# **S&P Global** Platts

# **OILGRAM PRICE REPORT**

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# Bakken crude to be rerouted in every direction if DAPL shuts

- April 9 court hearing could determine DAPL's fate
- Volumes would move to other pipelines, rail and truck
- Deep Bakken price discounts needed to encourage rail

Houston—Bakken Shale crude oil volumes would ship to the west, east and even up north into Canada and back into the US again as producers and pipeline operators target alternative routes if the Dakota Access Pipeline is shuttered, even temporarily, according to industry sources.

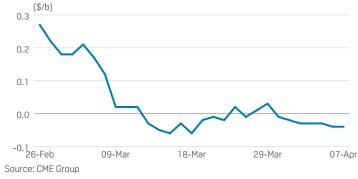
A federal court could decide as soon as April 9 whether the Bakken Shale's main crude artery is forced to close, dispersing the volumes from the four-year-old, 570,000 b/d pipeline to other existing pipelines, lightly used crude-by-rail networks, and trucking routes, and widening Bakken crude price discounts.

If the Energy Transfer-operated pipeline is ordered shut, energy analysts believe drastic measures will not become necessary so long as the closure is temporary only through the back half of the year. The US Army Corps of Engineers' court-ordered Environmental Impact Statement study could put DAPL back into good legal standing by the end of 2021 or early 2022, although an unprecedented permanent closure would have much bigger long-term impacts.

With Bakken crude production and activity already diminished from the ongoing coronavirus pandemic and, to a lesser extent, DAPL uncertainty, a temporary closure would keep projected Bakken production growth from occurring, but it would not trigger substantial reductions in volumes, analysts said.

"The industry had a lot of time to consider alternate routes," said Colton Bean, midstream analyst for Tudor, Pickering, Holt & Co. "Is it going to be a disaster scenario? No. It's more of a cap on growth than a big impact on existing production."

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### NYMEX WTI BACKWARDATION IN REARVIEW MIRROR

# MARKET ANALYSIS

International crude: North Sea sees limited Asian demand Americas crude: Frade boosts Petro Rio's Brazil output 44.8% Gasoline: PetroChina Guangxi to boost April exports Diesel: Asian demand gaining momentum Marine fuel: Weak demand sends USGC MGO to 8-week low Jet: Two-day USGC cycle sees volume spike Gasoli: Med gets North Africa boost amid rally Feedstocks: European exports to Asia down on week Gas liquids: US-Europe LPG arbitrage economics worsen Tankers: Cleans, dirties see rough waters ahead Refinery updates

# **NEWS HEADLINES**

# Valero, Phillips 66 see negative first quarter from February freeze

- Higher electricity, gas prices add to costs
- Low refinery utilization hurts revenues

*New York*—Valero Energy warned it will post a loss when it reports first quarter earnings later this month, with mid-February polar vortex's impacting its earnings and operations, the company said in an April 8 statement.

# Brazil's Bolsonaro warns of potential changes to Petrobras' fuel-price policy

- Import-price parity could be revised
- Shareholders to vote on new CEO April 12
- Former Army general to take over top post

*Rio de Janeiro*—Brazilian President Jair Bolsonaro has once again warned of changes at state-led Petrobras, raising the specter of renewed government interference at the company that could lead to changes in its policy for pricing transportation fuels.

# Total to start supplying sustainable aviation fuel to French airports in April

- La Mede, Oudalle facilities begin SAF production
- SAF part of Total's strategy to be carbon neutral by 2050
- Aviation sector starting to take more steps to decarbonize

*London*—Total will begin supplying sustainable aviation fuel, or SAF, to French airports this month, the energy major said April 8, as it steps up efforts to produce cleaner fuels.



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#### MARKET ANALYSIS

#### **INTERNATIONAL CRUDE**

# North Sea sees limited Asian demand

North Sea crude was under pressure April 8 as a lack of demand – both locally and from Asia – at the prompt and further down the curve has left cargoes unsold, according to traders.

East demand has been slow with cargoes in Asia looking for buyers, further weighing on any incentive to arbitrage North Sea crudes to the region.

"The market East is very slow. [There is] a lot of unsold cargoes still needing to find a home there," a source said.

Stressed differentials were also noted, with Flotta Gold and Johan Sverdrup both trading around Dated Brent minus \$2.00/b and minus \$3.00/b, respectively.

A similar pattern has been witnessed in sweeter grades, as weaker WTI Midland levels have been heard, weighing on the likes of Ekofisk in Europe.

A lack of refinery buying interest was evident in Europe, as oil demand markers continued to slip in the week to April 4 on rising COVID-19 infection rates leading to new lockdowns, feeding concerns over the recovery of oil demand.

Land-based mobility in France, Germany, Spain and the UK all fell from week-ago levels, according to Google data, while Italian mobility was little changed at 40% below pre-pandemic levels.

Israeli-owned Ithaca Energy has approved the second phase of the Captain enhanced oil recovery project in the North Sea, building on an innovative effort by Chevron to boost output from the heavy oil field, now in its third decade of production.

The project aims to maximize oil recovery from Captain into the 2030s, using polymer flooding technology to more effectively move the heavy oil through the reservoir.

The 1 billion barrel Captain field has been in production since 1997 and produces some of the heaviest crude in the North Sea, with an API gravity of around 19, loaded from a floating production storage and offloading vessel.

#### Urals excess continues to mount

Market demand for Russian Urals was weaker on the day, with mounting supply continuing to weigh on differential levels as at least 22 April-loading cargoes were still available, sources said April 8.

"After all the injections, we are now at 46 cargoes [for April] and, without the main buyer Neste, it looks rather weak to me," one trader said.

Elsewhere in the market, Hellenic Petroleum bought a Suezmax of Urals expected to load from Novorossiisk during the second half of April for early May arrival, sources said.

The spread between Northwest European Urals and Urals loading out of the Black Sea port of Novorossiisk was holding at 30 cents/b.

"The Med is quite long so reduces chances of Urals [from the North...] to come down, so I am not sure if we are at a bottom," the trader said.

"I actually see the North and the Med converging ... ice class

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vessels are officially not necessary from April 12, so freight from the North to the Med is much cheaper. The the only support for the Med [Urals from Novorossiisk] is that it can arrive earlier."

The outlook for Urals remained weak, particularly in Northwest Europe, with traders looking to June and July for any sustained recovery in value.

"I would say Urals in the North, with six cargoes injected and five cargoes displaced by Neste because of maintenance and arb closed, at least logically should see lower diffs," a second trader said.

In the Platts Market on Close assessment process, Total bid for a Urals Primorsk cargo, loading April 18-22, up to Dated Brent minus \$2.35/b where it was sold to by Gunvor.

# WTI, CPC Blend avails cap Asian premiums

Spot trading activity for June-loading barrels took center stage post the issuance of official selling prices by Abu Dhabi National Oil Co., or ADNOC, for their respective crude grades.

ADNOC raised May OSPs by 35 cents/b across all its crude grades from April.

Most market participants surveyed by S&P Global Platts expected a hike in the range of 20-30 cents/b especially after market leader Saudi Aramco raised prices for its Asia-bound crude grades by 20-50 cents/b.

Focus now shifts to spot trading in the month ahead amid increasing supplies, weaker consumption patters and pandemic outbreaks across Asia.

Lighter crude grades could see better premiums, similar to last month, compared to medium and heavy grades, traders said.

However, the availability of arbitrage crudes and increased OSPs could weigh on spot buying activity.

"WTI available but not as cheap yet. CPC Blend is more attractive [to Asian refiners]," said a trader with a North Asian refinery.

India continues to seek various crude grades through a flurry of tenders for June-loading barrels from various regions including West Africa and the US.

Despite a surge in COVID-19 cases in the country leading to renewed lockdowns and sagging consumption, Indian refiners continue to purchase crude oil.

"They [IOC] have secured product export contracts for gasoline, jet and diesel which allows them to buy more crude," said a trader with a South Asian refinery.

The COVID-19 developments in India will be keenly watched as trade for June-loading barrels nears kick off.

"The way things are going in India, I see further downside in demand this month and next month," said another trader with a South Asian refinery.

At 3 pm in Singapore (0700 GMT), the June/July Dubai time spread was pegged at 39 cents/b, up 4 cents from close on April 7 the data showed. Cash Dubai's premium to front-month Dubai futures was pegged at \$1.33/b at April 7 close, up by 2 cents/b from the previous day.

# North West Shelf loadings down one cargo

Two cargoes of North West Shelf condensate are scheduled to load in June, down from three cargoes in the May-loading program, traders said April 8. Shell will hold the first cargo for loading over June 4-8, while Japan's Mitsui will hold the second cargo for June 14-18 loading.

It was heard that there was a planned maintenance at one of the LNG production facility in Western Australia, which led to the decline in number of cargoes on the month, traders said.

On Qatari condensates, traders expect little recovery on the cash differentials of Deodorized Field Condensate for Juneloading.

Qatar Petroleum for the Sale of Petroleum Products, or QPSPP, issued a tender for 500,000-1 million barrels of Deodorized Field Condensate, or DFC, for loading over June 1-30 via a tender which closes on April 14 with next-day validity.

"There is not much expectation on the economic recovery of DFC, I see not much changes from May for June and July [loading cargoes]," said a South Korea-based crude oil trader.

"Refinery margins are dented and operational rates are lower than normal. There is slight recovery on benzene and styrene but still stagnant on paraxylene for the petrochemical industry," the trader added.

On Indonesia's Banyu Urip, Thailand's PTT was heard to have bought one May delivery cargo of the crude, but pricing details were not immediately available, said a crude oil trader.

"We are not aggressively buying more crude now as demand is not great amid COVID-19; refinery margins are not impressive," he said.

"[Cash premiums] for the regional grades may be pressured downwards, as the coronavirus [pandemic] continues to worsen in Southeast Asia," said a regional crude oil trader.

# AMERICAS CRUDE

# Frade boosts Petro Rio's Brazil output 44.8%

Brazilian independent oil and natural gas producer Petro Rio boosted output 44.8% year on year in March after completing the acquisition of 100% of the offshore Campos Basin Frade Field, which helped offset production lost to technical troubles at the Tubarao Martelo Field, the company has reported.

Petro Rio pumped an average of 33,698 b/d of oil equivalent in March, up from 23,274 boe/d in April 2020, the company said April 7. March's output also advanced 12.7% from 29,891 boe/d in February.

The year-on-year production increase was expected after Petro Rio received final approval to acquire the 30% minority stake in Frade previously held by state-led Petrobras on Feb. 4. The deal was first announced in November 2019, with Petro Rio booking 100% of Frade's output on Feb. 5. Petro Rio is banking on development of Frade to significantly boost the company's production in coming years, with plans to drill two new production wells and a new water-injection well in the fourth quarter. First oil from the new wells is expected in the first quarter of 2022.

Frade pumped 17,005 boe/d in March, an 22.9% jump from 13,837 boe/d in March 2020, Petro Rio said. Petro Rio owned a 70% operating stake in March 2020. March's output also advanced 4.7% from the 16,247 boe/d pumped in February.

#### Tubarao Martelo troubles

The output jump at Frade helped offset production lost to technical issues at the Tubarao Martelo Field, also in the Campos Basin and where Petro Rio continued to confront technical troubles with subsea pumps. Such pump issues are common in the mature basin is located because the region's heavy crude grades are highly viscous, which often requires pumps and oil heaters to help the crude flow from the seafloor to the floating production, storage and offloading vessel, or FPSO, on the surface.

Former Tubarao Martelo operator Dommo Energia encountered similar issues throughout the field's life before selling an 80% stake in the field and the FPSO OSX-3, since renamed FPSO Bravo, to Petro Rio in August 2020. Industry sources told S&P Global Platts at the time that the issues were related to electrical surges onboard the FPSO.

"Production at the Tubarao Martelo Field during the month of March was affected by a production shutdown at the TBMT-8H well because of the failure of the submerged centrifugal pump, causing a reduction in output of about 1,400 b/d," Petro Rio said. The pump was one of the field's original pieces of equipment and has been in operation since first oil flowed in December 2013.

Petro Rio plans to use the Kingmaker jack-up rig to carry out a well intervention to replace the pump, which should be completed in May-June, the company said. Petro Rio purchased the Kingmaker, formerly known as the Atlantic Zephyr, from Petroserv for the symbolic value of \$1 in December.

Tubarao Martelo pumped 5,748 boe/d in March, down from 5,934

boe/d in February, Petro Rio said. In February, output at Tubarao Martelo was also limited by similar pump issues in the OGX-44HP well. The issues cost about 1,200 boe/d during the month.

The downturn at Tubarao Martelo should be brief, as Petro Rio works to complete the tie back of production wells from the adjacent Polvo Field to the FPSO Bravo at Tubarao Martelo. The FPSO Polvo will be decommissioned and removed. The tie-back project, which is expected to be completed by July, also will include the addition of the TBMT-10 well at Tubarao Martelo and a second well in the Eocene frontier opened by the POL-L well at Polvo in 2020.

The wells will likely be added in September, according to Petro Rio. Polvo, meanwhile, rebounded from its own technical troubles in

March, Petro Rio said. The FPSO Polvo was shuttered for 10 days in February for maintenance work to repair the vessel's boiler. Polvo pumped an average of 8,655 boe/d in March, a decrease of 8.3% from 9,434 boe/d in March 2020, shortly after Petro Rio completed a drilling campaign at the field. March's production, however, advanced 46.6% from February's 5,904 boe/d.

The Manati Field, where Petro Rio still holds a 10% minority stake, also produced 2,289 boe/d in March, up from 3 boe/d in March 2020, Petro Rio said. The field was shuttered for several months in 2020 because of slack demand. March's output, however, advanced from 1,806 boe/d in February.

Petro Rio agreed in November 2020 to sell the company's 10% minority stake in the natural gas producer to Gas Bridge SA for \$26.3 million. The deal is still awaiting regulatory approval.

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### GASOLINE

# PetroChina Guangxi to boost April exports

State-owned PetroChina's Guangxi Petrochemical refinery plans to increase its gasoline exports by 25% month on month to 180,000 mt in April, a refinery source said April 8.

Exports had climbed four times higher to 144,000 mt in March, from 36,000 mt in February, on the back of relatively good margins.

In line with the higher gasoline exports, the refinery plans to raise its run rate by about seven percentage points in April to 84% of its nameplate refining capacity, or by cracking 830,000 mt of crude.

The Asian gasoline market was poised for its sharpest drop in two weeks on April 8, as crack spreads took a nosedive after data released by the US Energy Information Administration showed a heavy stock build in the US.

US gasoline inventories in fact, had climbed by 4.04 million barrels to 234.59 million barrels, EIA data showed.

Tracing weaker US cracks, the front month FOB Singapore 92 RON gasoline crack against Brent opened April 8 trade between the levels of \$6.20/b and \$6.30/b, representing around a 9.42% decline from the previous trading session, according to indications from brokers.

Sinopec's Jiujiang Petrochemical in southern Jiangxi province, has shut its 8 million mt/year (160,000 b/d) refinery since April 1 for a 45-day scheduled maintenance, according to its official WeChat account.

This is the first time that the refinery has been shut for maintenance in the past four years, as the last maintenance was carried out in 2017.

Taiwanese private refiner Formosa Petrochemical Corp. was noted having emerged offering a total of 500,000 barrels of gasoline for early May loading at Mailiao.

According to the tender document, the company is offering one 250,000 barrel cargo of 94 RON gasoline, with 50ppm sulfur, for May 1-5 loading, while a second 250,000 barrel cargo of 93 RON gasoline with 50ppm sulfur will be loaded May 6-10.

Formosa's tender closes on April 8, with same day validity.

### Middle East premiums stronger

Fujairah's 95 RON gasoline market could rise to pre-COVID-19 levels in coming months on increased demand and limited supply, regional traders said April 8.

"CFR 95 RON premiums are expected to go up to \$5.50/b to \$5.60/b, as seen historically, and we could reach those numbers by the end of summer," a Middle East gasoline trader said.

"COVID has already been priced in and we are now out of lockdowns and people are driving in the region," he said, adding gasoline producers in the region were continuing efforts to adjust production to favor higher premiums.

FOB Arab Gulf 95 RON gasoline was assessed at a \$4.95/b premium to Mean of Platts Arab Gulf 95 RON gasoline on April 8, its highest since Dec. 21, S&P Global Platts data showed. In the past year, on April 15, 2020, it fell as low as \$1.55/b.

A second Middle East trader said there was now a tightness in gasoline availability as supply was not matching demand.

"There are minor refinery shutdowns and demand is picking up as

summer comes. People drive more as there are no lockdowns in the region," the trader said.

Oman's Sohar refinery was undergoing unscheduled maintenance after unexpected outages affected its gasoline output.

"Gasoline has come back to around 95% of pre-COVID level. The market is really tight in the Middle East," he said.

#### DIESEL

### Asian demand gaining momentum

The Asian gasoil market remained on an upward march as demand indications firmed, spurred by healthy cross-regional flows and firmer sentiment amid news of the imminent revival of international flights.

Reflecting the strength in the ultra-low sulfur diesel complex, the balance April-May gasoil timespread was assessed at parity at the Asian close on April 7, up 3 cents/b on the day and up 22 cents/b since the start of the month, Platts data showed.

The upbeat sentiment was also reflected further along the forward curve, with the  $\Omega$ 3- $\Omega$ 4 quarterly gasoil spread – an indication of near-term sentiment – narrowing 31 cents/b, or 124%, on the week to plus 6 cents/b at the Asian close on April 7, Platts data showed.

Asian gasoil participants said the market strength has been underpinned by expectations of firmer demand, following news that some countries are actively looking at opening travel bubbles in an effort to kick start international flights.

"I think there is some optimism in the air, with the travel bubble between Australia and New Zealand coming in place, and the UK is also opening up, so on the international travel front, all these are supportive of demand," a Singapore-based trader said.

Other traders agreed, saying that the wider demand implications from this would have a positive effect on gasoil, with the activity likely to spur demand in sectors such as transportation, as well as economic growth.

More possible support could come from the regional maintenance season, which will likely see leaner gasoil output over Q2.

This, coupled with a growing list of newbuild VLCCs taking Asian gasoil West, have lent further support, with some traders saying that the resulting purchases to bulk up these vessels have been pushing gasoil prices higher, and that the eventual movement of barrels out of the region could aid in draining surplus volumes here.

"There are a few VLCCs we are seeing, but in terms of what volumes are moving out in April, that hasn't been confirmed yet as we don't know how many may be leaving [the region] this month," a Singapore-based trader said, adding that if the ships do move, a significant volume of gasoil would be shipped out.

Traders have previously estimated that a fully-laden VLCC can carry up to 280,000 mt, or 2.05 million barrels, of gasoil.

### ARA stocks slip

Cash differentials in the Mediterranean ultra low sulfur diesel market moved lower April 8, while Northwest Europe strengthened on regional stock draws.

CIF Mediterranean cargoes were assessed at a \$4.75/mt premium to the April ICE LSGO futures contract, down 75 cents/mt on the

day, while the equivalent Northwest European cargo assessment strengthened 50 cents/mt to a \$5.50/mt premium.

FOB ARA barges rose \$1/mt to a 50 cents/mt discount to LSGO futures, with a flat structure proven across the 15-day forward curve in the Platts Market on Close assessment process.

Strength in Northwest European cash differentials came as diesel and gasoil inventories at the Amsterdam-Rotterdam-Antwerp trading hub fell 1% to 2.329 million mt over the week ended April 7, according to Insights Global data, to be 22.5% higher than the same time a year ago.

Primary tanks in inland markets were full and even cavern storage in Scandinavia has begun to be used, according to traders.

Delayed cargo arrivals from East of Suez was said by sources to have helped tighten the European ULSD market, although very low volumes were flowing on the route previously.

Mobility indicators were bearish however, with land-based mobility in Europe's five biggest economies down 3 percentage points to 36% below pre-crisis levels in the week to April 4 – the lowest since Feb 24, 2021 – according to Google data.

France, Germany, Spain and the UK all fell while Italian mobility was little changed at 40% below pre-pandemic levels, as countries remained under tough restrictions to curb rising coronavirus cases.

In the Spanish market, diesel supply from storage facilities dropped 11% year on year in the first quarter to 5.1 million mt, data from national fuel distributor Exolum (formerly Compania Logistica de Hidrocarburos) showed.

For March alone, diesel supply was up 3% year on year to 2.1 million mt, but still 12% below March 2019.

# USAC offline hits 11-week low

US Atlantic Coast diesel markets sunk on April 8, with ULSD off the Colonial Pipeline falling for the fifth consecutive day to an elevenweek low.

S&P Global Platts assessed offline diesel at the NYMEX May ULSD futures contract plus 20 points/gal, down 10 points. This marks the lowest offline ULSD has been since Jan. 21 when it was assessed at prompt-month futures plus 15 points/gal.

ULSD in both the Buckeye Pipeline and barge also dropped 10 points/gal to be assessed level to May futures.

On the Gulf Coast, ULSD lost the ground gained during the previous day to begin the prompt-23rd shipping cycle on the Colonial Pipeline.

Platts assessed ULSD on the Gulf Coast at May futures minus 4.65 cents/gal, up 12 points.

In the Midwest, the Group 3 X grade market rose for the second straight day, reaching an over three-week high on talk of strengthening agricultural demand, one source said.

Platts assessed Group 3 X grade at May futures plus 4.65 cents/gal, up 40 points. X grade was last seen higher at prompt-month futures plus 5.25 cents/gal on March 17.

In Chicago, Buckeye Complex diesel continued to fall, dropping for the third straight day.

Platts assessed BCX diesel at May futures plus 4.75 cents/gal, down 25 points. This marks the lowest BCX ULSD has been since March 4, when it was assessed at prompt-month futures plus 3.25 cents/gal.

Chicago pipeline ULSD rose 25 points to also be assessed at May

futures plus 4.75 cents/gal.

Wolverine Pipeline diesel remained unchanged on the day at May futures plus 5 cents/gal.

# MARINE FUEL

## Weak demand sends USGC MGO to 8-week low

Lingering weak demand fundamentals and talk of oversupply in US Gulf Coast marine fuel markets is pressuring supplier offers lower, leading some products to reach 8-week lows.

In Houston, spot 0.5%S Marine Fuel bunkers pricing came off \$4 to \$465/mt ex-wharf, while MGO value shed \$31 to \$525/mt ex-wharf.

Spot MGO pricing in Houston now sits at its lowest point in eight weeks dating to a February 11 close at \$515/mt ex-wharf, according to S&P Global Platts data.

The declines on MGO were more pronounced amid recent talk of oversupply and weak demand, with levels in the \$520s/mt initially seen on April 6, according to market feedback.

At the time, MGO spot pricing in the \$520s/mt range was considered to be below market-wide values, sources said, but by April 8 sources were putting the lower end of pricing in the \$510-\$515/mt range and most other suppliers in the \$520-\$525/mt range.

Lingering weak demand has led some suppliers to lower pricing sharply to keep both their barges moving and product flowing, sources have said.

"[They] need to push barrels apparently," a source said. "Not much demand so they are just gobbling up all [the inquiries] they can."

The New Orleans market moved with Houston to maintain its premiums, with 0.5%S pricing assessed at \$477/mt ex-wharf and MGO at \$535/mt ex-wharf.

MGO spot value in New Orleans is now at its lowest point since Feb. 12, when the assessment closed at 531/mt ex-wharf, Platts data shows.

Weak demand has in turn led some suppliers to prioritize smaller volumes at much lower pricing, sources have said.

"More than a dozen barges chock full of LSMGO between Houston and Lake Charles," a source said earlier in the week. "It's a demand problem, lack thereof."

These suppliers are able to go lower than others due to having time-chartered barges, which they are financially incentivized to keep running, sources added.

With fixed costs already invested into these time-chartered barges, suppliers are then able to recoup lost marine fuel value via delivery fees on ex-wharf stems, the sources said.

This practice was cited regularly throughout the third and fourth quarters of 2020, leading to talk of wide price ranges as some suppliers were unable to compete at the lower price floors.

More recently, sources have pointed to an extension of the trend – one that involves suppliers forgoing some of the barging or delivery fees.

"The market is bad enough that they will go under to fix small quantities, for example, and not cover all the barging," a source said. "Only cover partial, hoping they can pair it with another delivery same date. Sometimes this is better than taking a full barging loss on the day if you have no delivery scheduled."

# Glencore begins Singapore supply

Glencore has started low sulfur bunker supply in Singapore, thus adding the IMO-compliant marine grade to its portfolio of high sulfur bunker fuel, where the company has been a dominant supplier in the city-state since the IMO 2020 mandate came into place, sources said.

The company has already started deliveries using two low sulfur fuel oil barges, which it previously had used to supply high sulfur bunker fuel, a Singapore-based trader familiar with the matter said.

A Zurich-based company spokesman declined to comment.

Glencore's move to include low sulfur bunker supply comes amid progressively higher sales of the erstwhile mainstay high sulfur bunker fuel that the world's largest ship refueling destination has been witnessing over the course of 2020.

High sulfur bunker fuel accounts for a fourth, while low sulfur marine fuel constitutes two-thirds of total bunker sales in Singapore.

"It's not a first for Glencore ... it did supply [low sulfur bunker] for a couple of months or so early last year before deciding to be more focused on high sulfur," a source close to the company said.

### JET

# Two-day USGC cycle sees volume spike

Activity for Colonial Pipeline's 23rd cycle ended on April 8, with traded volumes in the Platts Market on Close assessment surpassing 1 million barrels for the two-day cycle.

A total of 225,000 barrels of Gulf Coast jet fuel exchanged hands in the MOC assessment process on April 8, following a pandemic-high of 800,000 barrels the day prior. Two deals at NYMEX May ULSD futures minus 19.25 cents/gal set the day's assessment, marking a 25 point increase.

Colonial Pipeline operates 72 cycles per year, averaging out to six cycles per month. Following this logic, individual cycles average out to last approximately five days—the 23rd cycle lasted just two days.

Three deals were also seen in the MOC for New York jet fuel for Buckeye Pipeline at minus 15.25 cents/gal, setting the day's assessment. No change was seen from the day prior and the differential for jet fuel taken off Colonial Pipeline remained flat to Buckeye.

In the Midwest, the Chicago differential continued to climb, rising 25 points to trade at minus 3.50 cents/gal. The most recent data from the Energy Information Administration recorded Midwest stocks at a five-year low of 6.02 million barrels in the week ended April 2.

On the West Coast, the Los Angeles differential was down 2 cents/gal with a trade reported at minus 14 cents/gal.

### Asia remains weak

The FOB Singapore jet fuel/kerosene sector was seen weaker as the coronavirus pandemic continues to weigh on jet fuel demand.

The balance month April/May jet fuel/kerosene derivative spread was assessed at minus 38 cents/b at the 0830 GMT Asian close on April 7, widening 1 cent/b day on day. At 0300 GMT April 8, brokers assessed the spread wider at at minus 46 cents/b.

According to industry sources, the FOB Singapore jet fuel/kerosene sector extended declines as the aviation sector was weighed down by tepid demand for aviation fuels amid the ongoing border controls,

coupled with rigid travel restrictions.

According to a recent report by the International Air Transport Association on April 7, Asia-Pacific airlines' February traffic was down 95.2% from February 2019, little changed from the 94.8% decline registered for January 2021 compared to January 2019. IATA added that the region continues to suffer from steep traffic declines for an eighth consecutive month.

"February showed no indication of a recovery in demand for international air travel. In fact, most indicators went in the wrong direction as travel restrictions tightened in the face of continuing concerns over new coronavirus variants," IATA's Director General Willie Walsh, said.

In a report by the Association of Asia Pacific Airlines on March 29, international air cargo demand, as measured in freight tonne kilometers (FTK), climbed 7.6% on the year in February on the back of an acceleration in trade activity.

This, however, could not offset the collapse in passenger revenue, the AAPA said, adding that airlines will require further government support to weather the crisis, with travel markets shuttered by border closures.

Meanwhile, the FOB Singapore jet fuel/kerosene cash differential was assessed at a discount of 60 cents/b to the Mean of Platts Singapore jet fuel/kerosene assessment on April 7, widening 1 cent/b, S&P Global Platts data showed.

# ARA stocks up 2%

The European jet fuel complex was mixed on April 8, as cash differentials for barges retreated slightly from a 2-1/2 month high, while the overall market was steady with a slightly increase in consumption offset by ample stocks.

In the Amsterdam-Rotterdam-Antwerp trading hub, jet fuel/ kerosene inventories rose 2% to 904,000 mt in the week to April 7, Insights Global data showed, to be 44% higher than the same period in 2020.

"There was clearly some pick-up in travel and jet consumption due to Easter flights but we did not see it translate into more demand," a trader said.

"UK cannot fly, France is in lockdown, Germany a bit more flights, stocks everywhere are high and arrivals of jet from East of Suez are very steady month on month," he said.

Jet fuel cargoes and barges trading in Northwest Europe had been strengthening over the past seven days with both CIF NWE jet fuel cargoes and FOB FARAG jet fuel barges firming to fresh 2-1/2 month highs versus ICE low sulfur gasoil futures on April 7. While cash differentials for physical cargoes firmed further on April 8, barges retreated slightly.

Some market participants said the physical strength was rather surprising considering the fundamentals, notably weak demand, healthy volumes of jet fuel coming from the East of Suez into Europe in April and high inventories levels across the continent.

"The European jet market surprisingly is strong compared the fact that nobody is flying," another trader said.

"There is healthy incoming supply even if Suez canal wiped off one week of supply," he also said, adding that the US Gulf Coast's jet market firmness was underpin by constructive fundamentals. "There is demand out there. It is really picking up in the US and refineries are still not running full production. Demand is really robust and expecting to get better in the summer," he said.

According to data from Radarbox.com, European air traffic, a key proxy for jet fuel demand, continued to edge higher but remained about 70% below comparable levels in 2019.

S&P Global Platts Analytics expects demand for jet and kerosene in the region to recover to 1.19 million b/d by December, down 13% from the same month in 2019.

#### GASOIL

# Med gets North Africa boost amid rally

Mediterranean 0.1% gasoil cargoes have risen to an 11-week high amid lower availability for finished grade products and demand from North Africa, sources said.

CIF Med 0.1% gasoil cargoes rose \$1/mt to be assessed at a \$1.25/ mt premium to ICE low sulfur gasoil futures on April 7, the highest value since Jan. 20, S&P Global Platts data showed.

Sources said continued low refinery run rates in the Med meant there was not a lot of finished grade product on offer.

According to Platts Analytics, total refinery downtime in the region averaged 860,000 b/d in March, a 60,000 b/d increase from February but much higher than the average for March over the 2015-2019 period of around 400,000 b/d. Platts Analytics expects downtime in April to average 650,000 b/d.

Refinery rates were low as demand and cracking margins for refined products in Europe continued to be dampened by the new coronavirus wave.

Demand from North African countries such as Libya, Tunisia and Egypt was also supporting the Med 0.1% cargo market, sources said.

"The Mediterranean is a bit stronger than Northwest Europe because there is good demand in the Med from Libya, Egypt and some bunker demand," a source added.

The volume of gasoil imported into North Africa in the week beginning March 29 was 222,000 mt, the highest week since February, according to commodity data firm Kpler.

The four-week moving average stood at 179,000 mt, the highest since 2019, the data showed.

Meanwhile, demand for gasoil in inland Europe remained poor due to full primary tanks and the winter heating season drawing to a close.

#### FEEDSTOCKS

# European exports to Asia down on week

Around 570,000 barrels of naphtha from the Mediterranean was expected to be sent to Asian markets in the week to April 9, according to commodity data company Kpler, around half the level of the previous week.

Demand for blending naphtha into exported gasoline volumes across the Atlantic Basin should offer support to the European market, sources said.

Gasoline exports are likely to continue during April as the rapid US

coronavirus vaccination program fuels a rise in personal mobility as the economy reopens.

The steep build in stocks came as sources said the paper arbitrage had strengthened further, which will encourage further exports to the US Atlantic Coast.

Rising US road fuel consumption will also help, with Apple Mobility data showing US driving activity rose 2.6% in the week to April 7.

Meanwhile, the gasoline-naphtha spread narrowed slightly in the paper market, with the front-month Eurobob FOB AR barge swap assessed at a \$70/mt premium to the equivalent naphtha CIF NWE cargo swap, up \$1.75/mt on the day. The spread has averaged \$69.75/mt over April to date, up from an average of \$54.68/mt in March.

Elsewhere in the paper market, the May NWE naphtha crack was assessed at minus \$1.65/b, up 20 cents/b. During the morning, it traded around minus \$1.75/b.

The April/May CIF naphtha swap spread was assessed at \$2.00/mt, down \$1.00/mt from the previous assessment, while May/June stood at \$4.25/mt.

The front-month May CIF NWE naphtha swap was assessed at \$538.25/mt, up \$4.00/mt.

At the same time, the May East-West spread – the premium of the CFR Japan naphtha cargo swap over the CIF NWE equivalent – was assessed at \$14.00/mt, up 25 cents/mt, with June also 25 cents/mt higher, at \$14.75/mt.

