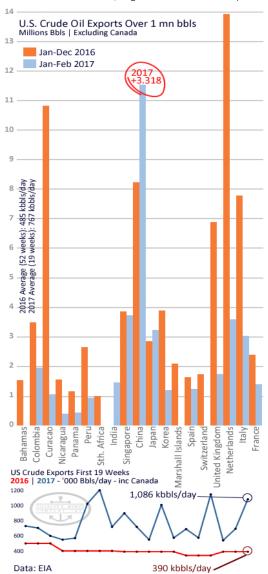
**WEEK 20 - 19 MAY 2017** 

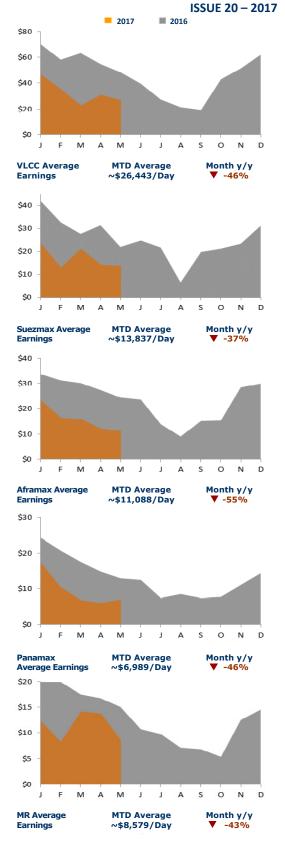
# **US Crude Exports: Economies of Scale**

By John M. Kulukundis

With the startup of the Dakota Access Pipeline (DAPL) set for June 1, Bakken producers are only days away from gaining easier, cheaper pipeline access to the Gulf Coast. DAPL runs from North Dakota to the crude hub at Patoka, IL, from where the new Energy Transfer Crude Oil Pipeline (ETCOP) links volumes to Nederland, TX. Bakken producers are keen to explore new worldwide export markets and these pipelines offer them an economical way to get their crude at least into PADD 3.

The 450,000 b/d DAPL promises to provide a safer and more direct route for U.S. Bakken crude traveling to refineries on the Gulf coast. Currently, oil from the Bakken in North Dakota must take a "...circuitous route through the Rocky Mountains or the Midwest and into Oklahoma, before heading south". This new direct supply will certainly boost existing US crude exports. Even before it commences, US crude exports in the first 19 weeks of 2017 have averaged 767,000 b/d. This compares to an average of 485,000 b/d during 2016 in its entirety. This is combined with shifting export destinations and in some cases, large increases in volumes (see chart).





Exporting oil from US shale plays, which became possible after Congress lifted a 40-year-old export ban in 2015, is becoming a more attractive option for American producers. While VLCCs have been used to carry US crude before, they have all been reverse lightered. But all going well, Occidental hopes to export US crude by VLCCs from its former US naval base in Ingleside, TX, by 2019. Until then, there are no VLCC export terminals available.

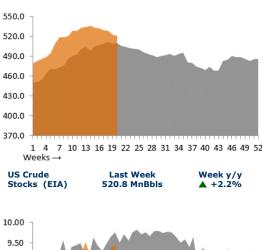
Occidental this month plans to test whether a VLCC can dock at its oil terminal along Texas' Corpus Christi Bay. If it works, the company plans to turn its onshore terminal into the first in the US to receive VLCCs to export U.S. crude.

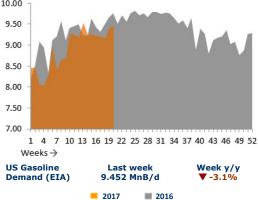
There will be numerous challenges to accommodating VLCCs at Ingleside; the Port of Corpus Christi is currently about 45 feet deep, though officials hope to deepen the port to 52 feet within 18 months to 2+ years. Then Occidental is hoping to partial-load the ships at the new dock and top them off in the Gulf. Occidental estimates its ability to berth VLCCs for partial loading -- rather than reverse lightering the entire vessel should save about 75 cents per barrel on transportation costs. Occidental is reportedly currently moving 250,000 barrels a day of Permian crude -- about one-eighth of the field's total production -- out of its facility in Ingleside, which is about 20 miles east of Corpus Christi.

