

# **OILGRAM PRICE REPORT**

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# Suez Canal reopens but vessel backlog seen taking a week to clear

- More than 360 ships waiting to transit key commodity chokepoint
- Freight rates start to firm; long delays expected for many shipments
- Stricken container ship moved to Great Bitter Lake for inspection

London—Shipping flows through the Suez Canal have resumed after almost a weeklong hiatus on the vital trade route, but the repercussions on commodity markets are likely to reverberate for weeks as a massive backlog of vessels clears.

The Ever Given container vessel was successfully freed early March 29 and later reached the Great Bitter Lake region of the waterway for technical inspections. By 1800 GMT, the southbound flow of waiting vessels had resumed, shipping agent Leth Agencies said, adding that northbound traffic flows had yet to be confirmed.

The closure of one of the world's most critical commodity chokepoints resulted in a logjam of more than 360 ships – including crude, product and chemical tankers, dry bulk carriers and container vessels – waiting to transit the waterway from both sides, according to data from S&P Global Platts trade flow software cFlow.

This traffic backlog is expected to take at least a week to clear, pushing up freight rates and delaying the shipments of many key commodities such as oil, refined products, LNG, iron ore, metals, consumer goods and chemicals.

The Ever Given ran aground on March 23 blocking the key waterway for almost a week. The container ship was finally refloated with the help of 13 tugboats and several dredgers.

The successful refloating of the Ever Given was confirmed by the Suez Canal Authority, which operates the chokepoint; the charterer of the vessel, Evergreen Maritime Corp; and Royal Boskalis Westminster, which is a Dutch dredging and heavy lift company, that was hired to

(continued on page 11)



Margin data reflects the difference between a crude 's netback and its spot price. Netbacks are based on crude yields, which are calculated by applying S&P Global Platts product price assessments to yield formulas designed by Turner, Mason & Co. Source: S&P Global Platts

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### **NEWS HEADLINES**

### US refined product builds likely extend amid expected uptick in refinery runs

- Gasoline stocks expected 1 million barrels higher
- Commercial crude stocks likely edge up 200,000 barrels
- US exports edge higher; transatlantic volumes plunge

*New York*—Counter-seasonal US refined product builds likely extended during the week ended March 26, amid an uptick in refinery runs, analysts surveyed by S&P Global Platts said March 29.

# Crude oil futures climb as market looks to OPEC+ quota extension

- OPEC+ group likely to extend production quotas to May
- Ever Given refloated; Suez traffic resumes
- Brent-WTI spread retreats from one-month high

New York—Oil futures finished a volatile day higher as the market searched for direction ahead of an April 1 OPEC+ group meeting.

# US refining margins hold value, demand normalizing amid vaccine rollouts

- USGC margins weaken slightly as refinery utilization ramps up
- Higher USWC driving offsets weak California demand

New York—US refining margins for the week ended March 26 slightly weakened but remained healthy, an analysis from S&P Global Platts showed March 29, as warmer spring weather spread across much of the nation and coronavirus vaccine rollouts continued to pick up the pace.

### **MARKET ANALYSIS**

### INTERNATIONAL CRUDE

- Angola's average loadings set to touch multi-year lows
- Murban available for export in April stands at 1.034 mil b/d
- Oman's exports to China drop 6.8% on year

### Soft China demand pressures ESPO

A supply glut caused by tepid Chinese demand and an oversupply of West African crudes in the past few months has weighed on the premiums for Far East Russia's ESPO Blend crude, making it difficult for sellers to clear their cargoes.

Reflecting the weakening demand, spot cash differentials for Mayloading barrels of the crude have eased from the start of the trading cycle this month, Platts data showed.

Latest premiums for May-loading barrels were heard at around low to mid-\$1s/b against Platts Dubai crude assessments, FOB, down from premiums of around \$1.90-\$2.10/b heard concluded earlier in the trading cycle.

"Brazilian and West African are relatively sweet [crudes], and can be taken as substitutes for ESPO blend by Chinese refineries," a source from a North Asian refinery said.

Meanwhile, Russia's export of ESPO Blend crude oil are expected to total 2.74 million mt in May, 3% lower from April, according to the latest monthly loading program seen by Platts.

The May loading program for the medium sweet crude grade runs from April 29 to May 31, and comprises 27 cargoes – one 140,000 mt cargo and the rest are 100,000 mt parcels – as per the program.

In comparison, the April loading program featured the same number of cargoes in total, with three 140,000 mt cargoes and the rest 100,000 mt in size.

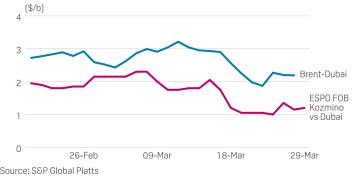
State-owned Rosneft held four cargoes for May, half from the April loading program, despite typically offering the largest number of cargoes.

Russia's Surgutneftegaz, on the other hand, held nine ESPO Blend cargoes for May loading, one more than the month before.

Gazprom Neft will hold three cargoes, including the sole 140,000 mt cargo. Two of their cargoes were sold via tenders last week at premiums of around \$1.30/b-\$1.50/b to Platts front month Dubai crude assessments, FOB, according to trade sources.

Meanwhile, Lukoil has offered three cargoes for May-loading, one

### ESPO COMES OFF IN ASIA ALONG WITH BRENT-DUBAI EFS



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more than April, and the remaining eight cargoes are held by small producers.

Benchmark cash Dubai premium against Dubai futures rebounded at the Asian close March 29 amid slow trading activity for May-loading barrels, as the focus now shifts to the upcoming OPEC+ meeting on April 1.

S&P Global Platts assessed May cash Dubai at a premium of \$1.16/b to the same-month Dubai futures at the 4.30pm Singapore close on March 29, up 20 cents/b from close on March 26.

May cash Oman was also rose to a premium of \$1.46/b to samemonth Dubai futures, up 35 cents/b from close on March 26.

The OPEC+ alliance is scheduled to meet on April 1 to discuss their production cuts for May, which the market widely expects to be rolled over from April.

"After last month [production cut rollover], the market seemed tight, but towards the end of the month, the market atmosphere started changing [and was] not so tight," said a trader based with a North Asian refinery.

An oversupply of arbitrage barrels, especially from West Africa, contributed to the increased length in the market, resulting in many unsold cargoes with few keen buyers, according to market sources.

Differentials for West African cargoes were heard adjusting downwards on a delivered basis in order to increase their competitiveness with the crudes from the Middle East, as sellers were eager to clear the cargoes they were holding on to.

"Now, West African [crude] FOB level is still high. For next trading cycle, FOB level will come down from positive to negative levels," said another trader from a North Asian refinery.

Amid the availability of arbitrage barrels and fragile recovery of demand as several regions, such as India, battle a resurgence of COVID-19, OPEC+ and Saudi Arabia are unlikely to increase production, sources said.

The Platts Market on Close assessment process saw a total of two May Dubai partials of 25,000-barrels and seven Oman partials traded.

The Dubai and Oman partials were traded with Trafigura and Vitol on the sell side and BP and Shell on the buy side.

The Oman partials were all traded with PetroChina on the sell side and Unipec on the buy side.

Unipec declares a cargo of May Oman crude to PetroChina following the convergence of 20 partials in Platts cash Oman.

This is the second convergence in Platts cash Oman between the same counterparties for May Oman crude cargo this month.

### Oman's exports fall 3.8% on year

Oman exported 45.1 million barrels of crude oil during the first two months of 2021, down 3.8% from the same two months last year, according to the National Centre for Statistics and Information.

Exports to China – Oman's largest market – totaled 38.4 million barrels during the period, down 6.8% from the 41.2 million barrels it shipped during the same period of 2020, according to the data on the government's website, amid reduced demand due to the pandemic.

Shipments to India, however, soared to 5.69 million barrels from 952,300 barrels over the same period. Japan took no shipments in the two months, compared with 608,200 barrels in the same period last year

The average price for Omani crude during the first two months of 2021 was \$46.90/b, down from \$64.2/b in the corresponding period of 2020, the data showed.

According to the most recent S&P Global Platts OPEC+ survey for February, Oman produced 740,000 b/d of oil, slightly exceeding its production quota of 732,000 b/d. While crude oil production over the two months fell 11.7% from the same period last year, condensate output soared 53%, according to the statistics data. Condensates is not included in the OPEC+ production accord.

### ADNOC's Murban available for export

Abu Dhabi National Oil Co. said Murban crude available for export between April 2021 and March 2022 remains unchanged from February as the national oil producer gears up to launch futures based on its flagship grade on a new UAE-based exchange on March 29.

In its second report published on March 28, ADNOC said it would have 1.034 million b/d of Murban available for export in April, with volumes falling to 1.001 million b/d in May, figures that remain unchanged from its first report published February. For June, the first delivery month for the new futures contract, the volume rises to 1.040 million b/d and then 1.070 million b/d in July and August. No explanation was given for the planned increase.

ADNOC and the Intercontinental Exchange are launching a new UAE-based exchange called ICE Futures Abu Dhabi on March 29 on which the Murban futures contract and 18 cash-settled derivatives and inter-commodity spreads will trade.

ICE named 24 financial institutions as exchange members allowed to directly trade Murban crude futures and related derivatives, it said March 25.

Murban is ADNOC's largest crude by volume, with a production capacity of about 2 million b/d of the company's total capacity of around 4 million b/d. It is produced from 2,000 onshore wells, and ADNOC describes the grade as light and sweet.

### **OSPs**

The official selling prices for Murban exports will be based on the futures contract settlement, which will go to delivery for two months ahead, once launched.

OSPs for ADNOC's Upper Zakum, Das and Umm Lulu grades will be priced at a differential to Murban.

Murban will be the second physically delivered futures contract to trade on a regional exchange after the Dubai Mercantile Exchange's Oman crude futures.

It is also a deliverable grade in the S&P Global Platts benchmark Dubai and Oman crude assessments. ADNOC has been pricing its crudes based on Platts Dubai.

IFAD is being launched with nine partner companies that include BP, GS Caltex of South Korea, Japanese companies Inpex and ENEOS, PetroChina, Thailand's PTT, Shell, Total and Vitol.

### Angola's May loadings slightly lower

Average crude loadings for Angola's finalized May schedule are 1.02 million b/d across 33 cargoes totaling 31.65 million barrels, slightly lower than the provisional program, according to a copy of the schedule seen by S&P Global Platts March 29.

With the revision, average loadings are set to slump to multi-year lows, with production likely at its lowest level in at least 16 years, according to Platts estimates.

In changes to the provisional schedule, one cargo each of Plutonio and Sangos were dropped while one of Saxi was added. Additionally, there were date changes for 22 cargoes across multiple grades.

Just Pazflor is expected to load one more cargo in May compared to April, with the rest of the grades loading the same number or fewer. There are no cargoes of Gimboa in May, as has been the case stretching back to September. There will also be no cargoes of Palanca in May. The first cargo since December is set to load in April.

The April schedule showed a total volume of 36.54 million barrels across 38 cargoes for an average 1.22 million b/d.

Sonangol, Angola's national oil company, has 10 equity cargoes in May, down from 13 in April.

### Brent CFD contango widens

The North Sea market saw a continued build-up of length in the prompt market March 29, contributing to an eclipse of the backwardation seen through much of March.

This pushed the Brent CFD wk1-wk6 structure furhter into contango at 21 cents/b, out 2 cents/b on the day, and much weaker compared to March 22 when the structure was in an 18 cents/b backwardation, according to Platts data.

WTI Midland has continued to move into Europe, heard at discounts to Dated Brent, with participants struggling to move crude out of Europe.

"Our market [Europe] does not need the oil. A lot of the volume is being priced into tank," a source said.

Lackluster demand from the East has been a leading factor in keeping most light sweet crude in Europe and Africa, with West African unsold supply also weighing on North Sea grades.

"Sweets are not doing well," the source added.

Forties, a typical grade that moves east, has seen a slowdown in loading activity, after one VLCC was loaded two weeks ago.

The VLCC Amyntas arrived at the Hound Point terminal in Scotland on March 21, and is now thought to be moving to Rizhao.

North Sea Ekofisk is staying local, with differentials notably weighed down by WTI Midland levels.

Loadings of Ekofisk crude in the week to March 28 comprised three Aframaxes, totaling an estimated 1.83 million barrels of Ekofisk crude, down from just one vessel the previous week, S&P Global Platts trade flow software cFlow showed March 29.

The NS Commander was seen taking 630,000 barrels of Ekofisk crude into Brofjorden, Sweden, and the Berica is awaiting to discharge 600,000 barrels outside of Northern Germany. Finally, the Alfa Italia is carrying 600,000 barrels of Ekofisk crude, with the location still unknown.

Despite Ekofisk staying local, refiners have continued to struggle, with products remaining weaker amid demand-side stress across

Northwest European gasoline and naphtha markets are facing more bearish fundamentals amid softening export demand, while domestic petrochemical end-users are shifting toward utilizing more LPG.

Furthermore, demand for middle distillates in Europe remained

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weak, with expectations of a return to normal demand now delayed due to strict mobility restrictions and/or lockdowns in Europe, apart from the UK where limits are being eased.

### CPC Blend values higher

Demand for European sweet grades was heard weaker March 29 as cargoes in the region continued to look for homes as freight levels increased.

Azerbaijan's Azeri Light was heard under pressure as freight costs continued to increase and market activity slowed.

"First of all crude [is] getting hit on freight...Azeri is not much better [with] plenty of barrels available on later [April] timing," said a trader.

Kazakhstan CPC Blend was, however, heard trending higher as traders reported increased levels on bids and offer ranges. Market sources reported pricing differentials recovering to Dated Brent minus \$2.20-\$2.50/b, after prices fell to 10-month lows.

Looking at North African grades, market sources continued to report rangebound levels on Libya's Es-Sider as the FOB grade held value despite weakness heard in other Libyan grades.

"I would say Es Sider is the best performing Libyan grade right now, but demand in the Med is not great. Es Sider will likely fall if we see any downside in Urals," the trader said.

Greek refiner Hellenic Petroleum was heard to have bought a Siberian Light cargo after its tender offer concluded March 29. Traders reported one Aframax cargo sold for late-April arrival, but pricing levels had yet to be disclosed.

Elsewhere in the market, giant container vessel the Ever Given, which ran aground in the Suez Canal March 23, had finally been freed and was now moving northbound to the Great Bitter Lake region of the key waterway, sources said. This should pave the way for the reopening of the key commodity chokepoint, which has remained blocked for almost a week.

The Suez Canal Authority confirmed during the afternoon of March 29 that the refloating was "successful." Over 300 ships remain waiting to traverse the canal.

### **AMERICAS CRUDE**

### Ecuador's output slows in January

Ecuador pumped an average 509,000 b/d of crude in January, a 4.9% decline from the 535,000 b/d produced in January 2020, and a 0.6% drop from 512,000 b/d pumped in December, according to data available Monday on the Ecuadorian central bank's website.

The country's oil patch has been slow to recover from devastating impacts of floods and landslides last April that destroyed sections of the two most important oil pipelines, SOTE (360,000 b/d) and OCP (450,000 b/d). The lines transport the bulk of crude output from the oil-rich Amazon basin to export docks and refineries near the Pacific coast.

Low crude prices and the COVID-19 pandemic, which forced stateowned Petroecuador and other companies to curtail field operations, have also been cited by the government as a cause of the decline. Although January's output was an improvement from the 479,000 b/d of crude that Ecuador pumped on average during all of 2020, it is well under the 525,000-550,000 b/d the country has averaged in recent years.

State-owned Petroecuador plans a rerouting of the SOTE and OCP lines farther from the Coca River which continues to erode and threaten line integrity. The company is completing two temporary bypasses – which forced a two-day shut-down of the SOTE in early March – but expects later this year to launch a comprehensive, and expensive, reroute plan.

The oil spill that sent crude into the Coca River last year and fouled the principal drinking water source of El Coca, a town downstream with a population of 45,000. Environmentalists called it the country's worst oil disaster in 15 years. Indigenous groups say they are still suffering consequences of the spill. The ongoing erosion of the river also threatens operations at the country's largest hydroelectric dam, Coca Codo Sinclair.

Hopes for a significant increase in crude output this year were dashed earlier this month when Petroecuador announced it will delay the development of the Ishipingo field, the richest sector of the ITT block in the Amazon basin, until next year due to environmental and financial issues.

Currently the Tambococha and Tiputini fields of ITT are producing a combined 60,000 b/d, but Ishipingo could easily double that output once fully on line, officials have said. Petroecuador expects to drill at least 72 wells from two new platforms planned at Ishipingo starting early next year.

Ecuador exported a total of 10.94 million barrels of crude in January, a 7% decline from the 11.76 million barrels sold abroad in January 2020, and a 10.1% drop from the 12.17 million barrels exported in December, the central bank said.

The average price fetched for the exported crude was \$48.55/b, down 3.9% from the \$50.53/b price charged in January of last year, but up 12.6% from the average \$43.11/b in December, the data showed.

Ecuador ships virtually all its exported crude to China and Thailand to comply with terms of the billions of dollars in oil-secured loans taken out by former president Rafael Correa (2007-2017) to finance infrastructure and social programs. The subsequent decline in oil prices has meant his successor President Lenin Moreno has had to ship far more volumes of crude than planned to meet loan terms, which has left less oil available to sell to finance other government measures.

Resulting fiscal deficits forced Moreno to seek a bail out from the IMF last year, despite both China and Thailand easing terms of the paybacks. The Quito-based newspaper El Comercio reported last week that the country owes the Asian countries a total of 226 million barrels of crude to be delivered by 2024.

Renegotiated terms with the two lender countries now permit Ecuador to sell a few tanker loads of crude per year on the spot market at better terms. On March 6, Petroecuador said that the latest spot sale was to US refiner Shell Western Supply and Trading Ltd. The company outbid 48 competitors for 1.44 million barrels of Oriente crude to be delivered this month in four shipments.

### **GASOLINE**

### Indonesia may import more after refinery fire

The Asian market was bullish following a fire at Indonesia's Balongan refinery March 29.

The fire boosted the Singapore 92 RON crack vs Brent to \$6.31/b, up from \$5.87/b at the end of last week, according to Platts data.

A fire forced Pertamina to shut the entire 125,000 b/d facility "to control the follow of oil and prevent the expansion of the fire," state-owned Pertamina said in a statement March 29.

"The incident has led the company to carry out a normal shutdown [at] the refinery to control the crude flow and to prevent the fire from expanding," the corporate secretary of Kilang Pertamina Internasional, Ifki Sukarya, said in a company statement released March 29.

The fire broke out at around 12.45 am local Indonesian time, at the T-301G tank, the company also added in the statement.

The cause of the incident cannot be determined at this point in time and is still being investigated by the authorities.

Pertamina was previously expected to only import around 8 million to 9 million barrels of gasoline in April, but could emerge in the spot market to purchase more cargoes should there be a need to replace output lost from the fire, industry sources said.

A boost of buying from Indonesia would be bullish for the Asian gasoline complex, which has been enjoying a wider recovery in regional demand as many countries ease movement restrictions on falling COVID-19 cases.

Meanwhile in China, a string of refineries are also expected to shut in  $\Omega 2$  and early  $\Omega 3$ . PetroChina's 100,000 b/d Dagang Petrochemical was heard to have plans to shut for maintenance over mid-May and end-June.

Sinopec will also shut a 4 million mt/year CDU for maintenance at its 280,000 b/d Qilu Petrochemical from mid-August till late-September while 200,000 b/d Shijiazhuang Petrochemical will be shut for an overall maintenance over end-August till end-October, Platts previously reported.

Also supportive on the demand end, one LR tanker was heard having placed on subjects to move gasoline out from Asia.

LR1 tanker Jo Rowan was heard from market sources to be loading gasoline mid-April at Sikka, with the cargo to discharge either in UKC or US Atlantic Coast, shipping sources said.

### Med flips to premium to NWE

As refineries in the Mediterranean enter maintenance turnarounds during the second quarter and some countries in the region ease restrictions, the physical and paper market could flip to a premium against the Northwest European gasoline market, sources said.

Typically, Mediterranean gasoline is at a premium to Northwest Europe during the winter, when lower Reid vapor pressure requirements for winter specification-gasoline make it cheaper to blend. The Med market then returns to a discount against Northwest Europe during the summer.

But tightness of supply for summer-spec gasoline could strengthen the Mediterranean market, sources said.

"I would say the supply issues outweigh the demand issues in

some places, so the market will be a bit tight and short," a trader said.

In the week to March 29, the front-month Mediterranean FOB Med cargo swap was assessed at an average discount of \$2.35/mt to the equivalent Eurobob FOB AR swap, up from an average discount of \$4.65/mt over the previous week.

Meanwhile, the Mediterranean physical cargo market was assessed flat to the April Med swap on March 26 while a backwardated structure across the paper market points to strengthening fundamentals during April.

Export demand for Mediterranean gasoline from across the Atlantic has also remained buoyant, as has buying interest from West Africa. Around 1.11 million barrels of gasoline were exported to West Africa in the week to March 27, according to data from energy intelligence provider Kpler, the highest weekly volume since early October and up threefold on the week.

Also, with Mediterranean gasoline prices currently discounted versus Northwest Europe, North African countries were pulling more volumes from the Mediterranean, tightening supply further, sources said.

In the East Mediterranean, gasoline demand is expected to rise in Israel as the country eases lockdown restrictions, while its refineries undergo Q2 turnarounds, sources said.

Other Mediterranean refineries undergoing maintenance include Italy's 180,000 b/d Sarpom plant, operated by Esso Italiana, which will remain offline for two months, sources said. Also, Spain's 220,000 b/d Bilbao refinery, operated by Repsol, said its Plant 3 at the facility would be taken offline from March 28 for an unspecified length of time.

The new national lockdown in Italy imposed for two weeks until April 6 will reduce gasoline demand in the country, sources said, while in other parts of Southern Europe the outlook was steady.

"Gasoline demand in France and Spain is OK, I think gasoline demand in the Mediterranean looks decent actually," a trader said.

Despite bullishness in the Mediterranean gasoline market, some impact on demand in Southern Europe from rising coronavirus cases and restrictions could help balance fundamentals in the region.

According to data from Google, personal mobility in the week to March 21 in Italy, Spain and France fell from week-ago levels with Italy showing the biggest slide of 8 percentage points to 43.6% below precrisis levels, the lowest since mid-January.

### DIESEL

### China to boost April exports

Chinese refineries are planning to increase gasoil exports in April to around 2.45 million mt, despite the cut in run rates ahead of the industry's major maintenance season next month, as several staterun companies look to capture healthy international export margins, market sources told S&P Global Platts March 29.

China's state oil majors – Sinopec, PetroChina, CNOOC and Sinochem, together with privately-held Zhejiang Petroleum & Chemical – are likely to export around 2.45 million mt of gasoil in April, up 10% from the planned exports of 2.22 million mt in March.

The April target, if achieved, could record a 12-month high after the country exported 2.57 million mt in April 2020, information collected by Platts showed.

PetroChina and Sinopec are likely to contribute most to the incremental volume as they plan to lift their gasoil exports by 28% and 14%, respectively, from March.

Sinopec plans to export 1.14 million mt of gasoil in April compared with 1 million mt last month.

However, a total 26 million mt/year of Sinopec's capacity is offline in March, with another 17.5 million mt/year scheduled to be shut over April and May, which could ease their export pressure.

"The margin is still ok, which has supported exports," a refinery source said.

"Outright refined product prices have shot above \$65/b in recent weeks, while the feedstocks had been purchased below \$55/b during early  $\Omega$ 1 and  $\Omega$ 4 last year," a middle distillates marketing and trading manager based in Singapore said. The backwardation in the Asian middle distillates market had also supported prompt sell off from storage tanks, he added.

### Huajin has no April export quota

Norinco's Huajin refinery has used up all its 150,000 mt quotas by exporting four gasoil cargoes – two in February and two in March.

Currently, the refinery has no quotas for April exports, and will wait before new quotas are allocated.

Sinochem, on the other hand, has cut its planned gasoil exports for April by 38% to 150,000 mt, compared with 240,000 mt for March.

ZPC has also cut its planned exports for April to 120,000 mt from 150,000 mt in March.

China's refiners have exported a total of about 7.86 million mt of refined products, including 3.54 million mt of gasoline, 3.435 million mt of gasoli, and 880,000 mt of jet fuel in the first two months of this year, according to the latest custom data.

### Singapore swap crack sinks to 11-week low

The front-month Singapore 10 ppm sulfur gasoil swap spread to the Dubai crude swap narrowed to an 11-week low at the Asia close March 26 amid mounting supply and lukewarm demand.

The front-month March 10 ppm sulfur gasoil swap crack – a measure of the product's relative strength to the crude it is refined from – was assessed down 71 cents/b day on day at \$4.91/b at the 0830 GMT close of Asia trade March 26. The spread was last assessed narrower at \$4.68/b on Jan. 7, S&P Global Platts data showed.