# Asia naphtha softer amid LPG alternative

Trading sentiment in the Asian naphtha market continued to soften, as front month May-June Mean of Platts Japan naphtha swap spread was pegged at \$3.50/mt by brokers in mid-afternoon trading April 8, lower than the \$4/mt at Asian close April 7, S&P Global Platts data showed.

The front month MOPJ naphtha swap fell to over a 2 month low on April 7, as it was last at that level on Jan. 29, Platts data showed.

Weaker sentiment was also reflected in the May CIF NWE naphtha crack against ICE Brent crude, which was assessed at minus \$1.65/b at the European close April 7, and had moved lower during midafternoon trading in Asia, as brokers pegged it at minus \$1.70/b, Platts data showed.

Naphtha end users were in no rush to in buying for the H2 May delivery cycle even though the trading cycle had rolled last week.

Demand was heard capped not only due to the use of LPG as an alternative feed stock for April and May, but also steam cracker turnaround season, sources said.

In Japan, Idemitsu's Chiba cracker was going through turnaround over April and May, while Mitsubishi Chem's Mizushima cracker will undergo turnaround over May and June, sources said. In Korea, LG Chem had scheduled turnaround at its Daesan cracker for May to July, sources said.

However, there are also some new cracker start ups, which was expected to offset the demand from scheduled maintenance, sources said.

South Korea's YNCC was heard to have issued a tender to buy naphtha for H2 May delivery, kicking off purchasing activity for cracker-feed naphtha, sources said.

### **GAS LIQUIDS**

# US-Europe LPG arbitrage economics worsen

US LPG exports to Europe and the Mediterranean so far in April have fallen overall from March as arbitrage economics for European delivery worsen.

Volumes of US LPG arriving into Europe in April are expected to be around 564,000 mt, according to data intelligence company Kpler, with 355,000 mt bound for Northwest Europe and 209,000 mt for the Mediterranean.

The US Gulf Coast is expected to ship 348,000 mt, while 216,000 mt will arrive from Marcus Hook on the US Atlantic Coast.

In March, an estimated 718,000 mt of LPG was sent trans-Atlantic from the US, with 388,000 mt going to Northwest Europe and 350,000 mt to the Mediterranean and North Africa. Of the total, 466,000 mt came from the US Gulf Coast and 252,000 mt from Marcus Hook.

Over the course of March, Mt. Belvieu LPG prices weakened, improving arbitrage economics, further incentivized by strong demand in Europe from petrochemical crackers, sources said.

However, since then, European and Mediterranean LPG prices have kept pace with the falls in US Gulf Coast prices, choking the arbitrage across the Atlantic.

"It doesn't look open at all to me, closed on both butane and propane from my calculations," one market source said.

Furthermore, the market structure in Europe is heavily backwardated, adding to the bearish outlook for US exports. The spread between the propane CIF ARA April and May swaps was assessed at a \$25/mt backwardation April 7.

FOB USGC propane cargoes were assessed at \$451.08/mt on April 7, down from \$514.90/mt March 5, compared with \$506/mt and \$551/mt for CIF NWE large cargoes and CFR South China, respectively.

Platts non-LST butane was assessed at \$405.44/mt down from \$498.30/mt March 2, compared with \$491/mt and \$536.50/mt for CIF NWE large cargoes and CFR North Asia, respectively.

#### TANKERS

### Cleans, dirties see rough waters ahead

- Iran sanctions a dark horse
- More tankers sale, purchase likely
- Weak demand to mellow down freight values

Clean and dirty tankers across the globe are likely to be under downward pressure in the April-June quarter due to slower oil trade flow, weak refining margins and lingering supply cuts, but the resale value of these ships will be firm as more among them exchange hands, an analysis by S&P Global Platts showed.

From Genoa and Copenhagen to Singapore and from Oslo to Mumbai, analysts and market participants told Platts that there could be an occasional rally in the near-term freight only to be quickly followed by a correction.

Higher freight for owners is more likely in the second half of the year rather than the second quarter, said Genoa-based Enrico Paglia,

a senior analyst with Banchero Costa, a global shipping brokerage and consultancy.

"Tankers are upbeat in general as global demand recovers but with OPEC + production cuts, they will struggle for the next three months," said Ole-Rikard Hammer, Oslo-based senior analyst with Arctic Securities.

Due to a sheer lack of cargoes, daily spot VLCC earnings on the Persian Gulf-North Asia routes have averaged less than \$5,000 so far this year and are currently less than \$500 compared with \$16,000 at the beginning of the year, brokers said.

Nevertheless, weak demand implies more trades in smaller parcels of one million barrels each that are loaded in Suezmaxes and the silver lining is that their rates are likely to be supported in the current quarter.

"Given the weakness in crude prices, the tanker market will remain in doldrums during this quarter," said Paglia.

# OPEC output boost not enough

OPEC+ countries plan to start raising crude output from next month in a phased manner but market participants said it is not enough to significantly revive tanker freight. Many among them have now pinned their hopes on the ongoing talks and possibility of US lifting sanctions on Iran, which have disrupted trade.

China's government data shows that the world's largest crude importer by volume is now buying more crude from smaller suppliers such as Oman and UAE, with shipments increasing 30% and 61% yearon-year during January-February. Several traders and shipping sources said that these grades are potentially blended with Iranian crude and moved on old ships which would have otherwise been scrapped.

Ships that are more than 15-20 years old are fetching a better resale price than their scrap value. The scrap price for a 21-22 year old VLCC is around \$18.5 million while 19 year old VLCCs have exchanged hands at \$24.5 million in the resale market, a VLCC broker said.

Only a couple of shuttle tankers and Aframaxes each and no VLCC were heard demolished during January-February.

Prices of new and 5-15 year old VLCCs are up 7% and 8% so far this year and two under construction VLCCs for delivery next year traded recently at \$92 million each, UK-based research consultancy, VesselsValue said citing increased sale and purchase for higher prices.

Tanker owners are looking for longer voyages to keep their ships occupied such as from Europe to India where some North Sea crude barrels have been purchased but the volumes are meager. It is the South American crude grades from Guyana, Colombia, Ecuador and Uruguay that can keep the VLCCs occupied for longer voyages in the coming months.

The second quarter looks set to be tough few months for tankers and even the recent increase in earnings in the clean segment seem to be temporary, said Emily Stausboll, BIMCO's Copenhagen-based shipping analyst.

She points out that US crude oil output is still about 2 million b/d lower than it was in the first quarter of last year. Platts Analytics has projected a 5.8 million b/d growth in oil demand this year but sources point out that it is over the demand destruction of last year and is unlikely to reflect in demand for tankers in the near-term.

# China pulls clean tankers

Clean Long Range, or LR, rates recently hit their highest level so far for this year, pushing up daily earnings on the key Persian Gulf-North Asia routes to over \$21,000 and \$13,000 from around \$1,000-\$2,000 earlier this year.

Strong demand to move products from China is delaying the return of ships to the Persian Gulf.

The higher rates now signal that the inventory overhang is starting to clear, said Arctic's Hammer. Charterers now have less flexibility while owners have more pricing power, he said.

For product tankers, the situation is a lot more variable since it depends very much on the COVID-19 vaccine campaigns around the world and it is too early to project an outcome, though pharma suppliers have pledged to speed up deliveries, added Paglia.

Travel restrictions, lockdowns and a slow vaccine rollout mean that a strong enough recovery in demand to help the tanker shipping market still seems something that cannot be expected in this quarter, said BIMCO's Stausboll.

There will be some improvement in this quarter from the truly dismal first but it may still take a few more months until OPEC+ feels confident that it can raise supply without hurting prices, added Hammer.

#### NEWS

# Bakken crude to be rerouted in every direction if DAPL shuts ...from page 1

#### Where to ship?

With the potential loss of DAPL capacity, analyst consensus mostly expects at least 200,000 b/d to move to existing pipeline alternatives, about 200,000 b/d more to crude-by-rail, and up to another 100,000 b/d or so in increased trucking volumes. Some analysts predict crudeby-rail volumes could even grow by at least 300,000 b/d with some modest optimization and expansion work.

Some of the big volume gainers would include the True Companies' Butte and Belle Fourche pipelines system from the Bakken to Guernsey, Wyoming; Kinder Morgan's Double H Pipeline to Guernsey; Enbridge's Bakken pipeline system to Illinois and Cushing, Oklahoma; Enbridge's Platte Pipeline from Casper, Wyoming, and Guernsey to Illinois; and Tallgrass Energy's Pony Express Pipeline from Guernsey to Cushing.

The major rail networks from the Bakken to the US Gulf Coast's refining and export hubs are BNSF and the joint Canadian Pacific Railway and Kansas City Southern networks, which are merging as part of a \$25 billion acquisition. Crestwood Equity Partners' prime COLT rail and trucking hub in the Bakken also stands to benefit.

Even pipeline systems from North Dakota to Canada, such as Enbridge Line 26 and Plains All American Bakken North, could be utilized to move crude north and then back into the US through Enbridge's Mainline network and others.

"In a normal world, you probably wouldn't be shipping crude north into Canada to bring it back into the US," Bean said.

The DAPL case is closely watched by industry and environmental

observers alike because it could potentially set a standard for attempting to close existing pipelines and other fossil fuel infrastructure.

Stretching nearly 1,200 miles, DAPL transports crude from North Dakota's Bakken to Illinois, where it connects to the Energy Transfer Crude Oil Pipeline, called ETCO, which runs to Nederland, Texas.

A federal appeals court ruling in January essentially confirmed the pipeline is operating illegally without the necessary legal permitting, and that it is up to the Army Corps, now under President Joe Biden, to determine whether it will let DAPL continue to operate while a court-ordered environmental review determines whether the needed easement is deserved.

#### **Dollars and barrels**

North Dakota crude production fell from a high of about 1.5 million b/d at the end of 2019 to less than 865,000 b/d in May during the peak of pandemic lockdowns. Output bounced back to 1.2 million b/d late last year before dipping back to 1.15 million b/d in January.

With fewer than 15 drilling rigs active in the Bakken – which is 35 lower than the same timeframe last year – S&P Global Platts Analytics actually expects production to dip a bit more this spring even if DAPL remains open. So a closure would have much less of an impact than during normal times.

Platts Analytics projects average annual production in the Bakken to fall by 45,000 b/d in 2021 year-on-year and increase by 120,000 b/d in 2022, ending 2022 at 1.3 million b/d – if DAPL is operating.

In the event of a temporary shutdown, Platts Analytics sees crude-by-rail volumes rising from 180,000 b/d to about 350,000 b/d, which is relatively close to pre-pandemic volumes. East Caley Capital projects more reliance on Bakken crude-by-rail though, rising as high as 490,000 b/d in the third quarter of 2021.

In order to financially incentivize such large rail growth, Bakken crude prices within the basin would need to at first fall to a nearly \$7/b discount to WTI at Cushing, said Kendrick Rhea, of East Daley.

The Bakken spot price at Williston, North Dakota averaged at a 45 cents/b premium to WTI during March, up \$1.95/b from February, S&P Global Platts assessments show. So differentials would need to substantially widen.

After a larger initial drop, Rhea estimates a shutdown of DAPL would put Bakken at around a \$5/b discount to Cushing WTI over the longer term.

North Dakota is keeping a wary eye on the proceedings.

"We'll all be watching. That's going to be a very, very significant event for oil production and oil prices for the state of North Dakota," said Lynn Helms, director of the North Dakota Department of Mineral Resources, during the state's monthly production webinar on March 11.

In the meantime, other pipeline operators are planning. Tallgrass Energy recently launched an open season to increase crude volumes on its 400,000 b/d Pony Express Pipeline from Guernsey to Cushing.

The move meshes with a previous open season jointly announced in March by Tallgrass and True Companies for more crude transportation from the Bakken Shale to Cushing and Texas Gulf Coast destinations that could commence as early as June 1. In late January, open seasons were announced for capacity expansions on the True Companies' Bridger and Belle Fourche systems.

#### How did we get here?

In 2016, construction of the Dakota Access Pipeline temporarily became the epicenter of the US environmental movement against fossil fuels, as climate activists teamed up with Native American tribes that wanted to protect their lands and waterways.

Headline-grabbing protests, security clashes and arrests ensued.

In December 2016, outgoing President Barack Obama blocked the completion of the pipeline in a largely symbolic gesture that was quickly overturned after Donald Trump was sworn in, and the pipeline came online later in 2017.

#### ALTERNATIVE ROUTES TO DAKOTA ACCESS PIPELINE



Source: S&P Global Platts Analytics, East Daley

Behind the scenes, the legal fights continued over the fasttracked environmental permitting the pipeline received under Trump. And federal Judge James Boasberg, who is hosting the April 9 hearing, stunned industry observers when he ordered the pipeline shut in July 2020. One month later, the shutdown order was halted on appeal.

Even with the pipeline's fate in question, operator Energy Transfer was still moving forward with expanding the crude pipeline's capacity by the end of 2021, although the timing is now unclear. Early construction work, including surveying and concrete pouring to build new pumping stations, began last year.

"We do not see a scenario where the pipeline will be shut-in," Energy Transfer co-CEO Thomas Long insisted on the company's earnings call on Feb. 17.

The pipeline would climb to about 750,000 b/d of crude capacity as part of the capacity expansion project, according to Energy Transfer. The company has planned to expand Dakota Access to 1.1 million b/d. But, with the ongoing coronavirus pandemic hurting crude demand, the expansion is taking a phased-in approach.

<u> — Jordan Blum</u>

### Valero, Phillips 66 see negative first quarter from February freeze

- Higher electricity, gas prices add to costs
- Low refinery utilization hurts revenues

*New York*—Valero Energy warned it will post a loss when it reports first quarter earnings later this month, with mid-February polar vortex's impacting its earnings and operations, the company said in an April 8 statement.

The company expects to report a first quarter net loss between \$835 million and \$735 million, due to lower production and higher operating costs. Most affected were facilities on the US Gulf Coast and Midwest as a prolonged bout of freezing weather destabilized electrical power grids and cut natural gas supply, forcing plants to close down or cut rates.

At the mid-February cold peak, S&P Global Platts estimated that as much as 7.6 million b/d of refining capacity was offline or running at very low rates. By the end of the month, almost half of USGC refining capacity, about 5.4 million b/d, capacity was still offline.

"The company expects electricity and natural gas costs incurred primarily by its refining and ethanol business segments to be higher than expected for the first quarter of 2021 due to the impacts of Winter Storm Uri," Valero's statement said.

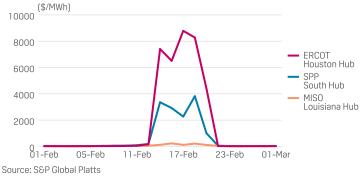
Valero expects the impact of excess energy costs to account for a loss of between \$535 million to \$520 million, or a loss of \$1.18-\$1.14/share. Of this, losses related to USGC facilities are expected to range from \$485 million to \$475 million, and losses in the Midwest region to range from \$45 million and \$40 million.

In mid-February, a wave of arctic cold, dubbed Winter Storm Uri by some weather forecasters, swept over Texas and parts of the lower Midwest, which impacted the reliability of the electrical grid.

The Electricity Reliability Council of Texas, which is not connected to other electric grids, struggled to provide power as the extreme cold froze wind turbines and natural gas field compressors alike, taking about two-thirds of power generation capacity offline and causing a severe spike in the price of electricity and natural gas.

At the request of Texas Governor Greg Abbott, many refineries shut down operations to conserve energy for consumers. Some refiners, including Phillips 66, ExxonMobil and Deer Park, even sold power into the grid from their cogeneration plants in an effort to increase power available as well as mitigate their own electric costs.

#### POLAR VORTEX IMPACT ON ELECTRICITY PRICES



#### **USGC** hardest hit

Following Valero's guidance, some analysts reduced the company's first quarter earnings-per-share estimates, with JP Morgan cutting them to minus \$1.95 from minus 73 cents.

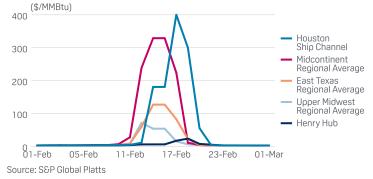
Analyst Phil Gresh said in an April 8 note the reduction is to account for a "one-time headwind from higher energy costs" associated with the winter storm.

"While the energy cost update is not ideal and worse than peers, we believe that this is a function of [Valero] having significantly greater exposure to the Gulf Coast," which he puts at 40% of the total company.

JP Morgan estimates Valero's first quarter USGC refinery throughput at 1.45 million b/d, below the company's previous guidance of 1.49 million-1.54 million b/d, as a result of the weather

USGC per-barrel operating costs were estimated much higher at \$7.78/b, up from the first quarter's \$3.67/b, a direct result of higher electricity and natural gas.

#### POLAR VORTEX IMPACT ON NATURAL GAS PRICES



#### Lesser impact to Midwest, Phillips 66

Valero's first quarter Midwest refinery throughput was estimated at 393,000 b/d by JP Morgan, below Valero's previous guidance of 410,000-430,000 b/d, with operating expenses estimated by JP Morgan at \$5.66/b, compared with the first quarter's actual \$4.19/b expense.

The Southwest Power Pool, which serves Kansas and Oklahoma north through Minnesota, also experienced grid instability and a spike in power prices, but the impact was not as severe. Valero reported some operating issues at its Ardmore, Oklahoma, refinery as a result of grid issues and the severe cold.

Phillips 66, which has less USGC exposure and more Midwest refinery concentration, including its Ponca City, Oklahoma, plant, on April 6 came out with their announcement that they, too, would be booking a loss for the first quarter on the polar vortex.

"The severe winter storms had significant impacts on the company's operations in the Central and Gulf Coast regions," Phillip 66 said in a statement.

"These winter storms resulted in lower utilization of assets, as well as higher utility, maintenance and repair costs primarily in the midstream, chemicals and refining segments," the company said.

Phillips 66 said the higher utility costs were driven by "significant" increases in prices for natural gas and electricity due to increased demand and supply outages caused by the storm.

However, Phillips 66 said "these negative impacts were partially offset by the sale of electricity to help meet demand in the Texas market."

JP Morgan forecast first quarter loss estimates for Phillips 66, estimating the USGC losing \$508 million and its Midcontinent operations losing \$128 million. They put refinery utilization for USGC and Midcontinent plants at 68% and 80%, respectively, with refinery throughput at 523,000 b/d and 424,000 b/d.

Per-barrel operating losses for the USGC and Midcontinent were forecast at \$9.36/b and \$3.23/b, respectively, JP Morgan said.

<u> — Janet McGurty</u>

# Brazil's Bolsonaro warns of potential changes to Petrobras' fuel-price policy

- Import-price parity could be revised
- Shareholders to vote on new CEO April 12
- Former Army general to take over top post

*Rio de Janeiro*—Brazilian President Jair Bolsonaro has once again warned of changes at state-led Petrobras, raising the specter of renewed government interference at the company that could lead to changes in its policy for pricing transportation fuels.

"We could change the pricing policy there," Bolsonaro said April 7.

Following the president's trend of naming former military officials to top spots, Bolsonaro in February nominated former Army General Joaquim Silva e Luna to be Petrobras' new CEO. The move is expected to give Bolsonaro, a former Army captain who considers former military officers more loyal to his policies, a greater voice in company decisions.

Silva e Luna cleared Petrobras' internal governance requirements and is expected to be approved by shareholders during an extraordinary meeting April 12.

Bolsonaro's comments underscored concerns made by investors and market analysts that Brazil was poised for a return to government meddling at the company in a repeat of the losses suffered in 2011-2014

Bolsonaro's comments underscored concerns made by investors and market analysts that Brazil was poised for a return to government meddling at the company in a repeat of the losses suffered in 2011-2014. During that period, the Workers' Party-led government prohibited Petrobras from passing along higher international oil prices along to consumers at the pump. The policy cost Petrobras billions of dollars in lost profits, analysts estimated at the time.

Petrobras implemented a new pricing policy in 2016 that committed the company to keeping domestic fuel prices at parity with international imports. The policy is important because it maintains arbitrage windows open for third-party importers, which are typically responsible for about 25% of Brazil's diesel consumption and about 15% of gasoline demand. The import-parity policy has been the source of public and government outrage at the company, especially since January.

Bolsonaro led criticism of Petrobras by government officials, trade groups and labor unions for passing the recent surge in oil prices to consumers by raising diesel and gasoline prices in the first quarter. The latest point of contention surrounded a 39% increase to natural gas prices paid by local distributors, which was triggered by a complicated formula that includes foreign-exchange rates, international oil prices and domestic inflation indicators.

"This is inadmissible. What contracts are these? What deals are these?," Bolsonaro said.

He also criticized the timing of the adjustments, which Petrobras makes on a quarterly basis. The increases go into effect May 1, when a two-month federal tax holiday on domestic diesel prices also expires.

#### Battle for support

Bolsonaro has been battling to maintain flagging support for his administration, which has been crushed by its lack of a coordinated response to the world's second-deadliest coronavirus outbreak. He has railed against social-distancing measures, changed health ministers several times and failed to secure necessary vaccine supplies from overseas. Brazil is now poised to surpass the US death toll by mid-2021, according to several estimates.

The discord between Bolsonaro and Petrobras started in January, when outgoing Petrobras CEO Roberto Castello Branco said an oversupply in freight capacity and not rising diesel prices was to blame for independent truckers' woes ahead of a walkout by the group. The comments incensed truckers, who went on strike Feb. 1.

While the strike failed to gain momentum because of the pandemic, it rattled Bolsonaro. Independent truckers were a key support group for Bolsonaro in the 2018 elections. Bolsonaro supported truckers during a 10-day walkout in May-June 2018 that was also related to high diesel prices, with the walkout causing food, fuel and medicine shortages across Brazil.

Castello Branco was then fired in February after Bolsonaro warned of consequences for the company's policies.

Bolsonaro, meanwhile, also faces new challenges by an old face in Brazilian politics: former President Luiz Inacio Lula da Silva. Known affectionately as Lula, he has had his rights to run for political office reinstated by a recent Supreme Court ruling that undercut corruptionrelated charges against him.

Lula has so far declined to officially declare as a candidate, but his relentless criticism of Bolsonaro's policies and response to the pandemic is expected to push the current president to adopt morepopulist positions, a trend that started in 2020 as Bolsonaro's approval ratings plummeted.

Bolsonaro also encountered pushback from state governors and Congress, which failed to reach a deal to reduce the ICMS state tax on manufactured goods that accounts for about 14% of the price for a liter of diesel.

Bolsonaro wanted Congress to approve a fixed monetary value rather than a percentage for the ICMS nationwide, but the measure failed to generate enough support. The president is now calling on governors to make the change, which is a hard sell for states already struggling with pandemic-related revenue losses.

States are currently free to set a 12%-25% rate for the ICMS, which is a key source of tax revenue.

<u> — Jeff Fick</u>

# Total to start supplying sustainable aviation fuel to French airports in April

- La Mede, Oudalle facilities begin SAF production
- SAF part of Total's strategy to be carbon neutral by 2050
- Aviation sector starting to take more steps to decarbonize

*London*—Total will begin supplying sustainable aviation fuel, or SAF, to French airports this month, the energy major said April 8, as it steps up efforts to produce cleaner fuels.

SAF is a renewable alternative to traditional jet fuel the global aviation industry has explored over the past decade, with five production technologies approved to convert sustainable feedstocks into fuel. It is mostly manufactured from bio-waste, namely agricultural waste fats and/or oils, or residue raw materials.

Total, which is Europe's biggest refiner, confirmed it had begun producing SAF at its La Mède biorefinery in southern France and its Oudalle facility near Le Havre. It also plans to produce SAF from its "zero-crude" Grandpuits platform from 2024.

This comes not long after the French government put in place a law calling all aircrafts to use at least 1% biojet fuel by 2022, 2% by 2025 and 5% by 2030.

Total's sustainable aviation fuel will be made from animal fat, used cooking oil and other waste and residue sourced from the circular economy. It will not use vegetable oils as feedstock, unlike other SAF producers, it added.

#### Net-zero strategy

The development comes as the oil and airlines industries are taking serious steps to decarbonize the aviation sector.

"By producing sustainable aviation fuel at our French sites today, we are able to respond to strong demand from an aviation industry looking to reduce its carbon footprint, while adapting our industrial resources," said Bernard Pinatel, president of refining and chemicals at Total. "This commitment is fully aligned with Total's climate ambition to get to net-zero emissions by 2050."

Total recently signaled a major boost in spending on renewable energy in the coming years as part of its strategy to shift to cleaner, lower-carbon fuels. The company's dedicated Renewable Fuels business will start operations from next month, the statement said.

But the French energy major pledged to maintain a previous target of growing its oil and gas production in the near term to fund its green investment drive.

In the week of April 4, fellow rival Shell invested in bio-jet producer LanzaJet as the energy major looks to increase its presence in the production of renewable fuels.

Many of Europe's refiners are moving away from traditional oil refining and refocusing their business on producing renewable diesel, sustainable aviation fuel and feedstock for polymers and chemicals. Finland's Neste has emerged as one of the key producers of SAF, with a current capacity of 100,000 mt/year. It is aiming to produce some 1.5 million mt/year of SAF by 2023.

#### Growing market

The SAF market remains small in comparison to the amount of jet fuel traded globally. It currently accounts for only 0.02% of global jet fuel use, according to S&P Global Platts estimates.

However, the aviation sector along with oil companies are taking more steps to increase global volumes. SAF is also currently around four times more expensive than conventional jet fuel, but five years ago, it was 15 times more expensive, according to Platts data.

It is expected to become more cost-competitive due to its rising supply as more airlines adopt the cleaner fuel, which is also being supported by better technology.

Platts assessed Northwest European SAF at \$2,045.44/mt on an ex-refinery basis on April 7; compared with a price of \$506/mt for a 30,000 mt jet fuel cargo on an FOB basis out of Northwest Europe on April 6.

Aircrafts can currently only operate using a maximum 50% blend of SAF and conventional jet fuel known as Jet A1. But the amount of SAF that can be blended into Jet A1 depends on the purity of the initial petroleum-based product.

Stringent jet fuel specifications, for example a flashpoint of 38 C and maximum freeze point of minus 47 C, have been a hurdle to achieving greener jet fuel.

The Emission and Climate Impact of Alternative Fuels (ECLIF3) recently started a study, looking into the emissions impact and performance of using 100% sustainable aviation fuel on passenger aircraft.

- Eklavya Gupte

# US oil, gas rig count jumps 9 to 528, with activity hike in smaller basins: Enverus

- Permian Basin loses a rig, leaving 235
- SCOOP/STACK, Bakken, Utica, DJ each gain 1
- Oil rig count up 12 to 405; highest in a year

*Houston*—The US oil and natural gas rig count jumped nine to 528 in the week ending April 7, rig data provider Enverus said, as drilling activity pulled back slightly in the giant Permian Basin but increased in a handful of smaller basins.

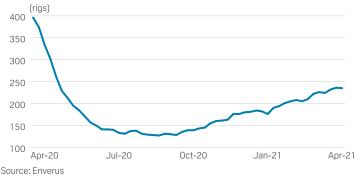
The Eagle Ford Shale in South Texas gained two rigs from the previous week for a total 43. The SCOOP/STACK of Oklahoma (19 rigs), the Bakken Shale (15) in North Dakota and Montana, the DJ Basin (14) in Colorado and the Utica Shale (13), mostly in Ohio, each gained a rig.

The Permian, sited in West Texas and New Mexico, lost a rig during the week, leaving 235.

Horizontal rigs that typically "move the needle" in terms of US shale production was flat week on week at 420, said Andrew Cooper, quantitative US supply analyst with S&P Global Platts Analytics.

Cooper added Permian rigs "appeared to flip-flop from the Midland to the Delaware Basin this week," with some rigs shifting from the Permian's eastern to the western sub-basin. The majority of rigs added in the past week were in basins other than the eight largest shale plays and were for vertical wells that commonly have initial production rates much lower than horizontal wells, Cooper said. Operators in those basins usually are smaller companies.

**PERMIAN RIG COUNT TICKS DOWN 1** 



#### Oil rigs at highest level in a year

The past week was the first time the oil rig count cracked the 400mark since mid-April 2020, when upstream operators were shedding rigs after a steep oil price drop in early March as the pandemic hit the market. The nationwide total rig count reached 838 in the first week of March, but plummeted 67% in the following four months before starting to slowly inch back up.

So far, the US fleet has regained 249 rigs since the fall from March 2000, less than half the 559 it lost.

Investment bank Goldman Sachs expects the total US oil and gas rig count to expand by an incremental 65-85 rigs by year-end 2021, with the "most upside" in the Permian at an incremental 35-45 rigs from the current count.

The investment bank also sees five to 10 incremental rigs in the Eagle Ford Shale by year-end 2021, three to five incremental rigs in the DJ-Niobrara, two to three incremental rigs in the Haynesville Shale, and one to two incremental rigs in the SCOOP/STACK.

One interesting anticipated Permian rig reduction, according to Evercore ISI analyst James West, will be the planned cutback in drilling for DoublePoint Energy, a small privately held operator being acquired by giant public Pioneer Natural Resources.

DoublePoint was in a substantial (30%/year) production growth mode, but Pioneer plans to cut the small operator's seven rigs to five by year's end as part of its own disciplined growth mode of 5%/year. The transaction should close in mid-to-late Q2.

"It will be interesting to see how a public company espousing capital discipline absorbs a private [player] operating under a different set of strategic objectives," West said in an April 5 investor note.

#### 2021 looks 'very good'

Overall, 2021 looks "very good" for US E&P companies, said Nicholas Cacchione, an analyst with consultancy RBN Energy.

"With the economy expected in recovery mode and travel poised to rebound, futures markets are indicating that oil and gas prices will remain strong throughout the rest of the year," Cacchione said in an April 7 industry note.

Cacchione expects E&P investment will be flat to slightly lower in 2021 after declining 50% last year, but not necessarily from less activity.

Instead, "this underscores the keen focus that we believe E&Ps will have on costs this year, given that the sector has debt to repay in order to repair impairment-ravaged balance sheets," he said.

Oil and gas prices lost some ground in the week ended April 7,

according to S&P Global Platts data.

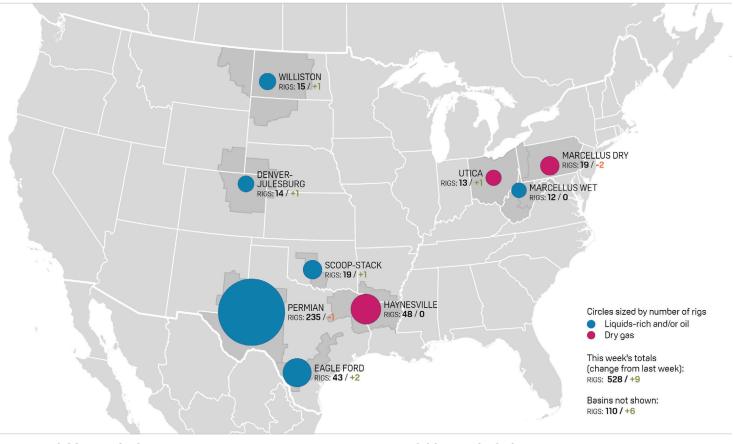
WTI prices averaged \$59.81/b for the week, down 34 cents; WTI Midland averaged \$60.19/b, down 35 cents; and the Bakken Composite averaged \$59.92/b, down 36 cents.

Gas prices at Henry Hub averaged \$2.39/MMBtu, down 8 cents, and averaged \$1.82/MMBtu at Dominion South, down 2 cents.

— <u>Starr Spencer</u>

# RIG COUNTS OF THE TOP PRODUCING BASINS, AS OF APRIL 7, 2021

Number of rigs / Week-on-week +Increase or -Decrease



#### WEEKLY RIG COUNT: TOP OIL PLAY WEEKLY RIG COUNT: TOP GAS PLAY (# of rias) (# of rigs) 700 100 600 80 500 60 400 300 Denver-Julesburg 40 Williston 200 Eagle Ford Utica 20 100 SCOOP-STACK Haynesville Permian Marcellus 0 0 Apr-20 Jul-20 Sep-20 Dec-20 Apr-21 Apr-20 Jul-20 Sep-20 Dec-20 Apr-21

Methodology: The S&P Global Platts Rig Count is an independent benchmark that assesses US onshore and offshore drilling activity on a weekly basis. Data sources include drilling contractors, state filings and proprietary production data. The process behind developing the rig count is unbiased and standardized. The key determinant is identifying whether a rig is active during the seven-day window preceding the publication deadline. Only the rigs on location and working during the past seven days are included in the count. For more details on methodology please visit http://plattsinfo.platts.com/Upstream.

Source: Enverus Drillinginfo

# Crude lacks direction as market weighs rising supply outlooks, pandemic demand risks

- US-Iran breakthrough poses downside price risk
- Brent, WTI hold below 50-day average
- US dollar tests 2-week lows

*New York*—Crude futures ended a volatile session mixed as the market searched for direction as a weaker US dollar offset weakened fundamental outlooks.