The 1,000-acre Ingleside facility presently has 2.1 million barrels of storage in six tanks and a berth designed to take an aircraft carrier. Their intention next week is to bring a VLCC into their berth so that they can reportedly take photos and measurements and work out where to install the necessary loading arms and mooring bits for a vessel of this size.

Another project under discussion is the transformation of the Louisiana Offshore Oil Port (LOOP), which is the only port in the US capable of offloading VLCCs. LOOP consists of three SPMs 18 miles off the Louisiana coast in waters 110 feet deep. The SPMs are connected by a 48-inch-diameter, northbound-only pipeline to the Clovelly Hub, a crude storage and blending facility located 25 miles inland in Clovelly, LA; the hub has eight underground salt caverns with a combined capacity of more than 60 MnBbls, as well as more than 20 aboveground tanks totaling another 12 MnBbls. The Clovelly Hub is also the pipeline destination for as much as 500 Mb/d of offshore Gulf of Mexico crude production, primarily from the Shell-operated Mars pipeline system and BP's Thunder Horse field. Since 2013 Clovelly has also been a destination point for Shell's Zydeco Pipeline (formerly Ho-Ho), which delivers up to 350 Mb/d of crude from terminals in Houston; Port Arthur/Beaumont, TX; and Lake Charles, LA.

LOOP has also been increasingly used to receive domestic crude and condensate on Jones Act tankers from Corpus Christi, TX, and other Gulf Coast ports as a more efficient way to get oil to refineries East of Houston. Post US crude ban lifting there have been discussions for LOOP to be converted to an export facility or, more likely, for LOOP to be expanded to allow both exports and continued imports. Whoever succeeds in getting VLCC export facilities up and running, there is clearly a global market for US crude — at least as long as OPEC cuts continue and the price remains around the \$50/bbl mark.





