product to the delivery location.

(2) 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 EIA⁵. The key development was the construction of the 590,000 b/d TransCanada Keystone pipeline that originates in Hardisty, Alberta, Canada. Until mid-2012, there was only one pipeline that could deliver crude oil from the Midwest to the Gulf Coast. The 96,000-b/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 3.0 million b/d of inflow pipeline capacity to Cushing and 2.7 million barrels per day of outflow capacity. In addition, 87.7 million barrels of storage capacity exists in the Cushing area which continues to grow steadily.

⁵ http://www.eia.gov/forecasts/steo/special/pdf/2013_sp_02.pdf

The Exchange collects inbound and outbound Cushing crude oil flows periodically but not on an on-going or scheduled basis as such information is proprietary and non-public. Based on information provided by pipeline and storage terminal operators in Table 2 in the Appendix, as of March 2015, actual flows of crude oil to Cushing have ranged from 1.6 million to 1.8 million barrels per day, with Domestic Light Sweet Common Stream Crude Oil averaging between 920,000 and 1,000,000 barrels per day.⁶ On a 30-day monthly basis, actual flows of Domestic Light Sweet Common Stream Crude Oil compute into 27.6 million to 30.0 million barrels per month or 27,600 to 30,000 Light Sweet Crude Oil futures contract equivalents.

As of February 2013, the previous time the Exchange collected such information, Domestic Light Sweet Common Stream Crude Oil flows into Cushing averaged between 665,000 and 750,000 barrels per day as illustrated in Table 3 below. On a 30-day monthly basis, actual flows of Domestic Light Sweet Common Stream Crude Oil ranged from 19.95 million to 22.5 million barrels per month or 19,950 to 22,500 futures contract equivalents. Given that the Exchange only collects such information on a periodic basis, the Exchange is unable to provide a three-year average of Domestic Light Sweet Common Stream Crude Oil flows into Cushing. As such, the Exchange determined to average the 2013 and 2015 estimated flows data collected. The average of the ranges for the 2013 and 2015 Domestic Light Sweet Common Stream Crude Oil flows data into Cushing are 23,775 to 26,250 contract equivalents. The midpoint of the average of the ranges is approximately 25,000 contract equivalents.

(3) Crude Oil Storage in the Cushing Delivery Area

As of September 30, 2015, EIA reported that shell storage capacity at Cushing was 87.7 million barrels and working capacity was 73.0 million barrels.⁷ Currently, there is substantial excess working capacity at Cushing (nearly 10 million barrels). Finally, it should be noted that, at least on a temporary basis, 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).

Table 4 below provides monthly averages of weekly Cushing stocks for the period beginning January 2013 through December 2015 as published by the EIA. During that time period, inventories averaged over 41 million barrels and ranged from about 19 million to 61 million barrels. 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 discussed above, the Exchange estimated that approximately 60% of the total oil stored at Cushing qualified as Domestic Light Sweet Common Stream Crude Oil. Based on the foregoing, for the 2013 – 2015 period, the monthly average Domestic Light Sweet Common Stream Crude Oil stored at Cushing was approximately 24.9 million barrels or 24,900 futures contract equivalents.

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.⁸ This converts into discounting an estimated 1.7 million barrels of Domestic Light Sweet crude oil based on the three-year average storage level (or 1,700 contract equivalents). In applying a discount of 6.75% to

⁶ The sources were: Plains All America, 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.

⁷ <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.

⁸ 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.

account for operational minimums, average monthly Domestic Light Sweet Common Stream Crude Oil for the 2013 – 2015 period is further reduced to approximately 23,200 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. Thus, the Exchange determined to further reduce the average monthly Domestic Light Sweet Common Stream crude oil stored at Cushing to account for this *contingency storage* in our estimate of deliverable supply. We estimate this quantity to be 2 million barrels (or 2,000 contract equivalents) of Domestic Light Sweet crude oil. Therefore, for the 2013 – 2015 period, the Exchange estimates stored product at Cushing (adjusted for quality specifications, operational minimums and contingency storage) and which is readily available for delivery against the Light Sweet Crude Oil futures contract to be approximately 21,200 contract equivalents.