The move lower comes amid growing supply length in the region. China's gasoil exports were estimated by traders at 2.29 million mt in March, an 11-month high, with some traders saying it could reach as high as 2.6 million mt, S&P Global Platts reported earlier.

Estimates for China's gasoil exports in April are currently around 2 million mt, traders said. While lower than March, the volume was still considered high given the tepid demand in the region.

South Korea's domestic gasoil consumption fell for the third consecutive month in February, slipping 1.6% month on month to a 12-month low of 12.75 million barrels, Korea National Oil Corporation data released March 25 showed.

India's gasoil demand also fell in February, slipping 3.79% from a month earlier to a five-month low of 6.55 million mt, latest Petroleum Planning and Analysis Cell data showed.

The faltering pace of India's demand recovery for gasoil was

underpinned by a rise in coronavirus cases, with local media reporting in recent days that a record spike in infections in the western state of Maharashtra had prompted authorities to impose night curfews.

### Russia's Primorsk exports up slightly

Exports of ultra low sulfur diesel from the Russian Baltic port of Primorsk will total around 1.575 million mt in April, 2.9% higher than March and unchanged year on year, according to market participants March 29.

Previously, the March program was expected to be 1.626 million mt, according to traders at the beginning of the month, but a series of weekly loading programs through the month put volumes for the whole of March at 1.53 million mt as of March 22.

Hopes of a demand recovery in April had largely faded by March 29, as several Northwest European countries faced tougher mobility restrictions in response to a rise in coronavirus cases across parts of mainland Europe. However in the UK, diesel demand was seen increasing with the lifting of some lockdown restrictions in England on March 29 and a further easing of restrictions planned for April 12.

"The [coronavirus case] numbers are crazy, which of course has an impact on business. We have seen no Easter holiday sales... the forecast is not really good," one Germany-based trader said, adding that storage tanks were already pretty full, so higher supply from Primorsk would likely put pressure on cash differentials.

"We had plans for increasing volumes but now have to delay those plans," a second trader said. "[We have] too much capacity and contracted volume. Tanks are full and demand is weak."

Zero cargoes of US Gulf Coast middle distillates are expected to arrive in Europe so far in April, following a record low of 40,000 mt of ULSD which arrived in March, according to data from S&P Global Platts trade flow software cFlow March 29.

In April 2020, 410,000 mt of USGC middle distillates arrived in Europe. European traders have reported the arbitrage as closed for several months, saying the lack of incoming volumes has supported the European market, which continues to suffer lackluster demand under lockdown restrictions. Until now, however, small volumes continued to flow, according to cFlow data.

Both Northwest Europe and the Mediterranean ULSD markets remain well supplied, while demand is expected to stay low or decline in the coming weeks as some countries regress to more stringent lockdowns in light of a third wave of COVID-19 infections, according to sources.

Shipments have stopped despite the US Gulf Coast diesel market sinking to a six-week low on March 26, falling for a third consecutive day.

Platts assessed ULSD on the Gulf Coast at the NYMEX May ULSD futures contract minus 4.38 cents/gal. The market was last seen lower on Feb. 12 at prompt-month futures minus 5.40 cents/gal.

The market has continued to fall in recent days as regional stocks saw a build for a second straight week, rising 1.31 million barrels to 43.36 million barrels during the week ended March 19, US Energy Information Administration data released March 24 showed.

Likewise, production on the Gulf Coast rose for a third consecutive week, increasing 298,000 b/d to 2.38 million b/d. The metric was last seen higher at 2.46 million b/d during the week ended Feb. 12.

Reverse arbitrage flows from Europe to the US Atlantic Coast have also dried up, with zero cargoes currently on the water, following only one 40,000 mt cargo sent in March, cFlow data showed.

CIF NWE cargoes were assessed at a \$2.75/mt premium over the front-month ICE LSGO contract March 26, up \$2.50/mt week on week. CIF Med cargoes were assessed at \$4.75/mt, up \$1.25/mt week on week.

### **MARINE FUEL**

### Demand set to increase

Marine fuel traders said that they expect bunker demand along shipping routes toward the Cape of Good Hope to rise in the upcoming weeks, as ships change course amid the ongoing blockage of the Suez Canal.

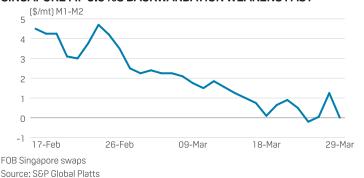
"We expect an uptick in demand in Gibraltar, Las Palmas, West Africa due to some vessels looking at the option of going round South Africa...No one has any idea on when this thing will move," one trader said March 29.

"I would expect Durban's demand to pick up, as well as Algoa Bay and Cape Town, as these are ports for bunker only callers," a physical supplier said. "Richards Bay is not a port for bunker only callers and vessels taking bunkers there will be because of working cargo."

Mega containership the Ever Given ran aground in the Suez Canal on March 23, blocking one of busiest global waterways. The shipping artery carries approximately 12% of global trade, with more than 360 ships – including crude, product and chemical tankers, dry bulk carriers and container vessels – waiting to transit the waterway from both sides as of March 28, according to data from S&P Global Platts trade flow software cFlow.

Local media reports suggest the ship was partially refloated the morning of March 29, with traffic expected to resume to some degree. But given the backlog, it could take days for traffic to return to normal, sources said.

### SINGAPORE MF 0.5%S BACKWARDATION WEAKENS FAST



### Fuel price changes

One marine fuel supplier said they expected increased demand in Gibraltar and Las Palmas, potentially impacting prices.

Delivered 0.5% sulfur marine fuel prices at Las Palmas rose \$27/mt on the day to \$493/mt on March 26, Platts data shows.

Conversely, prices at the east Mediterranean bunker ports of Piraeus, in Greece, and Istanbul, Turkey, dropped 1.9% and 1% on March 26, respectively, despite a 5% gain in benchmark ICE low sulfur gasoil futures.

This suggests weaker fundamentals in the local market, connected to the drop in demand from ships that would have entered the canal and bunkered at the ports by now.

"Many vessels are stuck in the Suez Canal, so we may see a backlog when traffic resumes eventually," a trader based in the region said.

Refined feedstocks – some of which are used as ingredients to make marine fuel – are not expected to suffer major disruptions due to the blockage, with the arbitrage between Europe and Asia not a common shipping route for producers.

Feedstock value is heavily dependent on the profitability of end products like gasoline and diesel, and these may be disrupted by the situation in Suez.

However, traders expect that the Suez Canal blockage might have a knock-on effect on feedstock values if the prices of refined products are affected.

"It all depends on how long we are stuck without a canal and what Gulf and Mediterranean product prices do as a result," one source said.

Similarly, sources in the upstream fuel oil market expect cargoes to face a ripple effect if freight rates and oil prices are impacted.

Last week, traders noted weakened crack differentials, which added further supply uncertainty as refiners were less incentivized to produce, leaving many unwilling to sell at low prices.

"Suez is closed, so expect Singapore to get stronger, all refineries will not run any 0.5% sulfur marine fuel and blending is impossible since there are no components," one European source said.

But at present, less demand eastward alongside weakness in crude as COVID-19 cases intensify in Europe have meant differentials remain pressured. The 0.5% sulfur FOB Rotterdam barge outright price moved down 5.7% in the week ending March 26 to \$432.25/mt, Platts data showed.

### **JET**

### Global scheduled airline capacity rises

Global scheduled airline capacity has increased 3.9% to 62.1 million seats for the week starting March 29, driven by Europe and Southeast Asia gains, according to aviation data company OAG. Although seat capacity is still only 58.2% of January 2020 levels, this represents the best week in over 12 months.

In Western Europe, scheduled airline capacity jumped by 19.6% week on week to 5.67 million seats, meaning the region was at 30.5% of the level of January 2020, OAG data also showed. Capacity almost double in Italy, up 49% week on week, while it increased 23.9% in Germany and 16.7% in France.

"The third coming of COVID-19 in Western Europe does not appear to be having any impact on capacity as we head to the holiday weekend with some 930,00 additional seats operating this week or a modest 20% growth week on week," OAG senior analyst John Grant said in his weekly blog. "Similarly, Eastern Europe, with 16% weekly growth,

probably reflects as much optimism and the realities of demand but airlines must be sensing a change in the market or are perhaps blinded by the longer daylight we now have after the clock change."

In North America, scheduled airline capacity edged 1.1% higher week on week to 15.6 million seats, which represents around 69% of January 2020 capacity.

"The last few weeks have seen nearly all the major US-based carriers announce a range of new destinations and services for the summer, many of which are hub by-pass services responding to the stronger leisure demand that has a feature of the domestic market in recent months," OAG's Grant said.

Of note, scheduled airline capacity only decreased in Lower South America, with Brazil's capacity down 6.8%, South Asia with India's capacity down 1.8%, and in Eastern Africa.

"This week's data certainly brings a cracking range of capacity growth across most regional markets although of course the demand side of the equation is crucial and that in turn seems increasingly dependent on travel passports being rolled out in the coming months," Grant said.

In Europe, no increase in demand for jet fuel was reported last week. With the Mediterranean market heard as long, and Northwest Europe slightly more balanced thanks to reduced regional production, most market participants do not expect a significant recovery in Western European consumption of jet fuel before mid-May, at least.

### Thailand's exports plunge

### SINGAPORE JET DIFFERENTIALS, STRUCTURE WEAKENS



The FOB Singapore jet fuel/kerosene complex was steady March 29, but market sentiment remained soft on demand concerns.

The front-month M1-M2 April/May jet fuel/kerosene derivative spread was assessed at minus 40 cents/b at the 0830 GMT Asian close on March 26, widening 3 cents/b day on day, but at the 0300 GMT March 29, brokers assessed the spread 3 cent/b narrower at minus 37 cents/b.

"The jet fuel market is so quiet, there's no movement, and there's little kerosene demand now," a refining source said March 29.

According to the latest data from the Customs Department, Thailand's jet fuel exports plunged 51.7% year on year to 5,486 b/d in February. The lower exports reflected weak regional air travel demand amid the coronavirus pandemic.

"I don't really see a recovery in the airline sector. In fact, many

countries' borders are still shut, or continue to have quarantine restrictions tagged to air travel. Look at India and the Philippines, infection rates are climbing again," a Singapore-based refining source said March 29.

"I think we will not see any improvements [in air travel demand] until everyone has been vaccinated," a second refining source added.

In other news, at least 160,000 mt of jet fuel coming from the East of Suez are so far scheduled to arrive in Europe in April, down from around half a million mt, Platts trade-flow software cFlow showed March 26.

At least six long-range tankers, which have loaded jet fuel in the East of Suez, have arrived in Northwest Europe in March and one more was on her way: the 74,401-dwt Alpine Penelope, which loaded a cargo of around 60,000 mt of jet fuel in the Persian Gulf and was expected to arrive in Rotterdam around March 30, according to cFlow.

### **FEEDSTOCKS**

### Traders book US-to-Asia naphtha shipments

Tighter supply in Asia kickstarted chartering activity for US-to-Asia naphtha arbitrage flows, amid tighter supply in Asia due to the logistical chokehold at the Suez Canal.

While the mega container ship Ever Given was freed on March 29 and moved to a waiting area at the Great Bitter Lake, the Suez Canal remains closed and has a backlog of ships awaiting transit, sources said.

At least 174,000 mt of US Gulf Coast naphtha loading over end March to early April had been provisionally booked on product tankers for voyages into the Far East, said market sources.

Furthermore, BP was heard seeking to book a Medium Range tanker to lift 38,000 mt of naphtha for a USGC-to-Far East voyage, loading March 29-31, and Valero was heard seeking to book an MR tanker for a similar USGC naphtha cargo, loading April 4, for a trans-Atlantic voyage with options for East discharge, sources said.

As a result, April-loading USGC-Far East fixtures total 136,000 mt, already half of the total amount of March-loading cargoes which amount to around 228,000 mt, showed data from S&P Global Platts cFlow.

Previously, the US-to-Asia naphtha arbitrage was closed as a polar vortex shut down refineries and berthing operations in USGC in second-half February. USGC port operations also saw a series of delays due to severe weather over the winter months, and continued to see delays due to fog throughout March, with the most recent fog delay closing the Houston Ship Channel and other USGC ports March 26-27, according to port agents.

The lack of supply from USGC also led naphtha buyers to procure cargoes from Peru, from which two MR-sized cargoes were due to arrive in H1 April, Platts cFlow data showed.

The Asian naphtha market depends on arbitrage shipments from the West of Suez to fulfil a net shortage of at around 2 million mt per month, so limited supply from both Europe and US had boosted sentiment.

Naphtha market sentiment has since reacted to progress with the Suez Canal blockage, with a flatter backwardation reflected in Japan naphtha swap spreads. Front month April-May Mean of Platts Japan naphtha swap spread had seen its structure fall \$2.50/mt day on day to \$6.50/mt on March 29, Platts data showed.

Asian naphtha traders said arbitrage was not open for all grades of US naphtha.

On paper, traders have had limited opportunities for the USGC-Asia naphtha arbitrage, as the physical spread between benchmark naphtha C+F Japan and FOB USGC after including MR freight has swung into both negative and positive territory over March thus far.

This cross-regional spread minus MR freight between FOB US Gulf Coast and C+F Japan naphtha was largely in negative territory in March, and averaged minus \$1.09/mt over March 1-26, Platts data showed. Traders also have to consider other costs such as port charges, Panama Canal fees or changes in market structure affecting delivered prices.

Benchmark physical C+F Japan naphtha has since edged down \$5.375/mt on the day to \$572.375/mt on March 29's Asian close, due to anticipated resumption of supply flows through the Suez Canal, Platts data showed.

For the USGC to Northeast Asia voyages, the MR tanker freight has begun to rise, and was assessed up 4% month on month at \$1.3 million on March 29.

Typically voyages from the USGC take around 30 days to arrive in North Asia via the Panama Canal while transiting at 13 knots. However, extended wait times at the Panama Canal due to increased transit demand can delay a tanker voyaging through the Canal southbound, with current wait times standing four-four days depending on the time of booking, according to shipping sources.

### LG Chemical sees unplanned cracker outage

South Korea's LG Chemical had an unplanned shutdown of its LPG-fed side cracker in Daesan on March 28, according to a company source on March 29.

The side cracker can produce 230,000 mt/year of ethylene and 100,000 mt/year of propylene, and uses 800 mt/day of LPG feedstock, sources said.

Multiple market sources said the unplanned shutdown was caused by a technical issue at the compressor and was likely to be restarted in 7-10 days.

The cause and shutdown periods couldn't immediately be confirmed with the company.

In the ethylene market, traders said the spot reaction to the outage is likely to be limited, due to the short expected shutdown period.

Also, South Korea's Lotte Chemical plans to shut its naphtha-fed steam cracker in Daesan from May 15 for an annual maintenance, a company source said on March 29.

The steam cracker is able to produce 1.1 million mt/year of ethylene, 550,000 mt/year of propylene and its butadiene plant has a production capacity of 150,000 mt/year.

The cracker is likely to be shut until June 25, the source noted.

### **GAS LIQUIDS**

### European propane tightens

In-land propane cargo premiums over large cargoes have shot to a three-year high as poor supply availability in the Amsterdam-Rotterdam-Antwerp region continues to elevate prices.

The propane FCA ARA market was assessed at a \$121.50/mt

premium over CIF large cargoes March 26, down slightly from a peak of \$127.25/mt n March 25 but remaining at a level previously unseen since March 2017.

The propane FOB ARA market was assessed at a \$116.50/mt premium over CIF large cargoes March 26.

Lower refinery runs in the ARA region since the start of the pandemic in 2020, combined with tight propane supply across Northwest Europe, have exacerbated availability issues within the in-land market.

After covering their contractual terms, refineries have little supply available for spot trading, sources said.

"There is not a single ton available," a source said.

At the same time, imports of propane into Northwest Europe have been depressed so far this year, with poor arbitrage economics, in particular from the US, impeding trans-Atlantic deliveries.

As a result, propane imports into Northwest Europe in the first three months of 2021 are now down almost 32% from the previous year.

According to commodity data company Kpler, 1.04 million mt was delivered in the first quarter, from 1.52 million mt over Q1 2020.

The in-land propane market supplies buyers in continental Europe by railcar and truck. Propane sold in the in-land market is used primarily as a heating fuel and for domestic purposes.

### **TANKERS**

### West of Suez LR1s in danger of drop off

Mediterranean Handysize markets prepped for a gradual drop off, with first signs of softening seen late in the day as an impending lengthening in the list reduced shipowner leverage for the short working week ahead.

A number of cargoes remained to be uncovered before markets embark on the Easter holiday long weekend starting April 2, and these cargoes soon emerged on subjects at repeated levels from last-done indications.

The SW Julia and Histria Dione were heard on subjects for Black Sea-Med shipments, basis 30,000 mt, at Worldscale 205, while the Gemma and Mariner A were heard on subjects for cross-Med shipments, basis 30,000 mt, at an equivalent to w195 levels.

Despite this, the overwhelming quietness in terms of fresh cargo inquiry brought some market participants to believe that an impending drop off was on the cards, and this emerged with the Aldebaran heard on subjects for an Arzew-Med shipment, basis 30,000 mt, at w192.5

"This is just the beginning, there are now plenty of ships to cover any subsequent cargoes," a shipbroker said.

The Mount Olympus was also heard on subjects for a Black Sea-Med shipment at w195, but this was heard to harbor a sharp discount to current indications.

In the Long Range tanker market, participants were wary of a steady build-up of tonnage in the west likely to drag indications down for next-done levels.

One Amsterdam-Rotterdam-Antwerp-West Africa cargo remained to be fixed, with market participants suggesting that counter offers as low as w100 were being tabled.

"Owners have been trying to cling on to the coattails of the LR2 movement, but there isn't enough cargo activity, so we're going to come down soon," a shipbroker said.

Freight indications for UK Continent-WAF shipments, basis 60,000 mt, remained at w115, however.

With news of the clearance of the Ever Given in the day, market participants foresaw no medium-term impact of tonnage for LR vessels, with LR2 continuing to enjoy firmer rates for Med-Japan shipments. The Ever Given was confirmed to be fully floated in the afternoon, with a backlog of vessels still to be cleared for northbound and southbound passage, which will likely keep larger vessel tonnage availability in the Med tight for the near term.

### East of Suez LR rates reach 2021 highs

The East of Suez Long Range tankers were at their highest year-to-date levels March 29 due to tight supply, with market participants saying that more gains were likely as cargoes sought tonnage.

"Its a busy start to the week with five LR1 cargoes quoted," said a source with an LR owner. Since the LR2 rates are going up, they will support the LR1s as well, the source said.

Among the LR1 fixtures heard, the Flagship Orchid was placed on subjects at \$1.825 million on the Sikka-UKC route, sources said.

The LR2 rates have increased and the LR1s will follow, said a source with another owner.

Among the LR2 fixtures heard, Ocean Energy replaced the Sri Asih with the Fair Seas at around w148 for April 14 naphtha loading on the Persian Gulf-Taiwan route, sources said. The route typically commands a 10 Worldscale points premium to the benchmark PG-Japan route.

"The rates will rise but it is unlikely to happen today [March 29]," a chartering source said. Another chartering source said, "the bullish sentiment is continuing."

In the Suez Canal, even though the ship has been practically refloated, it will be several days before the traffic backlog can be cleared, a few shipping brokers said. The near-term impact will only go away early next month, they said.

The main challenge is to safely tow away the ship without it running aground again.

Brokers pointed toward the cascading effect of the accident, as there will be crowding at the load and discharge ports resulting in congestion, demurrage costs, additional bunker consumption and insurance claims.

Ships that were to move, load and unload last week, will do so now and those which were scheduled for this week will also be in a ready state. This will lead to rescheduling and revising of itineraries at several ports across the globe, sources added.

The MR tankers remained weak at the start of the week. With low demand for clean products in the Far East, exports out of China have fallen, which has contributed to a slowdown in MRs, a broker said. He added that owners were aiming higher rates but as of now there was not much demand for their goal to materialize. In the PG, rates were mostly unchanged but may rise due to spillover support from the LRs, said a source with an owner.

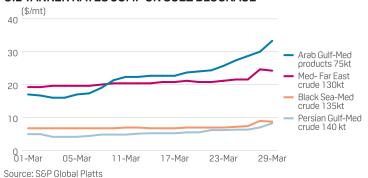
### **NEWS**

# Suez Canal reopens but vessel backlog seen taking a week to clear ...from page 1

carry out the salvage operation.

A strategic route for crude oil, petroleum products and LNG shipments, the 120-mile canal connects the Red Sea with the Mediterranean and sees more than 18,000 ships transit each year, according to the SCA.

### OIL TANKER RATES JUMP ON SUEZ BLOCKAGE



### Significant impact

Leading container line AP Moller-Maersk said that, despite the progress on the Ever Given, the "significant impact" of the closure could take a long time to clear.

"... The ripple effects on global capacity and equipment are significant and the blockage has already triggered a series of further disruptions and backlogs in global shipping that could take weeks, possibly months, to unravel," Maersk said on March 29.

The Danish company also said it will take "six days or more to clear up" the backlog of vessels. It has already redirected 15 vessels around the Cape of Good Hope, which will add sailing time equal to the current delay of sailing to Suez and waiting, it said.

By 16:45 BST (1535 GMT), there were at least 35 crude tankers estimated to be carrying around 26 million barrels and 24 product and chemical tankers holding around 1 million mt waiting to navigate through the canal, according to cFlow.

These tankers are carrying crudes such as Saudi Arabia's Arab Light and Arab Extra Light, Libya's Es Sider, Iraq's Basrah Light and Kazakhstan's CPC Blend, and also refined products including naphtha, jet fuel, gasoil, LPG, and fuel oil.

Many ships had already diverted from their original trade routes and head the long way around the Cape of Good Hope. The rerouting to the cape could add as many as 15-20 days to a voyage from the Middle East to Rotterdam that would normally go via Suez.

### Firmer freight rates

Freight rates on tankers and containers have risen sharply as tonnage lists start to shrink as ships divert from their original trade

routes to avoid being caught up in the logjam.

Platts Analytics said the ever-growing queue of vessels waiting to transit the chokepoint is causing owners and charterers to still consider their options, and this has already resulted in higher freight costs.

"Monthly average freight rates on some affected Suezmax routes are forecast to increase between 9%-35% for April compared to March. The LR1s are also forecast for similar increases in the region of 14%-18% for the same period," Platts Analytics said in a note.

Suezmax and LR1 fleets are expected to be the most affected as these tankers are some of the most active in the Suez Canal.

The ripple effect was reported across regions and ship sizes, with fresh fixtures on the VLCC West Africa-to-East run reported at Worldscale 43.5, or w4.5 points above last done on the run.

"These high fixtures were done on Friday and over the weekend on the back of panic buying," a broker said. "There are very slim chances of charterers lifting the subjects now with the Suez Canal situation unfolding, and the high fixtures should start failing, pushing freight rates back down."

Freight rates on the Suezmax Black Sea-to-Mediterranean run jumped to close to \$10/mt on March 29, from levels of around \$7/mt last week, according to Platts data.

Almost 10% of total seaborne oil trade and 8% of global LNG trade passes through the Suez Canal, according to the US Energy Information Administration.

Before the pandemic hit trade flows, the canal transported some 5 million b/d of crude and oil products and 31 million mt of LNG in 2019, according to S&P Global Platts Analytics and data from the SCA.

— Eklavya Gupte, Takeo Kumagai, Charlotte Bucchioni

# US refined product builds likely extend amid expected uptick in refinery runs

- Gasoline stocks expected 1 million barrels higher
- Commercial crude stocks likely edge up 200,000 barrels
- US exports edge higher; transatlantic volumes plunge

*New York*—Counter-seasonal US refined product builds likely extended during the week ended March 26, amid an uptick in refinery runs, analysts surveyed by S&P Global Platts said March 29.

Total gasoline stocks are expected to have climbed 1 million barrels last week to 233.3 million barrels, analysts said, narrowing the deficit to the five-year average of US Energy Information Administration data to 3.2% from 3.7% the week prior. Distillate stocks are expected 600,000 barrels higher at around 142.2 million barrels, leaving them 2.4% above average – the widest surplus since mid-February.

Refined product stocks typically decline during this time of year as shoulder-season maintenance weighs on refinery runs. Over the past five years, gasoline stocks have seen a typical draw of around 300,000 barrels and distillate inventories usually decline around 1.4 million barrels.

The expected product builds come despite signs of rising demand. The warmer weather combined with increased access to the three US-approved vaccines have made many feel more comfortable about diminishing contagion risks, releasing pent-up driving demand by

those who have been isolating in their home for the past year.

Apple Mobility data shows US driving activity climbed 3.3% last week and was the strongest since the week ended Sept. 18. Driving activity was nearly 138% above year-ago levels, which coincided with the ramp up of the initial wave of pandemic lockdowns in several states.