| Spot Market                   | WS/LS   | TCE                                     | WS/LS   | TCE                                     |
|-------------------------------|---------|---|---------|---|
| VLCC (13.0 Kts L/B)           | 12-May  |   | 19-Mav  |   |
| AG>USG 280k                   | 29.0    | \$3,270                                 | 25.0    | \$(596)                                 |
| AG>USG/CBS>SPORE/AG           |         | \$33,435                                |         | \$26,225                                |
| AG>SPORE 270k                 | 59.0    | \$24,180                                | 55.0    | \$20,202                                |
| AG>JPN 265k                   | 56.0    | \$24,358                                | 52.5    | \$20,639                                |
| AG>CHINA 270k                 | 56.0    | \$21,576                                | 52.5    | \$17,867                                |
| WAFR>CHINA 260k               | 58.0    | \$25,110                                | 53.0    | \$20,336                                |
| CBS>SPORE 270k                | \$4.10m |   | \$3.70m |   |
| VLCC Average Earnings         |         | \$25,010                                |         | \$20,667                                |
| SUEZMAX (13.0 Kts L/B)        |         | , |         | , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| WAFR>USG 130k                 | 70.0    | \$13,186                                | 70.0    | \$12,639                                |
| WAFR>UKC 130k                 | 72.5    | \$9,647                                 | 72.5    | \$9,105                                 |
| BSEA>MED 140k                 | 87.5    | \$12,758                                | 85.0    | \$10,706                                |
| CBS>USG 150k                  | 65.0    | \$12,315                                | 65.0    | \$10,706                                |
| Suezmax Average Earnings      | 00.0    | \$12,607                                |         | \$11,711                                |
| AFRAMAX (13.0 Kts L/B)        |         | Ψ12/007                                 |         | Ψ11//11                                 |
| N.SEA>UKC 80k                 | 100.0   | \$14,039                                | 102.5   | \$15,794                                |
| AG>SPORE 70k                  | 110.0   | \$11,238                                | 105.0   | \$9,534                                 |
| BALT>UKC 100k                 | 67.5    | \$6,929                                 | 70.0    | \$7,963                                 |
| CBS>USG 70k                   | 100.0   | \$6,363                                 | 152.5   | \$21,379                                |
| MED>MED 80k                   | 102.5   | \$11,494                                | 137.5   | \$23,049                                |
| Aframax Average Earnings      | 102.5   | \$8,501                                 | 137.3   | \$15,345                                |
| PANAMAX (13.0 Kts L/B)        |         | \$0,501                                 |         | \$13,343                                |
| CBS>USG 50k                   | 115.0   | \$1,520                                 | 110.0   | \$199                                   |
| CONT>USG 55k                  | 112.5   | \$7,602                                 | 112.5   | \$7,212                                 |
| ECU>USWC 50k                  | 147.5   | \$10,650                                | 147.5   | \$10,309                                |
| Panamax Average Earnings      | 147.5   | \$6,590                                 | 147.5   | \$5,822                                 |
|                               |         | \$0,390                                 |         | \$5,022                                 |
| LR2 (13.0 Kts L/B) AG>JPN 75k | 104.0   | \$10,205                                | 88.5    | \$6,097                                 |
|                               |         |   |         |   |
| AG>UKC 80k                    | \$1.55m | \$9,293                                 | \$1.65m | \$10,781                                |
| MED>JPN 80k AG>UKC/MED>JPN/AG | \$1.65m | \$8,459                                 | \$1.62m | \$7,507                                 |
|                               |         | \$14,636                                |         | \$14,883                                |
| LR2 Average Earnings          |         | \$11,680                                |         | \$9,023                                 |
| <b>LR1</b> (13.0 Kts L/B)     | 1110    | 47.C7F                                  | 00.5    | #4.605                                  |
| AG>JPN 55k                    | 114.0   | \$7,675                                 | 98.5    | \$4,605                                 |
| AG>UKC 65k                    | \$1.11m | \$4,223                                 | \$1.09m | \$3,348                                 |
| UKC>WAFR 60k                  | 108.0   | \$2,995                                 | 101.0   | \$1,453                                 |
| AG>UKC/UKC>WAFR/AG            |         | \$9,320                                 |         | \$7,925                                 |
| LR1 Average Earnings          |         | \$8,497                                 |         | \$6,265                                 |
| MR (13.0 Kts L/B)             |         |   |         |   |
| UKC>USAC 37k                  | 120.0   | \$5,096                                 | 125.0   | \$5,568                                 |
| USG>UKC 38k                   | 100.0   | \$3,098                                 | 95.0    | \$2,058                                 |
| USG>UKC/UKC>USAC/USG          |         | \$8,733                                 | + 4001  | \$8,294                                 |
| USG>CBS (Pozos Colorados) 38k | \$400k  | \$10,858                                | \$400k  | \$10,576                                |
| USG>CHILE (Coronel) 38k       | \$1.05m | \$12,681                                | \$1.05m | \$12,375                                |
| CBS>USAC 38k                  | 140.0   | \$10,085                                | 140.0   | \$9,803                                 |
| MR Average Earnings           |         | \$8,525                                 |         | \$8,322                                 |
| Handy (13.0 Kts L/B)          |         |   |         |   |
| MED>EMED 30k                  | 142.5   | \$10,546                                | 134.0   | \$8,345                                 |
| SPORE>JPN 30K                 | 132.5   | \$4,584                                 | 129.0   | \$3,903                                 |
| Handy Average Earnings        |         | <i>\$6,730</i>                          |         | \$5,502                                 |

Average Earnings weighted proportionally to regional activity share of each size class' worldwide market.