Dubai Crude Oil Market

I. Data and Price Sources

(1) Price Source: Platts

The price reporting service used for the final settlement price in the Dubai crude oil market is Platts. Platts is one of the major price reporting services that are used in the over-the-counter (OTC) market for pricing contracts and the methodology utilized is well-known in the oil industry. Platts has a long-standing reputation in the industry in publishing price benchmarks that are fair and not manipulated. Their pricing methodology is derived from telephone surveys and electronic data collected from multiple market participants to determine market value. NYMEX has entered into a license agreement with Platts to utilize its pricing data.

(2) Data Source: EIA / JODI

The Exchange determined to use production information collected by the U.S. Department of Energy (“DOE”) Energy Information Administration (“EIA”), where data is available to March 2017. Specifically, the Exchange has chosen to rely on the EIA production data because it constitutes a single source, employing common standards, across all states. The EIA data are highly regarded but they do not provide sufficient breakdown on the supply of crude oil that is deliverable into the Platts Dubai crude oil assessment (Platts code: Dubai M1 PCAAT00). The Exchange has estimated the proportions to use in the Deliverable Supply, based on other evidence published by various producers.

Crude oil production information is available from other sources, particularly the Joint Oil Data Initiative (JODI), which was launched in April 2001 by six international organizations (Asia Pacific Economic Cooperation (APEC), Statistical Office of the European Communities (Eurostat), International Energy Agency (IEA), Latin American Energy Organization (OLADE), Organization of the Petroleum Exporting Countries (OPEC), United Nations Statistics Division (UNSD)), provides a reliable, freely accessible and comprehensive database of energy statistics. However, as of the date of this submission, the data from JODI only updated to 2015. The Exchange has used this source as a cross check against the calculations carried out using the EIA data.

II. Production of Crude Oil in Dubai, Oman, Upper Zakum and Al-Shaheen

Dubai is the third largest oil benchmark and it incorporates supply from the Middle East. Specifically, it includes the delivery of several crude streams from the United Arab Emirates, Oman and Qatar as the crudes from these countries can be traded in the spot market. Platts Dubai crude oil is one of the primary crude oil benchmarks for the Middle East and Asia, and is used by regional producers in the Middle East such as Saudi Aramco and by consumers and refiners across Asia to index their long-term contracts. In addition to futures contracts, there is an active OTC market in Dubai crude oil contracts.

The specific grades, which underpin the Platts Dubai assessment were previously Dubai itself, Oman and Upper Zakum. Effective January 2016, Platts also added Murban and Al-Shaheen as alternative crudes that can be delivered into its Dubai and Oman benchmarks. The Al-Shaheen can be delivered as an alternative into the Dubai benchmark whereas Murban can be delivered as an alternative crude oil to Oman. Due to the quality variance within the basket of crudes, Platts also added a Quality Premium to compensate the seller for Murban crude (due to its higher quality). The producers use the price of Dubai (and Oman) crude oil in their Official Selling Prices for long-term contracts and for Asian customers, the Official Selling Price is a split between Platts Dubai and Platts Oman crude oil. There is an active Futures and OTC market in Dubai crude oil.

Platts reflects the value of crude as expressed through bids, offers and trading activity in partial cargo sizes of 25,000 barrels each, with a full cargo of 500,000 barrels to be delivered when the same buyer and seller have traded 20 partials together.

The US Energy Information Administration ('EIA') publishes production data for countries in the Middle East, including Oman, Qatar and the United Arab Emirates. This data is shown in Table 5 in the Appendix, and summarized below.

Country	Average January 2014 – March 2017 (thousand barrels per day)
United Arab Emirates	3,009
Qatar	662
Oman	977
Total	5,508

The five oil fields which contribute to Platts' Dubai assessment are the Dubai, Upper Zakum and Murban fields from the United Arab Emirates, the Al Shaheen field from Qatar, and the oil fields in Oman.

No formal data is published by EIA in respect of the Upper Zakum, Murban and Al Shaheen crude oil fields, and the production data for Qatar are for all oil liquids. However, Energy Intelligence does publish crude oil production data for Abu Dhabi and Qatar, which are available via Bloomberg, from which the crude oil production at the aforementioned three fields can be estimated.