NYMEX May WTI settled 17 cents lower at \$59.60/b, while ICE June Brent climbed 4 cents to settle at \$63.20/b.

The prospect of rising global crude supply later in 2021 has provided increasing headwinds to crude prices. The April 1 OPEEC+ agreement will see 2 million b/d of crude return to the market by July, and recent overtures between the US and Iran could see the return of sanctioned Iranian barrels sooner than most market watchers had anticipated.

"It's definitely trading a little heavy. The market has a lot to digest with 2.1 million barrels of additional oil till July and Iranian nuclear talks hanging over the market," Bjarne Schieldrop, chief commodity analyst at SEB Bank, told S&P Global Platts.

Front-month Brent and WTI settled below their respective 50-day moving averages for the fourth straight session.

NYMEX May RBOB settled 75 points higher at \$1.9593/gal and May ULSD climbed 19 points to \$1.8098/gal.

The headway made in the first round of indirect talks between Iran and the US over restoring the nuclear deal and lifting sanctions suggests that Iran is definitely on its way back to the market, with the prospect of extra supply weighing on prices, according to Schieldrop.

However, the relatively small slip in prices is down to the fact that Iran is already halfway back in the market, having been exporting from January to March, meaning a return of Iranian supply "is not going to be such an incredible shock," Schieldrop said.

Data intelligence firm Kpler estimates Iran exported some 896,000 b/d of crude oil and dirty petroleum products to China in March, up from 406,000 b/d in February and the highest level since April 2019.

Nevertheless, sudden success in the nuclear negotiations pose the main downside risk to prices in the near term, with the market largely expecting an agreement to take several months to a year.

"Oil traders have seen this coming and in the recent selloff had started to price in the return of Iranian oil, but I am not sure that they expected it might be this quick, assuming it happens," Price Futures Group analysts Phil Flynn said.

Meanwhile demand-side risks posed by the global COVID-19 pandemic continued to pressure near-term outlooks, analysts said.

"Some risks are brewing in the fight against COVID," OANDA senior market analyst Edward Moya said in a note. "China is facing a supply shortage for their vaccines, the US school-reopening is in jeopardy among virus spread with youth sports, and vaccine efficacy could be at risk as some European countries contemplate spreading out the time between first and second vaccine doses."

But oil prices were backstopped by a weakened US dollar. The ICE US Dollar Index fell to 92.07 in afternoon trading, on pace to close at the lowest since March 22.

US gasoline cracks rallied amid divergent crude and RBOB prices. The ICE New York Harbor RBOB crack versus Brent climbed to \$19.18/b in afternoon trading, up from \$18.79/b on April 7.

<u>– Chris van Moessner</u>

# South Korean gasoline producers look to increase exports in Q2

- To export more than 6.6 million barrels of gasoline in April
- Driving activity in Southeast Asia, Oceania rebounds sharply
- Asian benchmark gasoline crack spread at 14-month high

*Singapore*—South Korean refiners are planning to raise gasoline exports in the second quarter as motor fuel demand recovery in external markets outpaces domestic consumption and export margins surge amid a slew of refinery operation issues in the region significantly tighten Asian supply.

The country's major gasoline and diesel producers—including SK Innovation, Hyundai Oilbank and S-Oil—plan to take full advantage of the tight supply conditions to capture lucrative export margins, refinery officials and product marketing sources told S&P Global Platts.

"Domestic refined products demand has been improving over the past few months, but the pace of the recovery remains painfully slow and the outlook is always uncertain because of the volatile coronavirus spread trend," a middle distillates marketing and distribution chain manager at S-Oil said. "We may put more focus on overseas sales in the second quarter as demand is stronger in the external markets."

The appetite for motor fuels from regional net importers of gasoline has started to rebound in line with the uptick in driving activity as vaccine rollouts and a steady easing of movement restrictions continue, industry sources said.

Malaysia, Australia, New Zealand and Vietnam have all seen driving activity recover to above baseline levels in late March, according to Apple mobility data. Other buyers such as Thailand and Indonesia are closely behind, with driving activity slightly under baseline levels but at multimonth highs.

In contrast, driving activity across South Korea in late March was around 40% below baseline levels, and in the capital of Seoul almost 50% below baseline levels.

The country is forecast to consume 236,000 b/d of gasoline in Q2, up from 225,000 b/d in Q1 as the winter low-driving season came to an end, but the Q2 demand outlook is below the 244,000 b/d averaged in

#### SOUTH KOREA PLANS TO REVIVE GASOLINE EXPORTS



Jan-20 Mar-20 May-20 Jul-20 Sep-20 Nov-20 Jan-21 Mar-21 May-21 Source: S&P Global Platts market/industry survey, Korea National Oil Corp. the same period last year, according to S&P Global Platts Analytics.

Asia's major middle distillate supplier is expected to export more than 6.6 million barrels of gasoline in April and close to 7 million barrels in May, compared with an estimated 5.8 million barrels exported in March and 5.75 million barrels in February, according to fuel marketing sources at three major South Korean refiners surveyed by Platts.

South Korea's gasoline exports averaged 7.3 million barrels/ month in 2019 prior to the pandemic and around 6 million barrels in 2020. The industry's target is boost South Korea's international sales volumes to above 6.5 million barrels/month or close to 7 million barrels/month in 2021, according to a market research analyst at the Korea Petroleum Association.

#### Tight Asian supply, healthy margins

South Korea's ambition to boost exports comes as little surprise to the Asian middle distillates market as the physical gasoline crack spread surges amid a slew of unplanned and extended refinery outages across the region tightening the supply outlook.

The 127,500 b/d Wakayama refinery in western Japan reportedly went offline March 29 due to a fire. The restart date for the refinery, owned by Japan's largest refiner ENEOS, remains unclear.

It was the second blaze at an ENEOS refinery in three weeks A fire broke out March 11 at an 83,000 b/d vacuum distillation tower unit at the company's 129,000 b/d Chiba refinery in Tokyo Bay, which had been shut for regular maintenance since March 5.

A third ENEOS refinery, 136,000 b/d Oita, has been offline since a fire in May 2020 and is slated to restart in August.

The latest outage in Japan came the same day as a blaze prompted the shutdown of Pertamina's 125,000 b/d Balongan refinery in Indonesia.

Reflecting the regional supply situation and output disruptions, the FOB Singapore 92 RON gasoline crack against front month ICE Brent crude futures averaged \$5.69/b in March, the highest monthly level since \$6.97/b in February 2020, Platts data showed. The crack spread has averaged \$7.27/b to date in April.

South Korean refineries will undergo seasonal maintenance in Q2, but middle distillates marketers will put in a lot of effort to ship out and export as many barrels as possible to fully capture the lucrative margins, two refinery officials in Seoul told Platts.

— <u>Gawoon Philip Vahn, Mark Tan, Charles Lee</u>

#### **REFINERY UPDATES**

- A Coruna, Spain
- Owner: Repsol
- Overall capacity: 120,000 b/d
- Units affected: Coker, vacuum unit 2
- Unit capacity: Coker (1.1 million mt/year)
- Duration: April-October 2021

**Notes:** Spain's Repsol intends to halt operations at its coker unit, with a capacity of 1.1 million mt/year, and vacuum unit 2, but keep other units in operation until a planned turnaround of the fuel units in May. The company is temporarily laying off 31% of its staff at the A Coruna refinery due to the unprecedented decline in oil demand, the company said April 8. The 212 layoffs are expected to last for a maximum of six months, it said in a statement.

Operations at A Coruna have been modified through the course of the pandemic restrictions, now in their 14th month.

A Coruna can process 6 million mt/year (120,000 b/d) of crude. It operates 3 million mt/year vacuum units; a 1.7 million mt/year FCC and a 1.5 million mt/year mild hydrocracker.

The news follows halts at other Repsol units. Puertollano (150,000 b/d) took its crude unit offline on March 31, also for market reasons, while 220,000 b/d Petronor, near Bilbao, which has had the smaller of its two CDUs offline since Nov. 20, 2020, recently announced a temporary lay-off of one third of its staff.

In a presentation to shareholders March 26, Repsol said its refining margin indicator has dropped to around 50 cents/b during January and February this year, from an average of \$2.20/b in full year 2020 and \$5/b in full year 2019.

Spanish fuel volume supplied to the retail market in the first quarter fell 19% year on year, data published April 7 by national fuel distributor Exolum – formerly Compania Logistica de Hidrocarburos – showed, as demand, especially for jet fuel, was slowed by 14 months of travel restrictions.

Two other refineries in the Iberian peninsula have also halted CDUs during the pandemic – Cepsa has one of two distillation units offline at its 220,000 b/d complex at La Rabida, Huelva, and Galp's 110,000 b/d complex at Matosinhos, Portugal, was taken offline last year with the intention to permanently close refining operations during the course of this year.

Source: Company statement

#### La Mede, France

- Owner: Total
- Overall capacity: 500,000 mt/year
- Refinery: Grandpuits, France
- Owner: Total
- Overall capacity: 101,000 b/d

**Notes:** Total will begin supplying sustainable aviation fuel, or SAF, to French airports from the current month, the energy major said April 8, as it steps up efforts to produce cleaner fuels.

Total confirmed it had begun producing SAF at its La Mede biorefinery in southern France and its Oudalle facility near Le Havre. It also plans to produce SAF from its "zero-crude" Grandpuits platform from 2024.

La Mede stopped processing crude oil at the end of 2016 and was converted into a bio plant in 2019. It processes 60%-70% vegetable oil including palm oil, rapeseed and sunflower oil, with the rest coming from cooking oil and animal fat.

In 2020, Total said it would convert its Grandpuits refinery near Paris to produce renewable diesel and bioplastics. It is due to start operations in 2024. The refinery is currently offline. Source: Company

# Omsk, Russia

- Owner: Gazprom Neft
- Capacity: 21.4 million mt/year (428,000 b/d), of which 1 million mt/ year is gas condensate

**Notes:** Gazprom Neft said that its Omsk refinery started producing Jet A-1 meeting international standards. The refinery already produces TS-1 jet which is used on the Russian domestic market.

The refinery has already supplied Jet A-1 on the Asian market and plans to start supplying it to European airports. Source: company

# Jubail, Saudi Arabia

- Owner: Saudi Aramco Total Refining and Petrochemical Co., or Satorp
- Overall capacity: 440,000 b/d

**Notes:** Saudi Arabia's Satorp refinery is gradually coming back after partial works, according to trading sources.

The scheduled partial works have been ongoing since the second half of February.

The company declined to comment on specific maintenance plans. Source: Traders

# Bukhara, Uzbekistan

- Owner: Uzbekneftegaz
- Overall capacity: 2.5 million mt/year (50,000 b/d)

**Notes:** Uzbekistan's Bukhara has halted for planned maintenance, due to last ten days, Uzbekneftegaz said April 8. The works, which started April 5, will involve cleaning the heat exchangers and furnace pipes, as well as replacing the catalyst for the naphtha hydrotreater. Source: Company

# Sendai, Northeast Japan

- Owner: ENEOS
- Overall capacity: 145,000 b/d

Duration: Shut Feb. 13

**Notes:** Japan's largest refiner ENEOS said April 8 it has delayed the restart of its 145,000 b/d Sendai refinery in Northeast Japan to mid-April, which has been suspended since the strong earthquake offshore Fukushima on Feb. 13.

ENEOS initially planned to restart the Sendai refinery in the first half of April. However, another earthquake of magnitude 6.9 occurred off the coast of Miyagi Prefecture, northeast Japan, on March 20, then ENEOS had suggested that it could delay the initial restart schedule due to the impact of the earthquake.

A spokesman did not say why the restart was delayed to mid-April.

At the Sendai refinery, all units were automatically shut after the magnitude 7.3 earthquake hit offshore Fukushima at a depth of 55 km at 11:08 pm local time on Feb. 13. Right after the earthquake, waterborne and rack shipments of fuel oil were suspended, but rack shipments of fuel oil resumed on Feb. 20 and waterborne shipments restarted on Feb. 27.

Source: Company spokesman

# Wakayama, western Japan

- Owner: ENEOS
- Overall capacity: 127,500 b/d
- Duration: Shut after fire at 11:30 am local time on March 29

**Notes:** Japan's largest refiner ENEOS said April 8 it was delaying waterborne shipments of oil products from the 127,500 b/d Wakayama refinery in the western Japan.

Rack shipments of oil products other than fuel oil resumed on April 8 as originally planned, but the date for resuming waterborne shipments and rack shipments of fuel oil has not yet been decided, a spokesman said.

All units including petrochemical plants were shut at the Wakayama refinery after a fire broke out near the 39,000 b/d fluid catalytic cracker on March 29, and ENEOS suspended waterborne and rack shipments of oil products, a company official said earlier.

It was not clear when ENEOS would be able to restart the units, the spokesman said.

Source: company

#### ASIA, APR 8

			Mid	Change
Singapore (PGA page 2002)				
(\$/barrel)				
Naphtha	PAAAP00	61.00-61.04	61.020	+0.120
Jet kerosene	PJABF00	63.99–64.03	64.010	+0.710
Gasoil	POABC00	66.88–66.92	66.900	+0.350
Gasoil 10 ppm	AA0VC00	66.88-66.92	66.900	+0.350
Gasoil 50 ppm	AAPPF00	66.73-66.77	66.750	+0.360
Gasoil 0.05% S	AAFEX00	65.74-65.78	65.760	+0.310
Gasoil 0.25% S	AACUE00	65.45-65.49	65.470	+0.330
Gasoil 50 ppm disc/prem	AAPPH00	-0.240.20	-0.220	-0.050
Mogas 92 unl	PGAEY00	69.48-69.52	69.500	-0.010
Mogas 95 unl	PGAEZ00	71.61-71.65	71.630	-0.130
Mogas 97 unl	PGAMS00	72.96-73.00	72.980	-0.150
CFR Naphtha	AAOVF00		60.240	+0.210
Naphtha pap. (bal month)	AAPLD00	60.23-60.27	60.250	+0.100
Naphtha pap. (May)	PAAAQ00	59.88-59.92	59.900	+0.150
Naphtha pap. (Jun)	PAAAR00	59.48-59.52	59.500	+0.200
Kerosene pap. (bal month)	AAPLE00	64.43-64.47	64.450	+0.700
Kerosene pap. (May)	PJABS00	64.83-64.87	64.850	+0.720
Kerosene pap. (Jun)	PJABT00	65.11-65.15	65.130	+0.740
Gasoil pap. (bal month)	AAPLF00	66.92-66.96	66.94	+0.380
Gasoil pap. (May)	POAFC00	66.99-67.03	67.010	+0.450
Gasoil pap. (Jun)	POAFG00	67.11-67.15	67.130	+0.480
(\$/mt)				
F0 180 CST 2%	PUAXS00	365.91-365.95	365.930	+0.050
HSF0 180 CST	PUADV00	357.86-357.90	357.880	+0.050
180 CST disc/premium	AAGZF00	0.63-0.67	0.650	-0.100

# CHINA, APR 8 (PGA page 2010)

(\$/mt)			Mid	Change
South China FOB				
Unl 92 RON	AAICW00	582.75-586.75	584.750	-0.250
South China, C&F				
Jet kerosene	PJABQ00	515.50-519.50	517.500	+5.750
Gasoil	POAFA00	499.75–503.75	501.750	+3.250
Hong Kong				
Fuel oil 380 CST	PUAER00	374.50–375.50	375.000	+1.000

#### FUJAIRAH, FOB, APR 8 (PGA page 2018)

(\$/mt)		Mid	Change
Naphtha	NFJSA00	558.650	+0.230
HSF0 380 CST	AFUJQ00	365.320	+4.150
(\$/barrel)			
Gasoline 95 unleaded	AFUJA00	72.720	-0.100
Gasoline 92 unleaded	RFJFS00	69.880	-0.080
Kerosene	AFUJF00	63.150	+0.720
Gasoil 10 ppm	AFUJP00	65.360	+0.430
Gasoil	AFUJK00	65.360	+0.430

			Mid	Change
Singapore (continued)(PGA page	es 2002 & 2	2655)		
(\$/mt)				
HSF0 380 CST	PPXDK00	351.15-351.19	351.170	+0.420
HSFO 180 CST pap. (bal month)	AAPML00	357.48-357.52	357.50	0.000
HSFO 180 CST pap. (May)	PUAXZ00	356.88-356.92	356.900	+0.400
HSFO 180 CST pap. (Jun)	PUAYF00	355.63-355.67	355.650	+0.050
МТВЕ	PHALF00	698.00-700.00	699.000	+1.000
C&F Japan (PGA page 2006)				
(\$/barrel)				
Jet kerosene	PJAAN00	65.99-66.03	66.010	+0.810
Mogas unl	PGACW00	71.65-71.69	71.670	+0.020
(\$/mt)				
Naphtha	PAAAD00	558.75-563.25	561.000	+1.000
Nph 2nd 1/2 May	PAAAE00	567.75-568.25	568.000	+1.250
Nph 1st 1/2 Jun	PAAAF00	562.75-563.25	563.000	+1.000
Nph 2nd 1/2 Jun	PAAAG00	558.75-559.25	559.000	+1.000
FOB Japan				
(\$/barrel)				
Gasoil	POJAP00		66.170	+0.410
C+F Australia (PGA page 2004)				
(\$/barrel)				
Mogas 92 unl	AACZF00	72.58-72.62	72.600	+0.030
Mogas 95 unl	AACZH00	74.71–74.75	74.730	-0.090
Jet kerosene	AAFIY00	67.32-67.36	67.340	+0.750
Gasoil 10 ppm	AAQUD00	70.41-70.45	70.430	+0.390

### ARAB GULF, FOB, APR 8 (PGA page 2004)

(\$/mt)			Mid	Change
Naphtha	PAAAA00	525.75-530.25	528.000	+1.000
Naphtha LR2	AAIDA00	529.59-534.09	531.840	+1.940
HSF0 180 CST	PUABE00	345.56-345.60	345.580	+0.370
HSF0 380 CST	AAIDC00	338.85–338.89	338.870	+0.740
(\$/barrel)				
95 RON unleaded	AAICY00	69.03-69.07	69.050	-0.130
92 RON unleaded	AAGJA00		66.920	-0.010
Kerosene	ΡЈΑΑΑΘΘ	61.66-61.70	61.680	+0.710
Gasoil 10 ppm	AAIDT00	64.40-64.44	64.420	+0.350
Gasoil 0.05% S	AAFEZ00	63.85–63.89	63.870	+0.380
Gasoil 0.25% S	AACUA00	63.38-63.42	63.400	+0.350
Gasoil	POAAT00	64.40-64.44	64.420	+0.350

#### ASIA PRODUCT PREMIUM/DISCOUNT ASSESSMENTS

Apr 8			Mid	Change
MOP* Singapore (PGA	page 2002)			
(\$/barrel)				
Jet	PJACU00	-0.64/-0.60	-0.620	-0.010
Gasoil 0.25% S	AACQ100	-1.52/-1.48	-1.500	-0.080
Gasoil	POAIC00	-0.09/-0.05	-0.070	-0.060
CFR Naphtha	AAOVG00		0.150	+0.100
(\$/mt)				
380 CST	PPXDL00	0.31/0.35	0.330	+0.080
MOP* Arab Gulf (PGA p	oage 2004)			
(\$/barrel)				
Jet	PJACV00	0.73/0.77	0.750	0.000
Gasoil 10 ppm	AAIDU00	0.83/0.87	0.850	0.000
Gasoil 0.25% S	AACUC00	-0.19/-0.15	-0.170	0.000
Gasoil	POAID00	0.83/0.87	0.850	0.000
380 CST**	PPXDM00	-6.73/-6.69	-6.710	+0.370
(\$/mt)				
HSF0 180 CST	ΑΑΧΙΑΘΟ	25.98/26.02	26.000	+4.000
HSFO 380 CST	AAXJB00	24.98/25.02	25.000	+4.000
MOP* Japan (PGA page	2006)			
(\$/barrel)				
Naphtha	PAAD100	11.00/11.50	11.250	+0.250
MOP* West India (PGA	page 2012)			
(\$/mt)				
Gasoline (92 RON)	AARBQ00		574.540	-0.090
Gasoline (95 RON)	AAQWI00		592.650	-1.100
Naphtha	ΑΑQWK00		537.010	+1.000
Jet kero	AAQWM00		489.470	+5.610
Gasoil (10 ppm)	AAQW000		482.200	+2.610
Gasoil (500 ppm)	AAQWQOO		473.700	+2.310
Gasoil (2500 ppm)	AAQWS00		471.540	+2.460
(\$/barrel)				
Gasoline (92 RON)	AARBP00		67.590	-0.010
Gasoline (95 RON)	AAQWH00		69.720	-0.130
Naphtha	ΑΑQWJ00		59.670	+0.110
Jet kero	AAQWL00		61.960	+0.710
Gasoil (10 ppm)	AAQWN00		64.720	+0.350
Gasoil (500 ppm)	AAQWP00		63.580	+0.310
Gasoil (2500 ppm)	AAQWR00		63.290	+0.330

\*Mean of Platts. \*\*=Differential to FOB Arab Gulf HSF0 180 CST.

#### PLATTS INDEX, APR 8 (PGA page 115)

			Change
Platts Jet Fuel Index	PJGL000	182.75	+1.120
The Diette Let Evel Jedeu	تواو ومتورز اومغوار بواوم وت		Looot

The Platts Jet Fuel Index is calculated using daily assessments of Jet fuel spot prices in relevant regional centers. These values are compared with average spot prices in the base period (Index value of year 2000 = 100%) to generate a percentage figure reflecting the overall rise or fall in markets compared to the base period.

#### EUROPEAN BULK, APR 8

(\$/mt)			Mid	Change			Mid	Change
(PGA page 1114)								
	<u>Cargoes</u>	FOB Med basis Italy			Cargoes	CIF Med basis Genoa	a/Lavera	
Prem unl 10 ppm	AAWZA00	603.75-604.25	604.000	+6.000	AAWZB00	612.25-612.75	612.500	+5.750
Naphtha physical	PAAA100	519.50-520.00	519.750	+3.000	PAAAH00	531.00-531.50	531.250	+2.500
Jet av. fuel	AAIDL00	505.75-506.25	506.000	+7.750	AAZBN00	520.75-521.25	521.000	+7.000
ULSD 10 ppm	AAWYY00	494.25-494.75	494.500	+5.750	AAWYZ00	504.75-505.25	505.000	+5.500
Gasoil 0.1%	AAVJ100	490.25-490.75	490.500	+6.500	AAVJJ00	501.25-501.75	501.500	+6.000
1% fuel oil	PUAAK00	405.00-405.50	405.250	+1.750	PUAAJ00	414.75-415.25	415.000	+1.750
3.5% fuel oil	PUAAZ00	327.50-328.00	327.750	+1.250	PUAAY00	337.00-337.50	337.250	+1.250

(PGA page 1110)								
	Cargoe	s FOB NWE			<u>Car</u>	goes CIF NWE basis /	ARA	
Gasoline 10 ppm	_				AAXFQ00	620.00-620.50	620.250	+7.250
Naphtha swaps					PAAAJ00	538.00-538.50	538.250	+4.000
Naphtha physical					PAAAL00	539.50-540.00	539.750	+2.500
Jet kerosene	PJAAV00	513.25-513.75	513.500	+7.500	PJAAU00	522.25-522.75	522.500	+7.000
ULSD 10 ppm	AAVBF00	496.00-496.50	496.250	+6.750	AAVBG00	505.50-506.00	505.750	+6.500
Diesel 10 ppm NWE	AAWZD00	497.50-498.00	497.750	+7.000	AAWZC00	507.25-507.75	507.500	+6.500
Diesel 10 ppm UK					AAVBH00	508.75-509.25	509.000	+6.500
Diesel 10 ppm UK cargo	es				AUKDA00		508.750	6.500+
CIF NWE - original (Fren	ch) spec							
Gasoil 0.1%	AAYWR00	486.00-486.50	486.250	+6.500	AAYWS00	499.75-500.25	500.000	+6.000
1% fuel oil	PUAAM00	395.75-396.25	396.000	+1.500	PUAAL00	406.75-407.25	407.000	+1.500
3.5% fuel oil	PUABB00	318.50-319.00	318.750	+1.000	PUABA00	333.00-333.50	333.250	+1.000

#### (PGA pages 1112 & 1380)

	Barges F	OB Rotterdam				
98 RON unl	AAKOD00	642.00-642.50	642.250	+7.500		
Prem unl	PGABM00	614.00-614.50	614.250	+11.250		
Reformate	AAXPM00		624.250	+1.500		
Eurobob	AAQZV00	605.00-605.50	605.250	+7.500		
E10 Eurobob	AGEFA00		608.250	+5.750		
Naphtha physical	PAAAM00	535.50-536.00	535.750	+2.500		
Jet kerosene	PJABA00	521.25-521.75	521.500	+5.250		
Diesel 10 ppm*	AAJUS00	499.50-500.00	499.750	+7.000		
Gasoil 50 ppm	AAUQC00	496.25-496.75	496.500	+7.750		
Gasoil 0.1%*	<b>ΑΑΥWΤ00</b>	487.50-488.00	487.750	+6.000		
DMA MGO 0.1%*	LGARD00		484.000	+6.000		
1% fuel oil	PUAAP00	394.50-395.00	394.750	+1.500		
3.5% fuel oil	PUABC00	334.50-335.00	334.750	+1.000		
3.5% 500 CST fuel oil	PUAGN00	332.50-333.00	332.750	+1.000		
380 CST	PUAYW00	349.50-350.50	350.000	0.000		

\*FOB Amsterdam-Rotterdam-Antwerp.

#### WEST AFRICA PRODUCTS (\$/mt), APR 8 Mid

G (PGA page 1122)				
FOB	NWE			
AAKUV00	598.750	+5.250		
CIF Wes	st Africa			
AGNWC00	619.750	+5.250		
FOB STS W	Vest Africa			
AGNWD00	502.250	+6.000		
	FOB AAKUV00 CIF Wes AGNWC00 FOB STS V	FOB NWE           AAKUV00         598.750           CIF West Africa           AGNWC00         619.750           FOB STS West Africa		

# RENEWABLE FUELS (\$/mt), APR 8 (PGA pages 1414, 483 and 2414)

			Change	
Northwest Europe	е			
SAF	BJNWA00	2083.106	+37.670	
HVO	HVNWA00	1908.594	+34.320	
USWC				
SAF w/ credits	ASAFA00	1985.406	-2.173	
SAF w/o credits	ASAFB00	523.848	-6.885	
RD w/ credits	ARDFA00	1867.876	-1.316	
RD w/o credits	ARDFB00	248.433	-6.831	
Southeast Asia				
SAF	ASFAA00	1740.520	+9.610	
HVO	HVSAB00	1598.980	+8.740	

#### PLATTS EURO DENOMINATED PRODUCT ASSESSMENTS

Apr 8			Mid	Change
Cargoes CIF NWE/ba	əsis ARA (€/mt)	(PGA page 1116)		
Nap phy	AAQCE00	453.32-453.74	453.533	+1.797
Jet	AAQCF00	438.83-439.25	439.039	+5.591
Cargoes FOB NWE (F	PGA page 1116)			
1%	AAQCG00	332.54-332.96	332.745	+1.037
Barges FOB Rotterd	am (€/mt) (PGA p	oage 1118)		
Prem unl	AAQCH00	515.92-516.34	516.133	+9.112
10 ppm*	AAQC100	419.71-420.13	419.923	+5.604
Gasoil 0.1%*	AAYWY00	409.63-410.05	409.840	+4.770
DMA MGO*	LGARE00		406.689	+4.772
3.50%	ААQСК00	281.07-281.49	281.279	+0.652
3.50% 500 CST	PUAG000	279.39-279.81	279.598	+0.652
			Mid	Change
Cargoes CIF West A	frica (€/mt) (PGA	page 1116)		
Gasoline	AANWC00		520.755	+4.065
Cargoes FOB NWE W	/est Africa (€/m	<b>t)</b> (PGA page 1116)		
Gasoline	AGNWA00		503.109	+4.076
Cargoes FOB STS W	est Africa (€/mt	) (PGA page 1116)		
Gasoil 0.3%	AGNWE00		422.023	+4.761
Euro/US\$ forex rate: 1.	1901. Platts Euro	denominated Europea	an and US pro	oduct

Euro/US\$ forex rate: 1.1901. Platts Euro denominated European and US product assessments are based on market values and a Euro/US\$ forex rate at 4:30 PM local London time. \*F0B Amsterdam-Rotterdam-Antwerp.

#### EUROPEAN FEEDSTOCKS AND BLENDSTOCKS

			Change						
argo (\$/mt)	(PGF page 1760)								
AAHMZ00	456.50-457.50	457.000	+6.000						
AAHND00	447.75-448.75	448.250	+5.750						
FOB Northwest Europe cargo (\$/mt)									
AAHMX00	441.50-442.50	442.000	+5.500						
AAHNB00	432.50-433.50	433.000	+5.250						
PKABA00	437.00-438.00	437.500	+5.000						
FOB Black Sea cargo (\$/mt)									
ABBAD00		435.750	+5.750						
ABBAC00		427.000	+5.750						
o (\$/mt)									
AAJNT00		427.500	+1.250						
ABBAB00		447.750	+6.000						
ABBAA00		439.000	+5.750						
\$/mt)									
PHALA00	680.75-681.25	681.000	+5.250						
AAHNF00	432.00-433.00	432.500	+5.750						
		423.500	+5.250						
	AAHMZ00 AAHND00 Cargo (\$/mt AAHN200 AAHNB00 PKABA00 PKABA00 PKABA00 Mmt) ABBAD00 ABBAC00 o (\$/mt) AAJNT00 ABBAB00 ABBAA00 \$/mt) PHALA00	AAHND00         447.75–448.75           Cargo (\$/mt)         441.50–442.50           AAHNX00         432.50–433.50           PKABA00         437.00–438.00           /mt)         ABBAD00           ABBAC00         0           o (\$/mt)         AJNT00           ABBAB00         ABBAB00           ABBAB00         5/mt)           PHALA00         680.75–681.25	AAHMZ00         456.50-457.50         457.000           AAHNZ00         447.75-448.75         448.250           Cargo (\$/mt)						

#### NEW YORK, APR 8 (PGA page 152)

			Mid	Change					Mid	Change				Mid	Change	
		Cargo (¢/gal)				RVP		Barge (¢/gal)				RVP	Diff	erentials to NYM	1EX	
Unl 87	AAMHG00	196.99-197.09	197.040	0.000	AAMHGRV	9.0		0 1 0 1								
CBOB							AAWBL00	191.88-191.98	191.930	+0.750	AAWBLRV	9.0	AANYX14	-4.000	0.000	
Prem CBOB							AAWLC00	208.48-208.58	208.530	+4.100	AAWLCRV	9.0	AANYX16	12.600	+3.350	
Unl RBOB	AAVKS00	195.98-196.08	196.030	+0.750	AAVKSRV	7.4	AAMGV00	194.28-194.38	194.330	+0.750	AAMGVRV	7.4	AANYX15	-1.600	0.000	
Prem RBOB							AAMGY00	210.88-210.98	210.930	+4.100	AAMGYRV	7.4	AANYX17	15.000	+3.350	
Jet fuel							PJAAW00	165.68-165.78	165.730				ADIGA00	-15.250	0.000	
LS jet kero							PJABJ00	184.43-184.53	184.480				ADIHA00	3.500	0.000	
ULS kero							AAVT100	191.18-191.28	191.230				ADJKH00	10.250	0.000	
No. 2							POAEG00	155.18-155.28	155.230				ADIA000	-25.750	0.000	
ULSD							AATGX00	180.93-181.03	180.980	+0.090			ADIZA00	0.000	NANA	
ULS heating oil							AAXPX00		165.730	+0.190			ADIAQ00	-15.250	0.000	
	Ca	ərgo ex-duty (¢/gəl	)*			RVP										
Unl 87	AASAA00	179.10-179.20	179.150	-0.080	AASAARV	9.0										
Unl RBOB	AASAF00	178.12-178.22	178.170	+0.670	AASAFRV	7.4										
		(\$/barrel)					0	lifferential vs 1s str	ip(\$/barrel)	)						
No. 6 0.3% S hi pr	PUAAE00	75.78-75.80	75.790	-0.610			AAUGA00	13.73-13.75	13.740							
No. 6 0.3% S lo pr	PUAAB00	75.78-75.80	75.790	-0.610			AAUGB00	13.73-13.75	13.740							
No. 6 0.7% S max	PUAAH00	66.21-66.23	66.220	-0.540			AAUGC00	4.16-4.18	4.170							
No. 6 1% S max	PUAA000	61.45-61.47	61.460	-0.100			AAUGD00	-0.600.58	-0.590							
No. 6 1% S max 1s strip	AAUGG00	62.04-62.06	62.050	-0.100												
USAC HSFO	PUAAX00	54.78-54.80	54.790	+0.640			AAUGF00	-7.277.25	-7.260							
No. 6.1 S max pap bal M	AARZS00	62.00-62.10	62.05	-0.100												
No. 6 1.0% S pap 1st M	PUAXD00	62.00-62.10	62.050	-0.050												
No. 6 1.0% S pap 2nd M	PUAXF00	62.00-62.10	62.050	-0.050												
No. 6 1.0% S pap qtrly	PUAXG00	61.60-61.70	61.650	-0.100												

\*These assessments reflect gasoline cargoes sold on a delivered, ex-duty basis New York, excluding import duty and import taxes/fees.