Between May and July, S&P Platts Global Analytics expects global oil demand to increase by 7.2 million, far surpassing the historical demand gain of about 2.7 million b/d for those months seen from 2015 and 2019. The key risks are the pace of demand normalization in the US and Canada, which along with Europe account for about 44%, or 3.1 million b/d, of the gain, Platts Analytics noted.

Total refinery utilization likely climbed 1.2 percentage points to 82.8% of total capacity, analysts said. The uptick puts utilization around 6.2% behind the five-year average and leaves it roughly where it was ahead of the mid-February polar vortex that shuttered 4.4 million b/d of US Gulf Coast capacity.

USGC cracking margins for WTI MEH averaged \$12.67/b for the week ended March 26, compared with \$12.82/b the week earlier, Platts Analytics data showed. But year over year, Q1 2021 margins to date are averaging \$10.27/b compared with \$8.19/b for Q1 2020.

This strengthened refinery demand and an uptick in exports likely held back a seasonal build in US crude stocks, which are expected to have climbed 200,000 barrels to around 502.9 million barrels last week.

Outbound crude volumes average 2.79 million b/d last week, according to data from cFlow, Platts trade flow software, up from an EIA-reported 2.48 million b/d the week prior. Despite the overall increase, European-bound volumes fell to 220,000 b/d, down from 720,000 b/d the week prior and the lowest in at least five weeks.

The Brent-WTI spread was testing one-month highs last week at around \$3.60/b as the closure of the Suez Canal tightened outlooks for European crude supply.

But the spread began to narrow on March 29 as vessel traffic resumed through the critical waterway.

Chris van Moessner, Janet McGurty

# Crude oil futures climb as market looks to OPEC+ quota extension

- OPEC+ group likely to extend production quotas to May
- Ever Given refloated; Suez traffic resumes
- Brent-WTI spread retreats from one-month high

New York—Oil futures finished a volatile day higher as the market searched for direction ahead of an April 1 OPEC+ group meeting.

NYMEX May WTI settled 59 cents higher at \$61.59/b and ICE May Brent climbed 41 cents to \$64.98/b.

Demand outlooks remain under pressure due to India and Europe's pandemic woes, with many European countries still encumbered with mobility restrictions. Several European countries, including Germany and Poland, have said that the rate of increase in coronavirus infection numbers may eventually push hospitals to near the breaking point.

But these headwinds are likely to push the OPEC+ group to further extend production cuts at their April 1 meeting, analysts said.

"The weakness in the physical and paper market since the

OPEC+ meeting earlier in the month could push the group to roll over the current cuts when it next meets," Warren Patterson, head of commodities strategy at ING, said in a March 29 note.

With the latest reports on the Ever Given, "the chances of an OPEC+ move [to ease production cuts] recede to microscopic now," Jeffery Halley, Senior Analyst for Asia-Pacific at Oando, said in a note.

NYMEX April RBOB settled 2.79 cents higher at \$1.9952/b and April ULSD edged down 2 points to \$1.8098/gal.

Shipping flows through the Suez Canal are now resuming after the Ever Given container vessel was successfully freed earlier March 29 but the repercussions of the blockage are likely to reverberate for weeks.

The Ever Given, which ran aground in the canal March 23, reached the Great Bitter Lake region of the key trade route late March 29 for technical inspection and the southbound flow of waiting vessels has resumed, shipping agent Leth Agencies said, adding that northbound traffic flows have yet to be confirmed.

The Brent-WTI spread, which was testing one-month highs last week of around \$3.60/b March 26, narrowed to around \$3.40/b in afternoon trading.

The closure of one of the world's most critical commodity chokepoints resulted in a logjam of more than 360 ships — including crude, product and chemical tankers, dry bulk carriers, and container vessels — waiting to transit the waterway from both sides, according to data from cFlow, S&P Global Platts trade flow software.

This traffic backlog is expected to take at least a week to clear, pushing up freight rates and delaying the shipments of many key commodities such as oil, refined products, LNG, iron ore, metals, consumer goods, and chemicals.

### IFAD Murban trades at \$1.75/b premium to Dubai

Murban crude futures traded at a premium of \$1.75/b over the benchmark front-month Dubai crude futures at the Singapore close March 29, the first day of trading for the contract, according to data from Intercontinental Exchange.

The Singapore marker price for first-line June Murban crude futures was published at \$63.07/b. S&P Global Platts assessed June Dubai futures at Singapore close at \$61.32/b.

The June contract settled at \$63.90/b, up 47 cents from its open of \$63.43/b.

Traders said that while trading activity appeared to be healthy on the first day of the contract, overall market interest may pick up starting April 1 when the broader market starts trading Middle East crude loading in June.

— Chris van Moessner

# US refining margins hold value, demand normalizing amid vaccine rollouts

- USGC margins weaken slightly as refinery utilization ramps up
- Higher USWC driving offsets weak California demand

New York—US refining margins for the week ended March 26 slightly weakened but remained healthy, an analysis from S&P Global Platts showed March 29, as warmer spring weather spread across much of the nation and coronavirus vaccine rollouts continued to pick up the pace.

The warmer weather combined with increased access to the three US-approved vaccines have made many feel more comfortable about diminishing contagion risks, releasing pent-up driving demand by those who have been isolating in their home for the past year.

According to Center for Disease Control data, as of March 28 about 28% of US citizens have received at least one of the two shots required by some vaccines, with a 70% vaccination rate expected by June 16 and a 90% rate by July 24.

### Gasoline leading demand recovery

Between May and July, S&P Platts Global Analytics expects global oil demand to increase by 7.2 million, far surpassing the historical demand gain of about 2.7 million b/d for those months seen from 2015 and 2019. The key risks are the pace of demand normalization in the US and Canada, which along with Europe account for about 44%, or 3.1 million b/d, of the gain, Platts Analytics noted.

Globally, increased gasoline demand will account for 2.07 million b/d, or about 29%, of total demand growth during the period.

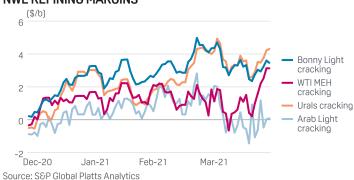
Transportation fuel demand from the distillate pool is expected to lag gasoline, with gasoil and diesel demand forecast to rise by 1.51 million b/d, or 21%, and jet demand growth pegged at 1.20 million b/d, or 17%.

### **USGC** refinery margins tempered

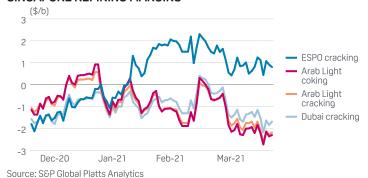
Refinery utilization along the US Gulf Coast showed the biggest gain across the nation over the past few weeks, as refiners appear to have moved past mid-February's polar vortex with stymied operations.

For the week ended March 19, USGC refinery runs averaged 78.9%

### **NWE REFINING MARGINS**



### SINGAPORE REFINING MARGINS



compared with 70.7% the week earlier, the most-recent Energy Information Administration data showed.

Last week's higher runs shaved the region's refinery margins, but they still far surpass those of a year earlier.

USGC cracking margins for WTI MEH averaged \$12.67/b for the

### **USWC REFINING MARGINS**



### **USGC REFINING MARGINS**



### US ATLANTIC COAST REFINING MARGIN AVERAGES (\$/B)

	Bonny Light	Arab LightBakken CrudeCPC Blend			
	Cracking	Cracking	Cracking	Cracking	
Week ending 26-Mar	7.91	7.02	5.26	11.37	
Week ending 19-Mar	8.23	7.25	5.45	10.52	
Q1 to date	7.38	6.48	5.98	9.28	
Q1-20	3.10	3.60	6.94	7.95	
Q4-20	4.18	3.66	3.46	6.24	
Q3-20	3.63	1.84	3.62	5.69	

Source: S&P Global Platts Analytics

### US GULF COAST REFINING MARGIN AVERAGES (\$/B)

	Arab Light	Basrah Light	LLS	Mars
	Cracking	Cracking	Cracking	Coking
Week ending 26-Mar	9.26	3.40	10.99	10.63
Week ending 19-Mar	9.70	3.61	11.38	10.94
Q1 to date	7.54	2.12	9.20	8.49
Q1-20	3.91	-3.08	8.51	7.93
Q4-20	3.30	-0.15	5.36	4.16
Q3-20	1.51	-1.76	4.23	2.84

Source: S&P Global Platts Analytics

### US MIDWEST REFINING MARGIN AVERAGES (\$/B)

	Bakken	WTI Cushing	SyncrudeW	CS ex-Cushing
	Cracking	Cracking	Cracking	Coking
Week ending 26-Mar	12.10	11.88	10.69	11.55
Week ending 19-Mar	10.44	10.57	9.41	10.15
Q1 to date	10.39	8.96	10.76	8.75
Q1-20	7.91	6.35	6.05	8.30
Q4-20	6.48	4.43	7.53	4.20
03-20	5.65	4.25	5.60	4.18

Source: S&P Global Platts Analytics

week ended March 26, compared with \$12.82/b the week earlier, Platts Analytics data showed. But year over year, Q1 2021 margins to date are averaging \$10.27/b compared with \$8.19/b for Q1 2020.

### USWC margins dip

As of March 11, US driving had increased 24% over the Jan. 13, 2020, baseline used by Apple to measure coronavirus mobility trends. However, in California, driving has increased by only 4%, as coronavirus cases there continue to rise, despite the state's 29% vaccination rate.

### **USAC REFINING MARGINS**



### US WEST COAST REFINING MARGIN AVERAGES (\$/B)

	ANS	VasconiaArab Medium		Napo
	Cracking	Coking	Coking	Coking
Week ending 26-Mar	15.68	18.69	16.80	13.95
Week ending 19-Mar	16.34	19.20	17.40	14.62
Q1 to date	12.81	15.82	13.65	12.06
Q1-20	14.57	15.17	14.80	16.97
Q4-20	10.00	11.59	9.53	9.39
Q3-20	9.66	10.99	7.90	9.63

Source: S&P Global Platts Analytics

### SINGAPORE REFINING MARGIN AVERAGES (\$/B)

	Dubai	Arab Light	ESP0	Arab Light
	Cracking	Cracking	Cracking	Coking
Week ending 26-Mar	-1.77	-2.26	0.87	-2.35
Week ending 19-Mar	-1.32	-1.77	0.84	-2.00
Q1 to date	-0.92	-1.10	0.98	-1.11
Q1-20	-0.37	-3.26	0.30	-2.89
Q4-20	-1.07	-0.45	-1.14	-0.57
Q3-20	-2.06	-2.27	-1.24	-2.62

Source: S&P Global Platts Analytics

### ARA REFINING MARGIN AVERAGES (\$/B)

	WTI MEH	Bonny Light	Arab Light	Urals	
	Cracking	Cracking	Cracking	Cracking	
Week ending 26-Mar	2.51	3.26	0.04	3.86	
Week ending 19-Mar	0.85	2.83	-0.52	3.05	
Q1 to date	1.34	3.21	0.70	2.75	
Q1-20	1.61	2.37	3.80	5.44	
Q4-20	0.91	1.68	0.38	0.91	
Q3-20	0.40	1.68	-0.90	0.51	

Source: S&P Global Platts Analytics

### **ITALY REFINING MARGIN AVERAGES (\$/B)**

	Urals	CPC Blend	Arab Light	WTI MEH	
	Cracking	Cracking	Cracking	Cracking	
Week ending 26-Mar	3.41	5.24	-1.37	1.51	
Week ending 19-Mar	3.15	4.34	-1.31	0.50	
Q1 to date	2.78	4.06	-0.34	0.74	
Q1-20	4.63	6.59	2.81	0.57	
Q4-20	1.14	2.81	-0.18	0.62	
03-20	0.28	2.17	-1.78	-0.06	

Source: S&P Global Platts Analytics

Los Angeles is leading the US with over 1.22 million confirmed cases as of March 26, according to Johns Hopkins data.

USWC refining margins for Iraq's Basrah Light—a recent popular import into USWC refineries by Chevron, Valero and BP—averaged \$17.25/b for the week ended March 19 before slipping to \$16.62/b for the week ended March 26, Platts Analytics data shows.

### US MIDWEST REFINING MARGINS



Despite its low driving rate, California, the largest user of gasoline in the country, increased crude feed to the state's refineries by 10.5% and production of its specially formulated CARB gasoline by 8.4% for the week ended March 19, according to the state's Energy Fuels Watch. This is due in part to increased driving from other USWC states that partly depend on California for its specially formulated gasoline. In Washington, Oregon, Nevada and Arizona, driving mobility picked up by an average 23%-37%, according to Apple Mobility data.

This increased demand from outside the state was reflected in the price of gasoline. Arizona 84 octane pipeline RBOB last week held a \$1.75/gal premium over Los Angeles CARBOB 84, compared with the \$1/gal discount it was trading at last year, S&P Global Platts assessments showed.

— <u>Janet McGurty</u>

# E&Ps may see borrowing base increases during upcoming reevaluations

- Higher oil prices put producers in a 'good position'
- Gas operators may see flat status or slight decline
- RBLs focusing more on cash flows than reserves

Houston—April's round of bank borrowing redeterminations for North American upstream companies is expected to be much improved from its gruesome counterpart six months ago, financial specialists say, with industry fundamentals that were just starting to show promise a half-year ago now much improved.

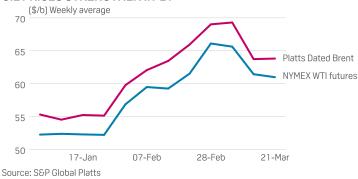
A substantially higher average oil price, continued spending discipline by upstream producers, generous cash flows reaped from lofty crude prices and less indebted balance sheets all position E&P companies for better creditworthiness in lenders' eyes, if not also slightly more access to capital.

"You'll probably see increases in borrowing bases, especially when [oil] prices are where they are" at around \$60/b WTI, said Thomas Watters, managing director for oil and gas at S&P Global Ratings. "Clearly, [producers are] in a good position when it comes to pricing.

Companies make money at these prices."

That price improvement is due to the current industry fundamentals compared to the round of late-2020 borrowing base redeterminations. Oil prices have averaged \$58.20/b in Q1 2021, up from \$40.92/b in Q3 2020, the quarter just prior to reevaluations six months ago.

### OIL PRICES STRENGTHEN IN Q1



### 'Going sideways'

On the other hand, certain companies might see bank credit lines slightly lower this season, including, for example, producers with a higher proportion of natural gas output.

Gas was "stressed" in Q1 2021, Jonathan Harms, managing director of the restructuring group at Opportune, noted. "I think banks are more about maintaining where levels are already instead of taking aggressive actions in this price environment."

"Overall, I probably characterize this year as going sideways on borrowing bases," Harms said. "No one will step out (lenders) and make a bold increase but they're not overtly looking to cause a problem in companies' liquidity either."

Operators' access to bank credit lines may also depend on the amount of drilling companies have done over the past year, Harms said.

"Sometimes the upside in commodity prices doesn't offset the amount of production roll-off that's occurred" over a given time span, he said.

### A focus on cash flow

While banks constantly review upstream companies' financials, they issue formal creditworthiness "report cards" to producer-borrowers twice a year, around April and again around October.

A big factor in E&P companies' financial health has been reserves, since they serve as a gauge of future cash generation. Reserve-based lending, or RBL, has been the gold standard in banks' determinations of how much access to cash they will grant producers.

However, in the current environment of less focus on production and more on reaping cash in the here and now, cash may play an increasing role in the evaluations, experts said.

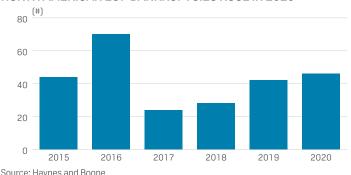
"RBL can be just an asset-backed loan where they aren't looking at cash flows, but it can also have financial covenants that look at cash flows the assets are actually generating," said Jeff Nichols, co-chair of the energy practice group at international law firm Haynes and Boone. Going forward, "there might be less emphasis on the asset-backed nature of it and more on cash flows."

Lending guidelines that came out in 2015, which marked the first year of a major multiyear oil price downturn, reflected a growing shift from an asset focus to more of a cash flow focus.

Now, six years later, public markets are "very focused" on cash flows, Nichols said.

The 2015 lending guidelines also suggested E&P operators keep their debt levels at less than 3.5 times debt/EBITDA, at a time when indebtedness could sometimes be 5x or even higher. Given today's climate of fiscal austerity, many operators have set a goal of 1.5x-2x, and some are even 1x or less.

### NORTH AMERICAN E&P BANKRUPTCIES ROSE IN 2020



### Bankruptcies to slow

Haynes and Boone is currently conducting its twice-year survey of bank borrowing base redeterminations, which will likely be released early in April.

The firm is also compiling a new quarterly updated Oil Bankruptcy Monitor to include O1 upstream bankruptcies. In 2020, there were 46 upstream bankruptcies, but that should drop this year with higher oil prices, Nichols said.

Consultancy Rystad Energy, which a year ago projected 170 bankruptcies this year, in an update from January 2021 lowered that to around 26 E&P bankruptcies this year and 22 in 2022, roughly in line with 2017-18 levels.

As the year progresses a lot of what happens for the October 2021 redeterminations round will depend on the stability of oil prices and how operators perform according to certain metrics like living within cash flow, paying down debt and controlling cost in the field.

For a lot of companies, it's a "prove-it year," Harms said.

— <u>Starr Spencer</u>

### Maduro offers Venezuelan oil for COVID-19 vaccines

- Maduro says has Venezuela has the oil tankers
- Calls for unfreezing funds in international banks

*Caracas, Venezuela*—Venezuelan President Nicolas Maduro has offered to trade oil for COVID-19 vaccine supplies.

The coronavirus has left more than 1,500 dead in the South American country.

"Venezuela has the oil tankers and would dedicate part of its production to guarantee all the vaccines that Venezuela needs. Oil

for vaccines!" said Maduro, in statements broadcast by Venezolana de Televisión on the night of March 28. "We are evaluating several ways to opt for the 20% of the vaccines that the Pan American Health Organization will allocate to the country."

Maduro's first option, he said, is to obtain the release of frozen financial resources under the control of the opposition. The government has more than \$7 billion frozen in international banks over which it has legal and diplomatic claims, he said.

"The government has tried to negotiate with the nations that have their money blocked through diplomatic, political, judicial channels, and has sent letters signed by all the political factors of the country, but they have not been successful," he said.

The Venezuelan government has imported vaccines from Russia and China, but its campaign has been insufficient to stop the current wave of COVID-19 cases.

In February, average crude output by Venezuela's PDVSA and its foreign partners rose to 570,000 b/d, or 50,000 b/d more than January and 120,000 b/d above the December average, according to daily production reports reviewed by S&P Global Platts.

Venezuela reported to OPEC an average crude production of 557,000 b/d for 2020. However, OPEC also published estimates from secondary sources showing an average of 493,000 b/d for Venezuela in 2020.

In 2019, average daily crude output in Venezuela was 1.01 million b/d, according to data submitted by the Venezuelan government to OPEC.

Venezuela's crude oil exports have fallen in parallel with its production. Additionally, US sanctions have restricted the availability of tankers willing to enter Venezuelan ports.

No updated export figures were available.

- Mery Mogollon

### **REFINERY UPDATES**

### Khartoum, Sudan

- Owner: Sudan (50%), CNPC (50%)
- Overall capacity: 5 million mt/year (around 100,000 b/d)

**Notes:** Sudan's Khartoum refinery has resumed operations after more than three months of closure following an annual routine maintenance aimed to increase its efficiency, Mahjoub Abdel Qader, the Director-General of Khartoum Refinery said.

"The refinery is now fully restored and has begun production with 80,000 b/d capacity of refined products", Abdel Qader said in a telephone interview.

According to local media reports the refinery restarted March 27 and will gradually ramp up operations to full capacity over the course of a week.

However Abdel Qader said that Sudan's Khartoum refinery is running at around 80% capacity due to a lack of enough crude, Sudan currently produces around 60,000 b/d.

The country also receives around 28,000 b/d of South Sudanese crude, Daniel Chuang, the under secretary ministry of petroleum of South Sudan said last year.

Repair works on the refinery began on Dec. 23 and were expected

to be concluded in 70 days but were delayed due to limitations of COVID 19 restrictions especially in getting spare parts in time.

There have been fears of a fuel crisis as well as a weakening economy due to delayed resumption, particularly as the country has previously faced severe fuel shortages when the refinery has been shut down, the last being in 2018.

Khartoum refinery is an equally-owned joint venture between China National Petroleum Corp. and the Sudan government.

The country has been relying exclusively on imported fuel while the country's main oil refinery is undergoing its routine maintenance.

The refinery will start with production of around 800 mt of gas, 3,000 mt of diesel and 5,000 mt of gasoline, Abdel Qader said.

The refinery will be able to ramp up to its full capacity after more crude supplies are either imported or locally produced, he added.

Last year in December, the Sudan National Petroleum Corporation (Sudapet) announced that it had discovered new oil wells in al-Rawat oilfield in White Nile state and was planning to increase the country's oil production by 3,000 b/d early this year.

Khartoum oil refinery is the country's only functioning refinery after the Port Sudan refinery closed in 2013 and was decommissioned.

The country aims to add 20,000 b/d in 2021, to offset high fuel costs associated with importation, Sudan's ministry of Petroleum said last year.

Source: official

### Bilbao, Spain

Owner: Repsol

Overall capacity (b/d): 220,000

Units affected: FCC, boiler

Unit capacity: 2.3 million mt/yr

Duration: March 26 – March 29

**Notes:** Spain's Petronor said March 29 it is restarting the fluid catalytic cracker at the refinery after it concluded a maintenance ahead of schedule. The unit was halted March 26 and seven days of work announced. The unit was previously halted in April 2020 for an undisclosed length of time.

Bilbao halted its number 2 crude distilation on Nov. 20, 2020 in reaction to weaker market conditions. The halt has affected 40% of the refinery's crude distilation and includes the visbreaking unit.

The company also took a boiler offline in plant 3 on March 28, without specifying the length of the work. Plant 3 is where most of the conversion units are located. The boiler has previously been taken offline March 15 and Jan. 24 this year.

Source: Company statement

### Wakayama, Japan

Owner: ENEOS

Overall capacity: 127,500 b/d

- Units affected: All units
- Units capacity: 127,500 b/d
- Duration: Shut after fire at 11:30 am local time March 29

**Notes:** Japan's largest refiner ENEOS shut all units at the sole 127,500 b/d Wakayama refinery in the western Japan after a fire March 29, a company official said March 29.

A fire broke out near the 39,000 b/d fluid catalytic cracker, or FCC, at around 11:30 am local time, but the fire was extinguished in a short time and no one was injured, the person said.

"For waterborne and rack shipments of oil products, we may temporarily stop, but we will continue to ship from inventory, and maintain a stable supply by transferring oil products from other refineries," the person added.

According to the person, it was not immediately clear when ENEOS would be able to restart the units.

"It will reduce domestic production of naphtha," said a naphtha trader, adding that while the refinery transfers naphtha to other locations via coastal tankers, there will be not much effect on the naphtha market.

On the gasoline front, news of another shut refinery in Asia is expected to have a bullish impact on the motor fuel complex.

"With this news coming on the heels of the Pertamina refinery fire, sentiment will become increasingly optimistic," one Singapore-based source said.

Like the Wakayama plant, state-owned Pertamina's 125,000 b/d Balongan refinery was forced to shut after a fire broke out at the complex at around 12:45 am local Indonesian time, Platts reported earlier.

Source: A company official

### Balikpapan, Indonesia

Owner: Pertamina

Overall capacity: 125,000 b/d

Unit affected: All units

Duration: Fire broke out 12.45 am local time, March 29

**Notes:** An incident has caused a fire at Indonesian Pertamina's Balongan refinery, forcing the company to shut the entire 125,000 b/d facility "to control the follow of oil and prevent the expansion of the fire," state-owned Pertamina said in a statement March 29.

The fire broke out at around 12.45 am local Indonesian time, at the T-301G tank, the company said in the statement.

The cause of the incident cannot be determined at this point in time and is still being investigated by the authorities.

Since February, the Balongan refinery has been going through upgrading works as part of the country's Refinery Master Development Program, Platts reported earlier.