| Time Charter Market<br>\$/day (theoretical) | 1 Year   | 3 Years  |
|---|----------|----------|
| VLCC  | \$27,000 | \$29,000 |
| Suezmax                                     | \$18,500 | \$19,000 |
| Aframax                                     | \$15,000 | \$17,000 |
| Panamax                                     | \$13,000 | \$14,000 |
| MR  | \$13,500 | \$14,500 |
| Handy                                       | \$12,000 | \$13,000 |

# VLCC Projected Orderbook Deliveries/Phase-Outs Present Fleet: 707 % fleet on order: 12% 22 19 1 -3 -38

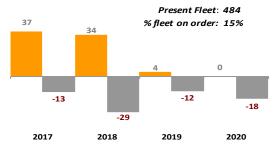
# Suezmax Projected Orderbook Deliveries/Phase-Outs

2019

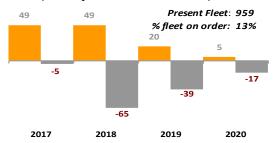
2020

2018

2017



# Aframax/LR2 Projected Orderbook Deliveries/Phase-Outs



# Panamax/LR1 Projected Orderbook Deliveries/Phase-Outs



Present Fleet: 1,583
% fleet on order: 8%
36

9

-9

-18

-17

-18

2017

2018

2019

2020



48.0

# **SPOT MARKET SUMMARY**

The VLCC market remained under negative pressure this week on increasingly sour supply/demand fundamentals as the May Middle East program concluded below expectations while charterers were slow in their progression into the June program and surplus tonnage soared to a three-year high.

The strong run of VLCC demand in the West Africa market that materialized during Q1 and drew tonnage from the Middle East market provided a strong measure of support to rates by raising competition for Middle East positions between the two regions while also consuming vessels for longer periods due to longer corresponding laden and ballast time. Over the past month, however, demand in the West Africa market has dropped by a third relative to the Q1 average due to discounted OSPs from Middle East producers for Asian buyers and a 13% decline in VLCC voyages to China. Meanwhile, the VLCC fleet has grown by 3.1% since the start of the year and, adding to the market's emerging challenges, the May Middle East VLCC program observed a 2.4% m/m decline while overall ton-miles generation is off due to lower US and Venezuelan VLCC-serviced exports.

With the May Middle East program having completed, we note that the number of surplus units stood at 25, representing a 150% increase from April's surplus – and the most since June 2014. Our models suggest this will guide AG-FEAST TCEs into the low \$10,000s/day range as in the coming weeks as the extent of overcapacity becomes apparent; these routes presently yield an average of ~\$19,825/day. Further forward, as units servicing late-Q1 West Africa cargoes reappear on positions lists, we expect negative pressures to accelerate, making the outlook for the coming months quite negative. Countering this view, it remains possible that an extending of the OPEC deal will reignite Asian purchases from West Africa and the Atlantic basin, which as the market observed as recently as a month ago can quickly change the market's positioning. Rates on the AG-FEAST route touched a YTD low of ws43 on 3/29, only to be quickly supported by strong West Africa draws with rates subsequently rallying to as high as ws77.5 by 4/20.

# Middle Fast

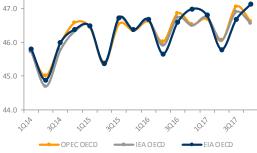
Rates to the Far East concluded the week with a loss of 3.5 points to ws52.5 and corresponding TCEs declined 15% to conclude at ~\$20,639/day, basis AG-JPN. Rates to the USG via the Cape shed 4 points to conclude at ws25. Triangulated Westbound trade earnings lost 22% with a closing assessment of ~\$26,225/day.

Rates in the West Africa market followed those in the Middle East. The WAFR-FEAST route shed 5 points to conclude at ws53 with corresponding TCEs off by 19% to ~\$20,336/day. The CBS-SPORE route shed \$400k to conclude at a fresh YTD low of \$3.7m lump sum.