#### USAC CPL LINDEN\*, APR 8 (PGA page 410)

(¢/gal)		Mid	Change	Differentials to NYMEX	Chan	ge	Cycle		RVP	
Unl 87	ACXPW00	195.330	0.000	AANYX40 -0.60	0 -0.75	O ACRQWO	Y 18	ACRQWRV	9.0	
CBOB	ABXPW00	194.330	0.000	AANYX41 -1.60	) -0.75	O ABRQWC	Y 18	ABRQWRV	10.0	
RBOB	ADXPW00	197.830	+0.750	AANYX42 1.90	) 0.00	O ADRQWC	Y 18	ADRQWRV	7.4	
Jet kero 54	AAXPV00	165.730	+0.190	ADIJA00 -15.25	) 0.00	O AAXPVC	Y 18			
ULS heating oil	AAXPU00	168.730	+0.190	ADIAR00 -12.25	) 0.00	0 AAXPUC	Y 18			
ULSD	AAXPW00	181.180	+0.090	ADLAA00 0.20	) -0.10	O AAXPWC	Y 18			

\*Assessments reflect shipments on the next full pipeline cycle after the prompt cycle

#### U.S. BUCKEYE PIPELINE, APR 8 (PGA page 310)

(¢/gəl)			Mid	Change		RVP	Differentials to NYI	MEX	Change
Unl RBOB	AAMHB00	194.28-194.38	194.330	+0.750	AAMHBRV	7.4	AANYX35	-1.600	0.000
Prem RBOB	AAMHZ00	210.88-210.98	210.930	+4.100	AAMHZRV	7.4	AANYX36	15.000	+3.350
CBOB	AAPSY00	191.88-191.98	191.930	+0.750	AAPSYRV	9.0	AANYX33	-4.000	0.000
CBOB prem	AAPSZ00	208.48-208.58	208.530	+4.100	AAPSZRV	9.0	AANYX34	12.600	+3.350
CBOB-PA	ΑΑΥΥΑΘΟ	188.48-188.58	188.530	+0.900	AAVYARV	10.0	AANYX37	-7.400	+0.150
CBOB-PA prem	AAVYB00	205.08-205.18	205.130	+4.250	AAVYBRV	10.0	ADLAL00	9.200	+3.500
ULSD	AATHF00	180.93-181.03	180.980	+0.090			ADIYA00	0.000	NANA
Jet fuel	AAJNL00	165.68-165.78	165.730	+0.190			ADIEA00	-15.250	0.000
LS jet/kero	AAJNNØØ	184.43-184.53	184.480	+0.190			ADIFA00	3.500	0.000
						RVP			

UNI CBOB AAUAS00 188.23-188.33 188.280 +0.900 AAUASRV 10.0 AANYX29	
	-7.650 +0.150
Prem CBOB AAUAT00 204.83-204.93 204.880 +4.250 AAUATRV 10.0 AANYX30	8.950 +3.500

All RVP references are after ethanol

#### CHICAGO PIPELINE, APR 8 (PGA page 160)

(¢/gal)			Mid	Change		RVP	Differentials to NYME	K	Change
Unleaded 87	PGACR00	193.38-193.48	193.430	+0.250	PGACRRV	9.0	AANYX98	-2.500	-0.500
Unleaded 89	PGAAX00	200.48-200.58	200.530	+0.250	PGAAXRV	9.0			
Prem. unl 91	PPASQ00	211.13-211.23	211.180	+0.250	PPASQRV	9.0	AANY100	15.250	-0.500
CBOB	AAREL00	192.38-192.48	192.430	+0.250	AARELRV	9.0	AANY101	-3.500	-0.500
PBOB	AAUEU00	219.38-219.48	219.430	+0.750	AAUEURV	7.4	AANY103	23.500	0.000
RBOB	PPARH00	200.63-200.73	200.680	+0.750	PPARHRV	7.4	AANY102	4.750	0.000
Jet fuel	PJAAF00	177.43-177.53	177.480	+0.440			ADILA00	-3.500	+0.250
ULSD	AATHA00	185.68-185.78	185.730	+0.440			ADLAI00	4.750	+0.250

#### CHICAGO BUCKEYE COMPLEX, APR 8 (PGA page 160)

(¢/gal)		Mid	Change		RVP	Differentials to N	NYMEX	Change
CBOB	ACBAA00	192.930	+0.750	ACBAARV	9.0	ACBAB00	-3.000	0.000
RBOB	ACBAC00	200.680	+0.750	ACBACRV	7.4	ACBAD00	4.750	0.000
ULSD	ACBAE00	185.730	-0.060			ACBAF00	4.750	-0.250

#### CHICAGO WOLVERINE PIPELINE, APR 8 (PGA page 160)

(¢/gal)		Mid	Change		RVP	Differentia	els to NYMEX	Change
CBOB	AGCWA00	192.430	-0.250	AGCWERV	9.0	AGCWB00	-3.500	-1.000
ULSD	AGCWC00	185.980	+0.190			AGCWD00	5.000	0.000

# MARINE FUEL (PGA page 30)

		\$/mt	Change
0.5% FOB Singapore cargo	AMFSA00	466.460	+4.460
0.5% FOB Fujairah cargo	AMFFA00	459.960	+2.810
0.5% FOB Rotterdam barge	PUMFD00	445.000	+4.500
0.5% FOB US Gulf Coast barge	AUGMB00	458.000	-2.000
0.5% Dlvd US Atlantic Coast barge	AUAMB00	467.250	-3.750
0.5% FOB Mediterranean cargo	MFFMM00	450.000	+5.750
0.5% CIF Mediterranean cargo	MFCMM00	458.500	+5.750
		\$/barrel	
0.5% FOB US Gulf Coast barge	AUGMA00	72.130	-0.310
0.5% Dlvd US Atlantic Coast barge	AUAMA00	73.580	-0.590
	vs FO	380 MOPS str	rip (\$/mt)
0.5% FOB Singapore cargo	AMOPA00	115.620	+4.120
	vs MF (	0.5% MOPS st	rip (\$/mt)
0.5% FOB Singapore cargo	FOFSB00	0.880	+0.100
0.5% FOB Singapore Bal mo	F0FS000	466.050	+4.500
0.5% FOB Singapore M1	F0FS001	465.000	+4.250
0.5% FOB Singapore M2	F0FS002	463.900	+4.150
0.5% FOB Singapore MOPS Strip	FOFSA00	465.580	+4.360

#### GROUP THREE, APR 8 (PGA page 160)

(¢/gal)			Mid	Change		RVP	Differentia	Is to NYMEX	Change
Sub-octane	AAXIX00	194.13-194.23	194.180	+0.750	AAXIXRV	8.5	AANYX01	-1.750	0.000
Prem. unleaded	PGABD00	209.88-209.98	209.930	+2.250	PGABDRV	8.5	AANYX02	14.000	+1.500
ULSD	AATHB00	185.58-185.68	185.630	+0.590			ADLAB00	4.650	+0.400
Jet fuel	PJAAI00	172.68-172.78	172.730	-1.810			ADIKA00	-8.250	-2.000

# ATLANTIC RESID/CONTRACT CARGOES POSTED PRICES,

APR 8 (PGA page 564)

(\$/barrel) Global		No. 4 Fuel
Boston 0.5%	PRALB00	93.60
Boston 1.0%	PRALD00	88.60
		No. 6 Fuel
Boston 0.5%	PRAMN00	91.60
Boston 1.0%	PRAMD00	80.30

Source: Global Montello Group Corp.

# U.S. GULF COAST, APR 8

			Mid	Change		Mic	l Cha	ənge						Μ	lid Change		
Houston (PGA page 156)					Diffe					0							
Unl 87		Pipeline (¢/gal) 192.88–192.98	102.0			rential to NYMEX	000 -	0.500	PGACTCY	Cycle	DOLOTOV	<b>RVP</b> 9.0		Waterborne (¢/gal) 194.88–194.98 194.			<b>RVP</b> 9.0
Unl 89	PGACT00 PGAAY00	192.88-192.98			AANY105	-3.	- 000	-0.500	PGACTCY		PGACTRV	9.0	PGACU00 PGAAZ00	194.88-194.98 194.		PGACURV PGAAZRV	9.0
Prem unl 93	PGAJB00	203.13-203.23			AANYX76	7	250 +	0.750	PGAJECY		PGAJBRV	9.0	PGAAZ00 PGAIX00	205.13-205.23 205.		PGAAZRV	9.0
CBOB 87	AAROU00	187.03-187.13			AANYX76 AANYX77			0.750	AARQUCY		AARQURV	10.0	AAWES00	189.03-189.13 189.		AAWESRV	10.0
CBOB 93	AARQUOO	200.03-200.13			AANYX78			0.750	AARQUCY		AARQURV	10.0	AAWESOO	189.03-189.13 189.	JOU +0.900	AAWESKV	10.0
RB0B 83.7	AAKQV00	194.13-194.23			AANYX79			0.750	AAMFBCY		AARQVRV	7.4					
RBOB 91.4	AAMNG00	205.53-205.63			AANYX80			0.750	AAMNGCY		AAMNGRV	7.4					
Jet/kero 54	PJAB000	161.68–161.78			ADIAS00	-19.		0.250	PJABOCY		AAPINORV	1.7	PJABM00	163.18-163.28 163.	230 +0 440		
Jet/kero 55	PJABP00	162.18–162.28			ADIA300	-18.		0.250	PJABPCY				PJABN00	163.68–163.78 163.			
ULS Kero	AAVTLOO	168.68–168.78			ADIA200	-12.		0.250	AAVTLCY				AAVTK00	170.18-170.28 170.			
ULSD	AATGY00	176.28–176.38			ADIQA00			0.120	AATGYCY				AATGZ00	177.28-177.38 177.			
No. 2	POAED00	151.68-151.78			ADIQA00			0.000	POAEDCY				POAEE00	159.18–159.28 159.			
ULS Heating Oil	AAXFD00	160.53-160.63			ADIAI00			+0.020	AAXFDCY				FUALLOU	133.10 133.20 133.	200 0.010		
		ne vs prompt pipe			ADIA100	-20.	400	0.020	AAAFDCT	20							
Jet Spread	AUSGL00	ne va prompt pipt		00 0.000													
ULSD Soread	AUSGN00		1.0														
No. 2 Spread	AUSGN00			00 -0.500													
NO. 2 Spread	AUSGMOO	500 0 · · · · / · / · · ·		00 -0.500	50												
5		FOB Cargo (¢/gal		10 0.000		B Cargo (\$/mt)	050										
Export ULSD	AAXRV00			10 +0.290	AAXRW00	505.	050 +	0.910									
	FOB Carg	o vs forward pipe															
ULSD Mexico	AUSGH00			00 0.000													
ULSD Brazil	AUSGA00		1.1														
ULSD EN590	AUSGB00		1.2														
Jet A	AUSGC00		1.5														
Jet A-1	AUSGD00		2.0	00 0.000													
	Colonial I	Pipeline Gasoline	Line Sp	oace (¢/gal)						Cycle							
Line 1	ΑΑΧΤΑΘΟ		-0.4	00 -0.100					AAXTACY	23							
Line 3	AAXTB00		0.0	00 0.000					AAXTBCY	23							
Line 1+3	AAXTC00		-0.4	00 -0.100					AAXTCCY	23							
	Colonial I	Pipeline Distillate:	s Line S	Space (¢/gal)													
Line 2	AAXTD00		-0.4	00 +0.350					AAXTDCY	23							
Line 3	AAXTE00		0.0	00 0.000					AAXTECY	23							
Line 2+3	AAXTG00		-0.4	00 +0.350					AAXTGCY	23							
		(\$/barrel)			Differential v	/s USGC HSFO strip	(\$/barre	el)					U	SGC HSFO Strip (\$/barr	el)		
Slurry Oil	PPAPW00	63.92-63.94	63.9	30 -0.080	AAUGS00	10.82-10.84 10.		-0.380									
No. 6 1.0% S 6 API	PUAA100	64.10-64.12	64.1	10 -0.080	AAUGT00	11.00-11.02 11.	010 -	-0.380									
USGC HSF0	PUAFZ00	53.92-53.94	53.9	30 -0.080	AAUGU00	0.82-0.84 0.	830 -	-0.380					AAUGW00	53.09-53.110 53.	100 +0.300		
RMG 380	PUBDM00	53.92-53.94		30 -0.080	AAUGV00			-0.380									
USGC HSFO swap BalMo(Apr)	AARZT00	53.05-53.15		10 +0.300													
USGC HSFO swap M1(May)	PUAXJ00	52.70-52.80	52.7	50 -0.050													
USGC HSFO swap M2(Jun)	PUAXL00	52.45-52.55		00 -0.200													
USGC HSFO swap Q1(Q3 21)	PUAXN00	51.70-51.80	51.7	50 -0.380													
(PGA page 330)																	
	USGC	RVP Adjustments	(¢/oal	1													
CBOB -1 psi	AGLOB00		1.7														
Prem CBOB -1 psi	AGLODOO		1.4														
CBOB +1 psi	AGLOCOO		-1.4														
Prem CBOB +1 psi	AGHOA00		-1.6														
				0.000													

#### **U.S. GULF COAST**

			Mid	Change		Mid	Change	Mid Change
(PGF page 760)								
		Waterborne (¢/ga	1)		Diff vs USGC wate	rborne 87 (¢/gal)		
FOB Naphha Cargo	AAXJP00	136.45-136.55	136.500	) -2.250				
FOB Naphha Cargo (\$/mt)	<b>AAXJU00</b>	515.95-516.05	516.000	0 -8.500				
Naphtha USGC vs	ANAPD00		-37.750	) -6.250				
Naphtha MOPJ (\$/mt)								
DAP LSR Naphtha Parcel	ΑΑΧQK00		136.500	) -2.250				
DAP LSR Naphtha Parcel (\$/mt)			547.370	) -9.020				
DAP LSR Naphtha Parcel diff**	AAXQN00		0.750	0.000				
Naphtha barge	AALPG00	146.88-146.98	146.930	) +0.250	AASGZ00	-48.000		
	AALPI00	149.88-149.98	149.930	) +0.250	AASHD00	-45.000		
MTBE	PHAKX00	207.88-207.98	207.930	) +1.750				
								Diff vs USGC pipeline 87 (¢/gəl)
Alkylate*	AAXBA00		201.450	) +1.110	AAFIE00	7.500	0.000	AAXBD00 9.500 0.000
Raffinate*	AAXBB00		154.950	) +1.110	AAJMU00	-39.000	0.000	AAXBE00 -37.000 0.000
Reformate*	AAXBC00		222.450	) +1.110	AAJMV00	28.500	0.000	AAXBF00 30.500 0.000

LSR = Light Straight Run. \*=DAP barge. \*\*= Diff to Mont Belvieu non-Targa natural gasoline.

Note: Platts line space assessments reflect the physical trade of gasoline or distillates at two locations agreed upon by the parties along the Colonial Pipeline between Pasadena, Texas, and Linden, New Jersey. The assessments represent the premium or discount paid by a buyer while taking refined product off the line at one location while giving product to the seller at another.

#### U.S. GULF COAST PIPELINE CYCLES, APR 8 (PGA page 156)

(¢/gal)		<b>Pipeline</b>	Mid		Cycle		RVP			Pipeline	Mid		Cycle	RVP
Gasoline														
Unl-87	AAELC00	192.88–192.98	192.930	AAELCCY	23	AAELCRV	9.0	ULSD	AAUJW00	176.28-176.38	176.330	AAUJWCY	24	
Unl-87	AAELD00	191.98-192.08	192.030	AAELDCY	24	AAELDRV	9.0	ULSD	ΑΑυσχο	176.33-176.43	176.380	AAUJXCY	25	
Unl-87	AAELE00	191.08-191.18	191.130	AAELECY	25	AAELERV	9.0	ULSD	<b>AAUJY00</b>	176.38-176.48	176.430	AAUJYCY	26	
Unl-87	AAELF00	190.18-190.28	190.230	AAELFCY	26	AAELFRV	9.0	ULSD	AAUJZ00	176.43-176.53	176.480	AAUJZCY	27	
Unl-87	AAELG00	189.68-189.78	189.730	AAELGCY	27	AAELGRV	9.0	ULSD	AAUKD00	176.48-176.58	176.530	AAUKDCY	28	
Unl-87	AAELH00	189.18-189.28	189.230	AAELHCY	28	AAELHRV	9.0	No. 2	AAELW00	151.68-151.78	151.730	AAELWCY	23	
CBOB 87	AARQW00		186.680	AARQWCY	24	AARQWRV	10.0	ULS heating oil	AAXF J00	160.53-160.63	160.580	AAXFJCY	23	
CBOB 87	AARQX00		186.280	AARQXCY	25	AARQXRV	10.0	ULS heating oil	AAXFK00	160.53-160.63	160.580	AAXFKCY	24	
CBOB 87	AARQY00		185.880	AARQYCY	26	AARQYRV	10.0	ULS heating oil	AAXFL00	160.58-160.68	160.630	AAXFLCY	25	
CBOB 87	AARQZ00		185.480	AARQZCY	27	AARQZRV	10.0	ULS heating oil	AAXFM00	160.63-160.73	160.680	AAXFMCY	26	
CBOB 87	AARQA00		185.080	AARQACY	28	AARQARV	10.0	ULS heating oil	AAXFN00	160.68-160.78	160.730	AAXFNCY	27	
Distillates								ULS heating oil	AAXFP00	160.73-160.83	160.780	AAXFPCY	28	
Jet kero	AAEL000	161.68–161.78	161.730	AAELQCY	23			Forward pipeline stri	ίρ					
Jet kero	AAELROO	161.63-161.73	161.680	AAELRCY	24			ULSD 15-30 Day	AUSGI00		176.380			
Jet kero	AAELS00	161.53-161.63	161.580	AAELSCY	25			ULSD 21-35 Day	AUSGJ00		176.400			
Jet kero	AAELT00	161.43-161.53	161.480	AAELTCY	26			ULSD 7-21 Day	AUSGK00		176.340			
Jet kero	AAELU00	161.33-161.43	161.380	AAELUCY	27			Jet Fuel 15-30 Day	AUSGE00		161.350			
Jet kero	AAELV00	161.23-161.33	161.280	AAELVCY	28			Jet Fuel 21-35 Day	AUSGF00		161.290			
ULSD	AAUJV00	176.28-176.38	176.330	AAUJVCY	23			Jet Fuel 7-21 Day	AUSGG00		161.450			

#### WEST COAST PIPELINE, APR 8 (PGA page 158)

California			Mid	Change		RVP			Mid	Change
(¢/gal)		Los Angeles						Differential to NYMEX		
Unl 84	AAUHA00	201.63-201.73	201.680	+2.000	AAUHARV	9.0	AANYX84		5.750	+1.250
Prem unl 90	PGABG00	217.63-217.73	217.680	+2.000	PGABGRV	9.0	AANYX85		21.750	+1.250
CARBOB	ΑΑΚΥJ00	202.63-202.73	202.680	+2.000	AAKYJRV	6.0	AANVX00	6.70/6.80	6.750	+1.250
CARBOB prem	AAKYL00	218.63-218.73	218.680	+2.000	AAKYLRV	6.0	AANYX86		22.750	+1.250
Jet fuel	PJAAP00	166.93-167.03	166.980	-1.810			AANVY00	-14.05/-13.95	-14.000	-2.000
ULS (EPA) diesel	POAET00	183.93-184.03	183.980	+1.190			AANVZ00	2.95/3.05	3.000	+1.000
CARB diesel	POAAK00	183.93-184.03	183.980	+1.190			AANWA00	2.95/3.05	3.000	+1.000
(¢/gəl)		San Francisco						<b>Differential to NYMEX</b>		
Unl 84	PGADG00	206.88-206.98	206.930	+1.750	PGADGRV	7.8	AANYX87		11.000	+1.000
Prem unl 90	PGAB000	222.88-222.98	222.930	+1.750	PGABORV	7.8	AANYX88		27.000	+1.000
CARBOB unl	AAKYN00	207.88-207.98	207.930	+2.750	AAKYNRV	6.0	AANYX89		12.000	+2.000
CARBOB prem	ΑΑΚΥΡΘΘ	223.88-223.98	223.930	+2.750	AAKYPRV	6.0	AANYX90		28.000	+2.000
Jet Fuel	PJABC00	166.93-167.03	166.980	-1.810			ADINA00		-14.000	-2.000
ULS (EPA) diesel	POAEY00	183.93-184.03	183.980	+0.190			ADLAE00		3.000	0.000
CARB diesel	POAAL00	183.93–184.03	183.980	+0.190			ADLAF00		3.000	0.000
Other West										
(¢/gal)		Phoenix						<b>Differential to NYMEX</b>		
CBG/RBOB unl	AADDP00	204.38–204.48(a)	204.430	+2.000	AADDPRV	5.7	AANYX91		8.500	+1.250
CBG/RBOB prem	PPXDJ00	220.38–220.48(b)	220.430	+10.000	PPXDJRV	5.7	AANYX92		24.500	+9.250
Northwest										
(¢/gəl)		<u>Seattle</u>						<b>Differential to NYMEX</b>		
Unl 84	AAXJE00	195.63-195.73	195.680	+1.500	AAXJERV	9.0	AANYX93		-0.250	+0.750
Prem unl 90	AAXJF00	214.63-214.73	214.680	+1.500	AAXJFRV	9.0	AANYX94		18.750	+0.750
Jet fuel	PJABB00	166.93-167.03	166.980	-1.810			ADIOA00		-14.000	-2.000
ULS (EPA) diesel	AAUEX00	183.28–183.38	183.330	-1.310			ADLAH00		-1.150	0.000
(¢/gəl)		Portland						<b>Differential to NYMEX</b>		
Unl 84	AAXJC00	197.63-197.73	197.680	+1.500	AAXJCRV	7.8	AANYX95		1.750	+0.750
Prem unl 90	AAXJD00	216.63-216.73	216.680	+1.500	AAXJDRV	7.8	AANYX96		20.750	+0.750
ULS (EPA) diesel	AAUEY00	184.43-184.53	184.480	-1.310			ADLAG00		3.500	-1.500

(a)=84 octane; (b)=90 octane

#### WEST COAST WATERBORNE, APR 8 (PGA page 158)

(¢/gal)			Mid	Change
Unl 87	PGADI00	201.63-201.73	201.680	+2.000
Jet fuel	PJABI00	165.93-166.03	165.980	-1.810

#### LATIN AMERICA, FOB, APR 8 (PGA page 164)

		\$/barrel	Mid	Change			
Argentina							
ULSD CIF	AAXWZ00		71.810	+0.080			
Colombia							
F0 1.75% S F0B	PPAR000	55.05-55.07	55.060	+0.260			
Diluent Naphtha Ex-Ship	AAXYB00		59.150	+0.330			
Ecuador							
F0 2.2% S F0B	PPASL00	50.80-50.82	50.810	+0.710			
RON 93 CIF	AAXYC00		76.790	+0.380			
ULSD CIF	AAXWF00		71.030	+0.120			
Peru							
Naphtha FOB	PAAAS00	58.69-58.71	58.700	+0.380			
F0 1.6% S F0B	PPARK00	53.05-53.07	53.060	+0.760			
Natural Gasoline FOB	AAXWD00		54.020	+0.330			
ULSD CIF	AAXWY00		71.280	+0.120			
						Peso/liter	Change
Mexico cargo							
Gasoline CIF Eastern Mexico	AAXWA00		74.600	+0.280	AATFH00	9.420	-0.020
Gasoline CIF Rosarito	AATFA00		77.450	+0.120	AATFK00	9.780	-0.050
Gasoline CIF Lazaro Cardenas	AATFD00		76.990	+0.130	AATFN00	9.720	-0.050
ULSD CIF Eastern Mexico	AAXWE00		68.520	+0.050	AATF100	8.650	-0.050
LIL SD CIE Posarito	AATEROO		71 200	+0.050	AATELOO	0.020	-0.040

Jet CIF Lazaro Cardenas	AATFF00	71.490	-0.470	AATFP00	9.030	-0.110
Jet CIF Rosarito	AATFC00	70.990	-0.760	AATFM00	8.970	-0.150
Jet CIF Eastern Mexico	AATFG00	69.190	+0.180	AATFJ00	8.740	-0.030
ULSD CIF Lazaro Cardenas	AATFE00	71.550	-0.150	AATF000	9.040	-0.070
ULSD CIF Rosarito	AATFB00	71.380	+0.050	AATFL00	9.020	-0.040
ULSD CIF Eastern Mexico	AAXWE00	68.520	+0.050	AATF100	8.650	-0.050
Gasoline CIF Lazaro Cardenas	AATFD00	76.990	+0.130	AATFN00	9.720	-0.050

# CARIBBEAN CARGOES, FOB, APR 8 (PGA page 162)

			Mid	Change
		\$/mt		
Jet kerosene	PJAAD00	547.53-547.59	547.560	+1.950
		¢/gal		
Jet kerosene	PJAAD10	163.44-163.46	163.450	+0.580
		\$/barrel		
No. 6 2.0% S	PUAAS00	53.91-53.93	53.920	-0.080

# TRINIDAD PRODUCT POSTINGS (PGA page 466)

#### Effective date 18Mar21

		¢/gəl	
Mogas 92 RON Unleaded	PPRAE00	222.00	
Mogas 95 RON Unleaded	PPRAF00	227.00	
Dual Purpose Kerosene	PPRAB00	178.00	
Gasoil 45 Cetane 0.1%S	PPRAC00	182.00	
		\$/b	
Bunker C Fuel Oil	PPRAA00	70.00	
0 0 1			

Source: Paria

### GAS LIQUIDS (¢/gal), APR 8 (PGA page 780)

			Mid	Change
		Mont Belvieu		-
Ethane/propane	PMUDA05	21.700-21.800	21.750	+0.125
Ethane purity	PMUDB05	22.700-22.800	22.750	+0.125
Ethane mo. 2	AAWUC00	22.825-22.925	22.875	+0.125
Propane	PMAAY00	85.450-85.550	85.500	-3.000
Propane LST	PMABQ00	85.200-85.300	85.250	-3.125
Propane mo. 2	AAWUD00	79.450–79.550	79.500	-1.000
Propane mo. 2 LST	AAWUE00	79.700–79.800	79.750	-1.125
Normal butane non-LST	PMAA100	87.450-87.550	87.500	-2.000
Butane LST	PMABR00	84.950-85.050	85.000	-4.500
N-Butane mo. 2	AAWUF00	87.200-87.300	87.250	-2.000
Isobutane	PMAAB00	86.450-86.550	86.500	-2.375
Natural gasoline LST	AAIVF00	136.200-136.300	136.250	-2.750
Natural Targa	PMABW05	136.450-136.550	136.500	-2.500
Natural non-Targa	PMABY05	135.700-135.800	135.750	-2.250
Nat gasoline mo. 2 non-Targa	AAWUG00	134.950-135.050	135.000	-1.750

		Conway		
Ethane/propane	PMAA000	21.200-21.300	21.250	+0.250
Propane	PMAAT00	77.450–77.550	77.500	-2.500
Normal butane non-LST	PMAAD00	82.200-82.300	82.250	-3.250
Isobutane	PMAAA00	101.575-101.675	101.625	-2.375
Natural gasoline	PMAAQ00	131.950-132.050	132.000	-5.750
		Other hubs		
Hattiesburg propane	AALBC00	85.950-86.050	86.000	-1.000
		<u>(\$/mt)</u>		
Waterborne FOB USGC propane	AAXIM00	444.920-444.940	444.930	-6.150
FOB USGC propane vs. Mt Belvieu	AAXI000	29.950-29.970	29.960	0.000
VLGC freight rates Houston to NWE	AAXIQ00	44.990-45.010	45.000	0.000
VLGC freight rates Houston to Japan	AAXIS00	80.990-81.010	81.000	0.000

		<u>(¢/gal)</u>		
Waterborne FOB USGC propane	AAXIN00	85.390-85.410	85.400	-1.180
FOB USGC propane vs. Mt Belvieu	AAXIP00	5.700-5.800	5.750	0.000
VLGC freight rates Houston to NWE	AAXIR00	8.585-8.685	8.635	0.000
VLGC freight rates Houston to Japan	AAXIT00	15.540-15.560	15.550	0.000

# ASIA PACIFIC/MIDDLE EAST SPOT CRUDE ASSESSMENTS (\$/barrel), APR 8

			Mid	Change	=	<u>Diffs (Asian MOC</u>	Mid	Change	Diff to Dat	Mid	Change	<u>A330331</u>	<u>ment (London</u> Mid	Change
0			MIO	change			MIU	Change			0			•
Condensate										PGA page 221	2)		(PGA page 2213	3)
NW Chalf		00.04.00.00	~~~~~			<u>Diff to Dubai</u>				1 750	0.000		00.400	
NW Shelf DFC	PCAGX00	60.34-60.38	60.360	+0.330		0.05/ 0.75	0.000	0.000	AAPAI00	-1.750	0.000	AAPAH00	60.400	+0.790
	ADFCA00	59.00-59.04	59.020	+0.300	ADFCB00	-0.85/-0.75	-0.800	0.000	ADFCC00	-2.790	+0.080	ADFCD00	59.030	+0.780
Qatar LSC South Pars	AARBB00	58.70-58.74 54.50-54.54	58.720	+0.300 +0.300	AARBD00	-1.15/-1.05	-1.100	0.000	AARBC00	-3.090 -7.290	+0.080 +0.080	AARBA00	58.730	+0.780
South Pars	AARAV00	54.50-54.54	54.520	+0.300	AARAX00	-5.35/-5.25	-5.300	0.000	AARAW00	-7.290	+0.080	AARAU00	54.530	+0.780
o · · ·		~~ ~~ ~~ ~~	~~ ~ ~ ~			Diff to ICP							~~ ~~~	
Senipah	AAEOE00	60.59-60.63	60.610	+0.330	AAEOK00	-0.75/-0.65	-0.700	0.000	AAPBE00	-1.500	0.000	AAPBD00	60.650	+0.790
Light									1	PGA page 221	4)		(PGA page 2215	5)
						Diff to ICP								
Cossack	PCAGZ00	61.29-61.33	61.310	+0.330					AAPAC00	-0.800	0.000	AAPAB00	61.350	+0.790
Gippsland	PCACP00	58.94-58.98	58.960	+0.330					AAPAU00	-3.150	0.000	ΑΑΡΑΤΘΟ	59.000	+0.790
Tapis	PCACB00	62.54-62.58	62.560	+0.330					AAOZWOO	0.450	0.000	AAOZV00	62.600	+0.790
Belida	PCAFL00	59.19-59.23	59.210	+0.330	PCAFM00	-0.25/-0.15	-0.200	0.000	AAPBQ00	-2.900	0.000	AAPBP00	59.250	+0.790
Kutubu	PCAF J00	61.49-61.53	61.510	+0.330					AAPAE00	-0.600	0.000	AAPAD00	61.550	+0.790
Handil Mix	PCABE00	60.24-60.28	60.260	+0.330	PCABF00	-0.05/0.05	0.000	0.000	AAPBI00	-1.850	0.000	AAPBH00	60.300	+0.790
Attaka	PCAAJ00	58.99-59.03	59.010	+0.330	PCAAK00	-1.10/-1.00	-1.050	0.000	AAPBC00	-3.100	0.000	AAPBB00	59.050	+0.790
Ardjuna	PCACQ00	54.44-54.48	54.460	+0.330	PCACR00	-3.20/-3.10	-3.150	0.000	AAPBG00	-7.650	0.000	AAPBF00	54.500	+0.790
Banyu Urip	PCAFQ00		62.910	+0.330	PCAQQ00		-0.100	0.000	AAPBU00	0.800	0.000	AAPBR00	62.950	+0.790
						Diff to Dubai								
Sakhalin Blend	AARBN00	61.80-61.84	61.820	+0.300	AARCN00	1.95/2.05	2.000	0.000	AARDN00	0.010	+0.080	AARENØØ	61.830	+0.780
Sokol	AASCJ00	62.70-62.74	62.720	+0.300	AASCK00	2.85/2.95	2.900	0.000	AAPA000	0.910	+0.080	AAPAN00	62.730	+0.780
Kikeh	AAWUH00	63.54–63.58	63.560	+0.330					AA0ZY00	1.450	0.000	AAOZX00	63.600	+0.790
Miri Light	PCABQ00	63.34–63.38	63.360	+0.330					AAPAS00	1.250	0.000	AAPAR00	63.400	+0.790
Labuan	PCABL00	63.84–63.88	63.860	+0.330					AAPAQ00	1.750	0.000	AAPAP00	63.900	+0.790
Kimanis	AASCL00		63.960	+0.330					AASCM00	1.850	0.000	AASCN00	64.000	+0.790
Medium										PGA page 221	6)		(PGA page 2217	7)
Nanhai	PCAFR00	55.89-55.93	55.910	+0.330					AAPAG00	-6.200	0.000	AAPAF00	55.950	+0.790
Minas*	PCAB000		58.755	+0.385								AAPAZ00	58.795	+0.845
Nile Blend	AAPLC00	61.49-61.53	61.510	+0.330					AAPAM00	-0.600	0.000	AAPAL00	61.550	+0.790
Widuri*	PCAFE00		53.910	+0.380								AAPBN00	53.950	+0.840
Daging	PCAAZ00	57.74-57.78	57.760	+0.330					AAPAW00	-4.350	0.000	AAPAV00	57.800	+0.790
Cinta*	PCAAX00		55.640	+0.315								AAPBJ00	55.680	+0.775
Su Tu Den	AARAR00	62.84-62.88	62.860	+0.330					AARAS00	0.750	0.000	AARAQ00	62.900	+0.790
Bach Ho	PCAHY00	64.64-64.68	64.660	+0.330					AAPAK00	2.550	0.000	AAPAJ00	64.700	+0.790
Heavy										PGA page 221	8)		(PGA page 2219	9)
						Diff to ICP				. o poge EEI	0,		(, or poge EETe	
Dar Blend	AARAB00	64.99-65.03	65.010	+0.330		DITIONE			AARAC00	2.900	0.000	AARAA00	65.050	+0.790
Shengli	PCABY00	63.74-63.78	63.760	+0.330					AAPAY00	1.650	0.000	AAPAX00	63.800	+0.790
Duri	PCABTOO	67.14-67.18	67.160	+0.330	PCABB00	4.00/4.10	4.050	0.000	AAPATOO	5.050	0.000	AAPAX00	67.200	+0.790
		01.17 01.10	01.100	.0.000	F CADDOO	7.00/ 7.10	050	0.000	MAL DUIDO	12.100	0.000	AAPDLOO	74.250	+0.790

\*Market Parity Price.