The completion of the upgrade would have improved the flexibility of the refinery's crude slate, and raise the capacity of the plant's crude distillation unit to 150,000 b/d, from the current 125,000 b/d, as the expansion is mainly to increase the refinery's light distillate production. Source: company statement

### ASIA, MAR 29

			Mid	Change
Singapore (PGA page 2002)				
(\$/barrel)				
Naphtha	PAAAP00	62.22-62.26	62.240	-0.580
Jet kerosene	PJABF00	64.64-64.68	64.660	+1.130
Gasoil	POABC00	67.28-67.32	67.300	+0.990
Gasoil 10 ppm	AAOVC00	67.28-67.32	67.300	+0.990
Gasoil 50 ppm	AAPPF00	67.17-67.21	67.190	+0.990
Gasoil 0.05% S	AAFEX00	66.41-66.45	66.430	+0.990
Gasoil 0.25% S	AACUE00	66.08-66.12	66.100	+0.990
Gasoil 50 ppm disc/prem	ААРРН00	-0.370.33	-0.350	+0.030
Mogas 92 unl	PGAEY00	70.46-70.50	70.480	+1.310
Mogas 95 unl	PGAEZ00	72.64-72.68	72.660	+1.310
Mogas 97 unl	PGAMS00	73.90-73.94	73.920	+1.310
CFR Naphtha	AAOVF00		61.370	-0.550
Naphtha pap. (bal month)	AAPLD00	NA-NA	NA	NANA
Naphtha pap. (Apr)	PAAAQ00	61.58-61.62	61.600	-0.600
Naphtha pap. (May)	PAAAR00	60.88-60.92	60.900	-0.350
Kerosene pap. (bal month)	AAPLE00	NA-NA	NA	NANA
Kerosene pap. (Apr)	PJABS00	65.18-65.22	65.200	+1.080
Kerosene pap. (May)	РЈАВТ00	65.54-65.58	65.560	+1.040
Gasoil pap. (bal month)	AAPLF00	NA-NA	NA	NANA
Gasoil pap. (Apr)	POAFC00	67.49-67.53	67.510	+0.950
Gasoil pap. (May)	POAFG00	67.68-67.72	67.700	+0.900
(\$/mt)				
FO 180 CST 2%	PUAXS00	380.89-380.93	380.910	+0.710
HSF0 180 CST	PUADV00	372.51-372.55	372.530	+0.700
180 CST disc/premium	AAGZF00	1.06-1.10	1.080	+0.080

### CHINA, MAR 29 (PGA page 2010)

(\$/mt)	- ( - 1-3-	-,	Mid	Change
South China FOB				e.ioiige
Unl 92 RON	AAICW00	588.50-592.50	590.500	+11.500
South China, C&F				
Jet kerosene	РЈАВQ00	520.75-524.75	522.750	+8.750
Gasoil	POAFA00	503.50-507.50	505.500	+7.250
Hong Kong				
Fuel oil 380 CST	PUAER00	385.50-386.50	386.000	+1.000

### FUJAIRAH, FOB, MAR 29 (PGA page 2018)

(\$/mt)		Mid	Change
Naphtha	NFJSA00	567.980	-1.120
HSF0 380 CST	AFUJQ00	380.000	-0.760
(\$/barrel)			
Gasoline 95 unleaded	AFUJA00	73.600	+1.250
Gasoline 92 unleaded	RFJFS00	70.900	+1.260
Kerosene	AFUJF00	63.770	+1.090
Gasoil 10 ppm	AFUJP00	66.010	+0.930
Gasoil	AFUJK00	66.010	+0.930

(\$/mt)				
HSF0 380 CST	PPXDK00	366.71-366.75	366.730	+0.760
HSFO 180 CST pap. (bal month)	AAPML00	NA-NA	NA	NANA
HSFO 180 CST pap. (Apr)	PUAXZ00	371.75-371.79	371.770	+0.760
HSFO 180 CST pap. (May)	PUAYF00	370.00-370.04	370.020	+1.220
MTBE	PHALF00	701.00-703.00	702.000	+9.000
C&F Japan (PGA page 2006)				
(\$/barrel)				
(\$/barrel) Jet kerosene	PJAAN00	66.44–66.48	66.460	+1.080
* '	PJAAN00 PGACW00	66.44–66.48 72.60–72.64	66.460 72.620	+1.080
Jet kerosene				
Jet kerosene Mogas unl				
Jet kerosene Mogas unl (\$/mt)	PGACW00	72.60–72.64	72.620	+1.310

Singapore (continued)(PGA pages 2002 & 2655)

Change

66.690 +0.960

### C+F Australia (PGA page 2004)

Nph 1st 1/2 Jun

(\$/barrel)
Gasoil

(\$/barrel)				
Mogas 92 unl	AACZF00	73.51-73.55	73.530	+1.310
Mogas 95 unl	AACZH00	75.69-75.73	75.710	+1.310
Jet kerosene	AAFIY00	67.92-67.96	67.940	+1.130
Gasoil 10 ppm	AAQUD00	70.76-70.80	70.780	+0.990

РОЈАРОО

PAAAG00 569.75-570.25 570.000 -5.500

### ARAB GULF, FOB, MAR 29 (PGA page 2004)

(\$/mt)			MIO	Change
Naphtha	PAAAA00	537.49-542.74	540.115	-5.615
Naphtha LR2	AAIDA00	537.55-542.80	540.175	-5.495
HSF0 180 CST	PUABE00	358.94–358.98	358.960	+0.070
HSF0 380 CST	AAIDC00	353.14–353.18	353.160	+0.130
(\$/barrel)				
95 RON unleaded	AAICY00	70.03-70.07	70.050	+1.280
92 RON unleaded	AAGJA00		67.870	+1.280
Kerosene	РЈААА00	62.35-62.39	62.370	+1.110
Gasoil 10 ppm	AAIDT00	64.85-64.89	64.870	+0.970
Gasoil 0.05% S	AAFEZ00	64.25-64.29	64.270	+0.870
Gasoil 0.25% S	AACUA00	63.85-63.89	63.870	+0.870
Gasoil	POAAT00	64.85-64.89	64.870	+0.970

### ASIA PRODUCT PREMIUM/DISCOUNT ASSESSMENTS

ASIA PRODUCT	PKEMIUM	/ DISCOUNT F	OSESSIME	LIVIO
Mar 29			Mid	Change
MOP* Singapore (PGA	page 2002)			
(\$/barrel)				
Jet	РЈАСИ00	-0.62/-0.58	-0.600	+0.020
Gasoil 0.25% S	AACQI00	-1.46/-1.42	-1.440	+0.030
Gasoil	POAIC00	-0.26/-0.22	-0.240	+0.030
CFR Naphtha	AAOVG00		-0.100	+0.100
(\$/mt)				
380 CST	PPXDL00	1.05/1.09	1.070	-0.100
MOP* Arab Gulf (PGA p	page 2004)			
(\$/barrel)				
Jet	PJACV00	0.68/0.72	0.700	0.000
Gasoil 10 ppm	AAIDU00	0.83/0.87	0.850	0.000
Gasoil 0.25% S	AACUC00	-0.17/-0.13	-0.150	-0.100
Gasoil	POAID00	0.83/0.87	0.850	0.000
380 CST**	PPXDM00	-5.82/-5.78	-5.800	+0.060
(\$/mt)				
HSF0 180 CST	AAXJA00	26.98/27.02	27.000	-3.000
HSF0 380 CST	AAXJB00	25.23/25.27	25.250	-1.750
MOP* Japan (PGA page	2006)			
(\$/barrel)				
Naphtha	PAADI00	10.00/10.50	10.250	+0.250
MOP* West India (PGA	page 2012)			
(\$/mt)				
Gasoline (92 RON)	AARBQ00		584.620	+10.970
Gasoline (95 RON)	AAQWI00		595.880	+10.840
Naphtha	AAQWK00		549.540	-5.710
Jet kero	AAQWM00		496.350	+8.760
Gasoil (10 ppm)	AAQW000		498.370	+7.390
Gasoil (500 ppm)	AAQWQ00		480.440	+7.210
Gasoil (2500 ppm)	AAQWS00		477.990	+7.220
(\$/barrel)				
Gasoline (92 RON)	AARBP00		68.780	+1.290
Gasoline (95 RON)	AAQWH00		70.940	+1.290
Naphtha	00CWQAA		61.060	-0.630
Jet kero	AAQWL00		62.830	+1.110
Gasoil (10 ppm)	AAQWN00		65.400	+0.970
Gasoil (500 ppm)	AAQWP00		64.490	+0.970
Gasoil (2500 ppm)	AAQWR00		64.160	+0.970

<sup>\*</sup>Mean of Platts. \*\*=Differential to FOB Arab Gulf HSF0 180 CST.

### PLATTS INDEX, MAR 29 (PGA page 115)

			unange
Platts Jet Fuel Index	PJGL000	183.11	+0.170

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.

(\$/mt)			Mid	Change			Mid	Change
(PGA page 1114)								
	Cargoes	FOB Med basis Italy			Cargoes	CIF Med basis Geno	a/Lavera	
Prem unl 10 ppm	AAWZA00	610.75-611.25	611.000	+2.750	AAWZB00	622.50-623.00	622.750	+2.750
Naphtha physical	PAAAI00	525.50-526.00	525.750	-5.250	РАААН00	541.50-542.00	541.750	-5.250
Jet av. fuel	AAIDL00	499.50-500.00	499.750	-6.500	AAZBN00	520.00-520.50	520.250	-6.750
ULSD 10 ppm	AAWYY00	495.25-495.75	495.500	-6.500	AAWYZ00	509.50-510.00	509.750	-6.750
Gasoil 0.1%	AAVJI00	489.75-490.25	490.000	-5.500	AAVJJ00	504.75-505.25	505.000	-5.750
1% fuel oil	PUAAK00	413.50-414.00	413.750	-1.750	PUAAJ00	425.25-425.75	425.500	-2.000
3.5% fuel oil	PUAAZ00	342.00-342.50	342.250	-3.750	PUAAY00	353.75-354.25	354.000	-4.000
(PGA page 1110)								
	Cargoe	s FOB NWE			Car	goes CIF NWE basis	ARA	
Gasoline 10 ppm					AAXFQ00	625.25-625.75	625.500	-1.250
Naphtha swaps					РАААЈ00	550.75-551.25	551.000	-4.750
Naphtha physical					PAAAL00	552.50-553.00	552.750	-5.500
Jet kerosene	PJAAV00	511.25-511.75	511.500	-6.750	РЈААU00	521.50-522.00	521.750	-6.750
ULSD 10 ppm	AAVBF00	496.50-497.00	496.750	-6.750	AAVBG00	507.50-508.00	507.750	-6.750
Diesel 10 ppm NWE	AAWZD00	498.00-498.50	498.250	-6.750	AAWZC00	509.50-510.00	509.750	-6.750
Diesel 10 ppm UK					AAVBH00	511.25-511.75	511.500	-6.750
Diesel 10 ppm UK cargo	es				AUKDA00		511.250	-6.750
CIF NWE - original (Fren	ch) spec							
Gasoil 0.1%	AAYWR00	488.50-489.00	488.750	-6.250	AAYWS00	504.25-504.75	504.500	-6.250
1% fuel oil	PUAAM00	407.25-407.75	407.500	-1.500	PUAAL00	417.75-418.25	418.000	-1.500
3.5% fuel oil	PUABB00	337.00-337.50	337.250	-2.750	PUABA00	351.00-351.50	351.250	-2.750
(PGA pages 1112 & 1380)								
	Barges F	OB Rotterdam						
98 RON unl	AAKOD00	651.50-652.00	651.750	+7.750				
Prem unl	PGABM00	621.50-622.00	621.750	-1.250				
Reformate	AAXPM00		644.750	+7.000				
Eurobob	AAQZV00	614.50-615.00	614.750	+7.750				
E10 Eurobob	AGEFA00		619.000	+7.750				
Naphtha physical	PAAAM00	548.50-549.00	548.750	-5.500				
Jet kerosene	РЈАВА00	523.00-523.50	523.250	-6.250				
Diesel 10 ρρm*	AAJUS00	502.75-503.25	503.000	-6.250				
Gasoil 50 ppm	AAUQC00	498.00-498.50	498.250	-6.750				
Gasoil 0.1%*	AAYWT00	492.75-493.25	493.000	-6.250				
DMA MGO 0.1%*	LGARD00		486.000	-4.000				
1% fuel oil	PUAAP00	406.00-406.50	406.250	-1.500				
3.5% fuel oil	PUABC00	352.50-353.00	352.750	-2.750				
3.5% 500 CST fuel oil	PUAGN00	350.50-351.00	350.750	-2.750				
380 CST	PUAYW00	366.50-367.50	367.000	-3.000				
*FOB Amsterdam-Rotterdar	m Antworo							

		MIO	Change
West Africa cargo	es (PGA page 1122)		
	FOB	NWE	
Gasoline	AAKUV00	606.500	+3.250
	CIF Wes	st Africa	
Gasoline	AGNWC00	631.250	+3.750
	FOB STS V	Vest Africa	
Gasoil 0.3%	AGNWD00	507.000	-6.750

			Change	
Northwest Europe	е			
SAF	BJNWA00	2044.063	+19.130	
HV0	HVNWA00	1873.981	+16.510	
USWC				
SAF w/ credits	ASAFA00	1943.756	-4.349	
SAF w/o credits	ASAFB00	482.304	+3.084	
RD w/ credits	ARDFA00	1831.705	-2.905	
RD w/o credits	ARDFB00	207.407	+5.495	
Southeast Asia				
SAF	ASFAA00	1757.750	+6.570	
HVO	HVSAB00	1610.660	+5.490	

### PLATTS EURO DENOMINATED PRODUCT ASSESSMENTS

Mar 29			Mid	Change
Cargoes CIF NWE/ba	sis ARA (€/mt)	(PGA page 1116)		
Nap phy	AAQCE00	469.37-469.80	469.586	-3.708
Jet	AAQCF00	443.04-443.46	443.250	-4.821
Cargoes FOB NWE (P	'GA page 1116)			
1%	AAQCG00	345.98-346.40	346.190	-0.567
Barges FOB Rotterd	əm (€/mt) (PGA	page 1118)		
Prem unl	AAQCH00	527.99-528.42	528.205	+0.015
10 ρρm*	AAQCI00	427.11-427.53	427.321	-4.430
Gasoil 0.1%*	AAYWY00	418.61-419.04	418.826	-4.447
DMA MGO*	LGARE00		412.879	-2.551
3.50%	ААQСК00	299.47-299.89	299.677	-1.722
3.50% 500 CST	PUAG000	297.77-298.19	297.978	-1.725
			Mid	Change
Cargoes CIF West Af	rica (€/mt) (PGA	v page 1116)		
Gasoline	AANWC00		536.276	+4.271
Cargoes FOB NWE W	/est Africa (€/m	t) (PGA page 1116)		
Gasoline	AGNWA00		515.249	+3.803
Cargoes FOB STS We	est Africa (€/mt	(PGA page 1116)		
Gasoil 0.3%	AGNWE00		430.720	-4.846

Euro/US\$ forex rate: 1.1771. 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. \*FOB Amsterdam-Rotterdam-Antwerp.

### FUROPEAN FEEDSTOCKS AND BLENDSTOCKS

EURUPEAN FEEDSTUCKS AND BLENDSTUCKS					
				Change	
CIF Northwest Europe cargo (\$/mt) (PGF page 1760)					
VGO 0.5-0.6%	AAHMZ00	468.00-469.00	468.500	-2.750	
VGO 2%	AAHND00	460.00-461.00	460.500	-3.000	
FOB Northwest Europe	cargo (\$/mt	)			
VGO 0.5-0.6%	ААНМХ00	454.00-455.00	454.500	-2.750	
VGO 2%	AAHNB00	446.00-447.00	446.500	-3.000	
Straight Run 0.5-0.7%	PKABA00	442.50-443.50	443.000	-2.250	
FOB Black Sea cargo (\$	/mt)				
VGO 0.8%	ABBAD00		444.250	-2.500	
VGO 2%	ABBAC00		436.250	-2.500	
CIF Mediterranean carg	o (\$/mt)				
Straight Run 0.5-0.7%	OOTNCAA		436.500	-2.000	
VGO 0.8%	ABBAB00		459.000	-2.750	
VGO 2%	ABBAA00		451.000	-3.000	
FOB Rotterdam barge (\$/mt)					
MTBE*	PHALA00	691.50-692.00	691.750	+2.000	
VGO 0.5-0.6%	AAHNF00	444.25-445.25	444.750	-3.000	
VGO 2%	AAHNI00	436.50-437.50	437.000	-3.000	
*FOB Amsterdam-Rotterdam-Antwerp.					

### NEW YORK, MAR 29 (PGA page 152)

			Mid	Change					Mid	Change				Mid	Change	
		Cargo (¢/gal)				RVP		Barge (¢/gal)				RVP	Dif	ferentials to NYM	IEX	
Unl 87	AAMHG00	194.87-194.97	194.920	+2.990	AAMHGRV	13.5										
CBOB							AAWBL00	188.47-188.57	188.520	+2.040	AAWBLRV	13.5	AANYX14	-11.000	-0.750	
Prem CB0B							AAWLC00	209.47-209.57	209.520	+2.040	AAWLCRV	9.0	AANYX16	10.000	-0.750	
Unl RBOB	AAVKS00	189.97-190.07	190.020	+2.040	AAVKSRV	13.5	AAMGV00	188.47-188.57	188.520	+2.040	AAMGVRV	13.5	AANYX15	-11.000	-0.750	
Prem RB0B							AAMGY00	210.97-211.07	211.020	+2.040	AAMGYRV	7.4	AANYX17	11.500	-0.750	
Jet fuel							РЈААШ00	166.43-166.53	166.480	+0.980			ADIGA00	-14.500	+1.000	
LS jet kero							РЈАВЈ00	184.43-184.53	184.480	-0.020			ADIHA00	3.500	0.000	
ULS kero							AAVTI00	191.18-191.28	191.230	-0.020			ADJKH00	10.250	0.000	
No. 2							POAEG00	155.68-155.78	155.730	-0.020			ADIA000	-25.250	0.000	
ULSD							AATGX00	180.78-180.88	180.830	-0.020			ADIZA00	-0.150	0.000	
ULS heating oil							AAXPX00		165.730	-0.020			ADIAQ00	-15.250	0.000	
	С	argo ex-duty (¢/gal)	)*			RVP										
Hnl 97	*******	177 51_177 61	177 560	T3 U8U	AACAADV	135										

	C	argo ex-duty (¢/gal)	*			RVP			
Unl 87	AASAA00	177.51-177.61	177.560	+3.080	AASAARV	13.5			
Unl RB0B	AASAF00	172.64-172.74	172.690	+2.130	AASAFRV	13.5			
		(\$/barrel)					Di	ifferential vs 1s str	ip(\$/barrel)
No. 6 0.3% S hi pr	PUAAE00	77.40-77.42	77.410	+0.570			AAUGA00	13.24-13.26	13.250
No. 6 0.3% S lo pr	PUAAB00	77.40-77.42	77.410	+0.570			AAUGB00	13.24-13.26	13.250
No. 6 0.7% S max	PUAAH00	67.63-67.65	67.640	+0.490			AAUGC00	3.47-3.49	3.480
No. 6 1% S max	PUAA000	63.55-63.57	63.560	+0.600			AAUGD00	-0.610.59	-0.600
No. 6 1% S max 1s strip	AAUGG00	64.15-64.17	64.160	+0.600					
USAC HSFO	PUAAX00	56.74-56.76	56.750	+0.240			AAUGF00	-7.427.40	-7.410
No. 6.1 S max pap bal M	AARZS00	NA-NA	NA	NANA					
No. 6 1.0% S pap 1st M	PUAXD00	64.10-64.20	64.150	+0.600					
No. 6 1.0% S pap 2nd M	PUAXF00	64.05-64.15	64.100	+0.600					
No. 6 1.0% S pap qtrly	PUAXG00	64.03-64.13	64.080	+0.600					

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

### USAC CPL LINDEN\*, MAR 29 (PGA page 410)

	,										
(¢/gal)		Mid	Change	Differentials to NYMEX		Change		Cycle		RVP	
Unl 87	ACXPW00	194.920	+2.790	AANYX40	-4.600	0.000	ACRQWCY	16	ACRQWRV	11.5	
CBOB	ABXPW00	193.920	+2.790	AANYX41	-5.600	0.000	ABRQWCY	16	ABRQWRV	12.5	
RBOB	ADXPW00	197.770	+2.790	AANYX42	-1.750	0.000	ADRQWCY	16	ADRQWRV	11.5	
Jet kero 54	AAXPV00	167.230	+0.980	ADIJA00	-13.750	+1.000	AAXPVCY	16			
ULS heating oil	AAXPU00	169.230	-0.020	ADIAR00	-11.750	0.000	AAXPUCY	16			
ULSD	AAXPW00	183.230	-1.020	ADLAA00	2.250	-1.000	AAXPWCY	16			

<sup>\*</sup>Assessments reflect shipments on the next full pipeline cycle after the prompt cycle

189.22-189.32

AAUAT00 209.27-209.37

### PRODUCT PRICE ASSESSMENTS

### U.S. BUCKEYE PIPELINE, MAR 29 (PGA page 310)

(¢/gal)			Mid	Change		RVP	Differentials to	NYMEX	Change
Unl RBOB	AAMHB00	188.47-188.57	188.520	+2.640	AAMHBRV	13.5	AANYX35	-11.000	-0.150
Prem RB0B	AAMHZ00	210.97-211.07	211.020	+2.640	AAMHZRV	7.4	AANYX36	11.500	-0.150
CBOB	AAPSY00	188.47-188.57	188.520	+2.640	AAPSYRV	13.5	AANYX33	-11.000	-0.150
CBOB prem	AAPSZ00	209.47-209.57	209.520	+2.640	AAPSZRV	9.0	AANYX34	10.000	-0.150
ULSD	AATHF00	180.78-180.88	180.830	-0.020			ADIYA00	-0.150	0.000
Jet fuel	AAJNL00	166.43-166.53	166.480	+0.980			ADIEA00	-14.500	+1.000
LS jet/kero	AAJNN00	184.43-184.53	184.480	-0.020			ADIFA00	3.500	0.000
						RVP			
Laurel									

+2.640

+2.640

**AAUASRV** 

AAUATRV

13.5 AANYX29

10.0 AANYX30

189.270

209.320

All RVP references are after ethanol

Unl CBOB

Prem CB0B

### ATLANTIC RESID/CONTRACT CARGOES POSTED PRICES,

MAR 29 (PGA page 564)

(\$/barrel) Global	No. 4 Fuel
Boston 0.5%	PRALB00 93.80
Boston 1.0%	PRALD00 89.30
	No. 6 Fuel
Boston 0.5%	PRAMN00 92.00
Boston 1.0%	PRAMD00 81.70

Source: Global Montello Group Corp.