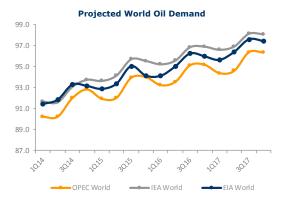
# Suezmax

The West Africa Suezmax market remained active this week as charterers covered first-decade June requirements, with a couple of second-decade cargoes adding to the demand profile. Amid an ongoing lull in VLCC demand in the region, a total of 13 fixtures were reported this week, pushing the four-week average to a YTD high of 12. Though Europe-bound voyages have trended higher since late April as refiners prepare for summer runs, we note that regional Suezmax demand has also benefitted from a number of voyages to points in the far east and to India, as well as non-traditional destinations. Meanwhile, strong Suezmax demand in the Middle East market - where the four-week moving average of fixtures rose this week to a twomonth high - has kept eastern ballasters (including many of the 23 NB units delivered since the start of the year) to the West Africa market at bay. Despite this, regional rates remained unchanged – as they have been since the start of the month, hovering near YTD lows as the overall supply/demand positioning continues to favor charterers. The WAFR-UKC route was steady at ws72.5, with a corresponding TCE of ~\$9,105/day.





**Projected OECD Oil Demand** 



## **Aframax**

The Caribbean Aframax market experienced strong rate gains this week on the back of stronger inquiry levels and delays-drive availability declines. A number of fresh requirements struggled to source tonnage with units either already fixed or suddenly delayed due to ullage and other issues. This started to build positive momentum with modest rate gains recorded early during the week before a restricted cargo was forced to pay a large premium to last done set rates markedly stronger for subsequent normalized requirements. The CBS-USG route ultimately observed a gain of 52.5 points to a three-month high of ws152.5. With availability remaining tight and some requirements outstanding at the close of the week, owners are likely to resist lower rates at the start of the upcoming week. Though rates are likely to correct thereafter, a pre-Memorial Day weekend rush could potentially provide sufficient momentum to delay that to the following week.

# MR

Rates in the USG MR market were largely unchanged this week as a rise in regional fixture activity materialized against fresh availability builds. A total of 41 fixtures were reported, representing a 37% w/w gain to a three-month high. Of these, ten were bound for points in Europe - the most since early January (+4, w/w), 18 were bound for points in Latin America and the Caribbean (-3, w/w) and the remainder were yet to be determined or bound for alternative destinations. Rates on the USG-UKC route posted a five-point loss to ws95 as the premium placed on the route last week to offset a depressed UKC market eased in-line with modest ex-UKC gains. Rates on the USG-CBS route concluded unchanged at \$400k lump sum and those on the USG-Chile route were unchanged at the \$1.05m lump sum level. Availability posted a fresh expansion. Participants had eyed rates gains early during the week due to robust demand, but weakness on the USG-UKC route weighed on sentiment for round-trip voyages. At the close of the week, there are 44 viable units available on a two-week forward basis, representing a w/w gain of 7%. Further availability builds over the weekend could weigh negatively on rates during the start of the upcoming week, though we remain optimistic that progression will be directionally positive through to early July.

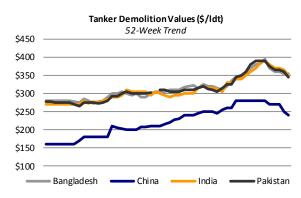
# **REPORTED TANKER SALES**

- **"Dalian Venture"** 296,722/11 Dalian DH
- -Sold for \$54.0m to Singaporean buyers (Zodiac).
- "Fortune Victoria" 74,998/07 Minami Nippon DH
- -Sold for \$17.2m to Greek buyers (Benetech).
- **"High Fidelity"** 49,990/14 Hyundai Vinashin DH
- -Sold for \$27.0m to undisclosed Japanese buyers including 10-Year BBB with purchase options from year three and purchase obligation at end of period.
- "Torm Vita" 46,308/02 STX Jinhae DH
- -Sold on private terms to undisclosed buyers including BBB.

# REPORTED TANKER DEMOLITION SALES

<u>India</u>

"Potengi" – 55,067/91 – 14,409 LDT – DH -Sold on private terms; unit declared total loss 04/2016.



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