				(PGA page 2220)				(PGA page 2202)						
						Spread vs OSF	2		Diff to Dubai					
Murban M1	AAKNL00	61.58-61.62	61.600	+0.360	AAKUB00	0.10/0.20	0.150	0.000	AARBZ00	1.780	+0.060			
Murban M2	MBNSA00		60.830	+0.400										
Murban M3	MBNSB00		60.220	+0.310										
Al Shaheen	AAPEV00	61.25-61.29	61.270	+0.400					AAPEW00 1.40/1.50	1.450	+0.100			
Upper Zakum	AAOUQ00	61.18-61.22	61.200	+0.350	AAOURØØ	0.00/0.10	0.050	0.000				Assessmen	t (Asian MOC)	
Umm Lulu	AUFAA00		61.550	+0.350	AUFAB00		0.150	0.000	Dubai CFR North Asia			PCAQA00	62.070	+0.330
Das Blend	AAXOF00	61.23-61.27	61.250	+0.350	AAXPF00	0.10/0.20	0.150	0.000	LOOP Sour CFR North A	sia		PCAQI00	61.690	+0.180
Qatar Land	AAKNP00	61.13-61.17	61.150	+0.350	AAKUJ00	0.00/0.10	0.050	0.000	Oman CFR North Asia			PCAQJ00	62.160	+0.340
Qatar Marine	AAKNR00	61.08-61.12	61.100	+0.350	AAKUH00	-0.10/0.00	-0.050	0.000	Upper Zakum CFR Nort			PCAQB00	62.050	+0.330
Banoco Arab Medium	AAKNT00	60.93-60.97	60.950	+0.350	AAKUD00	-0.30/-0.20	-0.250	0.000	Qatar Marine CFR North			PCAQC00	61.950	+0.330
Basrah Light M1	AALZA00	-	61.800	+0.400	AALZE00		-0.250	0.000	Murban CFR North Asia			PCAQE00	62.420	+0.340
Basrah Light M2	AALZB00	-	61.200	+0.400	AALZF00		-0.500	0.000	Basrah Light CFR North	n Asia		РСАОКОО	62.070	+0.380
Basrah Medium M1	BSMAM01	-	61.600	+0.450	BSMBM01		0.500	0.000	ESPO CFR North Asia			PCAQD00	61.590	+0.290
Basrah Medium M2	BSMAM02	-	60.900	+0.300	BSMBM02		0.250	0.000	Forties CFR North Asia			PCAQF00	63.980	+0.345
Basrah Heavy M1	AALZC00	-	60.350	+0.450	AALZJ00		0.750	0.000	Dalia CFR North Asia			PCAQG00	62.420	+0.210
Basrah Heavy M2	AALZD00	-	59.650	+0.300	AALZK00		0.500	0.000	WTI MEH CFR North As	ia		PCAQH00	63.330	+0.090

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(PGA page 2210)           Dubai (Jun)         PCAAT00         61.19–61.21         61.200         +0.350           Dubai (Jul)         PCAAU00         60.42–60.44         60.430         +0.390           Dubai (Aug)         PCAAU00         59.81–59.83         59.820         +0.300           MEC (Jun)         AAWSA00         61.19–61.21         61.200         +0.350           MEC (Jul)         AAWS200         69.81–59.83         59.820         +0.300           MEC (Aug)         AAWS200         61.29–61.31         61.300         +0.380           Oman (Jun)         PCAS200         61.91–50.33         59.820         +0.400           Oman (Aug)         AAHZP00         59.91–59.93         59.920         +0.310           Oman cash/OSP (Jun)         PCAS200         61.99–62.01         62.000         +0.975           DTD NSL         AA0FD00         61.99–62.01         62.000         +0.975           Dated Brent (CIF)         PCAAR00         62.900         +0.955           Brent (Jun)         PCAA2000         62.900         +0.955           Brent (Jun)         PCAAR00         62.30–62.32         62.310         +0.925           (PGA page 218)         Brent (MTI 1st         AAL200	(\$/barrel)			Mid	Change
Dubai (Jul)         PCAAUØØ         60.42–60.44         60.430         +0.390           Dubai (Aug)         PCAAVØØ         59.81–59.83         59.820         +0.300           MEC (Jun)         AAWSAØØ         61.19–61.21         61.200         +0.350           MEC (Jul)         AAWSØØ         60.42–60.44         60.430         +0.390           MEC (Aug)         AAWSØØ         60.42–60.44         60.430         +0.390           Oman (Jun)         PCABSØØ         61.29–61.31         61.300         +0.300           Oman (Jun)         PCABSØØ         61.29–61.31         61.300         +0.400           Oman (Aug)         AAHZFØØ         60.52–60.54         60.530         +0.400           Oman (Aug)         AAHZFØØ         60.199–62.01         62.000         +0.975           DTD NSL         AAOFDØØ         61.99–62.01         62.000         +0.975           DTD NSL         AAOFDØØ         62.900         +0.955         Brent (Jun)         PCARØØ         62.290         +0.880           Brent (Jun)         PCARØØ         62.30–62.32         62.310         +0.925         [PGA page 218)           Brent (Jun)         PCARØØØ         3.310         +0.150         Brent (MT1 1st         AALAVØ	(PGA page 2210)				
Dubai (Aug)         PCAAV00         59.81–59.83         59.820         +0.300           MEC (Jun)         AAWSA00         61.19–61.21         61.200         +0.350           MEC (Jul)         AAWS00         60.42–60.44         60.430         +0.390           MEC (Aug)         AAWSC00         59.81–59.83         59.820         +0.300           Oman (Jun)         PCABS00         61.29–61.31         61.300         +0.360           Oman (Jul)         AAHZF00         60.52–60.54         60.530         +0.400           Oman (Aug)         AAHZF00         59.91–59.93         59.920         +0.310           Oman cash/OSP (Jun)         PCABS00         61.99–62.01         62.000         +0.975           DTD NSL         AAOFD00         61.99–62.01         62.000         +0.975           DTD NSL         AAOFD00         61.99–62.01         62.000         +0.975           Dated Brent (CIF)         PCAR00         62.290         +0.955         Brent (Jun)         PCAR00         62.290         +0.880           Brent (Jul)         PCAR00         62.30–62.32         62.310         +0.925         (PGA page 218)           Brent (Aug)         PCAR00         3.310         +0.150         Brent (MTI 3rd	Dubai (Jun)	PCAAT00	61.19-61.21	61.200	+0.350
MEC (Jun)         AAWSA00         61.19–61.21         61.200         +0.350           MEC (Jul)         AAWS00         60.42–60.44         60.430         +0.390           MEC (Aug)         AAWSC00         59.81–59.83         59.820         +0.300           Oman (Jun)         PCABS00         61.29–61.31         61.300         +0.360           Oman (Jul)         AAHZF00         60.52–60.54         60.530         +0.400           Oman (Aug)         AAHZF00         59.91–59.93         59.920         +0.310           Oman cash/OSP (Jun)         PCABT00         -0.11–0.07         -0.990         +0.040           (PGA page 1212)         PCARS00         61.99–62.01         62.000         +0.975           DTD NSL         AAOFD00         61.99–62.01         62.000         +0.975           Dated Brent (CIF)         PCAR00         62.910         +0.955           Brent (Jun)         PCAR00         62.56–62.58         62.570         +0.750           Brent (Jul)         PCAR00         62.30–62.32         62.310         +0.925           (PGA page 218)         PCAR00         3.310         +0.150           Brent/WTI 1st         AALA000         3.71/3.73         3.720         +0.240	Dubai (Jul)	PCAAU00	60.42-60.44	60.430	+0.390
MEC (Jul)         AAWSB00         60.42–60.44         60.430         +0.390           MEC (Aug)         AAWSC00         59.81–59.83         59.820         +0.300           Oman (Jun)         PCABS00         61.29–61.31         61.300         +0.360           Oman (Jul)         AAHZF00         60.52–60.54         60.530         +0.400           Oman (Aug)         AAHZF00         59.91–59.93         59.920         +0.310           Oman cash/OSP (Jun)         PCABT00         -0.11–0.07         -0.090         +0.040           (PGA page 1212)         PCAAS00         61.99–62.01         62.000         +0.975           DTD NSL         AA0FD00         61.99–62.01         62.000         +0.975           Dated Brent (CIF)         PCAAR00         62.56–62.58         62.570         +0.750           Brent (Jul)         PCAR00         62.30–62.32         62.310         +0.925           IPGA page 218)         PCAR00         62.310         +0.925         (PGA page 218)           Brent/WTI 1st         AALA000         3.71/3.73         3.720         +0.240           Brent/WTI 2nd         AALA000         3.40/3.42         3.410         +0.160           Brent EFP (Jun)         AAGVX00         0.18/0.	Dubai (Aug)	PCAAV00	59.81-59.83	59.820	+0.300
MEC (Aug)         AAWSC00         59.81–59.83         59.820         +0.300           Oman (Jun)         PCABS00         61.29–61.31         61.300         +0.360           Oman (Jul)         AAHZF00         60.52–60.54         60.530         +0.400           Oman (Aug)         AAHZF00         59.91–59.93         59.920         +0.310           Oman cash/OSP (Jun)         PCABT00         -0.11–0.07         -0.090         +0.040           (PGA page 1212)         Brent (DTD)         PCAS00         61.99–62.01         62.000         +0.975           DTD NSL         AA0FD00         61.99–62.01         62.000         +0.975           Dated Brent (CIF)         PCAR00         62.98–63.00         62.990         +0.880           Brent (Jul)         PCAR00         62.56–62.58         62.570         +0.750           Brent (Aug)         PCAR00         62.30–62.32         62.310         +0.925           (PGA page 218)         Brent/WTI 1st         AALAU00         3.71/3.73         3.720         +0.240           Brent/WTI 1st         AALAV00         3.40/3.42         3.410         +0.160           Brent/WTI 1st         AALAV00         0.18/0.20         0.190         +0.060           Brent EFP	MEC (Jun)	AAWSA00	61.19-61.21	61.200	+0.350
Oman (Jun)         РСАВS90         61.29–61.31         61.300         +0.360           Oman (Jul)         ААНZF00         60.52–60.54         60.530         +0.400           Oman (Aug)         ААНZF00         59.91–59.93         59.920         +0.310           Oman cash/OSP (Jun)         РСАВ700         -0.11–-0.07         -0.090         +0.040           (PGA page 1212)         Brent (DTD)         РСАА500         61.99–62.01         62.000         +0.975           DTD NSL         ААОРD00         61.99–62.01         62.000         +0.975           Dated Brent (CIF)         РСАК000         62.566–62.58         62.570         +0.750           Brent (Jun)         РСАR000         62.566–62.58         62.570         +0.750           Brent (Aug)         РСАR000         62.30–62.32         62.310         +0.925           (PGA page 218)         Brent/WTI 1st         ААL2000         3.71/3.73         3.720         +0.240           Brent/WTI 1st         ААL2000         3.40/3.42         3.410         +0.160           Brent EFP (Jun)         ААGX200         0.16/0.18         0.170         +0.060           Brent EFP (Jul)         ААGY200         0.180/0.20         0.190         +0.060           <	MEC (Jul)	AAWSB00	60.42-60.44	60.430	+0.390
Oman (Jul)         ААНZF00         60.52–60.54         60.530         +0.400           Oman (Aug)         ААНZF00         59.91–59.93         59.920         +0.310           Oman cash/OSP (Jun)         PCABT00         -0.11–0.07         -0.090         +0.040           (PGA page 1212)         Brent (DTD)         PCAAS00         61.99–62.01         62.000         +0.975           DTD NSL         AA0FD00         61.99–62.01         62.000         +0.975           Dated Brent (CIF)         PCAA000         62.98–63.00         62.990         +0.955           Brent (Jun)         PCAA000         62.56–62.58         62.570         +0.750           Brent (Aug)         PCAR000         62.220         +0.660           North Sea Basket         AAGIZ00         62.30–62.32         62.310         +0.925           (PGA page 218)         Brent/WTI 1st         AALA000         3.71/3.73         3.720         +0.240           Brent/WTI 2nd         AALAV00         3.40/3.42         3.410         +0.160           Brent EFP (Jun)         AAGV200         0.16/0.18         0.170         +0.060           Brent EFP (Jul)         AAGV200         0.180/0.20         0.190         +0.060           Brent EFP (Aug)	MEC (Aug)	AAWSC00	59.81-59.83	59.820	+0.300
Oman (Aug)         ААНZH00         59.91–59.93         59.920         +0.310           Oman cash/OSP (Jun)         РСАВТ00         -0.11–0.07         -0.090         +0.040           (PGA page 1212)         Brent (DTD)         РСАА500         61.99–62.01         62.000         +0.975           DTD NSL         ААОГРОФ         61.99–62.01         62.000         +0.975           Dated Brent (CIF)         РСАКФФ         62.900         +0.955           Brent (Jun)         РСАЯСФФ         62.98–63.00         62.990         +0.880           Brent (Jul)         РСАЯСФФ         62.56–62.58         62.570         +0.750           Brent (Aug)         РСАЯСФФ         62.30–62.32         62.310         +0.925           Brent (Aug)         РСАЯСФФ         62.30–62.32         62.310         +0.925           Brent (Aug)         РСАЯСФФ         62.30–62.32         62.310         +0.925           Brent/WTI 1st         ААLAUФФ         3.71/3.73         3.720         +0.240           Brent/WTI 2nd         ААLAVФФ         3.40/3.42         3.410         +0.160           Brent/WTI 3rd         ААLAVФФ         0.18/0.20         0.190         +0.060           Brent EFP (Jun)         ААGVYФФ         0.18/0	Oman (Jun)	PCABS00	61.29-61.31	61.300	+0.360
Oman cash/OSP (Jun)         РСАВТ00         -0.110.07         -0.090         +0.040           (PGA page 1212)         Brent (DTD)         РСАА500         61.99-62.01         62.000         +0.975           DTD NSL         ААОГРОФ         61.99-62.01         62.000         +0.975           Dated Brent (CIF)         РСАА000         62.98-63.00         62.990         +0.880           Brent (Jun)         РСАА000         62.56-62.58         62.570         +0.750           Brent (Aug)         РСАR000         62.200         40.925           Brent (Aug)         РСАR00         62.630-62.32         62.310         +0.925           Brent (Aug)         РСАR00         62.200-62.32         62.310         +0.925           Brent/WTI 1st         ААL2000         3.71/3.73         3.720         +0.240           Brent/WTI 1st         ААLA000         3.71/3.73         3.720         +0.240           Brent/WTI 1st         ААLA000         3.40/3.42         3.410         +0.160           Brent/WTI 2nd         ААLA000         0.16/0.18         0.170         +0.060           Brent EFP (Jun)         ААGV200         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         ААМУ200         0.1	Oman (Jul)	AAHZF00	60.52-60.54	60.530	+0.400
(PGA page 1212)           Brent (DTD)         PCAAS00         61.99–62.01         62.000         +0.975           DTD NSL         AA0FD00         61.99–62.01         62.000         +0.975           Dated Brent (CIF)         PCAKM00         62.900         +0.955           Brent (Jun)         PCAAQ00         62.98–63.00         62.990         +0.880           Brent (Jul)         PCAAR00         62.56–62.58         62.570         +0.750           Brent (Aug)         PCARR00         62.30–62.32         62.310         +0.925           (PGA page 218)         Brent/WTI 1st         AALAU00         3.71/3.73         3.720         +0.240           Brent/WTI 1st         AALAV00         3.40/3.42         3.410         +0.160           Brent/WTI 2nd         AALAY00         3.310         +0.150           Brent EFP (Jun)         AAGV200         0.16/0.18         0.170         +0.060           Brent EFP (Jul)         AAGV200         0.18/0.20         0.190         +0.060           Brent EFP (Jul)         AAGV200         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AABWY00         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAHBM00 </td <td>Oman (Aug)</td> <td>AAHZH00</td> <td>59.91-59.93</td> <td>59.920</td> <td>+0.310</td>	Oman (Aug)	AAHZH00	59.91-59.93	59.920	+0.310
Brent (DTD)         PCAAS00         61.99–62.01         62.000         +0.975           DTD NSL         AA0FD00         61.99–62.01         62.000         +0.975           Dated Brent (CIF)         PCAKM00         62.900         +0.955           Brent (Jun)         PCAAQ00         62.98–63.00         62.990         +0.880           Brent (Jul)         PCAAQ00         62.56–62.58         62.570         +0.750           Brent (Aug)         PCARR00         62.30–62.32         62.310         +0.925           (PGA page 218)         Brent/WTI 1st         AALAU00         3.71/3.73         3.720         +0.240           Brent/WTI 2nd         AALAV00         3.40/3.42         3.410         +0.160           Brent/WTI 2nd         AALAY00         3.310         +0.150           Brent EFP (Jun)         AAGVX00         0.16/0.18         0.170         +0.060           Brent EFP (Jul)         AAGVY00         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAMVY00         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAMVY00         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAHBM00         60.41–60.45         60.430<	Oman cash/OSP (Jun)	PCABT00	-0.110.07	-0.090	+0.040
DTD NSL         AAOFDØØ         61.99–62.01         62.000         +0.975           Dated Brent (CIF)         PCAKMØØ         62.900         +0.955           Brent (Jun)         PCAAQØØ         62.98–63.00         62.990         +0.880           Brent (Jul)         PCAAQØØ         62.56–62.58         62.570         +0.750           Brent (Aug)         PCARØØ         62.30–62.32         62.310         +0.925           (PGA page 218)         Brent/WTI 1st         AALAUØØ         3.71/3.73         3.720         +0.240           Brent/WTI 2nd         AALAVØØ         3.40/3.42         3.410         +0.160           Brent/WTI 3rd         AALAVØØ         3.310         +0.150           Brent EFP (Jun)         AAGVØØ         0.16/0.18         0.170         +0.060           Brent EFP (Jul)         AAGVØØ         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAMVYØØ         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAMVØØ         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAHBMØØ         60.41–60.45         60.430         +0.390           Dubai (May)         AAHBMØØ         60.51–60.55         60.530	(PGA page 1212)				
Dated Brent (CIF)         PCAKM00         62.900         +0.955           Brent (Jun)         PCAAQ00         62.98–63.00         62.990         +0.880           Brent (Jul)         PCAAQ00         62.56–62.58         62.570         +0.750           Brent (Aug)         PCAR00         62.220         +0.660           North Sea Basket         AAGI200         62.30–62.32         62.310         +0.925           (PGA page 218)            +0.240           Brent/WTI 1st         AALAV00         3.71/3.73         3.720         +0.240           Brent/WTI 2nd         AALAV00         3.40/3.42         3.410         +0.160           Brent/WTI 3rd         AALAY00         0.16/0.18         0.170         +0.060           Brent EFP (Jun)         AAGV200         0.18/0.20         0.190         +0.060           Brent EFP (Jul)         AAGV200         0.18/0.20         0.190         +0.060           Brent EFP (Jul)         AAGV200         0.18/0.20         0.190         +0.060           Swaps(PGA page 2658)            Dubai (Jun)         AAHBM00         60.41–60.45         60.430         +0.390           Dubai (Jun)         AAHBM00	Brent (DTD)	PCAAS00	61.99-62.01	62.000	+0.975
Brent (Jun)         PCAAQ00         62.98–63.00         62.990         +0.880           Brent (Jul)         PCAAQ00         62.56–62.58         62.570         +0.750           Brent (Aug)         PCAR00         62.220         +0.660           North Sea Basket         AAGIZ00         62.30–62.32         62.310         +0.925           (PGA page 218)         Brent/WTI 1st         AALAV00         3.71/3.73         3.720         +0.240           Brent/WTI 2nd         AALAV00         3.40/3.42         3.410         +0.160           Brent/WTI 3rd         AALAY00         3.310         +0.150           Brent EFP (Jun)         AAGV200         0.16/0.18         0.170         +0.060           Brent EFP (Jul)         AAGV200         0.18/0.20         0.190         +0.060           Brent EFP (Jul)         AAGV200         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAMV00         0.190         +0.060           Swaps(PGA page 2658)         Dubai (Jun)         AAHBM00         60.41–60.45         60.430         +0.390           Dubai (Jun)         AAHB000         59.80–59.84         59.820         +0.300           Dubai (Jun)         AAHE000         59.90–59.94 <td< td=""><td>DTD NSL</td><td>AAOFD00</td><td>61.99-62.01</td><td>62.000</td><td>+0.975</td></td<>	DTD NSL	AAOFD00	61.99-62.01	62.000	+0.975
Brent (Jul)         PCAAR00         62.56–62.58         62.570         +0.750           Brent (Aug)         PCARR00         62.220         +0.660           North Sea Basket         AAGI200         62.30–62.32         62.310         +0.925           (PGA page 218)         Brent/WTI 1st         AALAV00         3.71/3.73         3.720         +0.240           Brent/WTI 2nd         AALAV00         3.40/3.42         3.410         +0.160           Brent/WTI 3rd         AALAV00         3.310         +0.150           Brent EFP (Jun)         AAGV200         0.16/0.18         0.170         +0.060           Brent EFP (Jul)         AAGV200         0.18/0.20         0.190         +0.060           Brent EFP (Jul)         AAGV200         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAMV200         0.190         +0.060         Swaps(PGA page 2658)         Dubai (Jun)         AAHBN00         60.41–60.45         60.430         +0.390           Dubai (Jun)         AAHBN00         59.80–59.84         59.820         +0.300           Dubai (Jun)         AAHBN00         59.91–59.43         59.410         +0.240           MOG (May)         AAHEN00         59.90–59.94         59.920	Dated Brent (CIF)	PCAKM00		62.900	+0.955
Brent (Aug)         PCARR00         62.220         +0.660           North Sea Basket         AAGIZ00         62.30–62.32         62.310         +0.925           (PGA page 218)         Brent/WTI 1st         AALAU00         3.71/3.73         3.720         +0.240           Brent/WTI 2nd         AALAV00         3.40/3.42         3.410         +0.160           Brent/WTI 3rd         AALAV00         3.40/3.42         3.410         +0.160           Brent EFP (Jun)         AAGVX00         0.16/0.18         0.170         +0.060           Brent EFP (Jun)         AAGVY00         0.18/0.20         0.190         +0.060           Brent EFP (Jul)         AAGVY00         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAMVY00         0.190         +0.060           Swaps(PGA page 2658)         Dubai (Jun)         AAHBM00         60.41-60.45         60.430         +0.390           Dubai (Jun)         AAHBM00         59.80-59.84         59.820         +0.300           Dubai (Jun)         AAHBM00         59.39-59.43         59.410         +0.240           MOG (May)         AAHZ000         59.90-59.94         59.920         +0.310           MOG (May)         AAHZ000         59.	Brent (Jun)	PCAAQ00	62.98-63.00	62.990	+0.880
North Sea Basket         AAGIZ00         62.30–62.32         62.310         +0.925           (PGA page 218)         Brent/WTI 1st         AALAU00         3.71/3.73         3.720         +0.240           Brent/WTI 2nd         AALAV00         3.40/3.42         3.410         +0.160           Brent/WTI 3rd         AALAV00         3.40/3.42         3.410         +0.160           Brent/WTI 3rd         AALAY00         0.16/0.18         0.170         +0.060           Brent EFP (Jun)         AAGVX00         0.18/0.20         0.190         +0.060           Brent EFP (Jul)         AAGVY00         0.18/0.20         0.190         +0.060           Brent EFP (Jul)         AAGVY00         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAMVY00         0.190         +0.060           Swaps(PGA page 2658)         Dubai (Jun)         AAHBN00         59.80–59.84         59.820         +0.300           Dubai (Jun)         AAHBN00         59.39–59.43         59.410         +0.240           MOG (May)         AAHZ000         59.90–59.94         59.920         +0.310           MOG (May)         AAHZ000         59.9.94         59.9.10         +0.240           MOG (May)         AAHZ0	Brent (Jul)	PCAAR00	62.56-62.58	62.570	+0.750
Image: Picture         Image:	Brent (Aug)	PCARR00		62.220	+0.660
Brent/WTI 1st         AALAU00         3.71/3.73         3.720         +0.240           Brent/WTI 2nd         AALAV00         3.40/3.42         3.410         +0.160           Brent/WTI 3rd         AALAY00         3.40/3.42         3.410         +0.160           Brent/WTI 3rd         AALAY00         3.310         +0.150           Brent EFP (Jun)         AAGVX00         0.16/0.18         0.170         +0.060           Brent EFP (Jul)         AAGVY00         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAMVY00         0.190         +0.060           Swaps(PGA page 2658)         Dubai (Jun)         AAHBN00         59.80-59.84         59.820         +0.300           Dubai (Jun)         AAHBN00         59.39-59.43         59.410         +0.240           MOG (May)         AAHZP00         60.51-60.55         60.530         +0.400           MOG (May)         AAHZP00         59.90-59.94         59.920         +0.310           MOG (Jun)         AAHZP00         59.9.921         +0.310         MOG (Jul)           MAHZP00         59.49-59.53         59.510         +0.250         Oman/Dubai Swap (May)         AAH1900         0.08/0.12         0.100         +0.010         Oman/D	North Sea Basket	AAGIZ00	62.30-62.32	62.310	+0.925
Brent/WTI 2nd         AALAVee         3.40/3.42         3.410         +0.160           Brent/WTI 3rd         AALAVee         3.310         +0.150           Brent EFP (Jun)         AAGVXee         0.16/0.18         0.170         +0.060           Brent EFP (Jun)         AAGVXee         0.16/0.18         0.170         +0.060           Brent EFP (Jul)         AAGVYee         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAMVYee         0.190         +0.060           Swaps(PGA page 2658)              Dubai (May)         AAHBNee         59.80–59.84         59.820         +0.300           Dubai (Jun)         AAHBNee         59.39–59.43         59.410         +0.240           MOG (May)         AAHZPee         60.51–60.55         60.530         +0.400           MOG (Jun)         AAHZPee         59.90–59.94         59.920         +0.310           MOG (Jul)         AAHZPee         59.49–59.53         59.510         +0.250           Oman/Dubai Swap (May)         AAHJee         0.08/0.12         0.100         +0.010	(PGA page 218)				
Brent/WTI 3rd         AALAY00         3.310         +0.150           Brent/WTI 3rd         AALAY00         3.310         +0.150           Brent EFP (Jun)         AAGVX00         0.16/0.18         0.170         +0.060           Brent EFP (Jul)         AAGVY00         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAMVY00         0.190         +0.060           Swaps(PGA page 2658)              Dubai (May)         AAHBM00         60.41–60.45         60.430         +0.390           Dubai (Jun)         AAHBM00         59.80–59.84         59.820         +0.300           Dubai (Jul)         AAHB000         59.39–59.43         59.410         +0.240           MOG (May)         AAHZ000         60.51–60.55         60.530         +0.400           MOG (Jun)         AAHZ000         59.90–59.94         59.920         +0.310           MOG (Jul)         AAHZ000         59.49–59.53         59.510         +0.250           Oman/Dubai Swap (May)         AATH300         0.08/0.12         0.100         +0.010           Oman/Dubai Swap (Jun)         AATH200         0.08/0.12         0.100         +0.010	Brent/WTI 1st	AALAU00	3.71/3.73	3.720	+0.240
Brent EFP (Jun)         AAGVX00         0.16/0.18         0.170         +0.060           Brent EFP (Jul)         AAGVY00         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAGVY00         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAMVY00         0.190         +0.060           Swaps(PGA page 2658)         Dubai (May)         AAHBM00         60.41–60.45         60.430         +0.390           Dubai (Jun)         AAHBM00         59.80–59.84         59.820         +0.300           Dubai (Jul)         AAHB000         59.39–59.43         59.410         +0.240           MOG (May)         AAHZP00         60.51–60.55         60.530         +0.400           MOG (Jun)         AAHZP00         59.90–59.94         59.920         +0.310           MOG (Jul)         AAHZP00         59.49–59.53         59.510         +0.250           Oman/Dubai Swap (May)         AAIH300         0.08/0.12         0.100         +0.010           Oman/Dubai Swap (Jun)         AAIH000         0.08/0.12         0.100         +0.010	Brent/WTI 2nd	AALAV00	3.40/3.42	3.410	+0.160
Brent EFP (Jul)         AAGVY00         0.18/0.20         0.190         +0.060           Brent EFP (Aug)         AAMVY00         0.190         +0.060           Swaps(PGA page 2658)              Dubai (May)         AAHBM00         60.41–60.45         60.430         +0.390           Dubai (Jun)         AAHBM00         59.80–59.84         59.820         +0.300           Dubai (Jul)         AAHB000         59.39–59.43         59.410         +0.240           MOG (May)         AAHZP00         60.51–60.55         60.530         +0.400           MOG (Jun)         AAHZP00         59.90–59.94         59.920         +0.310           MOG (Jul)         AAHZP00         59.49–59.53         59.510         +0.250           Oman/Dubai Swap (May)         AAH1900         0.08/0.12         0.100         +0.010           Oman/Dubai Swap (Jun)         AATH200         0.08/0.12         0.100         +0.010	Brent/WTI 3rd	AALAY00		3.310	+0.150
Brent EFP (Aug)         AAMVY00         0.190         +0.060           Swaps(PGA page 2658)              Dubai (May)         AAHBM00         60.41–60.45         60.430         +0.390           Dubai (Jun)         AAHBM00         59.80–59.84         59.820         +0.300           Dubai (Jul)         AAHB000         59.39–59.43         59.410         +0.240           MOG (May)         AAHZP00         60.51–60.55         60.530         +0.400           MOG (Jun)         AAHZP00         59.90–59.94         59.920         +0.310           MOG (Jul)         AAHZP00         59.49–59.53         59.510         +0.250           Oman/Dubai Swap (May)         AAIH300         0.08/0.12         0.100         +0.010           Oman/Dubai Swap (Jun)         AAIH000         0.08/0.12         0.100         +0.010	Brent EFP (Jun)	AAGVX00	0.16/0.18	0.170	+0.060
Swaps(PGA page 2658)           Dubai (May)         AAHBM00         60.41–60.45         60.430         +0.390           Dubai (Jun)         AAHBM00         59.80–59.84         59.820         +0.300           Dubai (Jul)         AAHBM00         59.39–59.43         59.410         +0.240           MOG (May)         AAHZP00         60.51–60.55         60.530         +0.400           MOG (Jun)         AAHZP00         59.90–59.94         59.920         +0.310           MOG (Jul)         AAHZP00         59.49–59.53         59.510         +0.250           Oman/Dubai Swap (May)         AAIH300         0.08/0.12         0.100         +0.010           Oman/Dubai Swap (Jun)         AAIHL00         0.08/0.12         0.100         +0.010	Brent EFP (Jul)	AAGVY00	0.18/0.20	0.190	+0.060
Dubai (May)         AAHBM00         60.41-60.45         60.430         +0.390           Dubai (Jun)         AAHBM00         59.80-59.84         59.820         +0.300           Dubai (Jul)         AAHBM00         59.39-59.43         59.410         +0.240           MOG (May)         AAHZP00         60.51-60.55         60.530         +0.400           MOG (Jun)         AAHZP00         59.90-59.94         59.920         +0.310           MOG (Jun)         AAHZP00         59.49-59.53         59.510         +0.250           Oman/Dubai Swap (May)         AAH1900         0.08/0.12         0.100         +0.010           Oman/Dubai Swap (Jun)         AAHL000         0.08/0.12         0.100         +0.010	Brent EFP (Aug)	AAMVY00		0.190	+0.060
Dubai (Jun)         AAHBN00         59.80–59.84         59.820         +0.300           Dubai (Jul)         AAHB000         59.39–59.43         59.410         +0.240           MOG (May)         AAHZP00         60.51–60.55         60.530         +0.400           MOG (Jun)         AAHZP00         59.90–59.94         59.920         +0.310           MOG (Jun)         AAHZP00         59.49–59.53         59.510         +0.250           Oman/Dubai Swap (May)         AAIH300         0.08/0.12         0.100         +0.010           Oman/Dubai Swap (Jun)         AAIHL00         0.08/0.12         0.100         +0.010	Swaps(PGA page 2658)				
Dubai (Jul)         AAHB000         59.39–59.43         59.410         +0.240           MOG (May)         AAHZP00         60.51–60.55         60.530         +0.400           MOG (Jun)         AAHZR00         59.90–59.94         59.920         +0.310           MOG (Jul)         AAHZR00         59.49–59.53         59.510         +0.250           Oman/Dubai Swap (May)         AAIH300         0.08/0.12         0.100         +0.010           Oman/Dubai Swap (Jun)         AAIHL00         0.08/0.12         0.100         +0.010	Dubai (May)	AAHBM00	60.41-60.45	60.430	+0.390
MOG (May)         AAHZP00         60.51-60.55         60.530         +0.400           MOG (Jun)         AAHZR00         59.90-59.94         59.920         +0.310           MOG (Jul)         AAHZR00         59.49-59.53         59.510         +0.250           Oman/Dubai Swap (May)         AAIHJ00         0.08/0.12         0.100         +0.010           Oman/Dubai Swap (Jun)         AAIHL00         0.08/0.12         0.100         +0.010	Dubai (Jun)	AAHBN00	59.80-59.84	59.820	+0.300
MOG (Jun)         AAHZR00         59.90–59.94         59.920         +0.310           MOG (Jul)         AAHZR00         59.49–59.53         59.510         +0.250           Oman/Dubai Swap (May)         AAIHJ00         0.08/0.12         0.100         +0.010           Oman/Dubai Swap (Jun)         AAIHL00         0.08/0.12         0.100         +0.010	Dubai (Jul)	AAHBO00	59.39-59.43	59.410	+0.240
MOG (Jul)         AAHZT00         59.49–59.53         59.510         +0.250           Oman/Dubai Swap (May)         AAIHJ00         0.08/0.12         0.100         +0.010           Oman/Dubai Swap (Jun)         AAIHL00         0.08/0.12         0.100         +0.010	MOG (May)	AAHZP00	60.51-60.55	60.530	+0.400
Oman/Dubai Swap (May)         AAIHJ00         0.08/0.12         0.100         +0.010           Oman/Dubai Swap (Jun)         AAIHL00         0.08/0.12         0.100         +0.010	MOG (Jun)	AAHZR00	59.90-59.94	59.920	+0.310
Oman/Dubai Swap (Jun) AAIHL00 0.08/0.12 0.100 +0.010	MOG (Jul)	AAHZT00	59.49-59.53	59.510	+0.250
	Oman/Dubai Swap (May)	AAIHJ00	0.08/0.12	0.100	+0.010
Oman/Dubai Swap (Jul)         AAIHN00         0.08/0.12         0.100         +0.010	Oman/Dubai Swap (Jun)	AAIHL00	0.08/0.12	0.100	+0.010
	Oman/Dubai Swap (Jul)	AAIHN00	0.08/0.12	0.100	+0.010