(1) Oman Crude Oil

According to the data from the EIA, the average crude oil production from Oman for the three-year period from 2014 to 2017 was 977,000 barrels per day (b/d), as shown in Table 5. The Omani Ministry of Oil and Gas puts the production levels at closer to 1-mil b/d and the JODI data from November 2015 to February 2016 also support this figure.

At present, approximately 80% of total Oman crude oil production is controlled by the Petroleum Development Oman ("PDO"), which is a joint venture owned 60% by the Oman government, 34% by Shell, 4% by Total, and 2% by Partex. In addition, Occidental Petroleum and other private oil companies have extensive oil production in Oman. Accordingly, there are multiple producers of Oman crude, rather than a single National Oil Company.

Oman is not a member of OPEC, so is not subject to OPEC production, destination or end-user restrictions. The Oman government sells most of its equity share of production through term contracts, and some of

these term cargoes are resold in the spot market. The remaining share of Oman crude oil production that is owned by private oil companies is typically sold in the spot market. Thus, there is robust trading activity in the Oman crude oil spot market. The standard cargo size is 500,000 barrels, and there are typically over 50 cargoes loaded per month exported from Oman's port, Mina al Fahal.

(2) Dubai Crude Oil

EIA publishes production statistics for Dubai, Abu Dhabi and the UAE, which are available in Bloomberg and shown in Table 6. The three-year average production from the Dubai oilfield is 26,000 b/d.

(3) Upper Zakum

ExxonMobil formed a joint venture Zakum Development Company with Abu Dhabi National Oil Company and Japan Oil Development Company Limited to operate the Upper Zakum field. According to ExxonMobil, the current production of the Upper Zakum field is at 650,000 barrels per day⁹, according to ADNOC and ExxonMobil.

(4) Murban

The average production at the Murban oilfield is estimated based on three sources. EIA publishes statistics for the Abu Dhabi oil field, whose average production from 2014 to 2017 is 3.1 million b/d. Production from the Abu Dhabi oil field includes the Murban, Upper Zakum and non-benchmark grade Das Island. Production from Das Island is around 600,000 b/d¹⁰ and Upper Zakum is around 650,000 b/d. As such, one estimate of the Murban production is 1.85 million (3.1 – 0.6 – 0.65) b/d.

According to Platts¹¹, the total production at the three fields of Dubai, Oman, Upper Zakum is around 1.7 million bpd, and the total production of the five fields, including Al Shaheen and Murban, is around 3.6 million bpd. And according to recent industry reports¹², production at the Al Shaheen field is around 300,000 bpd. A second estimate of the Murban production is 1.6 million (3.6 – 1.7 – 0.3 million) b/d. Total is a 10% stakeholder in Murban and as of 2015 production is 1.6 million b/d with plans to increase to 1.8 million b/d by 2017¹³. This is a third source of estimate.

Based on the three estimates, the average production of the Murban oilfield is deemed to be 50% of the average production of the Abu Dhabi reported by EIA, at 1.538 thousand b/d.

(5) Al Shaheen

Denmark's Maersk is a partner in the Qatari Al Shaheen field and has published a production figure of 300,000 b/d¹⁴. However, Qatar Petroleum announced that it had selected a different operator to run the Al-Shaheen field from July 2017. The field will be run jointly between Total and Qatar Petroleum with the goal of maintaining output at the 300,000 b/d level.

⁹ ExxonMobil – Upper Zakum production: <http://corporate.exxonmobil.com/en/company/worldwide-operations/crude-oils/upper-zakum>

¹⁰ Platts subscriber note – Das Blend <http://www.platts.com/subscriber-notes-details/21438406>

¹¹ <https://www.platts.ru/IM.Platts.Content/MethodologyReferences/MethodologySpecs/Dubai-Crude-FAQ.pdf>

¹² <http://www.offshore-technology.com/projects/alshaheen/> and <http://www.ogj.com/articles/2017/07/total-qp-combine-preparing-al-shaheen-development.html>

¹³ Total – Murban Crude oil: <http://www.total.com/en/media/news/press-releases/abu-dhabi-total-awarded-10-new-40-year-adco-concession>

¹⁴ Maersk Oil - Al Shaheen crude <http://www.maerskoil.com/media/press-releases/maersk-oil-to-leave-qatar-in-2017-following-al-shaheen-decision>

EIA publishes production statistics for Qatar, which averaged 662 thousand b/d as shown in Table 6. The Qatari production statistics include Al Shaheen and non-benchmark grade Qatar Marine. The Exchange has applied a split of 50% for Al-Shaheen and 50% for Qatar Marine, to the EIA data and arrived at an average production of 331 thousand b/d for Al Shaheen.