-10.250 -0.150

9.800 -0.150

### CHICAGO PIPELINE, MAR 29 (PGA page 160)

(¢/gal)			Mid	Change		RVP	Differentials	s to NYMEX	Change
Unleaded 87	PGACR00	199.04-199.14	199.090	+3.500	<b>PGACRRV</b>	9.0	AANYX98	-1.000	+0.500
Unleaded 89	PGAAX00	206.14-206.24	206.190	+3.500	PGAAXRV	9.0			
Prem. unl 91	PPASQ00	216.79-216.89	216.840	+3.500	PPASQRV	9.0	AANY100	16.750	+0.500
CB0B	AAREL00	198.04-198.14	198.090	+3.500	AARELRV	9.0	AANY101	-2.000	+0.500
PB0B	AAUEU00	224.79-224.89	224.840	+3.500	AAUEURV	7.4	AANY103	24.750	+0.500
RBOB	PPARH00	206.04-206.14	206.090	+3.500	PPARHRV	7.4	AANY102	6.000	+0.500
Jet fuel	PJAAF00	174.60-174.70	174.650	+0.260			ADILA00	-6.500	+0.250
ULS No. 1	PJACD00	208.85-208.95	208.900	+1.010					
ULSD	AATHA00	188.85-188.95	188.900	+1.010			ADLAI00	7.750	+1.000

### CHICAGO BUCKEYE COMPLEX, MAR 29 (PGA page 160)

(¢/gal)		Mid	Change		RVP	Differential	s to NYMEX	Change
CBOB	ACBAA00	198.090	+3.500	ACBAARV	9.0	ACBAB00	-2.000	+0.500
RBOB	ACBAC00	206.090	+3.500	ACBACRV	7.4	ACBAD00	6.000	+0.500
ULSD	ACBAE00	188.900	+1.010			ACBAF00	7.750	+1.000

### CHICAGO WOLVERINE PIPELINE, MAR 29 (PGA page 160)

(¢/gal)		Mid	Change		RVP	Dif	ferentials to NYMEX	Change
CBOB	AGCWA00	198.090	+3.500	<b>AGCWERV</b>	9.0	AGCWB00	-2.000	+0.500
ULSD	AGCWC00	188.900	+1.010			AGCWD00	7.750	+1.000

### GROUP THREE, MAR 29 (PGA page 160)

(¢/gəl)			Mid	Change		RVP	Differentials to	NYMEX	Change
Sub-octane	AAXIX00	195.97-196.07	196.020	+3.040	<b>AAXIXRV</b>	8.5	AANYX01	-3.500	+0.250
Prem. unleaded	PGABD00	209.72-209.82	209.770	+2.540	PGABDRV	8.5	AANYX02	10.250	-0.250
ULSD	AATHB00	184.68-184.78	184.730	-0.270			ADLAB00	3.750	-0.250
Jet fuel	PJAAI00	172.18-172.28	172.230	-0.020			ADIKA00	-8.750	0.000
No. 1	РЈАСВ00	194.68-194.78	194.730	-0.270					

### MARINE FUEL (PGA page 30)

		\$/mt	Change
0.5% FOB Singapore cargo	AMFSA00	469.880	+1.900
0.5% FOB Fujairah cargo	AMFFA00	470.110	-0.060
0.5% FOB Rotterdam barge	PUMFD00	449.250	-4.500
0.5% FOB US Gulf Coast barge	AUGMB00	468.000	+3.750
0.5% Dlvd US Atlantic Coast barge	AUAMB00	477.250	+3.500
0.5% FOB Mediterranean cargo	MFFMM00	451.500	-4.250
0.5% CIF Mediterranean cargo	MFCMM00	461.750	-4.750
		\$/barrel	
0.5% FOB US Gulf Coast barge	AUGMA00	73.700	+0.590
0.5% Dlvd US Atlantic Coast barge	AUAMA00	75.160	+0.550
	vs F0	380 MOPS str	iρ (\$/mt)
0.5% FOB Singapore cargo	AMOPA00	104.220	+1.040
	vs MF	0.5% MOPS st	riρ (\$/mt)
0.5% FOB Singapore cargo	FOFSB00	0.330	-0.250
0.5% FOB Singapore Bal mo	FOFS000	NA	NANA
0.5% FOB Singapore M1	FOFS001	469.550	+2.050
0.5% FOB Singapore M2	F0FS002	469.540	+3.290
0.5% FOB Singapore MOPS Strip	FOFSA00	469.550	+2.150

### U.S. GULF COAST, MAR 29

0.5. 00LI 00A51, PI			Mid	Change		,	Mid	Change							Mid Change		
Houston (PGA page 156)			1110	ononge		•	110	Onlinge							The onenge		
		Pipeline (¢/gəl	l)		Diffe	rential to NYMEX			(	Cycle		RVP		Waterborne (¢/gal	)		RVP
Unl 87	PGACT00	195.54-195.64		90 +4.500	AANY105		-4.500	+1.500	PGACTCY		<b>PGACTRV</b>	9.0	PGACU00	197.54-197.64		<b>PGACURV</b>	9.0
Unl 89	PGAAY00	198.42-198.52	2 198.4	70 +4.460					PGAAYCY	20	PGAAYRV	9.0	PGAAZ00	200.42-200.52	200.470 +4.460	PGAAZRV	9.0
Prem unl 93	PGAJB00	202.74-202.84	4 202.7	90 +4.400	AANYX76		2.700	+ 1.400	PGAJBCY	21	PGAJBRV	9.0	PGAIX00	204.74-204.84	204.790 +4.400	PGAIXRV	9.0
CBOB 87	AARQU00	189.54-189.64	189.5	90 +3.500	AANYX77	-1	0.500	+0.500	AARQUCY	20	AARQURV	10.0	AAWES00	191.54-191.64	191.590 +3.500	AAWESRV	10.0
CBOB 93	AARQV00	201.29-201.39	201.3	40 +4.400	AANYX78		2.700	+ 1.400	AARQVCY	20	AARQVRV	10.0					
RB0B 83.7	AAMFB00	195.79-195.89			AANYX79		-4.250		AAMFBCY		AAMFBRV	7.4					
RB0B 91.4	AAMNG00	205.29-205.39			AANYX80		5.250		AAMNGCY		AAMNGRV	7.4					
Jet/kero 54	РЈАВООО	160.75-160.85			ADIAS00		20.350		РЈАВОСҮ				РЈАВМ00		162.300 -0.090		
Jet/kero 55	РЈАВР00				ADIAZ00		19.850		РЈАВРСҮ				PJABN00		162.800 -0.090		
ULS Kero	AAVTL00				ADICA00		13.350		AAVTLCY				AAVTK00		169.300 -0.090		
ULSD	AATGY00	176.50-176.60			ADIQA00		-4.600	-0.220	AATGYCY				AATGZ00		177.550 -0.160		
No. 2	POAED00	160.00-160.10			ADIAA00		21.100	0.000	POAEDCY				POAEE00	164.50–164.60	164.550 +0.010		
ULS Heating Oil	AAXFD00	161.20–161.30	161.2	50 -0.110	ADIAI00	-1	19.900	-0.120	AAXFDCY	21							
	Waterbo	rne vs prompt pi															
Jet Spread	AUSGL00			0.000													
ULSD Spread	AUSGN00		1.0	00 +0.050													
No. 2 Spread	AUSGM00		4.5	0.000													
		FOB Cargo (¢/ga	al)		FOI	3 Cargo (\$/mt)											
Export ULSD	AAXRV00		161.8	90 +0.080	AAXRW00	50	06.550	+0.250									
	FOB Card	go vs forward pip	oe strio (	¢/oal)													
ULSD Mexico	AUSGH00	,0 10 .0		00 +0.100													
ULSD Brazil	AUSGA00			50 +0.050													
ULSD EN590	AUSGB00			50 0.000													
Jet A	AUSGC00		1.5	00.000													
Jet A-1	AUSGD00		2.0	0.000													
	Colonial	Pipeline Gasoline	e Line Sp	oace (¢/gal)					(	Cycle							
Line 1	AAXTA00		-0.3	0.000					<b>AAXTACY</b>	20							
Line 3	AAXTB00		0.0	0.000					AAXTBCY	20							
Line 1+3	AAXTC00		-0.3	0.000					AAXTCCY	20							
	Colonial	Pipeline Distillate			)												
Line 2	AAXTD00			50 0.000					AAXTDCY								
Line 3	AAXTE00			0.000					AAXTECY								
Line 2+3	AAXTG00		-0.7	50 0.000					AAXTGCY	21							
		(\$/barrel)			Differential v	s USGC HSFO st	riρ (\$/t	oarrel)					ι	JSGC HSFO Strip (\$	/barrel)		
Slurry Oil	PPAPW00	64.27-64.29	64.2	80 +0.230	AAUGS00	9.12-9.14	9.130	0.000									
No. 6 1.0% S 6 API	PUAAI00	64.15–64.17		60 +0.580	AAUGT00		9.010										
USGC HSF0	PUAFZ00	54.27-54.29		80 +0.230	AAUGU00	-0.880.86		0.000					AAUGW00	55.14-55.160	55.150 +0.230		
RMG 380	PUBDM00	54.27-54.29		80 +0.230	AAUGV00	-0.880.86	-0.870	0.000									
USGC HSFO swap BalMo(Mar	,	NA-NA		NA NANA													
USGC HSFO swap M1(Apr)	PUAXJ00	55.10-55.20		50 +0.250													
USGC HSFO swap M2(May)	PUAXL00	55.10-55.20		50 +0.300													
USGC HSFO swap Q1( Q2 21)	PUAXN00	55.05–55.15	55.1	00 +0.280													
(PGA page 330)																	
		RVP Adjustment															
CBOB -1 psi	AGLOB00			00 -0.400													
Prem CBOB -1 psi	AGLOC00			00 -0.700													
CBOB +1 psi	AGLOA00		-1.4														
Prem CBOB +1 psi	AGHOA00		-1.5	0.000													

### U.S. GULF COAST

0.3. GOLI COAST								
			Mid	Change		Mid	Change	Mid Change
(PGF page 760)								
		Waterborne (¢/ga	I)		Diff vs USGC wa	terborne 87 (¢/gal)		
FOB Naphha Cargo	AAXJP00	143.20-143.30	143.25	0 -3.250				
FOB Naphha Cargo (\$/mt)	AAXJU00	541.45-541.55	541.50	0 -12.250				
Naphtha USGC vs	ANAPD00		-23.75	0 -8.750				
Naphtha MOPJ (\$/mt)								
DAP LSR Naphtha Parcel	AAXQK00		141.75	0 +0.750				
DAP LSR Naphtha Parcel (\$/m	t) AAXQM00		568.42	0 +3.010				
DAP LSR Naphtha Parcel diff**	AAXQN00		2.25	0.000				
Naphtha barge	AALPG00	156.54-156.64	156.59	0 +6.500	AASGZ00	-41.000		
Heavy naphtha barge	AALPI00	158.54-158.64	158.59	0 +6.500	AASHD00	-39.000		
MTBE	PHAKX00	211.79-211.89	211.84	0 +3.110				
								Diff vs USGC pipeline 87 (¢/qal)
Alkylate*	AAXBA00		204.16	0 +4.190	AAFIE00	7.500	0.000	AAXBD00 9.500 0.000
Raffinate*	AAXBB00		157.66	0 +4.190	AAJMU00	-39.000	0.000	AAXBEØØ -37.000 0.000
Reformate*	AAXBC00		226.16	0 +4.190	AAJMV00	29.500	0.000	AAXBF00 31.500 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, MAR 29 (PGA page 156)

(¢/gal)		<u>Pipeline</u>	Mid		<u>Cycle</u>		RVP			<u>Pipeline</u>	Mid		<u>Cycle</u>	RVP
Gasoline														
Unl-87	AAELC00	195.54-195.64	195.590	AAELCCY	20	AAELCRV	9.0	ULSD	00WCUAA	176.40-176.50	176.450	AAUJWCY	22	
Unl-87	AAELD00	195.09-195.19	195.140	AAELDCY	21	AAELDRV	9.0	ULSD	AAUJX00	176.30-176.40	176.350	AAUJXCY	23	
Unl-87	AAELE00	194.64-194.74	194.690	AAELECY	22	AAELERV	9.0	ULSD	OOYCUAA	176.20-176.30	176.250	AAUJYCY	24	
Unl-87	AAELF00	194.19-194.29	194.240	AAELFCY	23	AAELFRV	9.0	ULSD	AAUJZ00	176.25-176.35	176.300	AAUJZCY	25	
Unl-87	AAELG00	193.74-193.84	193.790	AAELGCY	24	AAELGRV	9.0	ULSD	AAUKD00	176.30-176.40	176.350	AAUKDCY	26	
Unl-87	AAELH00	193.29-193.39	193.340	AAELHCY	25	AAELHRV	9.0	No. 2	AAELW00	160.00-160.10	160.050	AAELWCY	21	
CBOB 87	AARQW00		189.190	AARQWCY	21	AARQWRV	10.0	ULS heating oil	AAXFJ00	161.20-161.30	161.250	AAXFJCY	21	
CBOB 87	AARQX00		188.840	AARQXCY	22	AARQXRV	10.0	ULS heating oil	AAXFK00	161.10-161.20	161.150	AAXFKCY	22	
CBOB 87	AARQY00		188.490	AARQYCY	23	AARQYRV	10.0	ULS heating oil	AAXFL00	161.00-161.10	161.050	AAXFLCY	23	
CBOB 87	AARQZ00		188.140	AARQZCY	24	AARQZRV	10.0	ULS heating oil	AAXFM00	160.90-161.00	160.950	AAXFMCY	24	
CBOB 87	AARQA00		187.790	AARQACY	25	AARQARV	10.0	ULS heating oil	AAXFN00	160.95-161.05	161.000	AAXFNCY	25	
Distillates								ULS heating oil	AAXFP00	161.00-161.10	161.050	AAXFPCY	26	
Jet kero	AAELQ00	160.75-160.85	160.800	AAELQCY	21			Forward pipeline stri	iρ					
Jet kero	AAELR00	160.70-160.80	160.750	AAELRCY	22			ULSD 15-30 Day	AUSGI00		176.350			
Jet kero	AAELS00	160.65-160.75	160.700	AAELSCY	23			ULSD 21-35 Day	AUSGJ00		176.380			
Jet kero	AAELT00	160.60-160.70	160.650	AAELTCY	24			ULSD 7-21 Day	AUSGK00		176.300			
Jet kero	AAELU00	160.75-160.85	160.800	AAELUCY	25			Jet Fuel 15-30 Day	AUSGE00		160.710			
Jet kero	AAELV00	160.90-161.00	160.950	AAELVCY	26			Jet Fuel 21-35 Day	AUSGF00		160.810			
ULSD	AAUJV00	176.50-176.60	176.550	AAUJVCY	21			Jet Fuel 7-21 Day	AUSGG00		160.560			

### WEST COAST PIPELINE, MAR 29 (PGA page 158)

			Mid	Change		RVP			Mid	Change
California										
(¢/gal)		Los Angeles						Differential to NYMEX		
Unl 84	AAUHA00	207.29-207.39	207.340	+3.750	AAUHARV	9.0	AANYX84		7.250	+0.750
Prem unl 90	PGABG00	223.29-223.39	223.340	+3.750	PGABGRV	9.0	AANYX85		23.250	+0.750
CARBOB	ААКҮЈ00	208.29-208.39	208.340	+3.750	AAKYJRV	6.0	AANVX00	8.20/8.30	8.250	+0.750
CARBOB prem	AAKYL00	224.29-224.39	224.340	+3.750	AAKYLRV	6.0	AANYX86		24.250	+0.750
Jet fuel	РЈААР00	167.60-167.70	167.650	+0.010			AANVY00	-13.55/-13.45	-13.500	0.000
ULS (EPA) diesel	POAET00	185.10-185.20	185.150	-0.740			AANVZ00	3.95/4.05	4.000	-0.750
CARB diesel	POAAK00	184.10-184.20	184.150	-1.740			AANWA00	2.95/3.05	3.000	-1.750
(¢/gal)		San Francisco						Differential to NYMEX		
Unl 84	PGADG00	209.04-209.14	209.090	+6.000	PGADGRV	7.8	AANYX87		9.000	+3.000
Prem unl 90	PGAB000	225.04-225.14	225.090	+6.000	PGABORV	7.8	AANYX88		25.000	+3.000
CARBOB unl	AAKYN00	209.04-209.14	209.090	+6.000	AAKYNRV	6.0	AANYX89		9.000	+3.000
CARBOB prem	AAKYP00	225.04-225.14	225.090	+6.000	AAKYPRV	6.0	AANYX90		25.000	+3.000
Jet Fuel	РЈАВС00	167.60-167.70	167.650	+0.010			ADINA00		-13.500	0.000
ULS (EPA) diesel	POAEY00	184.85-184.95	184.900	-2.240			ADLAE00		3.750	-2.250
CARB diesel	POAAL00	184.85-184.95	184.900	-2.240			ADLAF00		3.750	-2.250
Other West										
(¢/gal)		Phoenix						Differential to NYMEX		
CBG/RBOB unl	AADDP00	210.04-210.14(a)	210.090	+3.750	AADDPRV	8.0	AANYX91		10.000	+0.750
CBG/RBOB prem	PPXDJ00	218.04-218.14(b)	218.090	+3.750	PPXDJRV	8.0	AANYX92		18.000	+0.750
Northwest										
(¢/gal)		Seattle						Differential to NYMEX		
Unl 84	AAXJE00	192.82-192.92	192.870	+2.790	AAXJERV	13.5	AANYX93		-6.650	0.000
Prem unl 90	AAXJF00	211.82–211.92	211.870	+2.790	AAXJFRV	13.5	AANYX94		12.350	0.000
Jet fuel	РЈАВВОО	167.60-167.70	167.650	+0.010			ADIOA00		-13.500	0.000
ULS (EPA) diesel	AAUEX00	184.78-184.88	184.830	-0.020			ADLAH00		-1.150	0.000
(¢/gal)		Portland						Differential to NYMEX		
Unl 84	AAXJC00	196.97–197.07	197.020	+2.790	AAXJCRV	7.8	AANYX95		-2.500	0.000
UIII 84				. 0.700	44475514	7.8			16.500	0.000
Prem unl 90	AAXJD00	215.97-216.07	216.020	+2.790	AAXJDRV	7.0	AANYX96		10.500	

WEST COAST WATERBORNE, MAR 29 (PGA page 158)

(¢/gal)			Mid	Change
Unl 87	PGADI00	207.29-207.39	207.340	+3.750
Jet fuel	РЈАВІ00	166.60-166.70	166.650	+0.010

LATIN AMERICA, FOB,		\$/barrel	Mid	Change			
Araontina		φ/σσιτσι	1110	onongo			
Argentina			71.010				
ULSD CIF	AAXWZ00		71.810	-0.010			
Colombia							
FO 1.75% S FOB	PPAR000	57.14-57.16	57.150	+0.240			
Diluent Naphtha Ex-Ship	AAXYB00		60.120	+0.480			
Ecuador							
F0 2.2% S F0B	PPASL00	52.44-52.46	52.450	+0.240			
RON 93 CIF	AAXYC00		77.830	+1.340			
ULSD CIF	AAXWF00		71.240	+0.020			
Peru							
Naphtha FOB	PAAAS00	62.18-62.20	62.190	+1.860			
FO 1.6% S FOB	PPARK00	54.64-54.66	54.650	+0.240			
Natural Gasoline FOB	AAXWD00	34.04 34.00	54.870	-0.060			
ULSD CIF	AAXWY00		71.490	+0.020			
OLOD OII	AAMTOO		11.100	70.020		Peso/liter	Channe
Mexico cargo						1 030/1101	Onlonge
Gasoline CIF Eastern Mexico	AAXWA00		75.720	+1.470	AATFH00	9.820	+0.200
Gasoline CIF Rosarito	AATFA00		78.660	+1.520	AATFK00	10.200	+0.210
Gasoline CIF Lazaro Cardenas	AATFD00		78.190	+1.520	AATFN00	10.140	+0.210
ULSD CIF Eastern Mexico	AATFD00		68.620	+0.160	AATFI00	8.900	+0.210
ULSD CIF Rosarito			71.980	+0.100		9.340	+0.030
ULSD CIF Rosanto ULSD CIF Lazaro Cardenas	AATFB00 AATFE00		71.980	+0.020	AATFL00	9.300	+0.020
Jet CIF Eastern Mexico	AATFG00		68.720	-0.010	AATFJ00	8.920	+0.030
Jet CIF Rosarito	AATFC00		71.270	0.000	AATFM00	9.250	+0.020
Jet CIF Lazaro Cardenas	AATFF00		71.680	+0.120	AATFP00	9.300	+0.030
				10.120	AATFFOO	3.300	10.030
CARIBBEAN CARGOES	S, FOB, N	<b>1AR 29</b> (PGA page	e 162)				
			Mid	Change			
		\$/mt					
Jet kerosene	PJAAD00	544.55–544.61	544.580	-0.800			
lot karaaana	D744D40	¢/gal	100 500	0.040			
Jet kerosene	PJAAD10	162.55–162.57	162.560	-0.240			
No. 6 2.0% S	PUAAS00	<b>\$/barrel</b> 54.11–54.13	54.120	+0.410			
			34.120	10.410			
TRINIDAD PRODUCT P	OSTING	<b>S</b> (PGA page 466)					
Effective date 18Mar21							
Encoure date for large		¢/gal					
Mogas 92 RON Unleaded	PPRAE00	222.00					
Mogas 95 RON Unleaded	PPRAE00	227.00					
Dual Purpose Kerosene	PPRAB00	178.00					
Gasoil 45 Cetane 0.1%S	PPRAC00	182.00					
555511 -75 OCTORE 0. 1 705	FRACOO	\$/b					
Bunker C Fuel Oil	PPRAA00	70.00					
Source: Paria		. 5.55					

GAS LIQUIDS	(¢/gal),	MAR 29	(PGA page 780)
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σ το Εισοίου (φ. go.), τ. μ. τ. συ (το προβοίου)			Mid	Change
		Mont Belvieu		
Ethane/propane	PMUDA05	20.575-20.675	20.625	+0.250
Ethane purity	PMUDB05	21.575-21.675	21.625	-0.375
Ethane mo. 2	AAWUC00	21.950-22.050	22.000	-0.250
Propane	PMAAY00	90.325-90.425	90.375	-0.125
Propane LST	PMABQ00	89.950-90.050	90.000	+0.500
Propane mo. 2	AAWUD00	89.075-89.175	89.125	+0.625
Propane mo. 2 LST	AAWUE00	88.575-88.675	88.625	+2.125
Normal butane non-LST	PMAAI00	94.950-95.050	95.000	+3.000
Butane LST	PMABR00	94.950-95.050	95.000	+3.000
N-Butane mo. 2	AAWUF00	94.700-94.800	94.750	+3.000
Isobutane	PMAAB00	93.575-93.675	93.625	+3.000
Natural gasoline LST	AAIVF00	140.450-140.550	140.500	+0.250
Natural Targa	PMABW05	140.450-140.550	140.500	0.000
Natural non-Targa	PMABY05	139.450-139.550	139.500	0.000
Nat gasoline mo. 2 non-Targa	AAWUG00	138.200-138.300	138.250	-0.500
		Conway		
Ethane/propane	PMAA000	22.950-23.050	23.000	0.000
Propane	РМААТ00	84.450-84.550	84.500	+2.000
Normal butane non-LST	PMAAD00	89.950-90.050	90.000	+3.000
Isobutane	PMAAA00	101.200-101.300	101.250	-4.500
Natural gasoline	РМААQ00	135.950-136.050	136.000	-0.750
		Other hubs		
Hattiesburg propane	AALBC00	90.950–91.050	91.000	-1.000
		(\$/mt)		
Waterborne FOB USGC propane	AAXIM00	467.540–467.560	467.550	+4.690
FOB USGC propane vs. Mt Belvieu	AAXI000	29.950–29.970	29.960	0.000
VLGC freight rates Houston to NWE	AAXIQ00	33.990–34.010	34.000	0.000
VLGC freight rates Houston to Japan	AAXIS00	69.990–70.010	70.000	0.000
VEGO Height rotes mouston to opport	AAAISOO	03.330 10.010	10.000	0.000
		(¢/gal)		
Waterborne FOB USGC propane	AAXIN00	89.730–89.750	89.740	+0.900
FOB USGC propane vs. Mt Belvieu	AAXIP00	5.700-5.800	5.750	0.000
VLGC freight rates Houston to NWE	AAXIR00	6.475-6.575	6.525	0.000
VLGC freight rates Houston to Japan	AAXIT00	13.430-13.450	13.440	0.000