#### ASIA (\$/barrel), APR 8 (PGA page 2210)

			Mid	Change
Brent (Jun)	PCAJG00	62.91-62.95	62.930	+0.480
Brent (Jul)	PCAJI00	62.54-62.58	62.560	+0.430
Brent (Aug)	PCAJ000		62.240	+0.330
Brent(DTD)	AAXPG00		61.845	+0.580
Brent/Dubai	AAJMS00	1.72/1.74	1.730	+0.130
WTI (May)	AAFFU00	59.30-59.34	59.320	+0.330
WTI (Jun)	AAF FW00	59.33-59.37	59.350	+0.320
WTI (Jul)	AAFFY00	59.24-59.28	59.260	+0.290

#### NORTH SEA, APR 8 (PGA page 1212)

(\$/barrel)			Mid	Change	<u>Sprea</u>	ad vs fwd Dated Brent	Mid	Change
Dated Brent Diff					AAXEZ00	-0.32/-0.30	-0.310	-0.005
BNB	<b>ΑΑVJA00</b>	61.99-62.01	62.000	+0.975	AAVJB00	-0.32/-0.30	-0.310	-0.005
Forties	PCADJ00	62.09-62.11	62.100	+1.000	AAGWZ00	-0.22/-0.20	-0.210	+0.020
Oseberg	PCAEU00	62.60-62.62	62.610	+0.880	AAGXF00	0.29/0.31	0.300	-0.100
Ekofisk	PCADI00	62.53-62.54	62.535	+0.855	AAGXB00	0.22/0.23	0.225	-0.125
Troll	AAWEX00	62.65-62.67	62.660	+0.880	AAWEY00	0.34/0.36	0.350	-0.100
Statfjord	PCAEE00	61.85-61.87	61.860	+0.830	AAGXD00	-0.46/-0.44	-0.450	-0.150
Flotta Gold	PCACZ00	60.60-60.62	60.610	+0.730	AAGXH00	-1.71/-1.69	-1.700	-0.250
Duc	AAWEZ00	62.05-62.07	62.060	+0.780	AAWFL00	-0.26/-0.24	-0.250	-0.200
Grane Blend	PCALA00		61.360	+0.830	PCALB00		-0.950	-0.150
Johan Sverdrup	AJSVA00		60.560	+0.580	AJSVB00		-1.750	-0.400
Statfjord (CIF)	AASAS00	62.82-62.83	62.825	+0.820	AASAT00	0.49/0.51	0.500	-0.150
Gullfaks (CIF)	AASAU00	62.72-62.73	62.725	+0.820	AASAV00	0.39/0.41	0.400	-0.150
Alvheim (CIF)	ALVHA00		63.075	+0.820	ALVHB00		0.750	-0.150
Asgard (CIF)	ASGCA00		61.525	+0.820	ASGCB00		-0.800	-0.150
North Sea Dated Strip	AAKWH00	62.30-62.32	62.310	+0.980				
(\$/barrel)					<u>Sprea</u>	d vs fwd CIF Dated Bro	ent	
Dated Brent (CIF)	AAVJG00		62.900	+0.955	AAVJF00		0.575	-0.015
BNB (CIF)	<b>РСАКР00</b>		63.125	+1.090	AAVJC00		0.800	+0.120
Forties (CIF)	PCAKR00		62.925	+0.965	AAHXC00		0.600	-0.005
Oseberg (CIF)	РСАКТ00		63.395	+0.805	AAHXD00		1.070	-0.165
Ekofisk (CIF)	PCAKV00		63.145	+0.705	AAHXB00		0.820	-0.265
Troll (CIF)	AAXJ000		63.450	+0.805	AAXJN00		1.125	-0.165
North Sea CIF Dated Strip	AAHXE00		62.325	+0.970				

#### WEST AFRICA, APR 8 (PGA pages 1230 and 1232)

(\$/barrel)			Mid	Change	<u>Spre</u>	ad vs fwd DTD Brent	Mid	Change
Nigeria								
Bonny Light	PCAIC00	61.24-61.27	61.255	+0.765	AAGXL00	-0.81/-0.79	-0.800	0.000
Qua Iboe	PCAID00	61.19-61.22	61.205	+0.765	AAGXN00	-0.86/-0.84	-0.850	0.000
Forcados	PCABC00	61.29-61.32	61.305	+0.765	AAGXP00	-0.76/-0.74	-0.750	0.000
Agbami	AAQZB00	60.49-60.52	60.505	+0.715	AAQZC00	-1.56/-1.54	-1.550	-0.050
Escravos	AAEIZ00	61.39-61.42	61.405	+0.765	AAGXR00	-0.66/-0.64	-0.650	0.000
Brass River	AAEJB00	61.19-61.22	61.205	+0.765	AAGXV00	-0.86/-0.84	-0.850	0.000
Ακρο	PCNGA00	60.49-60.52	60.505	+0.715	PCNGB00	-1.56/-1.54	-1.550	-0.050
Bonga	PCNGC00	61.29-61.32	61.305	+0.765	PCNGD00	-0.76/-0.74	-0.750	0.000
Usan	AAXUQ00		61.605	+0.765	AAXUR00		-0.450	0.000
Erha	AAXU000		61.655	+0.765	AAXUP00		-0.400	0.000
Egina	AFONA00		61.955	+0.765	AFONB00		-0.100	0.000
Angola								
Cabinda	PCAFD00	61.04-61.07	61.055	+0.765	AAGXT00	-1.01/-0.99	-1.000	0.000
Nemba	AAQYZ00	60.29-60.32	60.305	+0.715	AAQZA00	-1.76/-1.74	-1.750	-0.050
Dəliə	ΑΑQYX00	60.94-60.97	60.955	+0.765	AAQYY00	-1.11/-1.09	-1.100	0.000
Girassol	AASNL00	61.59-61.62	61.605	+0.765	AASJD00	-0.46/-0.44	-0.450	0.000
Hungo	AASLJ00	60.19-60.22	60.205	+0.765	AASJF00	-1.86/-1.84	-1.850	0.000
Kissanje	AASLK00	60.99-61.02	61.005	+0.765	AASJE00	-1.06/-1.04	-1.050	0.000
Pazflor	PCNGG00	60.79-60.82	60.805	+0.765	PCNGH00	-1.26/-1.24	-1.250	0.000
Plutonio	PCNGI00	60.79-60.82	60.805	+0.765	PCNGJ00	-1.26/-1.24	-1.250	0.000
Ghana								
Jubilee	AAXUS00		61.005	+0.665	ΑΑΧUΤ00		-1.050	-0.100
Republic of Congo								
Djeno	PCNGE00	59.94–59.97	59.955	+0.765	PCNGF00	-2.11/-2.09	-2.100	0.000
Chad								
Doba	AAXUU00		62.505	+0.715	AAXUV00		0.450	-0.050
30-60 Day Dtd strip	AAXRK00	62.05-62.06	62.055	+0.765				

#### LONDON, APR 8 (PGA page 1214)

(\$/barrel)		Brent CFD	Mid	Change		Dated Swap	Mid	Change
1 wk (Jul)	ΡϹΑΚΑΘΘ	-0.53/-0.51	-0.520	+0.340	οον <i>и</i> саа	62.04/62.06	62.050	+1.090
2wk (Jul)	<b>ΡCAKC00</b>	-0.35/-0.33	-0.340	+0.450	AAJOS00	62.22/62.24	62.230	+1.200
3wk (Jul)	PCAKE00	-0.23/-0.21	-0.220	+0.380	AAJOU00	62.34/62.36	62.350	+1.130
4wk (Jul)	PCAKG00	-0.20/-0.18	-0.190	+0.270	AAJOW00	62.37/62.39	62.380	+1.020
5wk (Jul)	AAGLU00	-0.31/-0.29	-0.300	+0.020	AAJPC00	62.26/62.28	62.270	+0.770
6wk (Jul)	AAGLV00	-0.41/-0.39	-0.400	+0.030	AAJPE00	62.16/62.18	62.170	+0.780
7wk (Jul)	AALCZ00	-0.51/-0.49	-0.500	+0.020	AALAW00	62.06/62.08	62.070	+0.770
8wk (Jul)	AALDA00	-0.61/-0.59	-0.600	-0.010	AALAX00	61.96/61.98	61.970	+0.740

#### MEDITERRANEAN, APR 8 (PGA pages 1220, 1222, 1234)

(\$/barrel)			Mid	Change		Spread vs fwd DTD Brent	Mid	Change
Med Dtd Strip	AALDF00	62.32-62.34	62.330	+0.980				-
BTC Dtd Strip	AAUFI00	62.32-62.33	62.325	+0.950				
15-45 Day Dtd Strip	AALGM00	62.27-62.29	62.280	+0.910				
Urals (Rdam)	PCAFW00	59.92-59.96	59.940	+1.160	AAGX J00	-2.40/-2.38	-2.390	+0.180
Urals (Med)	PCACE00	60.31-60.35	60.330	+1.080	AAGXX00	-2.01/-1.99	-2.000	+0.100
Urals (Ex-Baltic)	AAGZT00	59.02-59.06	59.040	+1.255	AAHP100	-3.30/-3.28	-3.290	+0.275
Urals FOB Novo Suez	AAGZS00	59.45-59.49	59.470	+1.110	ААНРНОО	-2.87/-2.85	-2.860	+0.130
Urals FOB Novo Afra	AAOTHØØ	59.07-59.11	59.090	+1.115	AAOTI00	-3.25/-3.23	-3.240	+0.135
Urals (Primorsk)	AAWVH00	59.00-59.03	59.015	+1.260	AAWVI00	-3.32/-3.31	-3.315	+0.280
Urals (RCMB)	AALIN00	59.98-60.02	60.000	+1.075				
Iranian Light FOB Kharg Island (Med)	AILKA00		59.820	+0.840	AILKB00		-2.510	-0.140
Iranian Heavy FOB Kharg Island (Med)	ΑΙΗΚΑΘΘ		58.270	+0.840	AIHKB00		-4.060	-0.140
Es Sider	PCAC000	60.11-60.14	60.125	+0.850	AAGYH00	-2.21/-2.19	-2.200	-0.100
Siberian Lt	AAGZW00	60.91-60.95	60.930	+0.930	ААНРКОО	-1.41/-1.39	-1.400	-0.050
Saharan Bld	AAGZY00	61.16-61.19	61.175	+0.950	AAHPN00	-1.16/-1.14	-1.150	0.000
Azeri Lt	AAGZX00	62.56-62.59	62.575	+0.950	AAHPM00	0.24/0.26	0.250	0.000
Azeri Lt FOB Ceyhan Suez	AAUFM00	61.96-61.99	61.975	+0.950	AAUFN00	-0.36/-0.34	-0.350	0.000
Azeri Lt FOB Ceyhan Afra	AAUFK00	61.78–61.81	61.795	+1.015	AAUFL00	-0.54/-0.52	-0.530	+0.065
Azeri Lt FOB Supsa	AATHM00	61.42-61.44	61.430	+0.980	AATHN00	-0.90/-0.89	-0.895	+0.030
BTC FOB Ceyhan	AAUFH00	61.87-61.90	61.885	+0.985	AAUF J00	-0.45/-0.43	-0.440	+0.035
Suez Blend	PCACA00	57.68-57.71	57.695	+1.130	AAGYD00	-4.64/-4.63	-4.635	+0.150
Kirkuk	AAEJD00	60.81-60.85	60.830	+1.080	AAGYF00	-1.51/-1.49	-1.500	+0.100
Syrian Lt	AAHMM00	61.31-61.35	61.330	+1.040	AALOU00	-1.01/-0.99	-1.000	+0.060
Syrian Hvy	AAHMN00	56.89-56.92	56.905	+1.140	AALOV00	-5.43/-5.42	-5.425	+0.160
CPC Blend CIF	AAGZU00	59.96-59.99	59.975	+1.100	AAHPL00	-2.36/-2.34	-2.350	+0.150
CPC Blend FOB Suez	AALVX00	59.21-59.24	59.225	+1.125	AALVZ00	-3.11/-3.09	-3.100	+0.175
CPC Blend FOB Afra	AAOFV00	58.88-58.90	58.890	+1.130	AAOFW00	-3.44/-3.43	-3.435	+0.180
(PPE page 1616)								
Urals Med CFD (Apr)	AAMDU00	-1.91/-1.89	-1.900	-0.300	CPC Blend CFD (Apr) AAOFX00		-2.300	0.000
Urals Med CFD (May)	AAMEA00	-1.61/-1.59	-1.600	-0.200	CPC Blend CFD (May) AAOFY00		-2.150	0.000
Urals Med CFD (Jun)	UMCM003	-1.56/-1.54	-1.550	-0.200	CPC Blend CFD (Jun) AAOFZ00		-2.000	0.000
Urals NWE CFD (Apr)	UNCM001	-2.36/-2.34	-2.350	+0.050				
Urals NWE CFD (May)	UNCM002	-2.21/-2.19	-2.200	0.000				
Urals NWE CFD (Jun)	UNCM003	-2.21/-2.19	-2.200	0.000				

#### CANADA, APR 8 (PGA page 230)

(\$/barrel)			Mid	Change
33-63 Day Dated Strip	AALEJ00	62.02-62.04	62.030	+0.755
Terra Nova	AAJUH00	61.46-61.50	61.480	+0.755
Hibernia	ΑΑJΚΚΘΘ	61.61-61.65	61.630	+0.755
White Rose	ΑΑΥΙΧΟΟ	62.36-62.40	62.380	+0.755
		Spread vs fwd DTD Brent	Mid	Change
Terra Nova	00CUCAA	-0.56/-0.54	-0.550	0.000
Hibernia	AAJKM00	-0.41/-0.39	-0.400	0.000
White Rose	AAVJY00	0.34/0.36	0.350	0.000

#### PLATTS EURO DENOMINATED CRUDE OIL ASSESSMENTS (€/barrel) (PGA page 1252)

Apr 8			Mid	Change
Dated Brent	AAPYR00	52.09-52.10	52.095	+0.780
Dated Brent (CIF)	PCAKN00		52.853	+0.768
Urals (Mediterranean)	AAPYS00	50.68-50.71	50.695	+0.875
WTI (May)	ΑΑΡΥΤΘΘ	49.78-49.79	49.785	+0.515
WTI MEH (May)	AAYSA00		50.500	+0.429
Mars (May)	AAPYU00	49.99-50.00	49.995	+0.515

Euro/US\$ forex rate: 1.190. Platts Euro denominated crude oil assessments are based on market values and a Euro/US\$ forex rate at 4:30 PM local London time.

# UNITED STATES (\$/barrel), APR 8 (PGA pages 210, 214 & 230)

			Mid	Change
Platts AGS	AGSAA00		60.610	-0.040
WTI (May)	PCACG00	59.59-59.61	59.600	-0.190
WTI (Jun)	PCACH00	59.62-59.64	59.630	-0.180
WTI (Jul)	AAGIT00	59.51-59.53	59.520	-0.210
WTI EFP (May)	AAGVT00	-0.01/0.01	0.000	-0.020
WTI EFP (Jun)	AAGVU00	-0.01/0.01	0.000	0.000
WTI EFP (Jul)	AAGVV00	-0.01/0.01	0.000	0.000
Light Houston Sweet	AAXEW00		60.450	-0.190
Light Houston Sweet M2	AAYRY00		60.630	-0.130
LOOP Sour (May)	AALSM01		59.750	-0.190
LOOP Sour (Jun)	AALSM02		59.730	-0.180
LOOP Sour (Jul)	AALSM03		59.620	-0.160
Eagle Ford Marker	ΑΑΥΑJ00		60.930	-0.230
Mars (May)	AAMBR00	59.84-59.86	59.850	-0.190
Mars (Jun)	AAMBU00	59.82-59.84	59.830	-0.180
Mars (Jul)	AAMBX00	59.71-59.73	59.720	-0.160
Mars/WTI (May)	AAGWH00	0.24/0.26	0.250	0.000
Mars/WTI (Jun)	AAKTH00	0.19/0.21	0.200	0.000
Mars/WTI (Jul)	AAMB000	0.19/0.21	0.200	+0.050
LOOP/WTI (May)	AALOM01		0.150	0.000
LOOP/WTI (Jun)	AALOM02		0.100	0.000
LOOP/WTI (Jul)	AALOM03		0.100	+0.050
LOOP/Mars (May)	AALPM01		-0.100	0.000
LOOP/Mars (Jun)	AALPM02		-0.100	0.000
LOOP/Mars (Jul)	AALPM03		-0.100	0.000
Dated Brent	AAQBF00	62.36-62.38	62.370	+0.220
P-Plus WTI	PCACI00	3.37/3.39	3.380	0.000
P-5 WTI	AAFEN00		56.150	-0.210
WTI-Delta	AAEJK00	-0.01/0.01	0.000	0.000
Kern River	<b>РСАВЈ00</b>	60.52-60.54	60.530	+0.490

#### US DOMESTIC CRUDE ASSESSMENTS LONDON CLOSE

(PGA page 1240)		\$/barrel	Mid	Change
WTI (May)	AAQAR00	59.24-59.26	59.250	+0.650
WTI (Jun)	ΑΑQΑΤ00	59.26-59.28	59.270	+0.640
WTI (Jul)	AAQAV00	59.15-59.17	59.160	+0.590
WTI MEH (May)	AAYRZ00		60.100	+0.550
WTI MEH (Jun)	AAXYD00		60.220	+0.540
LLS (May)	AAQBB00	61.24-61.26	61.250	+0.600
LLS (Jun)	AAQBD00	61.41-61.43	61.420	+0.540
Mars (May)	AAQAX00	59.49-59.51	59.500	+0.650
Mars (Jun)	AAQAZ00	59.46-59.48	59.470	+0.640
		<u>Spread</u>	Mid	Change
WTI (May)	AAQAS00	<u>Spread</u> -0.01/0.01	<b>Mid</b> 0.00	Change 0.000
WTI (Məy) WTI (Jun)	AAQAS00 AAQAU00	_		0
		-0.01/0.01	0.00	0.000
WTI (Jun)	AAQAU00	-0.01/0.01	0.00	0.000
WTI (Jun) WTI (Jul)	AAQAU00 AAQAW00	-0.01/0.01	0.00 0.000 0.000	0.000 0.000 0.000
WTI (Jun) WTI (Jul) WTI MEH (May)	AAQAU00 AAQAW00 AAYTA00	-0.01/0.01	0.00 0.000 0.000 0.850	0.000 0.000 0.000 -0.100
WTI (Jun) WTI (Jul) WTI MEH (May) WTI MEH (Jun)	AAQAU00           AAQAW00           AAQAW00           AAQAW00           AAYTA00           AAYWA00	-0.01/0.01 -0.01/0.01 -0.01/0.01	0.00 0.000 0.000 0.850 0.950	0.000 0.000 0.000 -0.100 -0.100
WTI (Jun) WTI (Jul) WTI MEH (May) WTI MEH (Jun) LLS (May)	AAQAU00           AAQAW00           AAQAW00           AAYTA00           AAYWA00           AAQBC00	-0.01/0.01 -0.01/0.01 -0.01/0.01 -0.01/0.01	0.00 0.000 0.000 0.850 0.950 2.000	0.000 0.000 -0.100 -0.100 -0.050

			1.10	Change			MIU	Change
WTI Midland	PCACJ00	59.84-59.86	59.850	-0.190	AAGVZ00	0.24/0.26	0.250	0.000
WTI Midland (2nd month)	AAYZA00		59.980	-0.180	AAXXF00		0.350	0.000
LS (1st month)	PCABN00	61.59-61.61	61.600	-0.190	AAGWN00	1.99/2.01	2.000	0.000
LLS (2nd month)	AAURC00	61.77-61.79	61.780	-0.230	AAURD00	2.14/2.16	2.150	-0.050
HLS (1st month)	PCABD00	60.84-60.86	60.850	-0.190	AAGWP00	1.24/1.26	1.250	0.000
HLS (2nd month)	AAURE00	61.02-61.04	61.030	-0.230	AAURF00	1.39/1.41	1.400	-0.050
WTS (1st month)	PCACK00	59.84-59.86	59.850	-0.190	AAGWB00	0.24/0.26	0.250	0.000
WTS (2nd month)	AAURG00	59.72-59.74	59.730	-0.180	AAURH00	0.09/0.11	0.100	0.000
WTI MEH	AAYRG00		60.450	-0.190	AAYRH00		0.850	0.000
WTI MEH (2nd month)	AAXXE00		60.630	-0.130	AAYYA00		1.000	+0.050
Poseidon	AABHK00	59.09-59.11	59.100	-0.190	AAGWL00	-0.51/-0.49	-0.500	0.000
Eugene Island	PCAFC00	60.19-60.21	60.200	-0.190	AAGWD00	0.59/0.61	0.600	0.000
Thunder Horse Blend	AAWZK00	61.19-61.21	61.200	-0.190	AAWZL00	1.59/1.61	1.600	0.000
Wyoming Sweet	PCACM00	58.89-58.91	58.900	-0.240	AAGWR00	-0.71/-0.69	-0.700	-0.050
Basrah Light	AAEJH00	63.01-63.03	63.020	-0.020	AAGWV00	3.38/3.40	3.390	+0.160
Bonito	PCAIE00	60.19-60.21	60.200	-0.190	AAGWF00	0.59/0.61	0.600	0.000
SGC	AASO100	59.14-59.16	59.150	-0.190	AASOJ00	-0.46/-0.44	-0.450	0.000
						d vs NYMEX WTI CM	1A	
ANS (Cal)	PCAAD00	62.89–62.93	62.910	-0.190	AAGWX00	3.30/3.32	3.310	0.000
WCS ex-Cushing	AAWTY00	55.79-55.81	55.800	-0.190	AAWTZ00	-3.81/-3.79	-3.800	0.000
WCS ex-Nederland	AAYAY00		56.850	-0.190	AAYAX00		-2.750	0.000
Bakken Williston	AAXPP00		59.000	-0.190	AASRX00		-0.600	0.000
Bakken Guernsey	AASRR00	58.89-58.91	58.900	-0.240	AASRV00	-0.71/-0.69	-0.700	-0.050
Bakken Clearbrook	AASRU00	60.14-60.16	60.150	-0.190	AASRW00	0.54/0.56	0.550	0.000
Bakken USGC Pipe	ABAKA00		60.300	-0.190	ABAKB00		0.700	0.000
Americas Crude Marker (May)	AAQHN00	59.09-59.11	59.100	-0.190				
Americas Crude Marker (Jun)	AAQH000	59.07-59.09	59.080	-0.180				
Americas Crude Marker (Jul)	AAQHP00	58.96-58.98	58.970	-0.160				
Thums	PCACD00	62.15-62.17	62.160	+0.500				
Line 63	PCABM00	65.74–65.78	65.760	-0.130				
P-Plus Line 63	PCAFV00	2.39/2.41	2.400	0.000				
						ed vs Eagle Ford Yie		
Eagle Ford postings avg.	AAYAH00	0011000	56.610	-0.200	AAYAI00		-4.320	+0.030
Platts AGS	AGSAA00	OB USGC	60.610	-0.040	FUB U AGSAC00	JSGC Spread vs NYI	1.010	+0.150
Bakken	ABAKCOO		60.410	-0.040	ABAKD00		0.810	+0.150
Eagle Ford Crude	ABARCOO		60.110	-0.040	ABAKD00		0.510	+0.150
Eagle Ford Condensate	AAYATOO		59.160	-0.040	AAYA000 AAYAS00		-0.440	+0.150
WTI	AAYAROO		60.610	-0.040	AAYAS00		1.010	+0.150
AA 11		ad vs Dated Brent S		-0.040	AATAZ00		1.010	+0.130
Platts AGS	AGSAB00		-2.040	-0.200				
Bakken	ABAKE00		-2.240	-0.200				
Eagle Ford Crude	AEFCA00		-2.540	-0.200				
Eagle Ford Condensate	AEFCB00		-3.490	-0.200				

Mid

Change

Spread vs WTI

Mid

Change

# US CRUDE ASSESSMENTS SINGAPORE CLOSE

(\$/barrel)		Change
AAZDA00	59.470	+0.330
AAZDB00	59.450	+0.270
AAZDC00	61.320	+0.280
AAZDD00	61.550	+0.370
AAZDE00	58.870	+0.330
AAZDF00	60.170	+0.230
AAZDG00	60.300	+0.220
	AAZDA00 AAZDB00 AAZDC00 AAZDD00 AAZDE00 AAZDF00	AAZDA00         59.470           AAZDB00         59.450           AAZDC00         61.320           AAZDD00         61.550           AAZDE00         58.870           AAZDF00         60.170

#### CANADIAN SPOT CRUDE ASSESSMENTS, APR 8

(PGA pages 230 & 232)		C\$/cu m	Mid	Change
Lloyd Blend	AALRM00	392.092-392.250	392.171	-4.233
Mixed Sweet	AALRT00	447.043-447.202	447.122	-3.258
Light Sour Blend	AALRZ00	447.834-447.992	447.913	-3.261
Midale	AAUCD00	440.718-440.876	440.797	-3.233
Condensates	AALSH00	483.809-483.968	483.889	-3.401
Syncrude Sweet Prem.	AASOL00	471.159-471.317	471.238	-3.352
WCS	<b>AAPP000</b>	388.139-388.297	388.218	-4.217
Cold Lake	AASZY00	387.348-387.506	387.427	-4.215
		\$/barrel		
Lloyd Blend	AALRK00	49.590-49.610	49.600	-0.340
Mixed Sweet	AALRR00	56.540-56.560	56.550	-0.190
Light Sour Blend	AALRX00	56.640-56.660	56.650	-0.190
Midale	AAUCC00	55.740-55.760	55.750	-0.190
Condensates	AALSF00	61.190-61.210	61.200	-0.190
Syncrude Sweet Prem.	AASOK00	59.590-59.610	59.600	-0.190
WCS	AAPPN00	49.090-49.110	49.100	-0.340
Cold Lake	AASZX00	48.990-49.010	49.000	-0.340
	<u>S</u>	pread vs Canada Basi	is	
Lloyd Blend	AALRP00	-10.010/-9.990	-10.000	-0.150
Mixed Sweet	AALRV00	-3.060/-3.040	-3.050	0.000
Light Sour Blend	AALSD00	-2.960/-2.940	-2.950	0.000
Midale	AAUCE00	-3.860/-3.840	-3.850	0.000
Condensates	AALSJ00	1.590/1.610	1.600	0.000
Syncrude Sweet Prem.	AASOM00	-0.010/0.010	0.000	0.000
WCS	AAPPP00	-10.510/-10.490	-10.500	-0.150
Cold Lake	AASZZ00	-10.610/-10.590	-10.600	-0.150

\*Canada Basis: See explanation at http://www.platts.com/

#### DELIVERED-ASIA SPOT CRUDE ASSESSMENTS (\$/barrel) (PGA page 2238)

US Delivered-Asia Spot Crudes		Mid	Change		Mid	Change	Diff to	Asian Dai Mid	Change
WTI Midland (DES Singapore)	WTMSA00	62.310	+0.140	WTMSD00	2.900	-0.100	WTMSB00	0.720	0.000
WTI Midland (DES Yeosu)	WTMYA00	62.810	+0.140	WTMYD00	3.400	-0.100	WTMYB00	1.220	0.000
Brazil Delivered-Asia Spot Crudes									
Tupi (DES Qingdao)	LUQDA00	62.360	+0.190	LUQDD00	2.950	-0.050	LUQDB00	0.770	+0.050

# LATIN AMERICA CRUDE (\$/barrel), APR 8 (PGA page 280)

		FOB Crude	Mid	Change		Diff to <u>WTI strip</u>		Diff to Futures Brent strip	3	Diff to Dated Brent strip
Oriente	PCADE00	58.01-58.05	58.030	-0.150	PCAGU00	-1.550	AAXBW00	-4.575	AAXBH00	-4.370
Vasconia	PCAGI00	59.63-59.68	59.655	-0.085	PCAGR00	0.075	AAXCB00	-2.950	AAXBN00	-2.745
Roncador	AAQTL00	60.18-60.23	60.205	-0.085	<b>ΑΑQTK00</b>	0.625	AAXBT00	-2.400	AAXAY00	-2.195
Escalante	PCAGC00	63.88–63.93	63.905	-0.385	PCAG000	4.325	AAXBS00	1.300	AAXAX00	1.505
Loreto	PCAGH00	61.81-61.85	61.830	-0.150	PCAGQ00	2.250	AAXBV00	-0.775	AAXBG00	-0.570
Mesa 30	AAITB00	60.03-60.08	60.055	-0.135	AAITH00	0.475	AAXCC00	-2.550	AAXB000	-2.345
Santa Barbara	AAITD00	61.76-61.80	61.780	-0.200	AAITJ00	2.200	AAXBU00	-0.825	AAXAZ00	-0.620
Marlim	AAITF00	60.23-60.28	60.255	-0.085	AAITL00	0.675	AAXBY00	-2.350	AAXBJ00	-2.145
Nabo	AAMCA00	56.66-56.70	56.680	-0.150	AAMCD00	-2.900	AAXBX00	-5.925	AAXBI00	-5.720
Castilla Blend	AAVEQ00	58.08-58.13	58.105	-0.085	AAVEQ01	-1.475	AAXBZ00	-4.500	AAXBK00	-4.295
Magdalena	AAWFR00	56.68-56.73	56.705	-0.085	AAWFS00	-2.875	AAXCA00	-5.900	AAXBL00	-5.695
Liza	ALIZA00		61.255	-0.035	ALIZD00	1.675	ALIZC00	-1.350	ALIZB00	-1.145
Latin America WTI strip	AAXBP00		59.580	-0.200						
Latin America Futures Brent strip	AAXBQ00		62.605	-0.085						
Latin America Dated Brent strip	AAXBR00		62.400	+0.025						

#### DAILY OPEC BASKET PRICE (\$/barrel) (PGA page 207)

	Change					
07Apr	AAEUQ00	60.680	-0.650			
The daily OPEC basket or	ice represents an index of the following 11 practice	Alooria's S	Saharan Bland, Indonesia's Minas, Iranian Heavy, Irao's Basra Light, Kuwait's Export			

The daily OPEC basket price represents an index of the following 11 grades: Algeria's Saharan Blend, Indonesia's Minas, Iranian Heavy, Iraq's Basra Light, Kuwait's Export, Libya's Es Sider, Nigeria's Bonny Light, Qatar's Marine, Saudi Arabia's Arab Light, Murban of the UAE and Venezuela's BCF 17.