Analysis of Deliverable Supply

In its November 18, 2011, final position limit rulemaking, the Commission defined deliverable supply as “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.”¹⁵

In respect of the WTI crude oil market, based on the above analysis, the Exchange determined at this time to base its estimates of deliverable supply on the sum of:

- Storage: 21,200 contract equivalents (which represents the average monthly inventory for the 2013 – 2015 period adjusted to account for quality specifications, operational minimums and contingency storage); and
- Inflow: 25,000 contract equivalents (which represents the midpoint of the average of the ranges of the 2013 and 2015 Domestic Light Sweet Common Stream Crude Oil flows into Cushing).

Additionally, and as noted in the above analysis, the Exchange shall apply a 10% haircut to the sum of inventory and flows into Cushing in order to discount segregated barrels that may be designated for processing by end-user refiners, and typically not available for re-sale in the Cushing market.

Based on the foregoing, the Exchange estimates deliverable supply of crude oil deliverable against the **WTI** leg of the futures contract at approximately 41.6 million barrels per calendar month, which equates to **41,600** futures contract equivalents per month. The current spot month position limit of 3,000 contracts represents **7.2%** of the estimated monthly deliverable supply.

In respect of the Dubai crude oil market, the production data available for the five sources of crude oil that are eligible for inclusion in Platts’ Dubai crude oil price assessment result in a combined production volume of 3,542 thousand barrels per day.

The method of estimation, sources of information, and the calculations are in Table 6 and Table 7 in the Appendix, and the results are summarized below.

Oil Field	Country	Method of Estimation ¹⁶	Thousand barrels per day
Dubai	UAE	Data directly available	28
Upper Zakum	UAE	21% of Abu Dhabi	646
Murban	UAE	50% of Abu Dhabi	1,538
Al Shaheen	Qatar	50% of Qatar	331
Oman	Oman	Data directly available	999
Estimated Total Contribution to Platts Dubai Assessment			3,542

¹⁵ 17 CFR 1,150-51 (2011), <http://www.cftc.gov/ucm/groups/public/@lrfederalregister/documents/file/2011-28809a.pdf>

¹⁶ Based on the average estimated production volumes from January 2014 to July 2017. Details in the Appendix.

In addition, Platts pointed out that while production in the five fields is around 3.6 million bpd, about 2.4 million bpd are available to be freely traded.¹⁷ On this basis, the Exchange shall apply a 33% haircut to the volume for purposes of assessing deliverable supply. This equates to 2,373 thousand barrels per day, or 71.2 million barrels per calendar month.

Based on the foregoing, the Exchange estimates deliverable supply of crude oil deliverable against the **Dubai** leg of the futures contract at approximately **71,200** futures contract equivalents per month. The current spot month position limit of 5,000 contracts represents **7.0%** of the estimated monthly deliverable supply.

¹⁷ <https://www.platts.ru/IM.Platts.Content/MethodologyReferences/MethodologySpecs/Dubai-Crude-FAQ.pdf>

Table 1
U.S. Crude Oil Production¹⁸
For Eight States that Supply Cushing, Oklahoma
(Thousand Barrels per Day)

Year	Crude Oil Production (Thousand Barrels per Day)
2013	4,542
2014	5,627
2015	6,241
Average	5,470