### **CRUDE PRICE ASSESSMENTS**

### ASIA PACIFIC/MIDDLE EAST SPOT CRUDE ASSESSMENTS (\$/barrel), MAR 29

		Assessment (Asi			Diffs (Asian MOC)			Diff to Date	Diff to Dated Brent (Asian MOC)			Assessn	nent (London	
			Mid	Change		Mid	Change		Mid	Change			Mid	Change
Condensate					Diff. D. b. i			(1	PGA page 2212	2)			(PGA page 2213	3)
NW Shelf	PCAGX00	62.80-62.84	62.820	+0.770	<u>Diff to Dubai</u>			AAPAI00	-0.500	-0.050		ААРАН00	62.820	-0.390
DFC	ADFCA00	61.42-61.46	61.440	+0.750	ADFCB00 -0.50/-0.40	-0.450	-0.050	ADFCC00	-1.880	-0.070		ADFCD00	61.440	-0.410
Qatar LSC	AARBB00	61.12-61.16	61.140	+0.750	AARBD00 -0.80/-0.70	-0.750	-0.050	AARBC00	-2.180	-0.070		AARBA00	61.140	-0.410
South Pars	AARAV00	56.92–56.96	56.940	+0.750	AARAX00 -5.00/-4.90	-4.950	-0.050	AARAW00	-6.380	-0.070		AARAU00	56.940	-0.410
Senipah	AAEOE00	63.05-63.09	63.070	+0.770	Diff to ICP AAEOK00 -0.10/0.00	-0.050	-0.050	AAPBE00	-0.250	-0.050		AAPBD00	63.070	-0.390
Light									PGA page 2214				(PGA page 2215	
					Diff to ICP									
Cossack	PCAGZ00	63.05-63.09	63.070	+0.520				AAPAC00	-0.250	-0.300		AAPAB00	63.070	-0.640
Gippsland	PCACP00	60.35-60.39	60.370	+0.770				AAPAU00	-2.950	-0.050		AAPAT00	60.370	-0.390
Tapis	PCACB00	63.95–63.99 60.60–60.64	63.970	+0.820 +0.770	PCAFM00 -0.15/-0.05	-0.100	-0.050	AAOZW00	0.650 -2.700	0.000 -0.050		AAOZV00	63.970 60.620	-0.340 -0.390
Belida Kutubu	PCAFL00	62.90-62.94	60.620 62.920	+0.770	PCAFM00 -0.15/-0.05	-0.100	-0.050	AAPACOO	-2.700	-0.050		AAPBP00	62.920	-0.390
Handil Mix	PCAFJ00 PCABE00	61.65-61.69	61.670	+0.770	PCABF00 0.10/0.20	0.150	-0.050	AAPAE00 AAPBI00	-1.650	-0.050		AAPAD00 AAPBH00	62.920	-0.390
Attaka	PCABLOO PCAAJOO	60.40–60.44	60.420	+0.770	PCABPOO 0.10/0.20 PCAAKOO -1.00/-0.90	-0.950	-0.050	AAPBC00	-2.900	-0.050		AAPBB00	60.420	-0.390
Ardjuna	PCACQ00	55.85-55.89	55.870	+0.820	PCACR00 -3.10/-3.00	-3.050	0.000	AAPBG00	-7.450	0.000		AAPBF00	55.870	-0.340
Banyu Urip	PCAFQ00	00.00 00.00	64.320	+0.820	PCAQQ00	0.000	0.000	AAPBU00	1.000	0.000		AAPBR00	64.320	-0.340
Borrya orr.p	200		0020	0.020	Diff to Dubai	0.000	0.000	70.11 2000	1,000	0.000		7511 51100	0020	0.0.0
Sakhalin Blend	AARBN00	63.97-64.01	63.990	+0.800	AARCN00 2.05/2.15	2.100	0.000	AARDN00	0.670	-0.020		AAREN00	63.990	-0.360
Sokol	AASCJ00	64.77-64.81	64.790	+0.800	AASCK00 2.85/2.95	2.900	0.000	AAPA000	1.470	-0.020		AAPAN00	64.790	-0.360
Kikeh	AAWUH00	64.95-64.99	64.970	+0.820				AAOZY00	1.650	0.000		AAOZX00	64.970	-0.340
Miri Light	PCABQ00	64.75-64.79	64.770	+0.820				AAPAS00	1.450	0.000		AAPAR00	64.770	-0.340
Labuan	PCABL00	65.25-65.29	65.270	+0.820				AAPAQ00	1.950	0.000		AAPAP00	65.270	-0.340
Kimanis	AASCL00		65.370	+0.820				AASCM00	2.050	0.000		AASCN00	65.370	-0.340
Medium									PGA page 2216				(PGA page 2217	
Nanhai	PCAFR00	57.30-57.34	57.320	+0.820				AAPAG00	-6.000	0.000		AAPAF00	57.320	-0.340
Minas*	PCAB000		60.210	+0.880								AAPAZ00	60.210	-0.280
Nile Blend	AAPLC00	63.20-63.24	63.220	+0.770				AAPAM00	-0.100	-0.050		AAPAL00	63.220	-0.390
Widuri*	PCAFE00	FO OF FO OO	54.910	+0.830					4.050	0.050		AAPBN00	54.910	-0.330
Daging	PCAAZ00	59.25–59.29	59.270	+0.770 +0.905				AAPAW00	-4.050	-0.050		AAPAV00	59.270	-0.390
Cinta* Su Tu Den	PCAAX00 AARAR00	64.20-64.24	56.660 64.220	+0.770				AARAS00	0.900	-0.050		AAPBJ00	56.660 64.220	-0.255 -0.390
Bach Ho	PCAHY00	66.00–66.04	66.020	+0.770				AAPAK00	2.700	-0.050		AARAQ00 AAPAJ00	66.020	-0.390
Heavy	PCAHTOO	00.00-00.04	00.020	10.770					PGA page 2218			AAPAJOO	(PGA page 2219	
licovy					Diff to ICP			(1	OA page 2210	)			(FOA page 2219	·)
Dar Blend	AARAB00	66.70-66.74	66.720	+0.770	<u> </u>			AARAC00	3.400	-0.050		AARAA00	66.720	-0.390
Shengli	PCABY00	65.25–65.29	65.270	+0.770				AAPAY00	1.950	-0.050		AAPAX00	65.270	-0.390
Duri	PCABA00	68.65-68.69	68.670	+0.770	PCABB00 4.15/4.25	4.200	-0.050	AAPBM00	5.350	-0.050		AAPBL00	68.670	-0.390
Vincent	AARAK00		75.720	+0.770				AARAL00	12.400	-0.050		AARAJ00	75.720	-0.390
*Market Parity Price.					(DOA 0000)					(DOA	- 0000)			
					(PGA page 2220) Spread vs OSP			Diff	to Dubai	(PGA pag	ge 2202)			
Murban M1	AAKNL00	63.53-63.57	63.550	+1.150	AAKUB00 0.05/0.15	0.100	0.000	AARBZ00	to Duosi	1.660	+0.350			
Murban M2	MBNSA00	00.00 00.01	63.010	+1.010	AARODOO 0.03/0.13	0.100	0.000	AARDZOO		1.000	10.550			
Murban M3	MBNSB00		62.390	+0.950										
Al Shaheen	AAPEV00	63.17-63.21	63.190	+1.100				AAPEW00	1.25/1.35	1.300	+0.300			
Upper Zakum	AAOUQ00	63.03-63.07	63.050	+1.000	AAOUR00 -0.05/0.05	0.000	0.000					Assessme	nt (Asian MOC	)
Umm Lulu	AUFAA00		63.500	+1.150	AUFAB00	0.100	0.000	Dubai CFR I				PCAQA00	64.010	+1.060
Das Blend	AAXOF00	63.18-63.22	63.200	+1.150	AAXPF00 0.05/0.15	0.100	0.000		CFR North As	sia		PCAQI00	62.900	+0.340
Qatar Land	AAKNP00	63.08-63.12	63.100	+1.200	-0.15/-0.05	-0.100	0.000	Oman CFR				PCAQJ00	64.300	+1.200
Qatar Marine	AAKNR00	62.93–62.97	62.950	+1.000	AAKUH00 -0.15/-0.05	-0.100	0.000		ım CFR North			PCAQB00	63.990	+1.060
Banoco Arab Medium	AAKNT00	62.73-62.77	62.750	+0.900	AAKUD00 -0.30/-0.20	-0.250	0.000		e CFR North	Asia		PCAQC00	63.890	+1.050
Basrah Light M1	AALZA00		63.850	+1.000	AALZE00	-0.100	+0.050		R North Asia	A - ! -		PCAQE00	64.450	+1.200
Basrah Light M2	AALZB00		63.350	+1.000	AALZF00	-0.250	+0.050	Basrah Ligh	nt CFR North	ASI8		PCAQK00	64.310	+1.060
Basrah Medium M1 Basrah Medium M2	BSMAM01		63.500 62.950	+0.950 +0.900	BSMBM01	0.750 0.450	0.000	ESPO CFR N Forties CFR				PCAQD00	63.790 65.805	+0.850 +0.785
Basrah Heavy M1	BSMAM02 AALZC00		62.250	+0.900	BSMBM02 AALZJ00	1.000	0.000	Dalia CFR N				PCAQF00 PCAQG00	64.185	+0.785
Basrah Heavy M2	AALZD00		61.800	+1.000	AALZKOO	0.750	0.000		R North Asia	1		PCAQH00	64.750	+0.750
DOSIGIT FICOVY I'IL	MALLUUU	-	01.000	11.000	MALLINOU	0.130	0.000	₩ III PILIT GI	IN INDI LIII MOIC	,		гсаупоо	04.130	. 0.330

### **CRUDE PRICE ASSESSMENTS**

Change   PCA page 2210	INTERNATIONAL, MA	R 29			
Dubai (May)         PCAAT00         63.04-63.06         63.050         +1.000           Dubai (Jun)         PCAAU00         62.50-62.52         62.510         +0.860           Dubai (Jul)         PCAAV00         61.88-61.90         61.890         +0.800           MEC (May)         AAWSA00         63.04-63.06         63.050         +1.000           MEC (Jun)         AAWSE00         62.50-62.52         62.510         +0.860           MEC (Jul)         AAWSE00         61.88-61.90         61.890         +0.800           Oman (May)         PCABS00         63.34-63.36         63.350         +1.150           Oman (Jun)         AAHZF00         62.80-62.82         62.810         +1.010           Oman cash/OSP (May)         PCABT00         -1.06-1.02         -1.040         +1.070           (PGA page 1212)         Brent (DTD)         PCABT00         63.26-63.27         63.265         -0.535           DTD NSL         AAOFD00         63.26-63.27         63.265         -0.535           Dated Brent (CIF)         PCAKM00         64.24-64.26         64.250         -0.280           Brent (May)         PCARR00         64.20-64.22         64.210         -0.220           Brent (May)         PCARR00 </th <th>(\$/barrel)</th> <th></th> <th></th> <th>Mid</th> <th>Change</th>	(\$/barrel)			Mid	Change
Dubai (Jun)         PCAAU00         62.50-62.52         62.510         +0.860           Dubai (Jul)         PCAAV00         61.88-61.90         61.890         +0.800           MEC (May)         AAMSA00         63.04-63.06         63.050         +1.000           MEC (Jun)         AAMSB00         62.50-62.52         62.510         +0.860           MEC (Jul)         AAMSC00         61.88-61.90         61.890         +0.800           Oman (May)         PCABS00         63.34-63.36         63.350         +1.150           Oman (Jun)         AAHZF00         62.80-62.82         62.810         +1.010           Oman (Jul)         AAHZF00         62.18-62.20         62.190         +0.950           Oman cash/OSP (May)         PCABT00         -1.06-1.02         -1.040         +1.070           (PGA page 1212)         PCABT00         63.26-63.27         63.265         -0.535           DTD NSL         AAOFD00         63.26-63.27         63.265         -0.535           Dated Brent (CIF)         PCAKM00         64.180         -0.475           Brent (May)         PCAAR00         64.20-64.22         64.210         -0.220           Brent (Jul)         PCARR00         63.60         -0.310 <th>(PGA page 2210)</th> <th></th> <th></th> <th></th> <th></th>	(PGA page 2210)				
Dubai (Jul)         PCAAV00         61.88–61.90         61.890         +0.800           MEC (May)         AAWSA00         63.04–63.06         63.050         +1.000           MEC (Jun)         AAWSB00         62.50–62.52         62.510         +0.860           MEC (Jul)         AAWSC00         61.88–61.90         61.890         +0.800           Oman (May)         PCABS00         63.34–63.36         63.350         +1.150           Oman (Jun)         AAHZF00         62.80–62.82         62.810         +1.010           Oman (Jul)         AAHZF00         62.18–62.20         62.190         +0.950           Oman cash/OSP (May)         PCABT00         -1.06–1.02         -1.040         +1.070           (PGA page 1212)         PCABT00         63.26–63.27         63.265         -0.535           DTD NSL         AAOFD00         63.26–63.27         63.265         -0.535           DTD NSL         AAOFD00         63.26–63.27         63.265         -0.535           Brent (May)         PCAAQ00         64.24–64.26         64.250         -0.280           Brent (Jun)         PCARR00         63.600         -0.310           North Sea Basket         AAGIZ00         63.602         3.610         +	Dubai (May)	РСААТ00	63.04-63.06	63.050	+1.000
MEC (May)         AAWSA00         63.04-63.06         63.050         +1.000           MEC (Jun)         AAWSB00         62.50-62.52         62.510         +0.860           MEC (Jul)         AAWSC00         61.88-61.90         61.890         +0.800           Oman (May)         PCABS00         63.34-63.36         63.350         +1.150           Oman (Jun)         AAHZF00         62.80-62.82         62.810         +1.010           Oman (Jul)         AAHZF00         62.18-62.20         62.190         +0.950           Oman cash/OSP (May)         PCABT00         -1.06-1.02         -1.040         +1.070           (PGA page 1212)         Brent (DTD)         PCABS00         63.26-63.27         63.265         -0.535           DTD NSL         AA0FD00         63.26-63.27         63.265         -0.535           Dated Brent (CIF)         PCAMC00         64.28-64.26         64.250         -0.280           Brent (May)         PCAAR00         64.20-64.22         64.210         -0.220           Brent (Jun)         PCARR00         63.600         -0.310           North Sea Basket         AAGIZ00         63.60-63.61         63.605         -0.395           (PGA page 218)         Brent WTI 1st         A	Dubai (Jun)	PCAAU00	62.50-62.52	62.510	+0.860
MEC (Jun)         AAWSB00         62.50-62.52         62.510         +0.860           MEC (Jul)         AAWSC00         61.88-61.90         61.890         +0.800           Oman (May)         PCABS00         63.34-63.36         63.350         +1.150           Oman (Jun)         AAHZF00         62.80-62.82         62.810         +1.010           Oman cash/OSP (May)         PCABT00         -1.06-1.02         -1.040         +1.070           (PGA page 1212)         PCABT00         -1.06-1.02         -1.040         +1.070           Brent (DTD)         PCABS00         63.26-63.27         63.265         -0.535           DTD NSL         AA0FD00         63.26-63.27         63.265         -0.535           Dated Brent (CIF)         PCAKM00         64.28-64.26         64.280         -0.280           Brent (May)         PCAAR00         64.24-64.26         64.250         -0.280           Brent (Jun)         PCAAR00         64.20-64.22         64.210         -0.220           Brent (Jul)         PCARR00         63.60-63.61         63.605         -0.395           PGA page 218)         Prestrum (Jul)         PCARR00         63.60-63.61         63.605         -0.395           PGA page 218)         Br	Dubai (Jul)	PCAAV00	61.88-61.90	61.890	+0.800
MEC (Jul)         AAWSC00         61.88–61.90         61.890         +0.800           Oman (May)         PCABS00         63.34–63.36         63.350         +1.150           Oman (Jun)         AAHZF00         62.80–62.82         62.810         +1.010           Oman (Jul)         AAHZH00         62.18–62.20         62.190         +0.950           Oman cash/OSP (May)         PCABT00         -1.06–1.02         -1.040         +1.070           (PGA page 1212)         PCABT00         -1.06–3.27         63.265         -0.535           DTD NSL         AA0FD00         63.26–63.27         63.265         -0.535           Dated Brent (CIF)         PCAKM00         64.24–64.26         64.250         -0.280           Brent (May)         PCARR00         64.24–64.26         64.210         -0.220           Brent (Jun)         PCARR00         64.20–64.22         64.210         -0.220           Brent (Jul)         PCARR00         63.60–63.61         63.605         -0.395           IPGA page 218)         Prent (May)         AAGIZ00         63.60–63.61         63.605         -0.395           IPGA page 218)         Brent/WTI 1st         AALAU00         3.60/3.62         3.610         +0.050           Br	MEC (May)	AAWSA00	63.04-63.06	63.050	+1.000
Oman (May)         PCABS00         63.34–63.36         63.350         ±1.150           Oman (Jun)         AAHZF00         62.80–62.82         62.810         ±1.010           Oman (Jul)         AAHZH00         62.18–62.20         62.190         ±0.950           Oman cash/OSP (May)         PCABT00         -1.06—1.02         -1.040         ±1.070           (PGA page 1212)         PCABT00         -1.06—1.02         -1.040         ±1.070           Brent (DTD)         PCABS00         63.26–63.27         63.265         -0.535           DTD NSL         AAOFD00         63.26–63.27         63.265         -0.535           Dated Brent (CIF)         PCAKM00         64.26–64.26         64.250         -0.280           Brent (May)         PCAAQ00         64.24–64.26         64.210         -0.220           Brent (Jul)         PCARR00         63.60–63.61         63.605         -0.395           IPGA page 218)         PCARR00         63.60–63.61         63.605         -0.395           IPGA page 218)         Brent/WTI 1st         AALAU00         3.60/3.62         3.610         +0.050           Brent WTI 2nd         AALAV00         3.60/3.62         3.610         +0.140           Brent EFP (May)         <	MEC (Jun)	AAWSB00	62.50-62.52	62.510	+0.860
Oman (Jun)         AAHZF00         62.80-62.82         62.810         +1.010           Oman (Jul)         AAHZH00         62.18-62.20         62.190         +0.950           Oman cash/OSP (May)         PCABT00         -1.06-1.02         -1.040         +1.070           (PGA page 1212)         PCABS00         63.26-63.27         63.265         -0.535           DTD NSL         AAOFD00         63.26-63.27         63.265         -0.535           Dated Brent (CIF)         PCAKM00         64.26-64.26         64.250         -0.280           Brent (May)         PCARQ00         64.24-64.26         64.250         -0.280           Brent (Jun)         PCARR00         64.20-64.22         64.210         -0.220           Brent (Jul)         PCARR00         63.60-63.61         63.605         -0.395           Brent (Jul)         PCARR00         63.60-63.61         63.605         -0.395           (PGA page 218)         Brent/WTI 1st         AALAU00         3.60/3.62         3.610         +0.050           Brent/WTI 2nd         AALAV00         3.60/3.62         3.610         +0.140           Brent EFP (May)         AAGVX00         0.10/0.12         0.110         +0.080           Brent EFP (Jun)         <	MEC (Jul)	AAWSC00	61.88-61.90	61.890	+0.800
Oman (Jull)         AAHZH00         62.18-62.20         62.190         +0.950           Oman cash/OSP (May)         PCABT00         -1.06—1.02         -1.040         +1.070           (PGA page 1212)         PCABS00         63.26-63.27         63.265         -0.535           DTD NSL         AAOFD00         63.26-63.27         63.265         -0.535           Dated Brent (CIF)         PCAKM00         64.28-64.26         64.250         -0.280           Brent (May)         PCAAQ00         64.24-64.26         64.250         -0.280           Brent (Jun)         PCARR00         64.20-64.22         64.210         -0.220           Brent (Jul)         PCARR00         63.60-63.61         63.605         -0.395           Brent (Jul)         PCARR00         63.60-63.61         63.605         -0.395           Morth Sea Basket         AAGIZ00         63.60-63.61         63.605         -0.395           Brent/WTI 1st         AALAU00         3.60/3.62         3.610         +0.050           Brent/WTI 2nd         AALAV00         3.60/3.62         3.610         +0.140           Brent EFP (May)         AAGV00         3.290         +0.060           Brent EFP (Jun)         AAGV00         0.10/0.12 <td< td=""><td>Oman (May)</td><td>PCABS00</td><td>63.34-63.36</td><td>63.350</td><td>+1.150</td></td<>	Oman (May)	PCABS00	63.34-63.36	63.350	+1.150
Oman cash/OSP (May)         PCABT00         -1.06—1.02         -1.040         +1.070           (PGA page 1212)         PCAAS00         63.26–63.27         63.265         -0.535           DTD NSL         AA0FD00         63.26–63.27         63.265         -0.535           Dated Brent (CIF)         PCAKN00         64.180         -0.475           Brent (May)         PCAAQ00         64.24–64.26         64.250         -0.280           Brent (Jun)         PCARR00         64.20–64.22         64.210         -0.220           Brent (Jul)         PCARR00         63.60–63.61         63.605         -0.310           North Sea Basket         AAGIZ00         63.60–63.61         63.605         -0.395           (PGA page 218)         Prent/WTI 1st         AALAU00         3.60/3.62         3.610         +0.050           Brent/WTI 2nd         AALAV00         3.60/3.62         3.610         +0.050           Brent EFP (May)         AAGVX00         0.10/0.12         0.110         +0.080           Brent EFP (Jun)         AAGVX00         0.11/0.13         0.120         +0.050           Swaps(PGA page 2658)         Dubai (Apr)         AAHBN00         61.87–61.91         61.890         +0.800           Dubai (May) <td>Oman (Jun)</td> <td>AAHZF00</td> <td>62.80-62.82</td> <td>62.810</td> <td>+1.010</td>	Oman (Jun)	AAHZF00	62.80-62.82	62.810	+1.010
PCAA page 1212    Brent (DTD)	Oman (Jul)	AAHZH00	62.18-62.20	62.190	+0.950
Brent (DTD)         PCAASØØ         63.26–63.27         63.265         -0.535           DTD NSL         AAOFDØØ         63.26–63.27         63.265         -0.535           Dated Brent (CIF)         PCAKMØØ         64.180         -0.475           Brent (May)         PCAAQØØ         64.24–64.26         64.250         -0.280           Brent (Jun)         PCAARØØ         64.20–64.22         64.210         -0.220           Brent (Jul)         PCARØØ         63.680         -0.310           North Sea Basket         AAGIZØØ         63.60–63.61         63.605         -0.395           (PGA page 218)         PERT/WTI 1st         AALAUØØ         3.60/3.62         3.610         +0.050           Brent/WTI 2nd         AALAVØØ         3.60/3.62         3.610         +0.050           Brent EFP (May)         AAGAVØØ         0.10/0.12         0.110         +0.080           Brent EFP (Jun)         AAGVØØ         0.11/0.13         0.120         +0.050           Brent EFP (Jul)         AAMVØØ         0.130         +0.050           Swaps(PGA page 2658)         Dubai (Apr)         AAHBØØ         62.49–62.53         62.510         +0.800           Dubai (May)         AAHBØØØ         61.87–61.91         6	Oman cash/OSP (May)	PCABT00	-1.061.02	-1.040	+1.070
DTD NSL         AAOFD00         63.26–63.27         63.265         -0.535           Dated Brent (CIF)         PCAKM00         64.180         -0.475           Brent (May)         PCAAQ00         64.24–64.26         64.250         -0.280           Brent (Jun)         PCAAR00         64.20–64.22         64.210         -0.220           Brent (Jul)         PCAR00         63.680         -0.310           North Sea Basket         AAGIZ00         63.60–63.61         63.605         -0.395           (PGA page 218)         PERT/WTI 1st         AALAU00         3.60/3.62         3.610         +0.050           Brent/WTI 2nd         AALAV00         3.60/3.62         3.610         +0.050           Brent/WTI 3rd         AALAV00         3.290         +0.060           Brent EFP (May)         AAGVX00         0.10/0.12         0.110         +0.080           Brent EFP (Jun)         AAGVX00         0.11/0.13         0.120         +0.050           Swaps(PGA page 2658)         Dubai (Apr)         AAH800         62.49-62.53         62.510         +0.860           Dubai (May)         AAH800         61.87-61.91         61.880         +0.800           Dubai (Jun)         AAH8000         61.30-61.34         61	(PGA page 1212)				
Dated Brent (CIF)         PCAKM00         64.180         -0.475           Brent (May)         PCAAQ00         64.24-64.26         64.250         -0.280           Brent (Jun)         PCAAR00         64.20-64.22         64.210         -0.220           Brent (Jul)         PCARR00         63.680         -0.310           North Sea Basket         AAGIZ00         63.60-63.61         63.605         -0.395           (PGA page 218)         Pertri (WTI 1st         AALAU00         3.60/3.62         3.610         +0.050           Brent/WTI 2nd         AALAV00         3.60/3.62         3.610         +0.140           Brent/WTI 3rd         AALAV00         3.290         +0.060           Brent EFP (May)         AAGVX00         0.10/0.12         0.110         +0.080           Brent EFP (Jun)         AAGVX00         0.11/0.13         0.120         +0.050           Brent EFP (Jul)         AAMVY00         0.130         +0.050           Swaps(PGA page 2658)         Dubai (Apr)         AAHBM00         62.49-62.53         62.510         +0.800           Dubai (May)         AAHBM00         61.87-61.91         61.890         +0.800           Dubai (Jun)         AAHB000         61.30-61.34         61.320	Brent (DTD)	PCAAS00	63.26-63.27	63.265	-0.535
Brent (May)         PCAAQ00         64.24-64.26         64.250         -0.280           Brent (Jun)         PCAAR00         64.20-64.22         64.210         -0.220           Brent (Jul)         PCARR00         63.680         -0.310           North Sea Basket         AAGIZ00         63.60-63.61         63.605         -0.395           (PGA page 218)         Frent/WTI 1st         AALAU00         3.60/3.62         3.610         +0.050           Brent/WTI 2nd         AALAV00         3.60/3.62         3.610         +0.140           Brent EFP (May)         AAGVX00         0.10/0.12         0.110         +0.080           Brent EFP (Jun)         AAGVX00         0.11/0.13         0.120         +0.050           Brent EFP (Jul)         AAMVY00         0.130         +0.050           Swaps(PGA page 2658)         Dubai (Apr)         AAHBM00         62.49-62.53         62.510         +0.800           Dubai (May)         AAHBM00         61.87-61.91         61.890         +0.800           Dubai (May)         AAHBM00         61.30-61.34         61.320         +0.770           MOG (Apr)         AAHZ00         62.79-62.83         62.810         +1.010           MOG (Jun)         AAHZ00         61.60	DTD NSL	AAOFD00	63.26-63.27	63.265	-0.535
Brent (Jun)         PCAAR00         64.20-64.22         64.210         -0.220           Brent (Jul)         PCARR00         63.680         -0.310           North Sea Basket         AAGIZ00         63.60-63.61         63.605         -0.395           (PGA page 218)         AALAU00         3.60/3.62         3.610         +0.050           Brent/WTI 1st         AALAV00         3.60/3.62         3.610         +0.140           Brent/WTI 2nd         AALAV00         3.290         +0.060           Brent EFP (May)         AAGVX00         0.10/0.12         0.110         +0.080           Brent EFP (Jun)         AAGVX00         0.11/0.13         0.120         +0.050           Brent EFP (Jul)         AAMVY00         0.130         +0.050           Swaps(PGA page 2658)         Dubai (Apr)         AAHBM00         62.49-62.53         62.510         +0.800           Dubai (May)         AAHBM00         61.87-61.91         61.890         +0.800           Dubai (Jun)         AAHB000         62.79-62.83         62.810         +1.010           MOG (Apr)         AAHZ00         62.17-62.21         62.190         +0.950           MOG (Jun)         AAHZ00         61.60-61.64         61.620         +0.920	Dated Brent (CIF)	PCAKM00		64.180	-0.475
Brent (Jul)         PCARR00         63.680         -0.310           North Sea Basket         AAGIZ00         63.60-63.61         63.605         -0.395           (PGA page 218)         Brent/WTI 1st         AALAU00         3.60/3.62         3.610         +0.050           Brent/WTI 2nd         AALAV00         3.60/3.62         3.610         +0.140           Brent/WTI 3rd         AALAV00         3.290         +0.060           Brent EFP (May)         AAGVX00         0.10/0.12         0.110         +0.080           Brent EFP (Jun)         AAGVY00         0.11/0.13         0.120         +0.050           Swaps(PGA page 2658)         Dubai (Apr)         AAHBM00         62.49-62.53         62.510         +0.800           Dubai (May)         AAHBM00         61.87-61.91         61.890         +0.800           Dubai (Jun)         AAHB000         61.30-61.34         61.320         +0.770           MOG (Apr)         AAHZ00         62.79-62.83         62.810         +1.010           MOG (May)         AAHZ00         61.60-61.64         61.620         +0.950           MOG (Jun)         AAHZ00         62.17-62.21         62.190         +0.950           Oman/Dubai Swap (Apr)         AAIHJ00	Brent (May)	PCAAQ00	64.24-64.26	64.250	-0.280
North Sea Basket         AAGIZ00         63.60−63.61         63.605         −0.395           (PGA page 218)           Brent/WTI 1st         AALAU00         3.60/3.62         3.610         +0.050           Brent/WTI 2nd         AALAV00         3.60/3.62         3.610         +0.140           Brent/WTI 3rd         AALAV00         3.290         +0.060           Brent EFP (May)         AAGVX00         0.10/0.12         0.110         +0.080           Brent EFP (Jun)         AAGVY00         0.11/0.13         0.120         +0.050           Swaps(PGA page 2658)         Dubai (Apr)         AAHBM00         62.49−62.53         62.510         +0.860           Dubai (May)         AAHBM00         61.87−61.91         61.890         +0.800           Dubai (May)         AAHBM00         61.30−61.34         61.320         +0.770           MOG (Apr)         AAHZ00         62.79−62.83         62.810         +1.010           MOG (May)         AAHZ00         62.17−62.21         62.190         +0.950           MOG (Jun)         AAHZ100         62.17−62.21         62.190         +0.950           Oman/Dubai Swap (Apr)         AAIHJ00         0.28/0.32         0.300         +0.150	Brent (Jun)	PCAAR00	64.20-64.22	64.210	-0.220
Rent/WTI 1st	Brent (Jul)	PCARR00		63.680	-0.310
Brent/WTI 1st         AALAU00         3.60/3.62         3.610         +0.050           Brent/WTI 2nd         AALAV00         3.60/3.62         3.610         +0.140           Brent/WTI 3rd         AALAY00         3.290         +0.060           Brent EFP (May)         AAGVV00         0.10/0.12         0.110         +0.080           Brent EFP (Jun)         AAGVV00         0.11/0.13         0.120         +0.050           Brent EFP (Jul)         AAMVV00         0.130         +0.050           Swaps(PGA page 2658)         Dubai (Apr)         AAHBM00         62.49-62.53         62.510         +0.860           Dubai (May)         AAHBM00         61.87-61.91         61.890         +0.800           Dubai (Jun)         AAHB000         61.30-61.34         61.320         +0.770           MOG (Apr)         AAHZ000         62.17-62.21         62.810         +1.010           MOG (May)         AAHZ000         62.17-62.21         62.190         +0.950           MOG (Jun)         AAHZ100         61.60-61.64         61.620         +0.920           Oman/Dubai Swap (Apr)         AAIH000         0.28/0.32         0.300         +0.150	North Sea Basket	AAGIZ00	63.60-63.61	63.605	-0.395
Brent/WTI 2nd         AALAV00         3.60/3.62         3.610         +0.140           Brent/WTI 3rd         AALAY00         3.290         +0.060           Brent EFP (May)         AAGYX00         0.10/0.12         0.110         +0.080           Brent EFP (Jun)         AAGYY00         0.11/0.13         0.120         +0.050           Brent EFP (Jul)         AAMYY00         0.130         +0.050           Swaps(PGA page 2658)         Dubai (Apr)         AAHBM00         62.49-62.53         62.510         +0.860           Dubai (May)         AAHBN00         61.87-61.91         61.890         +0.800           Dubai (Jun)         AAHB000         61.30-61.34         61.320         +0.770           MOG (Apr)         AAHZ00         62.17-62.21         62.190         +0.950           MOG (May)         AAHZ00         61.60-61.64         61.620         +0.920           Oman/Dubai Swap (Apr)         AAIHJ00         0.28/0.32         0.300         +0.150           Oman/Dubai Swap (May)         AAIHL00         0.28/0.32         0.300         +0.150	(PGA page 218)				
Brent/WTI 3rd         AALAY00         3.290         +0.060           Brent EFP (May)         AAGYX00         0.10/0.12         0.110         +0.080           Brent EFP (Jun)         AAGYY00         0.11/0.13         0.120         +0.050           Brent EFP (Jul)         AAMYY00         0.130         +0.050           Swaps(PGA page 2658)         Dubai (Apr)         AAHBM00         62.49-62.53         62.510         +0.860           Dubai (May)         AAHBN00         61.87-61.91         61.890         +0.800           Dubai (Jun)         AAHB000         61.30-61.34         61.320         +0.770           MOG (Apr)         AAHZP00         62.79-62.83         62.810         +1.010           MOG (May)         AAHZR00         62.17-62.21         62.190         +0.950           MOG (Jun)         AAHZT00         61.60-61.64         61.620         +0.920           Oman/Dubai Swap (Apr)         AAIHJ00         0.28/0.32         0.300         +0.150	Brent/WTI 1st	AALAU00	3.60/3.62	3.610	+0.050
Brent EFP (May)         AAGVX00         0.10/0.12         0.110         +0.800           Brent EFP (Jun)         AAGVY00         0.11/0.13         0.120         +0.050           Brent EFP (Jul)         AAMVY00         0.130         +0.050           Swaps(PGA page 2658)         Dubai (Apr)         AAHBM00         62.49–62.53         62.510         +0.860           Dubai (May)         AAHBN00         61.87–61.91         61.890         +0.800           Dubai (Jun)         AAHB000         61.30–61.34         61.320         +0.770           MOG (Apr)         AAHZP00         62.79–62.83         62.810         +1.010           MOG (May)         AAHZR00         62.17–62.21         62.190         +0.950           MOG (Jun)         AAHZT00         61.60–61.64         61.620         +0.920           Oman/Dubai Swap (Apr)         AAIHJ00         0.28/0.32         0.300         +0.150           Oman/Dubai Swap (May)         AAIHL00         0.28/0.32         0.300         +0.150	Brent/WTI 2nd	AALAV00	3.60/3.62	3.610	+0.140
Brent EFP (Jun)         AAGVV00         0.11/0.13         0.120         +0.050           Brent EFP (Jul)         AAMVV00         0.130         +0.050           Swaps(PGA page 2658)           Dubai (Apr)         AAHBM00         62.49–62.53         62.510         +0.860           Dubai (May)         AAHBN00         61.87–61.91         61.890         +0.800           Dubai (Jun)         AAHB000         61.30–61.34         61.320         +0.770           MOG (Apr)         AAHZP00         62.79–62.83         62.810         +1.010           MOG (May)         AAHZR00         62.17–62.21         62.190         +0.950           MOG (Jun)         AAHZT00         61.60–61.64         61.620         +0.920           Oman/Dubai Swap (Apr)         AAIHJ00         0.28/0.32         0.300         +0.150           Oman/Dubai Swap (May)         AAIHL00         0.28/0.32         0.300         +0.150	Brent/WTI 3rd	AALAY00		3.290	+0.060
Brent EFP (Jul)         AAMVY00         0.130         +0.050           Swaps(PGA page 2658)         Dubai (Apr)         AAHBM00         62.49–62.53         62.510         +0.860           Dubai (May)         AAHBN00         61.87–61.91         61.890         +0.800           Dubai (Jun)         AAHB000         61.30–61.34         61.320         +0.770           MOG (Apr)         AAHZP00         62.79–62.83         62.810         +1.010           MOG (May)         AAHZR00         62.17–62.21         62.190         +0.950           MOG (Jun)         AAHZT00         61.60–61.64         61.620         +0.920           Oman/Dubai Swap (Apr)         AAIHJ00         0.28/0.32         0.300         +0.150           Oman/Dubai Swap (May)         AAIHL00         0.28/0.32         0.300         +0.150	Brent EFP (May)	AAGVX00	0.10/0.12	0.110	+0.080
Swaps(PGA page 2658)           Dubai (Apr)         AAHBM00         62.49–62.53         62.510         +0.860           Dubai (May)         AAHBN00         61.87–61.91         61.890         +0.800           Dubai (Jun)         AAHB000         61.30–61.34         61.320         +0.770           MOG (Apr)         AAHZP00         62.79–62.83         62.810         +1.010           MOG (May)         AAHZR00         62.17–62.21         62.190         +0.950           MOG (Jun)         AAHZT00         61.60–61.64         61.620         +0.920           Oman/Dubai Swap (Apr)         AAIHJ00         0.28/0.32         0.300         +0.150           Oman/Dubai Swap (May)         AAIHL00         0.28/0.32         0.300         +0.150	Brent EFP (Jun)	AAGVY00	0.11/0.13	0.120	+0.050
Dubai (Apr)         AAHBM00         62.49–62.53         62.510         +0.860           Dubai (May)         AAHBN00         61.87–61.91         61.890         +0.800           Dubai (Jun)         AAHB000         61.30–61.34         61.320         +0.770           MOG (Apr)         AAHZP00         62.79–62.83         62.810         +1.010           MOG (May)         AAHZR00         62.17–62.21         62.190         +0.950           MOG (Jun)         AAHZT00         61.60–61.64         61.620         +0.920           Oman/Dubai Swap (Apr)         AAIHJ00         0.28/0.32         0.300         +0.150           Oman/Dubai Swap (May)         AAIHL00         0.28/0.32         0.300         +0.150	Brent EFP (Jul)	AAMVY00		0.130	+0.050
Dubai (May)         AAHBN00         61.87-61.91         61.890         +0.800           Dubai (Jun)         AAHB000         61.30-61.34         61.320         +0.770           MOG (Apr)         AAHZP00         62.79-62.83         62.810         +1.010           MOG (May)         AAHZR00         62.17-62.21         62.190         +0.950           MOG (Jun)         AAHZT00         61.60-61.64         61.620         +0.920           Oman/Dubai Swap (Apr)         AAIHJ00         0.28/0.32         0.300         +0.150           Oman/Dubai Swap (May)         AAIHL00         0.28/0.32         0.300         +0.150	Swaps(PGA page 2658)				
Dubai (Jun)         AAHB000         61.30-61.34         61.320         +0.770           MOG (Apr)         AAHZP00         62.79-62.83         62.810         +1.010           MOG (May)         AAHZR00         62.17-62.21         62.190         +0.950           MOG (Jun)         AAHZT00         61.60-61.64         61.620         +0.920           Oman/Dubai Swap (Apr)         AAIHJ00         0.28/0.32         0.300         +0.150           Oman/Dubai Swap (May)         AAIHL00         0.28/0.32         0.300         +0.150	Dubai (Apr)	AAHBM00	62.49-62.53	62.510	+0.860
MOG (Apr)         AAHZP00         62.79–62.83         62.810         +1.010           MOG (May)         AAHZR00         62.17–62.21         62.190         +0.950           MOG (Jun)         AAHZT00         61.60–61.64         61.620         +0.920           Oman/Dubai Swap (Apr)         AAIHJ00         0.28/0.32         0.300         +0.150           Oman/Dubai Swap (May)         AAIHL00         0.28/0.32         0.300         +0.150	Dubai (May)	AAHBN00	61.87-61.91	61.890	+0.800
MOG (May)         AAHZR00         62.17-62.21         62.190         +0.950           MOG (Jun)         AAHZT00         61.60-61.64         61.620         +0.920           Oman/Dubai Swap (Apr)         AAIHJ00         0.28/0.32         0.300         +0.150           Oman/Dubai Swap (May)         AAIHL00         0.28/0.32         0.300         +0.150	Dubai (Jun)	AAHB000	61.30-61.34	61.320	+0.770
MOG (Jun)         AAHZT00         61.60-61.64         61.620         +0.920           Oman/Dubai Swap (Apr)         AAIHJ00         0.28/0.32         0.300         +0.150           Oman/Dubai Swap (May)         AAIHL00         0.28/0.32         0.300         +0.150	MOG (Apr)	AAHZP00	62.79-62.83	62.810	+1.010
Oman/Dubai Swap (Apr)         AAIHJ00         0.28/0.32         0.300         +0.150           Oman/Dubai Swap (May)         AAIHL00         0.28/0.32         0.300         +0.150	MOG (May)	AAHZR00	62.17-62.21	62.190	+0.950
Oman/Dubai Swap (May) AAIHL00 0.28/0.32 0.300 +0.150	MOG (Jun)	AAHZT00	61.60-61.64	61.620	+0.920
	Oman/Dubai Swap (Apr)	AAIHJ00	0.28/0.32	0.300	+0.150
Oman/Dubai Swap (Jun) AAIHN00 0.28/0.32 0.300 +0.150	Oman/Dubai Swap (May)	AAIHL00	0.28/0.32	0.300	+0.150
	Oman/Dubai Swap (Jun)	AAIHN00	0.28/0.32	0.300	+0.150