<b>CRUDE OIL POSTINGS</b>												
			Effective date			Effective date			Effective date		I	Effective date
US (\$/barrel) (PGA page 250)												
		Plains			Shell			Sunoco			Valero	
WTI	PSADF09	56.08*	08APR21	PSADI09	56.20*	08APR21	PSADG09	56.25*	08APR21	PSACS09	56.00*	08APR21
WTS	PSAED09	54.28	08APR21	PSAEG09	56.54	08APR21	PSAEE09	51.25	08APR21			
LLS	PSAM009	54.58	08APR21	PSAMQ09	54.58	08APR21	PSAMP09	54.75	08APR21	PSATF09	58.21	08APR21
Ok. Swt.	PSUS191	56.08	08APR21	PSANX09	55.95	08APR21	PSANW09	56.25	08APR21			
Kansas	PSAPL09	46.43	08APR21	PSUS112	48.68	08APR21				PSAPE09	55.00	08APR21
Wyo. Swt	PSAQZ09	53.18	08APR21									
Eugene Island	AALBB00	51.58	08APR21									
Eagle Ford							PSUS100	56.25	08APR21			
Eagle Fd Cond							PSUS110	55.25	08APR21			
		Phillips66			FlintHIs						<u>Coffey</u>	
WTI	PSACP09	56.22*	08APR21	AAUQN00	56.25	07APR21				PSUS066	56.25	08APR21
WTS	PSAD009	55.27	08APR21									
LLS	PSAMC09	54.97	08APR21									
Ok. Swt	PSASL09	56.02	08APR21							PSUS064	56.00	08APR21
Kansas										PSUS060	49.75	08APR21
Wyo. Swt.				PSUS264	54.25	07APR21						
Wyo. Sr.				PSUS261	47.25	07APR21						

\*P-5 WTI is a crude oil postings-based index as of 5:30 p.m. local New York time. Posted prices by the following companies are used in the index: Phillips66, Plains, Sunoco, Shell, and Valero. Postings available at presstime. Companies listed are representative of key crude oil purchasers.

SPOT TANKER RATES, APR 8

Route							
From	То		Size (mt)		WS		Rate (\$/mt)
Clean							
(PGT page 1910)							
Med	UKC	PFADCSZ	30k	PFADC10	150.00	TCABA00	16.62
Med	USAC	PFACWSZ	37k	PFACW10	130.00	TCABC00	20.49
Med	Med	PFADBSZ	30k	PFADB10	140.00	TCAAY00	7.70
UKC	UKC	PFALYSZ	22k	PFALY00	177.25	TCABV00	9.31
UKC	USAC	PFAMASZ	37k	PFAMA00	130.00	TCABX00	17.16
UKC	USGC	PFAMBSZ	37k	PFAMB00	125.00	TCACA00	22.61
BSea	Med	PFABXSZ	30k	PFABX00	150.00	TCAAP00	15.86
(PGT page 2920)							
AG	West Coast India	PFABMSZ	35k	PFABM10	190.00	TCAAF00	13.26
AG	Japan	PFABNSZ	35k	PFABN10	135.00	TCAAH00	28.43
Sing	Japan	PFAEBSZ	30k	PFAEB10	150.00	TCABP00	15.59
Sing	HK	PFAKWSZ	30k	PFAKW10	355.00*	TCADI00	11.83
(PGT page 2922)							
AG	Japan	PFAEYSZ	55k	PFAEY10	135.00	TCAA100	28.43
AG	Japan	PFAMTSZ	75k	PFAMT00	125.00	TCAAJ00	26.33
Dirty (PGT page 1962)							
Carib	USGC	PFANZSZ	50k	PFANZ00	165.00	TDABA00	15.00
Carib	USAC	PFALTSZ	70k	PFALT10	80.00	TDAAY00	7.58
(PGT page 1960)							
Med	Med	PFAJPSZ	80k	PFAJP10	87.50	TDABL00	6.92
Med	USGC	PFAJOSZ	80k	PFAJ010	55.00	TDABU00	10.66
UKC	UKC	PFAKDSZ	80k	PFAKD10	97.50	TDACD00	6.66
UKC	USAC	PFAKESZ	80k	PFAKE10	67.50	TDACG00	9.33
(PGT page 1970)							
WAF	USGC	PFAIASZ	130k	PFAIA10	57.50	TDACV00	11.37
UKC	USGC	PFAHNSZ	135k	PFAHN10	40.00	TDACH00	7.26
Med	USGC	PFAHGSZ	135k	PFAHG10	40.00	TDABS00	7.76
(PGT page 2970)							
AG	Asia	PFAJDSZ	80k	PFAJD10	97.50	TDAAC00	16.71
(PGT page 2980)							
AG	Asia	PFAOCSZ	270k	PFAOC00	31.50	TDAAB00	6.23
AG	USGC	PFAOGSZ	280k	PFA0G00	18.50	TDAAN00	6.87
*values are in lumosu	m						

\*values are in lumpsum

# PLATTS FUTURES ASSESSMENTS SINGAPORE MOC, APR 8 (PGA page 703)

NYMEX RBOB (¢/gal)			NYMEX NY ULSD (¢/gal)		
Мау	XNRBA01	194.920	Мау	XNHOA01	179.650
Jun	XNRBA02	194.700	Jun	XNHOA02	179.870
Jul	XNRBA03	193.590	Jul	XNHOA03	180.080

#### PLATTS FUTURES ASSESSMENTS, APR 8

NYMEX light sweet crude (\$/barrel) (PGA page 701)

	CME 2:30 PM E	T settlement
Мау	AAWS001	59.600
Jun	AAWS002	59.630
Jul	AAWS003	59.520
Aug	AAWS004	59.250
	Platts 2:30 PM ET fu	itures assessmer
Мау	NYCRM01	59.620
Jun	NYCRM02	59.640
Jul	NYCRM03	59.520
Aug	NYCRM04	59.240
	CME 2:30 PM vs Plat	tts 2:30 PM sprea
Мау	AAWD001	-0.020
Jun	AAWD002	-0.010
Jul	AAWD003	0.000
Aug	AAWD004	0.010
NYMEX RBOB (¢/gal)	(PGA page 701)	
	CME 2:30 PM E	Tsettlement
May	AARS001	195.930
Jun	AARS001	195.970
Jul	AARS002	194.910
our	Platts 2:30 PM ET fu	
Мау	NYRBM01	196.030
Jun	NYRBM02	196.050
Jul	NYRBM03	194.970
	CME 2:30 PM vs Plat	ts 2:30 PM sorea
Мау	AARD001	-0.100
Jun	AARD002	-0.080
Jul	AARD003	-0.060
NYMEX NY ULSD (¢/		
	CME 2:30 PM E	Teattlamont
Мау	CME 2.30 PM E AAHS001	180.980
Jun	AAHS001 AAHS002	181.180
Jul	AAH5002 AAH5003	181.450
oui	Platts 2:30 PM ET fu	
Мау	Platts 2:30 PM ET IL NYHOM01	180.980
Jun	NYHOMOI NYHOMOI	181.190
Jul	NYHOMO2 NYHOMO3	181.470
oui		
Мау	CME 2:30 PM vs Plat	0.000
inoy	AAHD001	-0.010
lun		
Jun Jul	AAHD002 AAHD003	-0.020

#### ICE Brent crude (\$/barrel) (PGA page 703)

AAQBG00	63.190
AAQBH00	62.710
AAXZZ00	62.340
AAVAL 00	61.980
	<b>C</b> 111

#### **FUTURES SETTLEMENTS, APR 8**

		Settlement	Change	Low	High	Volume*	Open inter	rest	PNT****
NYMEX Light s	weet crude (	\$/barrel) (PGA	N page 705)						
May 21	NMCL001	59.60	-0.17	58.82	59.85	373667	312954		
Jun 21	NMCL002	59.63	-0.18	58.85	59.86	192084	356904		
Jul 21	NMCL003	59.52	-0.21	58.76	59.74	96921	212331		
Aug 21	NMCL004	59.25	-0.25	58.52	59.46	67227	112487		
Total	NMCL000					952593		XNCLP00	11346
NYMEX NY ULS	SD (\$/gal) (PG	A page 705)							
May 21	NMH0001	1.8098	+0.0019	1.7845	1.8118	30556	110141		
Jun 21	NMH0002	1.8118	+0.0025	1.7868	1.8139	24603	74597		
Jul 21	NMH0003	1.8145	+0.0031	1.7893	1.8166	13815	39057		
Aug 21	NMH0004	1.8177	+0.0037	1.7943	1.8196	7822	19801		
Total	NMH0000					103372		XNHOP00	7018
May 21	Inleaded gas		(PGA page 70 +0.0075		1.9655	46859	129294		
May 21	NMRB001	1.9593	+0.0075	1.9331	1.9655	46859	129294		
Jun 21	NMRB002	1.9597	+0.0084	1.9332	1.9654	49655	68896		
Jul 21	NMRB003	1.9491	+0.0078	1.9235	1.9546	26610	40278		
Aug 21	NMRB004	1.9284	+0.0065	1.9047	1.9337	12581	20466		
Total	NMRB000					161489		XNRBP00	7684
NYMEX Nəturə	l Gas (\$/MME	<b>Stu)</b> (PGA page	705)						
May 21	NMNG001	2.522	+0.00	2.478	2.535	114019	271784		
Jun 21	NMNG002	2.607	+0.01	2.563	2.616	45122	117251		
Jul 21	NMNG003	2.691	+0.02	2.645	2.696	50162	106270		
Aug 21	NMNG004	2.724	+0.02	2.677	2.728	18761	60247		
Total	NMNG000					328735		XNNGP00	4000
DME Oman cru	ide (\$/barrel)	** (PGA pages )	702 & 2710)						
Jun 21 Asia	XD0A001	61.31	+0.39			3505			
Jun 21	DM0Q001	61.38	-0.19	61.20	61.38	2751	2476		
Jul 21	DM0Q002	60.76	-0.26	60.76	60.76	1242	4		
Aug 21	DM0Q003	60.17	-0.33	60.17	60.17	1565	3		
Sep 21	DMOQ004	59.76	-0.37	59.76	59.76	323	0		

# DMOQ000 IFAD Murban crude (\$/barrel) (PGA page 703)

Jun 21	AMIFA00	61.570		
Murban vs Dub	əi***	AMIFB00	1.750	

#### ICE Brent (\$/barrel) (PGA page 704)

Total

Total	ICLL000					864180		XILLP00	18871
Sep 21	ICLL004	61.97	-0.23	61.34	62.24	93732	146925		
Aug 21	ICLL003	62.33	-0.18	61.64	62.59	109627	158860		
Jul 21	ICLL002	62.71	-0.10	61.97	62.95	171684	366040		
Jun 21	ICLL001	63.20	+0.04	62.38	63.43	352272	515507		

#### PNT\*\*\*\* Settlement Change Low High Volume\* Open interest

#### ICE BWAVE (Brent weighted futures average)(\$/barrel) (PGA page 704)

Jun 21	XIBW001	62.61		
Jul 21	XIBW002	62.37		
BWAVE data	refer to previous day	·.		

ICE WTI (\$/barrel) (PGA page 704)

(, e, bege )								
ICIC001	59.60	-0.17	58.84	59.85	26115	48708		
<b>ICIC002</b>	59.63	-0.18	58.87	59.86	46864	81525		
<b>ICIC003</b>	59.52	-0.21	58.79	59.70	48597	32824		
ICIC004	59.25	-0.25	58.64	59.45	38359	20620		
<b>ICIC000</b>					204380		XIICP00	2106
	ICIC001 ICIC002 ICIC003 ICIC004	ICIC002         59.63           ICIC003         59.52           ICIC004         59.25	ICIC001         59.60         -0.17           ICIC002         59.63         -0.18           ICIC003         59.52         -0.21           ICIC004         59.25         -0.25	ICIC001         59.60         -0.17         58.84           ICIC002         59.63         -0.18         58.87           ICIC003         59.52         -0.21         58.79           ICIC004         59.25         -0.25         58.64	ICIC001         59.60         -0.17         58.84         59.85           ICIC002         59.63         -0.18         58.87         59.86           ICIC003         59.52         -0.21         58.79         59.70           ICIC004         59.25         -0.25         58.64         59.45	ICIC001         59.60         -0.17         58.84         59.85         26115           ICIC002         59.63         -0.18         58.87         59.86         46864           ICIC003         59.52         -0.21         58.79         59.70         48597           ICIC004         59.25         -0.25         58.64         59.45         38359	ICIC001         59.60         -0.17         58.84         59.85         26115         48708           ICIC002         59.63         -0.18         58.87         59.86         46864         81525           ICIC003         59.52         -0.21         58.79         59.70         48597         32824           ICIC004         59.25         -0.25         58.64         59.45         38359         20620	ICIC001         59.60         -0.17         58.84         59.85         26115         48708           ICIC002         59.63         -0.18         58.87         59.86         46864         81525           ICIC003         59.52         -0.21         58.79         59.70         48597         32824           ICIC004         59.25         -0.25         58.64         59.45         38359         20620

#### ICE low sulfur Gasoil (\$/mt) (PGA page 704)

Apr 21	ICL0001	500.50	+7.00	498.00	505.75	59531	42856		
May 21	ICL0002	502.50	+6.50	500.50	508.00	105734	189993		
Jun 21	ICL0003	504.25	+6.25	502.50	509.50	64203	135033		
Jul 21	ICL0004	506.00	+6.25	504.00	511.25	23947	79496		
Total	ICL0000					322315		XILOP00	8756

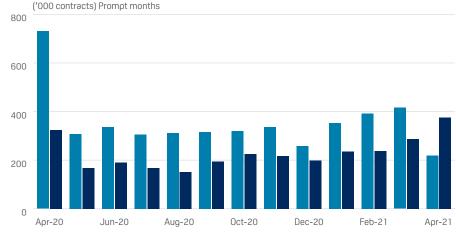
\*Volume, open interest and PNT reflect prior trading day. PNT reflect volume for Privately Negotiated Trades or off-exchange. \*\*Oman settlements are Post Close settlements. \*\*\*IFAD Murban spread to 1st Line (Jun 21) Platts Dubai crude futures. \*\*\*\*Privately Negotiated Trade values found on PGA page 710