Table 2
Crude Oil Flows to Cushing (as of March 2015)
(Barrels/Day)¹⁹

Incoming Pipelines	Capacity	Owner	Estimated Flows (in Barrels/Day)
Keystone XL (from Steele City, NE)	575,000	Transcanada	200,000 - 250,000 BD (Heavy sour)
Basin Pipeline (Permian)	450,000	Plains	250,000 (80% WTI)
Centurion North Pipeline (Permian)	120,000	Occidental	95,000 - 100,000 (100% WTI)
Spearhead Pipeline (Canada)	210,000	Enbridge	150,000 - 175,000 (Canadian sour)
Flanagan South (Canada/Bakken)	585,000	Enbridge	400,000 - 450,000 (10% WTI, 90% Sour)
White Cliffs Pipeline (Niobrara)	150,000	Rose Rock	100,000 - 120,000 (100% WTI)
Plains Cashion, OK Pipeline	100,000	Plains	80,000 (100% WTI)
Mississippi Lime Pipeline	175,000	Plains	110,000 (100% WTI)
Pony Express Pipeline (Niobrara)	320,000	Tallgrass	180,000 – 200,000 (100% WTI)
Hawthorn (Stroud to Cushing)	90,000	Hawthorn	20,000 – 25,000 (100% WTI)
Great Salt Plains	30,000	JP Energy	15,000 – 20,000 (100% WTI)
Northern Cimarron	30,000	Rose Rock	15,000 – 20,000 (100% WTI)
Midcontinent Pipeline	30,000	Sunoco Logistics	25,000 – 30,000 (100% WTI)
Glass Mountain Pipeline	140,000	Rose Rock	40,000 – 50,000 (100% WTI)

TOTAL In-Bound Capacity 3.0 Million B/D Capacity

WTI Flow: 920,000 – 1,000,000 B/D

Outgoing Pipelines	Capacity (B/D)	Owner
Seaway Pipeline	850,000	Enterprise
Keystone MarketLink	700,000	Transcanada
BP#1 (to Chicago)	180,000	BP
Occidental Centurion South	60,000	Occidental
Ozark (to Wood River, IL)	235,000	Enbridge
Osage (to Eldorado, KS)	150,000	Magellan/NCRA
Coffeyville CVR pipeline	110,000	CVR Energy
Phillips (to Ponca City, OK)	122,000	ConocoPhillips
Phillips (to Borger, TX)	59,000	NuStar
PAA Red River Pipeline	30,000	Plains All America
Sun (twin lines to Tulsa)	70,000	Sunoco
PAA Cherokee	50,000	Plains
West Tulsa (to Tulsa)	50,000	Enbridge
Eagle (to Ardmore)	20,000	Blue Knight
Magellan Tulsa	30,000	Magellan
Diamond Pipeline (to Memphis)	200,000	Plains (in 2016)

TOTAL Out-bound Capacity 2.7 Million B/D

¹⁸ The production listed here includes North Dakota, Montana, Wyoming, Colorado, New Mexico, Onshore Texas, Oklahoma, and Kansas. The web link is: http://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbbldp_a.htm

¹⁹ Sources: Plains All American Pipeline Company, JSK Consulting, and other industry sources.

Table 3
Crude Oil Flows to Cushing (as of February 2013)
(Barrels/Day)²⁰

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)
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		WTI Flow: 665,000 – 750,000 B/D

²⁰ Sources: Plains All American Pipeline Company, JSK Consulting, and other industry sources.

Table 4
Cushing Storage²¹
Average of Weekly Stocks (in Thousand Barrels)

Year	Month	Stock
2013	Jan	51,253
	Feb	50,711
	Mar	49,567
	Apr	50,551
	May	49,916
	Jun	49,193
	Jul	44,798
	Aug	37,432
	Sep	33,254
	Oct	33,618
	Nov	39,174
	Dec	40,412
2014	Jan	41,058
	Feb	35,099
	Mar	29,081
	Apr	26,474
	May	22,750
	Jun	21,226
	Jul	19,480
	Aug	19,496
	Sep	20,263
	Oct	20,274
	Nov	23,559
	Dec	28,080
2015	Jan	36,601
	Feb	46,689
	Mar	55,300
	Apr	61,381
	May	60,368
	Jun	57,183
	Jul	57,312
	Aug	57,389
	Sep	54,483
	Oct	53,569
	Nov	57,549
	Dec	61,150
Three-Year Average		41,547

²¹ http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=W_EPC0_SAX_YCUOK_MBBL&f=W

Table 5
UAE, Oman and Qatar Total Production
Average of Monthly Production (in Thousand Barrels per Day)
Data Source: Energy Information Administration (EIA)