### ASIA (\$/barrel), MAR 29 (PGA page 2210)

			Mid	Change
Brent (May)	PCAJG00	64.18-64.22	64.200	+0.720
Brent (Jun)	PCAJI00	64.09-64.13	64.110	+0.700
Brent (Jul)	РСАЈ000		63.630	+0.640
Brent(DTD)	AAXPG00		63.470	+0.685
Brent/Dubai	AAJMS00	1.14/1.16	1.150	-0.280
WTI (May)	AAFFU00	60.28-60.32	60.300	+0.290
WTI (Jun)	AAFFW00	60.27-60.31	60.290	+0.280
WTI (Jul)	AAFFY00	60.10-60.14	60.120	+0.330

### NORTH SEA, MAR 29 (PGA page 1212)

(\$/barrel)	( - 1-3- )		Mid	Change	Sorea	d vs fwd Dated Br	ent Mid	Change
Dated Brent Diff				•	AAXEZ00	0.05/0.07	0.060	-0.255
BNB	AAVJA00	63.32-63.34	63.330	-0.555	AAVJB00	0.12/0.13	0.125	-0.275
Forties	PCADJ00	63.41-63.43	63.420	-0.465	AAGWZ00	0.21/0.22	0.215	-0.185
Oseberg	PCAEU00	63.85-63.86	63.855	-0.280	AAGXF00	0.64/0.66	0.650	0.000
Ekofisk	PCADI00	63.80-63.81	63.805	-0.280	AAGXB00	0.59/0.61	0.600	0.000
Troll	AAWEX00	63.90-63.91	63.905	-0.280	AAWEY00	0.69/0.71	0.700	0.000
Statfjord	PCAEE00	63.10-63.11	63.105	-0.280	AAGXD00	-0.11/-0.09	-0.100	0.000
Flotta Gold	PCACZ00	62.00-62.01	62.005	-0.330	AAGXH00	-1.21/-1.19	-1.200	-0.050
Duc	AAWEZ00	63.40-63.41	63.405	-0.280	AAWFL00	0.19/0.21	0.200	0.000
Grane Blend	PCALA00		62.655	-0.330	PCALB00		-0.550	-0.050
Johan Sverdrup	AJSVA00		62.105	-0.330	AJSVB00		-1.100	-0.050
Statfjord (CIF)	AASAS00	64.08-64.09	64.085	-0.265	AASAT00	0.84/0.86	0.850	0.000
Gullfaks (CIF)	AASAU00	63.98-63.99	63.985	-0.265	AASAV00	0.74/0.76	0.750	0.000
Alvheim (CIF)	ALVHA00		64.335	-0.265	ALVHB00		1.100	0.000
Asgard (CIF)	ASGCA00		62.785	-0.265	ASGCB00		-0.450	0.000
North Sea Dated Strip	AAKWH00	63.20-63.21	63.205	-0.280				
(\$/barrel)					<u>Sprea</u>	d vs fwd CIF Dated	Brent	
Dated Brent (CIF)	AAVJG00		64.180	-0.475	AAVJF00		0.945	-0.210
BNB (CIF)	PCAKP00		64.645	-0.530	AAVJC00		1.410	-0.265
Forties (CIF)	PCAKR00		64.190	-0.610	AAHXC00		0.955	-0.345
Oseberg (CIF)	РСАКТ00		64.740	-0.265	AAHXD00		1.505	0.000
Ekofisk (CIF)	PCAKV00		64.585	-0.265	AAHXB00		1.350	0.000
Troll (CIF)	AAXJ000		64.790	-0.265	00NCXAA		1.555	0.000
North Sea CIF Dated Strip	AAHXE00		63.235	-0.265				

### WEST AFRICA, MAR 29 (PGA pages 1230 and 1232) (\$/barrel)

Nigeria								
Bonny Light	PCAIC00	62.56-62.59	62.575	-0.340	AAGXL00	-0.71/-0.69	-0.700	0.000
Qua Iboe	PCAID00	62.51-62.54	62.525	-0.340	AAGXN00	-0.76/-0.74	-0.750	0.000
Forcados	PCABC00	62.61-62.64	62.625	-0.340	AAGXP00	-0.66/-0.64	-0.650	0.000
Agbami	AAQZB00	61.86-61.89	61.875	-0.340	AAQZC00	-1.41/-1.39	-1.400	0.000
Escravos	AAEIZ00	62.66-62.69	62.675	-0.340	AAGXR00	-0.61/-0.59	-0.600	0.000
Brass River	AAEJB00	62.51-62.54	62.525	-0.340	AAGXV00	-0.76/-0.74	-0.750	0.000
Akpo	PCNGA00	61.86-61.89	61.875	-0.340	PCNGB00	-1.41/-1.39	-1.400	0.000
Bonga	PCNGC00	62.61-62.64	62.625	-0.340	PCNGD00	-0.66/-0.64	-0.650	0.000
Usan	AAXUQ00		62.925	-0.340	AAXUR00		-0.350	0.000
Erha	AAXU000		62.975	-0.340	AAXUP00		-0.300	0.000
Egina	AFONA00		63.275	-0.340	AFONB00		0.000	0.000
Angola								
Cabinda	PCAFD00	62.56-62.59	62.575	-0.340	AAGXT00	-0.71/-0.69	-0.700	0.000
Nemba	AAQYZ00	61.81-61.84	61.825	-0.340	AAQZA00	-1.46/-1.44	-1.450	0.000
Dalia	AAQYX00	62.51-62.54	62.525	-0.340	AAQYY00	-0.76/-0.74	-0.750	0.000
Girassol	AASNL00	63.11-63.14	63.125	-0.340	AASJD00	-0.16/-0.14	-0.150	0.000
Hungo	AASLJ00	61.66-61.69	61.675	-0.340	AASJF00	-1.61/-1.59	-1.600	0.000
Kissanje	AASLK00	62.81-62.84	62.825	-0.340	AASJE00	-0.46/-0.44	-0.450	0.000
Pazflor	PCNGG00	62.26-62.29	62.275	-0.340	PCNGH00	-1.01/-0.99	-1.000	0.000
Plutonio	PCNGI00	62.36-62.39	62.375	-0.340	PCNGJ00	-0.91/-0.89	-0.900	0.000
Ghana								
Jubilee	AAXUS00		62.425	-0.340	AAXUT00		-0.850	0.000
Republic of Congo								
Djeno	PCNGE00	61.46-61.49	61.475	-0.440	PCNGF00	-1.81/-1.79	-1.800	-0.100
Chad								
Doba	AAXUU00		63.875	-0.440	AAXUV00		0.600	-0.100
30-60 Day Dtd strip	AAXRK00	63.27-63.28	63.275	-0.340				

Mid

Change

Spread vs fwd DTD Brent Mid

Change

### **CRUDE PRICE ASSESSMENTS**

LONDON, MAR 29 (PGA page 1214)								
(\$/barrel)		Brent CFD	Mid	Change		Dated Swap	Mid	Change
1wk (Jun)	PCAKA00	-1.04/-1.02	-1.030	-0.150	OOVNCAA	63.17/63.19	63.180	-0.370
2wk (Jun)	PCAKC00	-1.31/-1.29	-1.300	-0.140	AAJOS00	62.90/62.92	62.910	-0.360
3wk (Jun)	PCAKE00	-1.15/-1.13	-1.140	-0.100	AAJOU00	63.06/63.08	63.070	-0.320
4wk (Jun)	PCAKG00	-0.90/-0.88	-0.890	-0.070	AAJOW00	63.31/63.33	63.320	-0.290
5wk (Jun)	AAGLU00	-0.80/-0.78	-0.790	-0.090	ААЈРС00	63.41/63.43	63.420	-0.310
6wk (Jun)	AAGLV00	-0.83/-0.81	-0.820	-0.130	ААЈРЕ00	63.38/63.40	63.390	-0.350
7wk (Jun)	AALCZ00	-0.89/-0.87	-0.880	-0.190	AALAW00	63.32/63.34	63.330	-0.410
8wk (Jun)	AALDA00	-0.96/-0.94	-0.950	-0.240	AALAX00	63.25/63.27	63.260	-0.460