Source: CQG

0

XDOQP00

#### **CRUDE FUTURES VOLUMES FAVOR BRENT IN APRIL**



Source: CME Group, ICE

5881

# FIVE-DAY ROLLING AVERAGES, FIVE DAYS ENDING APRIL 8

S/mt         c/gal           Jagan C/F         PAALOB         5617,756865         (37,78)         149,80-141,05           C/F W/E (privical         PAALOB         5618,756865         (37,78)         139,74-141,05           C/F W/E (privical         PAALOB         5618,756866.5         (37,88)         149,39,4-141,05           C/F Orena         PAALOB         528,75-527.25         (37,88)         149,39,4-144,07           C/F Grena         PAALOB         528,75-527.25         (37,88)         149,39,4-144,07           Stoff TOB cargo         AAXOPB         538,25-539,75         (37,88)         142,66-142,79           Stoff TOB cargo         AAXOPB         138,25-139,75         (37,86)         142,66-142,79           Stoff TOB cargo         AAXOPB         138,25-16,37.55         (17,89)         156,35-16,40,0           Stoff TOP Largo         AAXOPB         518,70-520,20         (17,89)         156,35-16,56,30           C/F WKE cargo         PDAALOB         518,70-520,20         (17,89)         156,35-16,56,30           C/F WKE cargo         PDAALOB         518,70-520,20         (17,89)         156,35-16,56,30           C/F WKE cargo         PDAALOB         518,70-520,20         (17,89)         156,38-16,56,30           Otho tr				<b>Conversion</b>					Conversion	
Singapore         PAAARPP         61.63-6-13.24         (1.42)         14.43-145.52         C           Japan C/F         PAAARP         561.70-566.65         (7.3.78)         14.46.00-149.31         C         C         Singapore         PAAARP         561.70-566.65         (7.3.78)         14.45.00-149.31         Singapore         PAAARP         Singapore         PAAARP         PAAARP         562.25-253.27         (7.3.78)         14.45.00-145.13         Singapore         PAAARP         PAAARP         563.25-553.27         (7.3.78)         14.35.00-145.13         Singapore         PAAARP         PAAARP         663.4-66.68         Attra Guill         PAAARP         PAAARP         562.25-552.75         (7.3.78)         14.35.00-145.13         Singapore         PAAARP         94.32.6-94.15         (7.0.92)         Singapore         PAAARP         64.33.6-51.97         Singapore         94.32.6-94.15         (7.0.92)         Singapore	4 page 34)					Gasoline, Intl. Market				
S/mt         C/pi           Japan C/F         PAAAaee         5617.0-5665.55 (7, 27, 18, 18, 20, -141.05           JApan C/F         PAAAaee         5617.0-5665.55 (7, 27, 18)         139, 27-141.05           JCF CHWC physical         PAAAaee         548.10-544.800 (7, 78)         143, 29-144.07           JCF Genoa         PAAAeee         526.75-527.25 (7, 78)         143, 29-144.07           JCF Genoa         PAAAeee         532.5539.75 (7, 28)         143, 26-142.79           JCS Gut FDB Cargo         AAxysee         139.35         (4, 0.083)         559.46           Just Karosene (FCA page 32)         S/mt         C// 7.89)         156.69-157.15           JCF MWE cargo         P JAALEe         5119.70-520.20         (77.89)         156.69-156.73           C/F MWE cargo         P JAALEe         5119.70-520.20         (77.89)         156.69-156.73           C/F MWE cargo         P JAALEE         5119.70-520.20         (77.89)         156.69-156.73           C/F Medo         AAXY30e         5119.70-520.20         (77.89)         156.69-156.73           C/F Medo         AAXY30e         5119.70-520.20         (77.89)         156.39-156.73           C/F Medo         AAXY30E         5119.70-520.20         (77.89)         156.39-156.73      <										¢/gal
Japan C/F         PAAADB         561,70~566.65         (/2,78)         14.8,0°-14.9.1           Abb Culf         PAAALDB         State 2-35.317         (/2,78)         14.8,0°-14.9.1           Cir NUE ophysical         PAAALDB         State 2-35.317         (/2,78)         14.9,0°-14.9.1           Cir NUE ophysical         PAAALDB         State 2-35.37         (/2,78)         14.9,0°-14.9.1           Cir NUE ophysical         PAAALDB         State 2-35.37         (/2,78)         14.9,3°-14.4         PAAALDB         State 3-44.17           Cir Mue ophysical         PAAALDB         State 2-35.37         (/2,78)         14.9,3°-14.4         PAAALDB         State 3-44.17         State 3-19.4.4           Cir Genoa         Copal         Strit         Copal         Strit         Copal         Copal         AvraceB         494.65-485.15         Cir           US Gulf DAD LSR parcel         AvraceB         Strit         Copal         Copal         AvraceB         494.65-485.15         Cir           Cir Mue cargo         PaaAleb         Sila 2-57.55.27         Cir AB         Sila 2-57.55.27         Cir AB         Sila 2-57.55.27         Cir AB         AvraceB         494.65-485.15         Cir           Cir Genoa         AvaraceB         Sila 2-57.55.37         <		PAAAP00		(/.42)		R'dam Barge Prem unl	PGABM00	618.75-619.25	(/3.51)	176.28-176.42
Jagen Dir         paaloes         Status         (37.6)         148.00-148.10           Dir Mich Dir         paaloes         56.2         58.2         58.3         17         (37.9)         145.0         145.0         145.0         145.0         145.0         145.0         145.0         145.0         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00         145.00						Gasoil/Heating Oil (PGA page 32)				
Nace Coll         PAALON         Sold 22–23.1         (3.7 / 9)         139. / 4–14.0.5           CP Wic physical         PAALON         548. (0–548.60         (3.7 / 9)         143.94–144.07           CP Groop         26.27–25.27.25         (3.7 / 9)         143.94–144.07         FOAD Coll           CP Groop         26.27–52.72.5         (3.7 / 9)         143.94–144.07         FOAD Coll           US Guir POB cargo         AAXDR00         539.27–539.75         (7.7 / 9)         143.66–142.79           US Guir POB cargo         AAXDR00         139.65–139.75         (7.3 / 9)         156.38–156.36           US Guir POB cargo         AAXDR00         139.55         (*4.0083)         559.46           Jet Kerosene (PGA pige 3)         Sfmt         c/gal         Ci FOM Weig         AMUR00         4657-165.15         (7.6 / 9)           US Guir POB cargo         PAALOR         50.02–56.2.07         (7.7 / 9)         156.38–156.59         (7.8 / 9)         156.38–156.59         CPal           CP Readon         AXDL00         50.02–56.2.07         (7.7 / 19)         156.38–156.53         (7.7 / 19)         156.38–156.53         (7.7 / 19)         156.38–156.53         (7.4 / 2)         53.35–56.47         VParge         PoALC00         152.02–152.12         (US Guir Water								¢/harrel		¢/gəl
Dr. Wite physical         PAALUSE         Stritt         Stritt         PAALUSE				. ,		Sincacore	DOARCOO		(/.42)	158.66-158.76
Numerical loging         Palative         Spart 14_2/5           Off Geno d         Palative         5287-52/25         (7.378)         139,35-139.48           Cif Geno d         Palative         5287-52/25         (7.378)         139,35-139.48           US Gulf FOB cargo         Axxpree         139,365-139.75         (7.378)         142,66-142.79           US Gulf FOB cargo         Axxpree         139,355         (*4,003)         557,4669           Jet Karosene (FGA page 35)         C/4         6/gal         Avarasee         484,65-485,15         (7.09)           US Gulf Appendix         Somt         6/gal         Avarasee         6/gal         C/page 33				. ,		·			(/.42)	152.69-152.78
Production         Parallase         Social Figure 3         Contend         Parallase         Social Figure 3         Contend         Parallase         Social Figure 3         Contend 3<	arge			. ,		Alao Gui	PUAATOO		(/.42)	¢/gal
Our Oational         Package         Sign 29-39.7.9         (2.7.0)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)         (1.2.10)									(/3.133)	159.49-159.65
US Quif F0B cargo         AXX7Pee         133,68         139,75         133,58         (*4,0083)         559,46         0.1 Botterdam barge         AXX7Pee         487,10-487,60         (////////////////////////////////////		PAAAH00		(/3.78)					(/3.133)	157.72-157.88
OS OUT NO Dat No         AXXPRE         132.05 313.5.3         (3.34.069)         32.7.35 342.7.35         (3.34.069)         32.7.35 342.7.35         (4.0083)         555.46         (1.012)         AXXPRE         444.65-465.15         (7.7.9)           US OUT AVE LAGR         S/mt         c/gal         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)         (1.012)									(/3.133)	155.62-155.78
Solution Lar Explore         Addree         13:33         (14:005)         333-46           Jet Kerosene (PCA page 35)         5/mt         c/gal         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005)         (14:005) <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>(/3.133)</td> <td>154.84-155.00</td>	0								(/3.133)	154.84-155.00
Jet Kerosene (PCA page 33)           (PCA page 33)           CIF NWE cargo         prakage         Source         C/gal           CIF NWE cargo         prakage         Source         C/gal           CIF NWE cargo         prakage         Source         C/gal         C/gal           Carib cargo         prakage         Source         C/gal         C/gal         C/gal           US Gulf water         prakage         161.86–161.96         (*.42)         Source           Colspan="2">Source         Source         Source           Source         Source           Source         Source           Source           Source           Source           Source           Source           Source           Source           Source           Source           SourcorSourcor	LSR parcel	ΑΑΧQK00	139.58	(*4.0083)	559.46				(/3.133)	159.79–159.95
S/mt         c/gal           CIF NWE cargo         PJAAU89         519.70-52.02         (7.89)         156.83-156.98           F0B Med         AATDLE9         501.90-502.40         (7.7.9)         156.49-157.15           CIF Genoa         AAZDLE9         501.90-502.40         (7.7.9)         156.49-157.15           CIF Genoa         AAZDE9         518.20-518.70         (7.7.9)         156.38-156.53           Carib cargo         PJAAD99         543.55-543.61         (7.7.7)         168.28-168.30           US Gulf pipe         PJAAD99         161.86-161.96         (*.42)         536.36-536.69           US Gulf pipe         PJAAD99         173.57-175.67         (*.42)         533.35-536.13           Chicago         PJAAP99         175.57-175.67         (*.42)         553.3-575.63           Chicago         PJAAP99         175.57-175.67         (*.42)         558.73-357.63           Chicago         PJAAP99         175.57-175.67         (*.42)         558.73-357.63           Chicago         PJAAP99         175.57-175.67         (*.42)         558.73-357.63           Chicago         PJAAP99         PJAAP99         PJAAP99         PJAAP99           Mer Collegine         Sp.75-59.77         NYMEX NULSD	e (PGA page 35)						AAVJJ00	500.15-500.05	(/3.133)	159.79-159.95
CIF NWE Cargo         P JANU99         519.70-520.20         (77.89)         156.89-156.98         LA. LS diesel         P DAE 10         153.30           Rotterdam barge         P JAAA09         520.25-520.75         (77.89)         156.99-157.15         (77.89)         156.99-157.15         (77.89)         151.40-151.60         (77.89)         151.40-151.60         (77.89)         151.40-151.60         (77.89)         151.40-151.60         (77.89)         151.40-151.60         (77.89)         151.40-151.60         (77.89)         151.40-151.60         (77.89)         156.30-160.40         (77.89)         156.30-160.40         (77.89)         156.30-160.40         (77.89)         156.30-160.40         (77.89)         156.30-160.40         (77.89)         156.30-160.40         US Guif water         P DAE 000         154.91-155.01         (US Guif water         P DAE 000         159.22-159.32         (US Guif water         P DAE 000         159.22-159.32         (US Guif water         P DAE 000         159.22-159.32         (US Guif water         P DAE 000         169.22-159.32         (US Guif water         P DAE 000         169.22-159.32         (US Guif water         V Davidow         179.55         (US Guif water         No 200.22-152.12         (NT MAE NT WLSD)         Number 000         No 200.22-152.12         (Davidowater         No 200.22-152.12         (	- (* *** • • • • • • • • • • • • • • • •		\$/mt		¢/gal	(PGA page 33)		¢/00		\$/barrel
Rotterdam barge         PJABA99         520.25–520.75         (77.89)         156.99–157.15         DAL         POAL 1089         103.37–183.37         C           CIC F Genoa         AAZD1069         518.20–518.20         (77.89)         156.38–151.66         SF. LS Gliesel         POAL 1089         153.37–183.37         C           CiC F Genoa         AAZD1069         543.55–543.61         (77.7)         156.38–156.53         V         barge         POAL 209         153.37–133.57         C           US Gulf pipe         PJAB090         161.86–161.96         (*.42)         536.36–536.69         V         barge         DS Gulf pipe         POAL 209         152.02–152.12         US Gulf pipe         POAL 209         152.02–152.12 <td><u>0</u></td> <td>PJAAU00</td> <td>519.70-520.20</td> <td>(/7.89)</td> <td></td> <td></td> <td>DOALLOO</td> <td></td> <td>(*3.07)</td> <td>562.93-563.24</td>	<u>0</u>	PJAAU00	519.70-520.20	(/7.89)			DOALLOO		(*3.07)	562.93-563.24
FOB Med         ANDLee         501.90-502.40         (77.89)         151.46-151.61           ClF Genoa         AAZ8N80         518.20-518.70         (77.89)         156.38-156.53           Carlis cargo         PDACE00         154.91-155.01         (Ggl)           US Gulf water         PJAN000         518.20-518.70         (77.89)         156.38-156.53           US Gulf water         PJAN000         161.86-161.96         (*42)         536.38-536.56           US Gulf mater         PJAN000         160.32-160.46         (*42)         536.38-536.56           US Gulf mater         PJAN000         167.97-168.07         (*42)         535.81-356.13           Group 3         PJAN000         173.62-173.72         (*42)         575.33-57.56           Chicago         PJAN000         175.57-175.67         (*42)         581.79-582.12           West Texas Int         PCAC600         59.75-59.77         NV Cargo.3% LP         PUAA000         400.45-400.95           West Texas Int         PCAC600         59.75-59.77         NV Cargo.3% LP         PUAA000         66.57-66.59           NY Cargo.3% LP         PUAA000         61.34-61.36         NY Cargo.3% LP         PUAA000         61.75-61.77           Dubai (First Month)         PCAC600	0			. ,					(*3.07)	563.24-563.55
ClF Genoa         AA28N99         518.20–518.70         (77.89)         156.38–156.53           Carlo cargo         PDAL099         543.55–543.61         (7.7)         198.28–168.30         VY barge         PDAL699         154.9–155.01         (           US Gulf water         PDAB090         160.36–161.96         (*42)         536.36–536.89         VY barge         PDAL699         152.02–152.12         (           US Gulf pipe         PDAL099         160.36–160.46         (*42)         536.35–536.89         VY barge         PDAL699         152.02–152.12         (           US Gulf water         PDAL099         160.36–160.46         (*42)         536.35–536.89         VY BCM VULSD         XMr0602         179.55         (           Chy parteria         PDAL099         167.37–175.67         (*42)         555.81–536.13         CIF ARA 1%         PUAAL69         411.25–411.75         NY Cargo.3% HP         PUAAL69         411.25–411.75         NY Cargo.3% HP         PUAAL69         411.25–411.75         NY Cargo.3% HP         PUAAL69         6.57–66.51         NY Cargo.3% HP         PUAAL69         6.57–66.51         NY Car	- 5*					S.F. LS DIESEI	PUAEY00		("3.07)	
Carib cargo         PJAAD99         543.55–543.61         (7.7)         168.28–168.30         Violage         PDAE089         159.32–153.32         (100 args)           US Gulf water         PJABM09         161.86–161.96         (*.42)         536.36–536.89         US Gulf water         PDAE089         159.22–159.32         (IND args)           NY barge         PJAAM99         160.36–160.46         (*.42)         531.39–531.72         (VS Gulf water         PDAE099         152.02–152.12         (IND args)           NY barge         PJAAM99         164.72–164.82         (*.42)         531.39–531.72         (VS Gulf water         PDAE099         159.22–159.32         (IND args)           Korpage         PJAAM99         164.72–164.82         (*.42)         535.31–536.67         (IND args)         INVESIDE VILSO         XNHOB2         179.55         (IND args)           Chride Oil FOB Source         S/barrel         S/barrel         VS Carl 39.6         NVE Carl 39.6         NVE Carl 39.6         PUAAB99         400.45–400.95         (IND Args)           West Texas Int         PCAC699         59.75–59.77         (*.42)         S51.79–76.52         NV Cargo .3% LP         PUAAB99         76.19–76.21           NYC Ergo .3% LP         PUAAB99         61.34–61.36         NV Cargo .3% LP				. ,		NV baraa	2012000		(*2 1 5)	\$/mt
¢/gal         \$/mt         00.8 Cull woten         PDAEM90         153.22 = 153.32         1           US Gulf pipe         PDAEM90         161.86 - 161.96         (*.42)         533.636-536.69         US Gulf pipe         PDAEM90         164.72 - 164.82         (*.42)         533.139-531.72         (INV MEX NV ULSD         NNH0001         179.55         (INV MEX NV ULSD           Ny barge         PDAAM90         164.72 - 164.82         (*.42)         533.81 - 536.13         Group 3         PDAA100         173.62 - 173.72         (*.42)         575.33 - 575.66         CIF ARA 1%         PUAA100         411.25 - 411.75         (INV MEX NV ULSD         NV MEX NV ULSD									(*3.15)	487.95-488.27 490.39-490.69
US Gulf water         P JABM00         161.86=161.96         (* 42)         536.36=536.69         Volume         P JAAL000         112.02=132.12         (           US Gulf pipe         P JAAM00         160.36=160.46         (* 42)         531.39=531.72         (* 42)         543.65=438.69           LA pipeline         P JAAM00         164.72=164.82         (* 42)         543.65=438.63         (* 42)         543.65=438.63           Group 3         P JAAM00         167.97=168.07         (* 42)         575.33=576.66         (* 42)         581.79=582.12           Chicago         P JAAF00         173.62=173.72         (* 42)         581.79=582.12         (* 42)         581.79=582.12           Crude Oil, FOB Source         \$/barrel         \$/barrel         \$/barrel         \$/barrel           West Texas Int         P CACG00         59.75=59.77         (* 42)         581.79=582.12         NY Cargo.3% LP         PUAAE00         76.19=-76.21           NY KEX Crude         XNCL001         59.67         NY Cargo.3% LP         PUAAE00         76.19=-76.21           NY Cargo.3% LP         PUAAE00         61.75=61.77         US Gulf not         PUAAE00         61.75=61.77           Urals ClF med         PCACE00         61.34=61.36         -         NY Cargo.3% LP				()					(*3.08)	
US Gulf pipe         PJAB000         160.36–160.46         (*.42)         531.39–531.72           NY barge         PJAA000         164.72–164.82         (*.42)         543.56–543.89           LA pipeline         PJAA000         167.97–168.07         (*.42)         535.81–536.13           Group 3         PJAA100         173.52–173.72         (*.42)         575.33–575.66           Chicago         PJAA100         175.57–175.67         (*.42)         581.79–582.12           Med FOB Source         S/barrel         Clf ARA 1%         PUAA100         400.45–400.95           VMMEX Crude         \$XicL001         59.75–59.77         NY Cargo .3% LP         PUAA100         400.45–400.95           Wars         AMBR00         60.03–60.05         NY Cargo .3% LP         PUAA000         66.57–66.59           NY Cargo .3% LP         PUAA000         61.75–61.77         NY Cargo .3% LP         PUAA000         61.7–6.21           NY Cargo .3% LP         PUAA000         61.3–61.36         NY Cargo .3% LP         PUAA000         61.3–61.76           Urals ClF med         PCAC000         60.50–60.53         NY Cargo .7% Max         PUAA000         61.3–56.17           Urals ClF med         PCAC000         60.50–60.53         Singapore 180         PUA2000	r	ΡΊΔΒΜΘΘ		(* 42)	536 36-536 69				(*3.08)	468.21-468.52
NY barge         PJAAN99         164.72–164.82         (*.42)         543.56–543.89           LA pipeline         PJAAP90         167.97–168.07         (*.42)         535.81–536.13           Group 3         PJAAP90         173.562–173.72         (*.42)         535.81–536.13           Chicago         PJAAP90         175.57–175.67         (*.42)         535.81–536.13           Crude Oll, FOB Source         S/barrel         PuaAP90         399.20–399.70         (NWE FOB 1%         PuaAP90         399.20–399.70         (NWE FOB 1%         PuaAP90         400.45–400.95         (NV Cargo .3% LP         PuaAP90         66.57–66.51           Mars         AAMBR09         60.03–60.05         NY Cargo .3% LP         PuaAP90         66.37–66.59         NY Cargo .3% LP         PuaAP90         66.37–66.59           NY Cargo .3% LP         PuaAP90         66.37–66.59         NY Cargo .3% MAX         PuaAP90				. ,			XNH0001	179.55	(*3.08)	565.57
LA pipeline         PJAAP00         167.97-168.07         (*.42)         535.81-536.13           Group 3         PJAAF00         173.62-173.72         (*.42)         575.33-575.66         CIF ARA 1%         PUAAL00         411.25-411.75         (           Chicago         PJAAF00         175.57-175.67         (*.42)         575.33-575.66         Rot bar 1%         PUAAL00         411.25-411.75         (           Crude Oil, FOB Source         \$/barrel         \$/barrel         WE FOB 1%         PUAAL00         400.45-400.95         (           West Texas Int         PCACG00         59.75-59.77         (         NY Cargo.3% HP         PUAAE00         76.19-76.21           NYMEX Crude         XNCL001         59.67         NY Cargo.3% LP         PUAAE00         76.19-76.21           NY Cargo .3% LP         PUAAE00         76.19-76.21         NY Cargo .3% LP         PUAAE00         61.75-61.77           Brent (First Month)         PCAA200         61.34-61.36         NY Cargo .7% Max         PUAA000         61.75-61.77           Urals CIF med         PCACE00         60.50-60.53         Singapore 180         PUAD00         362.34-362.38         (           Urals CIF med         PCACE00         61.34-61.36         MIT         Singapore 380         PUAD00<				. ,		Low Sulfur Resid Fuel Oil (PGA page 38)				
Group 3         PJAA100         173.62–173.72         (*.42)         575.33–575.66         Cli ARA 1%         PUAA100         411.25–411.75         (           Chicago         PJAAF00         175.57–175.67         (*.42)         581.79–582.12         Rot bar 1%         PUAA100         411.25–411.75         (           Crude Oil, FOB Source         \$/barrel         Rot bar 1%         PUAA100         400.45–400.95         (           West Texas Int         PCACG00         59.75–59.77         (*.42)         581.79–582.12         Med FOB 1%         PUAA100         400.45–400.95         (           West Texas Int         PCACG00         59.67         (*.42)         S9.67         NY Cargo .3% LP         PUAA100         61.9–76.21           NY Cargo .3% LP         PUAA100         65.5–66.59         NY Cargo .3% LP         PUAA100         63.39–63.41         (           Dubai (First Month)         PCAA200         63.18–63.20         NY Cargo .3% LP         PUAA100         63.39–63.41         (           Urals CIF med         PCACE00         63.50–60.53         NY Cargo .3% LP         PUAA100         63.39–63.41         (           Urals CIF med         PCACE00         63.5–6.14.2         Singapore 180         PUAD100         362.34–362.38         (				. ,				\$/mt		\$/barrel
Chicago         PJAAF00         175.57–175.67         (*.42)         581.79–582.12         Rot bar 1%         PUAAP00         399.20-399.70         (           Crude Oil, FOB Source         \$/barrel         NWE FOB 1%         PUAAP00         400.45–400.95         (           West Texas Int         PCAC600         59.75–59.77         MME FOB 1%         PUAAE00         76.19–76.21           NYMEX Crude         XNCL001         59.67         NY Cargo.3% HP         PUAAE00         76.19–76.21           Mars         AAMBR00         60.03–60.05         NY Cargo.3% HP         PUAAE00         66.57–66.59           Brent (DTD)         PCAAS00         61.34–61.36         NY Cargo 1% Max         PUAA000         61.75–61.77           Dubai (First Month)         PCAAE00         61.34–61.36         Other 1.42         Singapore 180         PUAAE00         63.39–63.41         (           Urals CIF med         PCACE00         0.36–3.38         Premium         Singapore 180         PUAD000         355.32–355.36         (           Gasoline, U.S. Market (PCA page 36)         Unleaded         Premium         PuaB00         25.57–326.25         (           US Gulf water         PGACU00         195.52–195.62         PGAIX00         205.26–205.36         PuAB200				. ,		CIF ARA 1%	PUAAL00	411.25-411.75	(/6.35)	64.76-64.84
Crude Oil, FOB Source         NWE FOB 1%         PUAAMee         400.45-400.95         (           Crude Oil, FOB Source         \$/barrel         Med FOB 1%         PUAAKee         400.45-400.95         (           West Texas Int         PCACGee         59.75-59.77         NY Cargo .3% HP         PUAAKee         76.19-76.21           NYMEX Crude         XNCLee1         59.67         NY Cargo .3% HP         PUAAKee         76.19-76.21           Mars         AAMBRee         60.03-60.05         NY Cargo .3% LP         PUAAKee         76.19-76.21           Mars         AAMBRee         62.26-62.27         NY Cargo .3% LP         PUAAKee         66.57-66.59           Brent (DTD)         PCAASee         61.34-61.36         NY Cargo .7% Max         PUAAKee         63.39-63.41         (Dubai (First Month)         PCAATEE         US Gulf 1%         PUAATEE         Singapore 180         PUAATEE         Singapore 380         PPXDKee         355.32-355.36         (Cir ARA 3.5%         PUABEE®         340.05-340.55         (Cir ARA 3.5%         PUABE®E®         340.05-340						Rot bar 1%	PUAAP00	399.20-399.70	(/6.35)	62.87-62.94
\$/barrel         \$/barrel           West Texas Int         PCACG00         59.75-59.77           NYMEX Crude         XNCL001         59.67           Mars         AAMBR00         60.03-60.05           Brent (DTD)         PCAAS00         62.26-62.27           Brent (First month)         PCAAS00         63.18-63.20           Dubai (First Month)         PCAA200         61.34-61.36           Oman (First Month)         PCACE00         61.40-61.42           Urals CIF med         PCACE00         60.50-60.53           WTI Posting Plus         PCACE00         60.50-60.53           Gasoline, U.S. Market (PGA page 36)         Unleaded         Premium           US Gulf water         PGACU00         195.52-195.62         PGAIX00         205.26-205.36           US Gulf vater         PGACU00         195.52-193.62         PGAIX00         205.26-205.36           Wed FOB 3.5%         PUAB800         325.75-326.25         (           Wed FOB 3.5%         PUAB800         325.75-326.25         (				(=)		NWE FOB 1%	PUAAM00		(/6.35)	63.06-63.14
West Texas Int         PCACG00         59.75-59.77         NY Cargo .3% HP         PUAAE00         76.19-76.21           NYMEX Crude         XNCL001         59.67         NY Cargo .3% LP         PUAAB00         76.19-76.21           Mars         AAMBR00         60.03-60.05         NY Cargo .3% LP         PUAAB00         76.19-76.21           Mars         AAMBR00         60.03-60.05         NY Cargo .3% LP         PUAAB00         66.57-66.59           Brent (DTD)         PCAAS00         63.18-63.20         NY Cargo 1% Max         PUAA000         61.75-61.77           Brent (First Month)         PCAAT00         61.34-61.36         US Gulf T%         PUAA100         63.39-63.41         (           Urals CIF med         PCACE00         60.50-60.53         Singapore 180         PUADV00         362.34-362.38         (           WTI Posting Plus         PCACE00         3.36 -3.38         Singapore 180         PUABA00         349.53-349.57         (           Gasoline, U.S. Market (PGA page 36)         VInleaded         Premium         Singapore 180         PUABA00         340.05-340.55         (           US Gulf water         PGACU00         195.52-195.62         PGAIX00         205.26-203.36         NWE FOB 3.5%         PUABB00         325.75-326.25         ( </td <td>JB Source</td> <td></td> <td></td> <td></td> <td></td> <td>Med FOB 1%</td> <td>PUAAK00</td> <td></td> <td>(/6.35)</td> <td>64.39-64.47</td>	JB Source					Med FOB 1%	PUAAK00		(/6.35)	64.39-64.47
NYMEX Crude         XNCL001         59.67         PUAAB00         76.19–76.21           Mars         AAMBR00         60.03–60.05         NY Cargo .3% LP         PUAAB00         66.57–66.59           Brent (DTD)         PCAAS00         62.26–62.27         NY Cargo .7% Max         PUAA000         61.75–61.77           Brent (First month)         PCAA000         61.34–61.36         NY Cargo 1% Max         PUAA000         63.39–63.41         (           Dubai (First Month)         PCAE000         61.40–61.42         Urals CIF med         PCAE000         60.50–60.53         US Gulf 1%         PUAD000         362.34–362.38         (           WTI Posting Plus         PCAC100         3.36–3.38         Singapore 180         PUAD000         362.34–362.38         (           Gasoline, U.S. Market (PGA page 36)         Inleaded         Premium         Singapore 180         PUAB000         349.53–349.57         (           US Gulf water         PGACU00         195.52–195.62         PGAIX00         205.26–205.36         NWE FOB 3.5%         PUAB000         325.75–326.25         (           WE FOB 3.5%         PUAB00         325.75–326.25         (         Med FOB 3.5%         PUA200         333.80–334.30         (			\$/barrel					\$/barrel		\$/mt
Mars         AAMBR00         60.03–60.05         NY Cargo .7% Max         PUAAH00         66.57–66.59           Brent (DTD)         PCAAS00         62.26–62.27         NY Cargo 1% Max         PUAAH00         61.75–61.77           Brent (First month)         PCAAQ00         63.18–63.20         NY Cargo 1% Max         PUAA000         61.75–61.77           Dubai (First Month)         PCAAT00         61.34–61.36         US Gulf 1%         PUAA100         63.39–63.41         (           Urals CIF med         PCACE00         60.50–60.53         Singapore 180         PUADV00         362.34–362.38         (           WTI Posting Plus         PCACE00         3.36–3.38         Singapore 180         PUABE00         349.53–349.57         (           Gasoline, U.S. Market (PGA page 36)         Inleaded         Premium         Singapore 380         PVDABE00         349.53–349.57         (           US Gulf water         PGACU00         195.52–195.62         PGAIX00         205.26–205.36         NWE FOB 3.5%         PUABB00         325.75–326.25         (           WE FOB 3.5%         PUABB00         325.75–326.25         (         Med FOB 3.5%         PUAB200         333.80–334.30         (	nt	PCACG00	59.75-59.77			NY Cargo .3% HP	PUAAE00	76.19-76.21	(*6.7)	510.45-510.58
Brent (DTD)       PCAAS90       62.26-62.27       NY Cargo 1% Max       PUAA000       61.75-61.77         Brent (First month)       PCAAQ00       63.18-63.20       US Gulf 1%       PUAA000       63.39-63.41       (US Gulf 1%         Dubai (First Month)       PCAAT00       61.34-61.36       US Gulf 1%       PUAA000       63.39-63.41       (US Gulf 1%         Urals CIF med       PCACE00       60.50-60.53       Singapore 180       PUAD00       362.34-362.38       Singapore 180       Singapore 380       PVDA000       355.32-355.36       (US Gulf 180       PUABE00       349.53-349.57       (US Gulf 180       PUABA00       340.05-340.55       (US FOB 3.5%)       PUABA00       340.05-340.55       (UNE FOB 3.5%)       PUABA00       325.75-326.25       (UNE FOB 3.5%)       PUAB00       325.75-326.25       (UNE FOB 3.5%)       PUAB00       333.80-334.30       (UNE FOB 3.5%)       PUAB200       333.80-334.30       (UNE FOB 3.5%)	e	XNCL001	59.67			NY Cargo .3% LP	PUAAB00	76.19-76.21	(*6.7)	510.45-510.58
Brent (First month)         PCAAQ00         63.18–63.20         US Gulf 1%         PUAA100         63.39–63.41         (           Dubai (First Month)         PCAAT00         61.34–61.36         US Gulf 1%         PUAA100         63.39–63.41         (           Oman (First Month)         PCAB500         61.40–61.42           \$/mt           Urals CIF med         PCACE00         60.50–60.53          \$/mt            Gasoline, U.S. Market (PGA page 36)          PLABE00         355.32–355.36         (           US Gulf water         PGACU00         195.52–195.62         PGAIX00         205.26–205.36         PUAB00         340.05–340.55         (           NWE FOB 3.5%         PUAB00         325.75–326.25         (         Med FOB 3.5%         PUAB00         325.75–326.25         (		AAMBR00	60.03-60.05			NY Cargo .7% Max	PUAAH00	66.57-66.59	(*6.5)	432.69-432.82
Dubai (First Month)         PCAAT00         61.34–61.36           Oman (First Month)         PCAB500         61.40–61.42           Urals CIF med         PCACE00         60.50–60.53           WTI Posting Plus         PCACI00         3.36–3.38           Gasoline, U.S. Market (PGA page 36)         Image and the second se		PCAAS00	62.26-62.27			NY Cargo 1% Max	PUAA000	61.75-61.77	(*6.5)	401.38-401.51
Oman (First Month)         PCABS00         61.40–61.42           Urals CIF med         PCACE00         60.50–60.53         \$/mt           WTI Posting Plus         PCACI00         3.36 – 3.38         Singapore 180         PUADV00         362.34–362.38         (           Gasoline, U.S. Market (PGA page 36)         Imeded         Premium         Singapore 380         PUABE00         349.53–349.57         (           US Gulf water         PGACU00         195.52–195.62         PGAIX00         205.26–205.36         VWE FOB 3.5%         PUABB00         325.75–326.25         (           VS Gulf noice         PGACT00         193.52–193.62         PGAJB00         203.26–203.36         Wed FOB 3.5%         PUAA200         333.80–334.30         (	nonth)	PCAAQ00	63.18-63.20			US Gulf 1%	PUAA100	63.39-63.41	(*6.11)	400.62-400.75
Oman (First Month)         PCABS00         61.40–61.42         \$/mt           Urals CIF med         PCACE00         60.50–60.53         Singapore 180         PUADV00         362.34–362.38         (C           WTI Posting Plus         PCACI00         3.36–3.38         Singapore 180         PVADK00         355.32–355.36         (C           Gasoline, U.S. Market (PGA page 36)         Image: Comparison of the state of the	1onth)	PCAAT00	61.34-61.36			Hi Sulfur Resid Fuel Oil (PGA page 39)				
Urals CIF med         PCACE00         60.50–60.53         Singapore 180         PUADV00         362.34–362.38         (           WTI Posting Plus         PCACE00         3.36–3.38         Singapore 180         PPXDK00         355.32–355.36         (           Gasoline, U.S. Market (PGA page 36)         Image: Circle of the second se	Month)	PCABS00	61.40-61.42					\$/mt		\$/barrel
WTI Posting Plus         PCAC100         3.36 - 3.38         Singapore 380         PPXDK00         355.32 - 355.36         C           Gasoline, U.S. Market (PGA page 36)         Singapore 380         PVXDK00         355.32 - 355.36         C           (¢/gal)         Unleaded         Premium         CIF ARA 3.5%         PUABA00         340.05 - 340.55         C           US Gulf water         PGACU00         195.52 - 195.62         PGAIX00         205.26 - 205.36         NWE FOB 3.5%         PUABA00         325.75 - 326.25         C           US Gulf uito ine         PGACT00         193.52 - 193.62         PGAJB00         203.26 - 203.36         Med FOB 3.5%         PUAA200         333.80 - 334.30         C	d	PCACE00	60.50-60.53			Sincacore 180	DUADVAA	•	(/6.35)	57.06-57.07
Gasoline, U.S. Market (PGA page 36)         Arab Gulf 180         PUABE00         349.53–349.57         (           (¢/gal)         Unleaded         Premium         GUI (GI ARA 3.5%)         PUABA00         340.05–340.55         (           US Gulf water         PGACU00         195.52–195.62         PGAIX00         205.26–205.36         NWE FOB 3.5%         PUABB00         325.75–326.25         (           US Gulf nice         PGACT00         193.52–193.62         PGAJB00         203.26–203.36         Med FOB 3.5%         PUAA200         333.80–334.30         (	Plus	PCAC100	3.36 - 3.38						(/6.35)	55.96-55.96
Unleaded         Premium         CIF ARA 3.5%         PUABA00         340.05–340.55         C           US Gulf water         PGACU00         195.52–195.62         PGAIX00         205.26–205.36         NWE FOB 3.5%         PUABB00         325.75–326.25         C           US Gulf water         PGACT00         193.52–193.62         PGAJB00         203.26–203.36         Med FOB 3.5%         PUAB200         333.80–334.30         C									(/6.35)	55.04-55.05
US Gulf water         PGACU00         195.52–195.62         PGAIX00         205.26–205.36         NWE FOB 3.5%         PUABB00         325.75–326.25         (           US Gulf nice         PGACT00         193.52–193.62         PGAJB00         203.26–203.36         Med FOB 3.5%         PUAAZ00         333.80–334.30         (	5. Market (PGA page 36)								(/6.35)	53.55-53.63
US Gulf vice PGACT00 193.52-193.62 PGA100 203.26-203.36 Med FOB 3.5% PUAAZ00 333.80-334.30 (									(/6.35)	51.30-51.38
	r								(/6.35)	52.57-52.65
Craup 2 200 07 200 17 CIF Med 3.5% PUAAY00 343.80-344.30		PGACT00	193.52-193.62			CIF Med 3.5%		343.80-344.30	(/6.35)	54.14-54.22
Gloup 5 Pabboo 203.01-203.11						GII 1160 3.370	PUAATOO		(/0.35)	54.14-54.22 \$/mt
							DUAAXOO		(*6.25)	\$/III 345.87–346.00
SE PIPEIIIE POADOO 200.07-200.77 POADOO 222.07-222.77 UCCC UCCO PUETOO 52.01.52.02									(*6.35)	
Cilicagu Paackoo 193.07-193.17 PPAStoo 212.02-212.92				PPASQ00	212.82-212.92				(*6.35)	337.88-338.01
NYMEX UNI XNRB001 197.10 Carib 2.0% PUAAS00 53.20-53.22		XNRB001	197.10			Cano 2.0%	PUAAS00	53.20-53.22	(*6.4)	340.49-340.62

#### **US WHOLESALE POSTED PRICES EFFECTIVE APR 8**

PADD 1	Unleaded	Midgrade	Premium	Kerosene	Diesel No.2	ULSD
oany, NY	DR198ZY 178.75-185.50	DM198ZY 184.35-198.95	DP198ZY 191.75-218.95	DK198ZY 202.50-215.40	DUDDERV	DU198ZY 185.75-193.2
entown	DR235ZY 180.70-191.40	DM235ZY 187.31-208.25	DP235ZY 195.62-232.46		DH235ZY -	DU235ZY 185.93-189.8
anta	DR048ZY 185.06-208.10	DM048ZY 193.95-209.40	DP048ZY 201.60-243.92	DV(027V 100.00 010.07	DU4 0 271/	DU048ZY 180.00-188.3
imore (a)	DR123ZY 181.65-201.37	DM123ZY 186.75-211.90	DP123ZY 195.50-248.72	DK123ZY 192.00-219.67	DH123ZY -	DU123ZY 180.75-195.0
ghamton	DR200ZY 181.20-186.60	DM200ZY 196.40-213.79	DP200ZY 194.20-217.08	DK1217X 227 10 227 10		DU200ZY 190.28-192.8
ston (a)	DR121ZY 176.20-181.44	DM121ZY 181.75-185.20	DP121ZY 189.20-191.71	DK121ZY 227.10-227.10		DU121ZY 187.15-190.4
erleston	DR250ZY 189.74-203.94	DM250ZY 200.55-206.40	DP250ZY 231.65-236.40			DU250ZY 194.63-205.
arlotte	DR169ZY 178.74-193.79	DM169ZY 189.57-222.20	DP169ZY 202.00-245.65			DU169ZY 179.70-186.
irfəx (ə)	DR299ZY 187.00-207.52	DM299ZY 199.02-227.52	DP299ZY 214.60-252.52	DK4747X 224 E0 224 E0		DU299ZY 181.19-186.
eensboro ami				DK171ZY 224.50-224.50	DU039ZY 185.35-190.02	DU171ZY 181.80–186.
ew Haven (a)	DR034ZY 175.50-189.86	DM034ZY 181.05-196.00	DP034ZY 188.00-216.97	DK034ZY 226.80-226.80	DH034ZY -	DU034ZY 185.50-190.
w York City (a)	DR204ZY 175.50-178.91	DM204ZY 181.05-190.00	DP03421 188.00-218.97 DP2042Y 191.55-194.01	DK03421 220.00-220.00	0003421 -	DU204ZY 185.50-190.
ewark (a)	DR189ZY 173.47–190.58	DM189ZY 177.78–192.47	DP2042Y 191.55-194.01 DP189ZY 186.02-212.66	DK189ZY 212.36-212.36		DU189ZY 182.90–185.
work (a)	DR300ZY 185.20-193.14	DM300ZY 198.98-210.14	DP300ZY 222.47-254.52	DK18921 212.30-212.30		
lando	DR3002Y 185.20-193.14 DR0412Y 186.30-193.74	DM3002Y 198.98-210.14 DM041ZY 200.04-210.11	DP3002Y 222.47-254.52 DP0412Y 212.25-244.74			DU300ZY 181.85–185. DU041ZY 186.20–190.
niladelphia (a)	DR2422Y 177.70–192.71	DM0412Y 200.04-210.11 DM2422Y 183.25-197.98	DP04121 212.25-244.74 DP2422Y 190.60-207.81		DH242ZY -	DU2422Y 182.46–198.
	DR2422Y 177.70-192.71 DR243ZY 179.43-194.64	DM2422Y 103.25-197.96 DM243ZY 194.75-197.13	DP2422Y 190.80-207.81 DP243ZY 217.25-242.69	DK243ZY -	DH2432Y -	DU2422Y 182.46-198. DU243ZY 181.96-195.
ttsburgh	DR2452Y 179.43-194.84 DR248ZY 177.01-201.30	DM2432Y 194.75-197.13 DM248ZY 184.10-214.30	DP24321 217.25-242.09 DP248ZY 190.70-233.55	DK24321 -	DH24321 -	DU2432Y 181.96-195. DU248ZY 188.36-190.
ovidence (a) ortland	DR2482Y 177.01-201.30 DR1262Y 177.90-186.82	DM2482Y 184.10-214.30 DM126ZY 183.45-191.53	DP2482Y 190.70-233.55 DP126ZY 191.80-198.50		DH126ZY -	DU2482Y 188.36–190. DU126ZY 187.30–200.
leigh	DR1262Y 177.90-180.82	DM1262Y 183.45-191.53	DP12621 191.80-198.50		DH1262Y -	
chmond	DD2017V 105 00 105 02	DN2017V 201 FE 222 F2	DD2017V 214 F0 254 02	DK301ZY 225.00-225.00		
	DR301ZY 185.00-196.92	DM301ZY 201.55-222.52	DP301ZY 214.50-254.92	DK3012Y 225.00-225.00		
avannah	DR054ZY 196.85-200.10	DM054ZY 211.90–217.10 DM252ZY 189.19–204.72	DP054ZY 247.00-247.10 DP252ZY 201.85-234.28			DU054ZY 187.70-187.
partanburg	DR252ZY 178.02–194.63	DM252ZY 189.19–204.72	UP25221 201.85-234.28		DU0457V 192.00 190.70	DU252ZY 180.50–186.
ampa ADD 2					DU045ZY 182.90–188.79	
berdeen	DR253ZY 190.71-198.67	DM2E37V 107 70 20E 22	<b>DP253ZY</b> 203.25–210.39			DU253ZY 198.02-203.
	DR253ZY 190.71–198.67 DR144ZY 192.98–197.95	DM253ZY 197.70-205.32				
ape Girardeau		DW2C07V 202 C0 210 22				
nattanooga		DM260ZY 203.60-218.33				
nicago (a)	DR075ZY 189.85-199.29	DM075ZY 209.85-215.17	DP075ZY 248.51-251.17	DK075ZY 226.36-272.00		DU075ZY 189.10-192.
eveland	DR212ZY 186.34-204.34	DM212ZY 203.52-211.42	DP212ZY 218.59-236.85	DK212ZY 271.20-271.20		DU212ZY 185.95-200.
olumbus	DR213ZY 181.67-202.88	DM213ZY 198.43-227.88	DP213ZY 223.59-266.88	DK213ZY 268.05-268.05		DU213ZY 183.83-191.
uluth	DR138ZY 191.25-194.77	DM138ZY 198.31-200.83	DP138ZY 211.41-214.14 DP059ZY 197.49-244.01			DU138ZY 199.38-200.
es Moines	DR059ZY 187.91–202.01 DR130ZY 179.46–191.03	DM059ZY 193.16-236.01				DU059ZY 192.54–210. DU130ZY 181.94–187.
etroit		DM130ZY 197.60-220.03	DP130ZY 216.44-251.53	DK130ZY 265.85-265.85		
argo	DR174ZY 186.66-199.06	DM174ZY 193.10-202.21	DP174ZY 199.53-206.47			DU174ZY 196.76-203.
reen Bay	DR313ZY 198.00-198.00	DM313ZY -	DP313ZY 233.00-233.00	DK313ZY -		DU313ZY 200.50-200.
dianapolis	DR088ZY 181.44-195.39	DM088ZY 198.43-211.00	DP088ZY 206.44-237.00	DK088ZY 270.10-270.52		DU088ZY 186.77-192.
ansas City	DR099ZY 187.30-193.15	DM099ZY 191.61-207.42	DP099ZY 214.47-242.60	DVOCATV		DU099ZY 191.44-198.
noxville ilwaukee	DR261ZY 183.80-197.15	DM261ZY 196.74-214.15	DP261ZY 205.10-247.15	DK261ZY -		DU261ZY 181.14-186.
inneapolis/St.Paul	DR316ZY 189.60–196.75 DR141ZY 184.45–193.58	DM316ZY 197.65-212.05 DM141ZY 191.00-202.06	DP316ZY 212.60-252.05 DP141ZY 202.11-211.22	DK316ZY 273.15–273.15 DK141ZY 223.20–223.20		DU316ZY 189.55–193.0 DU141ZY 188.15–200.0
				DK1412Y 223.20-223.20		
klahoma City	DR226ZY 186.66-196.50	DM226ZY 191.91-207.25	DP226ZY 195.66-220.25			DU226ZY 188.53-204.6
maha	DR185ZY 188.66-199.72	DM185ZY 193.95-210.75	DP185ZY 197.72-240.72			DU185ZY 193.27-202.3
ioux Falls	DR256ZY 187.88-201.24	DM256ZY 193.59–196.87	DP256ZY 197.28-205.20			DU256ZY 193.13-201.3
. Louis (a)	DR154ZY 190.81–197.58	DM154ZY 202.50-222.18	DP154ZY 205.81-245.58			DU154ZY 189.51–196.
ADD 3	DD1007W 000 00 004 50	D1100714 041 00 044 50	DD10071/ 000 00 000 F0			017 00 017
buquerque	DR192ZY 222.00-224.50	DM192ZY 241.00-244.50	DP192ZY 260.00-266.50			DU192ZY 217.50-243.9
marillo	DR265ZY 197.00-199.19	DM265ZY 213.00-213.94	DP265ZY 234.00-234.69			DU265ZY 202.25-205.
ton Rouge	DR115ZY 183.25-190.90	DM115ZY 198.07-209.07	DP115ZY 224.25-233.57			DU115ZY 181.75-186.
rmingham	DR003ZY 180.90-197.00	DM003ZY 186.65-214.37	DP003ZY 193.15-255.37	DK003ZY 215.87-215.87		DU003ZY 179.50-183.
orpus Christi	DR275ZY 186.14-192.04	DM275ZY 201.14-207.04	DP275ZY 232.39-238.04			DU275ZY 180.30–185.
allas/Ft.Worth (a)	DR276ZY 188.60-192.93	DM276ZY 203.60-225.04	DP276ZY 228.60-242.20			DU276ZY 182.55–202.
ouston (a)	DR416ZY 185.05-194.02	DM416ZY 198.43-222.27	DP416ZY 220.10-238.55	DK416ZY 222.05-222.05		DU416ZY 181.75–191.
tle Rock	DR009ZY 187.74-216.25	DM009ZY 198.49-247.35	DP009ZY 208.48-275.12			DU009ZY 191.40-227.
ew Orleans	DR119ZY 177.30-185.81	DM119ZY 194.84-206.60	DP119ZY 217.30-231.84			DU119ZY 178.80-182.
n Antonio	DR289ZY 180.30–193.25	DM289ZY 197.72-210.25	DP289ZY 215.30-242.15			DU289ZY 185.50–194.
DD 4						
lings (b)	DR162ZY -		DP162ZY 230.33-231.17			DU162ZY 212.52–213.
sper (b)	DR321ZY 205.38-205.43		DP321ZY 240.37-240.82		DU321ZY* 229.65-232.00	
nver	DR028ZY 213.70-220.00	DM028ZY 230.67-236.15	DP028ZY 254.99-257.54			DU028ZY 212.25-233.
It Lake City	DR298ZY 231.31-238.00	DM298ZY 248.00-253.00	DP298ZY 264.31-273.00			DU298ZY 210.10-224.
DD 5	01450.007.77					
nacortes	DR305ZY 214.50-231.39	DM305ZY 243.50-255.89	DP305ZY 250.50-267.39			DU305ZY 188.89–194.
is Vegas (e)	DR196ZY 236.00-251.00	DM196ZY 246.00-262.00	DP196ZY 253.00-273.00			DU196ZY 213.45-216.
os Angeles(e)	DR022ZY 249.33-252.23	DM022ZY 266.30-268.50	DP022ZY 278.65-283.23			DU022ZY 223.50-230.
noenix	DR012ZY 206.00-224.67	DM012ZY 223.00-239.67	DP012ZY 240.00-260.00			DU012ZY 184.00-200.
ortland	DR233ZY 194.50-214.00	DM233ZY 219.15-232.80	DP233ZY 226.15-249.00			DU233ZY 191.81–200.
ənFrənEBəy (e)	DR025ZY 239.35-267.33	DM025ZY 252.60-289.33	DP025ZY 263.85-297.95			DU025ZY 222.00-234.
eattle/Tacoma	DR308ZY 194.15-200.40	DM308ZY 221.90-229.40	DP308ZY 226.90-236.40			DU308ZY 184.75–192.8
ookane	DR309ZY 193.05-199.65	DM309ZY 212.70-218.39	DP309ZY 224.73-234.04			DU309ZY 197.50-201.3

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