	2014	2015	2016	2017 Jan-Mar	Average Jan'14-Mar'17
Qatar (all liquid fuels)	1,541	1,532	1,523	1,408	1,522
Oman	943	982	1,007	968	977
United Arab Emirates	2,983	3,019	3,105	3,047	3,009
Total	5,377	5,533	5,635	5,423	5,508

Table 6
UAE, Oman and Qatar Production from Selected Oil Fields
Average Monthly Production (in Thousand Barrels per Day)
Data Source: EIA / Bloomberg

Production	Qatar	Oman	UAE ²²	Dubai	Abu Dhabi
Bloomberg Code	PIWOQATR	PIWBOMAN	PIWOTUAE	PIWODUBI	PIWOABUD
Mar-17	621	968	2,973	26	2,947
Feb-17	545	970	2,995	26	2,969
Jan-17	615	966	3,060	26	3,034
Dec-16	643	966	3,220	24	3,196
Nov-16	646	1,015	3,195	25	3,170
Oct-16	639	1,012	3,188	25	3,163
Sep-16	610	1,003	3,186	25	3,161
Aug-16	643	1,013	3,154	25	3,129
Jul-16	677	1,011	3,181	26	3,155
Jun-16	662	1,012	3,168	26	3,142
May-16	671	1,000	3,107	26	3,081
Apr-16	625	994	2,870	27	2,843
Mar-16	699	976	2,909	27	2,882
Feb-16	692	1,014	2,780	27	2,753
Jan-16	637	1,006	3,133	27	3,106
Dec-15	632	1,007	2,993	25	2,968
Nov-15	683	996	3,033	26	3,007
Oct-15	660	993	2,971	26	2,945
Sep-15	663	990	3,002	26	2,976
Aug-15	643	1,001	3,027	26	3,001
Jul-15	613	1,001	3,061	27	3,034
Jun-15	664	993	2,974	27	2,947
May-15	642	975	3,019	27	2,992
Apr-15	635	960	2,931	27	2,904
Mar-15	708	977	2,907	27	2,880

²² [Bloomberg provides production data for UAE total, and also for the Dubai and Abu Dhabi production fields. The underlying data source is the U.S. Energy Information Administration.](#)

Feb-15	676	958	2,980	27	2,953
Jan-15	674	960	2,960	28	2,932
Dec-14	684	932	3,156	28	3,128
Nov-14	681	921	2,938	29	2,909
Oct-14	680	938	2,908	29	2,879
Sep-14	690	955	3,072	29	3,043
Aug-14	734	953	3,171	29	3,142
Jul-14	734	957	3,148	30	3,118
Jun-14	729	957	3,108	30	3,078
May-14	701	936	3,090	30	3,060
Apr-14	701	924	2,830	31	2,799
Mar-14	710	941	3,003	31	2,972
Feb-14	734	946	3,043	31	3,012
Jan-14	732	959	2,970	32	2,938

Table 7
Oil Eligible for Inclusion into Platts Dubai Assessment
Average of Monthly Production (in Thousand Barrels per Day)

Oil Field	Al Shaheen	Oman	Dubai	Upper Zakum	Murban	Estimated Total
Country	Qatar	Oman	UAE	UAE (% based on Abu Dhabi)		
Proportion	50% ²³	100%	100%	21% ²⁴	50% ²⁵	
2014	355	943	30	631	1,503	3,462
2015	329	984	27	622	1,481	3,442
2016	327	1,002	26	644	1,533	3,531
2017 to Mar	301	971	26	623	1,484	3,405
Average	331	999	28	646	1,538	3,550

²³ <http://www.ogj.com/articles/2017/07/total-qp-combine-preparing-al-shaheen-development.html> Al Shaheen produces over 300k bpd, about half of Qatar's production.

²⁴ <http://www.offshore-technology.com/projects/upper-zakum-offshore-uae/> Upper Zakum produces 640k bpd.

²⁵ <https://www.platts.ru/IM.Platts.Content/MethodologyReferences/MethodologySpecs/Dubai-Crude-FAQ.pdf> Dubai+UpperZakum+Oman produces 1.7m bpd; including Murban+Al Shaheen totals 3.6m bpd. Al Shaheen produces over 300k bpd, so Murban produces roughly 1.6m bpd (rounded down to 1.5m).