Med Dit Strip   ALLPRO   63.21—83.22   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.26   63.27   63.27   63.26   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27   63.27	MEDITERRANEAN, MAR 29 (PGA	pages 1220, 1222, 1234	·J						
BTC DITS STIP 5 45 Bay DITS STIP	(\$/barrel)				Change		Spread vs fwd DTD Brent	Mid	Change
15-45 Day Did Strip	Med Dtd Strip	AALDF00	63.21-63.22	63.215	-0.240				
Urals (Ridarn)	BTC Dtd Strip	AAUFI00							
Urals (Med) PCACRE® 61.50-61.53 61.515 -0.240 AACXXR8 -1.71/-1.69 -1.700 0.000 Urals (EX-Baltic) AACXXR8 60.29-60.31 60.105 -0.240 AARPTR8 -3.12/-3.10 -3.110 0.000 Urals FOB Novo Suez AACXXR8 60.29-60.31 60.300 -0.135 AARPTR8 -2.92/-2.91 -2.915 +0.105 Urals FOB Novo Afra AAOTR88 60.29-60.31 60.300 -0.135 AARPTR88 -2.92/-2.91 -2.915 +0.105 Urals FOB Novo Afra AAOTR88 60.08-60.09 60.075 -0.240 AAOTR88 -3.86/-3.67 -3.875 +0.340 Urals (Primorsk) AAAVR88 60.08-60.09 60.075 -0.240 AAOTR88 -3.16/-3.13 -3.140 0.000 Urals (ROMB) AALTR888 60.08-60.09 60.075 -0.230 ATLK888 -2.380 +0.010 Iranian Heavy FOB Kharg Island (Med) ATLKA88 60.835 -0.230 ATLK888 -2.380 +0.010 Iranian Heavy FOB Kharg Island (Med) ATLKA88 61.660 -0.195 AAOTR88 62.00-62.03 62.015 -0.240 AAIPKR88 -2.21/-2.19 -2.200 0.000 Siberian Lt AACXXR8 62.00-62.03 62.015 -0.240 AAIPKR88 -1.21/-1.19 -1.200 0.000 Siberian Lt AACXXR8 63.74-63.78 63.760 -0.295 AAIPKR88 -1.21/-1.19 -1.200 0.000 AZeri Lt FOB Ceyhan Suez AAIPKR88 62.90-62.03 62.015 -0.240 AAIPKR88 -1.26/-1.24 -1.250 0.000 AZeri Lt FOB Ceyhan Suez AAIPKR88 62.90-62.03 62.015 -0.240 AAIPKR88 -1.26/-1.24 -1.250 0.000 AZeri Lt FOB Ceyhan Suez AAIPKR88 63.74-63.78 63.760 -0.255 AAIPKR88 0.49/0.51 0.500 0.000 AZeri Lt FOB Ceyhan Suez AAIPKR88 62.90-62.93 62.915 -0.225 AAIPKR88 0.49/0.51 0.500 0.000 AZeri Lt FOB Ceyhan Suez AAIPKR88 62.90-62.93 62.915 -0.225 AAIPKR88 0.49/0.51 0.500 0.000 AZeri Lt FOB Ceyhan Suez AAIPKR88 62.90-62.93 62.915 -0.225 AAIPKR88 0.49/0.51 0.500 0.000 AZeri Lt FOB Ceyhan Suez AAIPKR88 62.90-62.93 62.915 -0.225 AAIPKR88 0.49/0.51 0.500 0.000 AZeri Lt FOB Ceyhan Suez AAIPKR88 62.90-62.93 62.915 -0.225 AAIPKR88 0.49/0.51 0.500 0.000 AZeri Lt FOB Ceyhan Suez AAIPKR88 62.90-62.93 62.915 -0.225 AAIPKR88 0.49/0.51 0.500 0.000 AZeri Lt FOB Ceyhan Suez AAIPKR88 62.90-62.93 62.915 -0.225 AAIPKR88 0.49/0.51 0.500 0.000 0.000 AZeri Lt FOB Ceyhan AAIPKR88 62.90-62.93 62.915 0.025 AAIPKR88 0.49/0.51 0.500 0.000 0.000 AZeri Lt FOB Ceyhan AAIPKR88 62.90-62.93 62.915 0.000 0.000 0.000 AAIPKR88 0.49/0.		AALGM00			-0.295				
Urals (Ex-Battic)	Urals (Rdam)	PCAFW00	61.11–61.14	61.125	-0.240	AAGXJ00	-2.10/-2.08	-2.090	0.000
Urals FDB Novo Suez AACTS08 60.29-60.31 60.300 -0.135 AAMP108 -2.92/-2.91 -2.915 +0.105 Urals FDB Novo Afra AAOTH80 AAOTH80 60.06-60.09 60.075 -0.240 AANV108 -3.15/-3.13 -3.140 0.000  Urals (RCMB) AAL N00 A	Urals (Med)	PCACE00			-0.240	AAGXX00			0.000
Urals (Primorsk)	Urals (Ex-Baltic)	AAGZT00				AAHPI00			0.000
Urals (Primorsk)	Urals FOB Novo Suez	AAGZS00			-0.135	ААНРН00			+0.105
Urals (RCMB)		AAOTH00	59.53–59.55	59.540	+0.100	AAOTI00		-3.675	+0.340
Iranian Light FOB Kharg   Island (Med)	Urals (Primorsk)	AAWVH00	60.06-60.09	60.075	-0.240	AAWVI00	-3.15/-3.13	-3.140	0.000
Iranian Heavy FOB Kharg Island (Med)	Urals (RCMB)	AALIN00	61.55–61.58	61.565	-0.535				
Es Sider PCAC099 61.04-61.08 61.06 -0.195 AACY109 -2.21/2.19 -2.200 0.000 Siberian Lt AACY109 62.00-62.03 62.015 -0.240 AAIPK09 -1.21/-1.19 -1.200 0.000 AAIPK09 61.99-62.03 62.015 -0.240 AAIPK09 -1.26/-1.24 -1.250 0.000 AZEFILL AACY209 61.99-62.03 62.010 -0.195 AAIPK09 -1.26/-1.24 -1.250 0.000 AZEFILL AACY209 63.74-63.78 63.760 -0.250 AAIPK09 0.49/0.51 0.500 0.000 AZEFILL AACY209 63.74-63.78 63.760 -0.250 AAIPK09 0.49/0.51 0.500 0.000 AZEFILL FOB Ceyhan Suez AAUFK09 62.90-62.93 62.915 -0.225 AAUFK09 -0.35/-0.34 -0.345 +0.025 AZEFILL FOB Ceyhan Afra AAUFK09 62.41-62.44 62.425 -0.070 AAUFK09 -0.84/-0.83 -0.835 +0.180 AZEFILL FOB Supsa ATTKN09 61.92-61.95 61.935 +0.070 AAUFK09 -1.33/-1.32 -1.325 +0.320 BTC FOB Ceyhan Afra AAUFK09 62.65-62.69 62.670 -0.150 AAUFL09 -0.64/-0.83 -0.690 +0.100 BTC FOB Ceyhan AUFK09 PCACA09 58.46-58.49 58.475 -0.110 AACY009 -4.75/-4.73 -4.740 +0.130 Kirkluk AAEJ09 62.00-62.03 62.015 -0.240 AACY009 -4.75/-4.73 -4.740 +0.130 Kirkluk AAEJ09 62.00-62.03 62.015 -0.240 AACY009 -1.21/-1.19 -1.200 0.000 Syrian Lt AAIHM09 61.98-62.01 61.995 -0.095 AAL0U00 -1.23/-1.21 -1.220 +0.145 Syrian Hvy AAHM009 57.60-57.62 57.610 -0.085 AAL0U00 -1.23/-1.21 -1.220 +0.145 Syrian Hvy AAHM009 57.60-57.62 57.610 -0.085 AAL0U00 -1.23/-1.21 -1.220 +0.145 Syrian Hvy AAL0U00 59.53-59.57 59.550 +0.050 AALV200 -3.72/-3.70 -3.710 +0.245 CPC Blend FOB Suez AALV200 59.53-59.57 59.550 +0.050 AALV200 -3.72/-3.70 -3.710 +0.245 CPC Blend FOB Mater AAUFK00 58.86-58.90 58.880 +0.260 AAUFK00 -4.39/-4.37 -4.380 +0.455 CPC Blend FOD Mater AAUFK00 -0.81/-0.79 -0.800 0.000 CPC Blend CFD (Apr) AAOFK00 -2.200 0.000 Urals Med CFD (May) AAMEA00 -0.81/-0.79 -0.800 0.000 CPC Blend CFD (Apr) AAOFK00 -2.200 0.000 Urals Med CFD (May) UKCN002 -1.88/-1.81/-1.79 -1.800 0.000 CPC Blend CFD (Jun) AAOFK00 -2.200 0.000 Urals NWE CFD (May) UKCN002 -1.88/-1.81/-1.79 -1.800 0.000	Iranian Light FOB Kharg Island (Med)	AILKA00		60.835	-0.230	AILKB00		-2.380	+0.010
Siberian Lt AAGZW00 62.00-62.03 62.015 -0.240 AAHPK00 -1.21/-1,19 -1,200 0.000 Saharan Bid AAGZY00 61.99-62.03 62.010 -0.195 AAHPK00 -1.26/-1,24 -1.250 0.000 AAGET LT FOB CEYHAN SUEZ AAUFR00 63.74-63.78 63.760 -0.250 AAUFR00 0.49/0.51 0.500 0.000 AZERT LT FOB CEYHAN SUEZ AAUFR00 62.90-62.93 62.915 -0.225 AAUFR00 -0.35/-0.34 -0.345 +0.025 AZERT LT FOB CEYHAN AFTA AAUFK00 62.41-62.44 62.425 -0.070 AAUFL00 -0.84/-0.83 -0.835 +0.180 AZERT LT FOB SUBSA AATRR00 61.92-61.95 61.935 +0.070 AATRR00 -1.33/-1.32 -1.325 +0.320 BTC FOB CEYHAN AAUFR00 62.65-62.69 62.670 -0.150 AAUFL00 -0.60/-0.58 -0.590 +0.100 SUEZ BIEND PACAGO 58.46-58.49 58.475 -0.110 AAGYD00 -4.75/-4.73 -4.740 +0.130 Kirkuk AAE JD00 62.00-62.03 62.015 -0.240 AAGYF00 -1.21/-1,19 -1.200 0.000 Syrian Lt AAHRW00 61.98-62.01 61.995 -0.095 AAL000 -1.23/-1.21 -1.220 +0.145 Syrian LT AAHRW00 60.59-60.63 60.610 -0.085 AAL000 -1.23/-1.21 -1.220 +0.145 SYSTIAN LY AAUFR00 59.53-59.57 59.550 +0.050 AAUFR00 -2.66/-2.64 -2.650 +0.155 CPC Blend FOB Suez AALVX00 59.53-59.57 59.550 +0.050 AAUFR00 -2.66/-2.64 -2.650 +0.155 CPC Blend FOB Suez AALVX00 59.53-59.57 59.550 +0.050 AAUFR00 -2.66/-2.64 -2.650 +0.155 CPC Blend FOB Suez AALVX00 59.53-59.57 59.550 +0.050 AAUFR00 -2.66/-2.64 -2.650 +0.155 CPC Blend FOB Afra AACFV00 59.88-59.0 58.880 +0.260 AAOFR00 -4.39/-4.37 -4.380 +0.455 CPC Blend FOB Afra AACFV00 59.83-59.57 59.550 +0.050 AAUFR00 -2.66/-2.64 -2.650 +0.155 CPC Blend FOB Afra AACFV00 59.83-59.57 59.550 +0.050 AAUFR00 -2.66/-2.64 -2.650 +0.155 CPC Blend FOB Afra AACFV00 59.88-59.0 58.880 +0.260 AAOFR00 -4.39/-4.37 -4.380 +0.455 CPC Blend FOB Afra AACFV00 59.83-59.57 59.550 +0.050 AAUFR00 -2.66/-2.64 -2.650 +0.155 CPC Blend FOB Afra AACFV00 59.83-59.57 59.550 +0.050 AAUFR00 -2.66/-2.64 -2.650 +0.155 CPC Blend FOB Afra AACFV00 59.83-59.57 59.550 +0.050 AAUFR00 -2.66/-2.64 -2.650 +0.155 CPC Blend FOB Afra AACFV00 59.88-59.0 59.880 +0.260 AACFV00 -3.72/-3.70 -3.710 +0.245 CPC Blend FOB Afra AACFV00 59.88-59.0 59.880 +0.260 AACFV00 -2.66/-2.64 -2.650 +0.155 CPC Blend FOB Afr	Iranian Heavy FOB Kharg Island (Med)	AIHKA00			-0.230	AIHKB00			+0.010
Saharan Bld   AAGZY09   61.99-62.03   62.010   -0.195   AAHPN00   -1.26/-1.24   -1.250   0.000	Es Sider	PCAC000			-0.195	AAGYH00			0.000
AZERILLE MAGZX88 63,74-63,78 63,760 -0.250 AAHPM88 0.49/0.51 0.500 0.000  AZERILLE FOB Ceyhan Suzz AAUFM88 62.90-62.93 62.915 -0.225 AAUFM88 -0.35/-0.34 -0.345 +0.025  AZERILLE FOB Ceyhan Affra AAUFK88 62.41-62.44 62.425 -0.070 AAUFW88 -0.84/-0.83 -0.835 +0.180  AZERILLE FOB Sugsa AATM88 61.92-61.95 61.935 +0.070 AATM88 -1.33/-1.32 -1.325 +0.320  BTIC FOB Ceyhan AAUFH88 62.66-62.69 62.670 -0.150 AAUFJ88 -0.60/-0.58 -0.590 +0.100  SUEZ Blend PCACA88 58.46-58.49 58.475 -0.110 AACYD88 -0.60/-0.58 -0.590 +0.130  KIKRUK AAEJD88 62.00-62.03 62.015 -0.240 AACYF88 -1.21/-1.19 -1.200 0.000  KIKRUK AAHM88 61.98-62.01 61.995 -0.095 AALUW88 -1.23/-1.21 -1.220 +0.145  Syrian Lt AAHM88 57.60-57.62 57.610 -0.085 AALUW88 -1.23/-1.21 -1.220 +0.145  Syrian Hvy AAHM88 57.60-57.62 57.610 -0.085 AALUW89 -2.66/-2.64 -2.650 +0.155  CPC Blend CIF AAGZU88 60.59-60.63 60.610 -0.045 AAIPL88 -2.666/-2.64 -2.650 +0.150  CPC Blend FOB Suez AALUW88 59.53-59.57 59.550 +0.050 AALUW88 -3.72/-3.70 -3.710 +0.245  CPC Blend FOB Mare AAOFW89 58.86-58.90 58.880 +0.260 AAOFW89 -4.39/-4.37 -4.380 +0.455  CPC Blend FOR Mare AAOFW89 58.86-58.90 58.880 +0.260 AAOFW89 -2.260/-2.73 -2.270 0.000  Urals Med CFD (May) AAMEA88 -0.81/-0.79 -0.800 0.000 CPC Blend CFD (May) AAOFW89 -2.270 0.000  Urals Med CFD (May) UNCM893 -0.76/-0.74 -0.750 0.000 CPC Blend CFD (May) AAOFW89 -2.270 0.000  Urals NWE CFD (May) UNCM892 -1.81/-1.79 -1.800 0.000	Siberian Lt	AAGZW00	62.00-62.03	62.015	-0.240	ААНРК00	-1.21/-1.19	-1.200	0.000
AZERI LT FOB Ceyhan Suez  AAUFR00 62.90-62.93 62.915 -0.225 AAUFR00 -0.35/-0.34 -0.345 +0.025 AZERI LT FOB Ceyhan Afra AAUFR00 62.41-62.44 62.425 -0.070 AAUFL00 -0.84/-0.83 -0.835 +0.180 AZERI LT FOB Supsa AATRW00 61.92-61.95 61.935 +0.070 AATRW00 -1.33/-1.32 -1.325 +0.320 BTC FOB Ceyhan AAUFR00 62.65-62.69 62.670 -0.150 AAUF300 -0.60/-0.58 -0.590 +0.100 Suez Blend PCACA00 58.46-58.49 58.475 -0.110 AAGYD00 -4.75/-4.73 -4.740 +0.130 Kirkuk AAEJD00 62.00-62.03 62.015 -0.240 AAGYF00 -1.21/-1.19 -1.200 0.000 Syrian Lt AARW000 61.98-62.01 61.995 -0.095 AALOU00 -1.23/-1.21 -1.220 +0.145 Syrian Hvy AARW00 59.50-50.62 57.610 -0.085 AALOU00 -5.61/-5.60 -5.605 +0.155 CPC Blend CIF AAGZU00 60.59-60.63 60.610 -0.045 AAHPL00 -2.66/-2.64 -2.650 -3.710 -0.245 CPC Blend FOB Suez AALVX00 59.53-59.57 59.550 +0.050 AALVX00 -3.72/-3.70 -3.710 +0.245 CPC Blend FOB Mara AAOFV00 58.86-58.90 58.880 +0.260 AAOFW00 -4.39/-4.37 -4.380 +0.455 CPC Blend CFD (Apr) AAMD00 -0.91/-0.89 -0.91/-0.89 -0.900 CPC Blend CFD (May) AAMEA00 -0.81/-0.79 -0.800 CPC Blend CFD (May) AAOFX00 -2.200 -0.000 CPC Blend CFD (May) AAOFX00 -2.207 -2.070 -2.000 CPC Blend CFD (May) AAOFX00 -2.070 -2.070 -2.070 -2.000 CPC Blend CFD (May) AAOFX00 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.070 -2.0	Saharan Bld	AAGZY00				AAHPN00			
AZERÍL TOB CEÝNAN ÁFRA AAUFKØØ 62.41-62.44 62.425 -0.070 AAUFLØØ -0.84/-0.83 -0.835 +0.180 AZERÍL TOB SUPSA AATHMØØ 61.92-61.95 61.935 +0.070 AATHNØØ -1.33/-1.32 -1.325 +0.320 BTC FOB CEÝNAN AAUFLØØ -0.60/-0.58 -0.590 +0.100 SUEZ Blend PCACAØØ 58.46-58.49 58.475 -0.110 AAGYDØØ -4.75/-4.73 -4.740 +0.130 KIrkuk AAEJDØØ 62.00-62.03 62.015 -0.240 AAGYPØØ -1.21/-1.19 -1.200 0.000 Syrian Lt AAHMNØØ 61.98-62.01 61.995 -0.095 AALOUØØ -7.23/-1.21 -1.220 +0.145 Syrian Hvy AAHMNØØ 57.60-57.62 57.610 -0.085 AALOUØØ -5.61/-5.60 -5.605 +0.155 CPC Blend CIF AAGZUØØ 60.59-60.63 60.610 -0.045 AAIPLØØ -2.66/-2.64 -2.650 +0.150 CPC Blend FOB SUEZ AALVXØØ 59.53-59.57 59.550 +0.050 AALVZØØ -3.72/-3.70 -3.710 +0.245 CPC Blend FOB Afra AAOFVØØ -4.39/-4.37 -4.380 +0.455  PCPE Blend CIP (Apr) AAMEAØØ -0.81/-0.79 -0.800 0.000 CPC Blend CFD (Apr) AAOFVØØ -2.220 0.000 Urals Med CFD (May) AAMEAØØ -0.81/-0.79 -0.800 0.000 CPC Blend CFD (Jun) UNCMØØ2 -1.81/-1.79 -1.800 0.000 CPC Blend CFD (Jun) UNCMØØ2 -1.81/-1.79 -1.800 0.000 UNCMØØ2 -1.81/-1.79 -1.800 0.000 UNCMØØ2 -1.81/-1.79 -1.800 0.000  AAUFLØØ -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000 -0.000		AAGZX00				ААНРМОО			0.000
AZERI LEFOB SUPSA AATHM86 61.92-61.95 61.935 +0.070 AATHM86 -1.33/-1.32 -1.325 +0.320 BTC FOB Ceyhan AAUFH86 62.65-62.69 62.670 -0.150 AAUFJ86 -0.670/-0.58 -0.590 +0.100 SUEZ BIRIND PCACA86 58.46-58.49 58.475 -0.110 AAGFV86 -4.75/-4.73 -4.740 +0.130 KITKUK AAEJD86 62.00-62.03 62.015 -0.240 AAGFV86 -1.21/-1.19 -1.200 0.000 Syrian Lt AAHM868 61.98-62.01 61.995 -0.095 AAL0008 -1.23/-1.21 -1.220 +0.145 Syrian Hyy AAHM868 57.60-57.62 57.610 -0.085 AAL0008 -1.23/-1.21 -1.220 +0.145 SCPC Blend CIF AAGZU86 60.59-60.63 60.610 -0.045 AAHPL86 -2.66/-2.64 -2.650 +0.150 CPC Blend FOB Suez AALVX86 59.53-59.57 59.550 +0.050 AALVX86 -3.72/-3.70 -3.710 +0.245 CPC Blend FOB Afra AAOFV86 58.86-58.90 58.880 +0.260 AAOFW86 -4.39/-4.37 -4.380 +0.455 CPC Blend CFD (Apr) AAMB086 -0.91/-0.89 -0.900 0.000 CPC Blend CFD (Apr) AAOFX86 -2.500 0.000 Urals Med CFD (May) AAMEA86 -0.81/-0.79 -0.800 0.000 CPC Blend CFD (May) AAOFX86 -2.220 0.000 Urals Med CFD (May) UNCM863 -0.76/-0.74 -0.750 0.000 CPC Blend CFD (Jun) AAOFX86 -2.070 0.000 Urals NWE CFD (May) UNCM862 -1.81/-1.79 -1.800 0.000	Azeri Lt FOB Ceyhan Suez	AAUFM00			-0.225	AAUFN00			+0.025
BTC FOB Ceyhan AAUFH00 62.65-62.69 62.670 -0.150 AAUFJ00 -0.60/-0.58 -0.590 +0.100 Suez Blend PCACA00 58.46-58.49 58.475 -0.110 AAGYD00 -4.75/-4.73 -4.740 +0.130 Kirkuk AAEJD00 62.00-62.03 62.015 -0.240 AAGYP00 -1.21/-1.19 -1.200 0.000 Syrian Lt AAHM00 61.98-62.01 61.995 -0.095 AAL0U00 -1.23/-1.21 -1.220 +0.145 Syrian Hvy AAHM00 57.60-57.62 57.610 -0.085 AAL0V00 -5.61/-5.60 -5.605 +0.155 CPC Blend CIF AAGZU00 60.59-60.63 60.610 -0.045 AAHPL00 -2.66/-2.64 -2.650 +0.150 CPC Blend FOB Suez AALVX00 59.53-59.57 59.550 +0.050 AALVX00 -3.72/-3.70 -3.710 +0.245 CPC Blend FOB Afra AAOFV00 58.86-58.90 58.80 +0.260 AAOFW00 -4.39/-4.37 -4.380 +0.455 CPC Blend FOB Afra AAOFW00 -0.91/-0.89 -0.900 0.000 CPC Blend CFD (Apr) AAOFW00 -2.200 0.000 Urals Med CFD (May) AAMEA00 -0.81/-0.79 -0.800 0.000 CPC Blend CFD (May) AAOFV00 -2.200 0.000 Urals Med CFD (Jun) UNCM003 -0.76/-0.74 -0.750 0.000 CPC Blend CFD (Jun) AAOFZ00 -2.070 0.000 Urals NWE CFD (May) UNCM002 -1.81/-1.79 -1.800 0.000 Urals NWE CFD (May) UNCM002 -1.81/-1.79 -1.800 0.000		AAUFK00			-0.070	AAUFL00			+0.180
Suez Blend   PCACA00   58.46–58.49   58.475   -0.110   AAGYD00   -4.75/-4.73   -4.740   +0.130	Azeri Lt FOB Supsa	AATHM00	61.92–61.95	61.935	+0.070	AATHN00	-1.33/-1.32	-1.325	+0.320
Kirkuk AAEJD00 62.00-62.03 62.015 -0.240 AAGYF00 -1.21/-1.19 -1.200 0.000 Syrian Lt AAHM00 61.98-62.01 61.995 -0.095 AAL0U00 -1.23/-1.21 -1.220 +0.145 Syrian Hvy AAHM00 57.60-57.62 57.610 -0.085 AAL0V00 -5.61/-5.60 -5.605 +0.155 CPC Blend CIF AAGZU00 60.59-60.63 60.610 -0.045 AAHPL00 -2.66/-2.64 -2.650 +0.150 CPC Blend FOB Suez AALVX00 59.53-59.57 59.550 +0.050 AALVZ00 -3.72/-3.70 -3.710 +0.245 CPC Blend FOB Afra AAOFV00 58.86-58.90 58.880 +0.260 AAOFW00 -4.39/-4.37 -4.380 +0.455 CPC Blend FOB Afra AAMDU00 -0.91/-0.89 -0.900 0.000 CPC Blend CFD (Apr) AAOFX00 -2.500 0.000 Urals Med CFD (May) AAMEA00 -0.81/-0.79 -0.800 0.000 CPC Blend CFD (May) AAOFX00 -2.220 0.000 Urals Med CFD (Jun) UMCM003 -0.76/-0.74 -0.750 0.000 CPC Blend CFD (Jun) AAOFZ00 -2.070 0.000 Urals NWE CFD (Apr) UNCM001 -1.86/-1.84 -1.850 +0.050 Urals NWE CFD (May) UNCM002 -1.81/-1.79 -1.800 0.000	BTC FOB Ceyhan	AAUFH00				AAUFJ00			
Syrian Lt		PCACA00			-0.110	AAGYD00			+0.130
Syrian Hvy AAHM00 57.60–57.62 57.610 -0.085 AAL0V00 -5.61/-5.60 -5.605 +0.155 CPC Blend CIF AAGZU00 60.59–60.63 60.610 -0.045 AAHPL00 -2.66/-2.64 -2.650 +0.150 CPC Blend FOB Suez AALVX00 59.53–59.57 59.550 +0.050 AALVZ00 -3.72/-3.70 -3.710 +0.245 CPC Blend FOB Afra AAOFV00 58.86–58.90 58.880 +0.260 AAOFW00 -4.39/-4.37 -4.380 +0.455  Urals Med CFD (Apr) AAMDU00 -0.91/-0.89 -0.900 0.000 CPC Blend CFD (Apr) AAOFX00 -2.500 0.000 Urals Med CFD (May) AAMEA00 -0.81/-0.79 -0.800 0.000 CPC Blend CFD (May) AAOFX00 -2.220 0.000 Urals Med CFD (Jun) UMCM003 -0.76/-0.74 -0.750 0.000 CPC Blend CFD (Jun) AAOFX00 -2.070 0.000 Urals NWE CFD (Apr) UNCM001 -1.86/-1.84 -1.850 +0.050 Urals NWE CFD (May) UMCM002 -1.81/-1.79 -1.800 0.000	Kirkuk	AAEJD00			-0.240	AAGYF00			0.000
CPC Blend CIF AAGZU00 60.59-60.63 60.610 -0.045 AAHPL00 -2.66/-2.64 -2.650 +0.150 CPC Blend FOB Suez AALVX00 59.53-59.57 59.550 +0.050 AALVZ00 -3.72/-3.70 -3.710 +0.245 CPC Blend FOB Afra AAOFV00 58.86-58.90 58.880 +0.260 AAOFW00 -4.39/-4.37 -4.380 +0.455 CPC Blend FOB Afra AAMDU00 -0.91/-0.89 -0.900 0.000 CPC Blend CFD (Apr) AAOFX00 -2.500 0.000 Urals Med CFD (Apr) AAMEA00 -0.81/-0.79 -0.800 0.000 CPC Blend CFD (May) AAOFX00 -2.220 0.000 Urals Med CFD (Jun) UMCM003 -0.76/-0.74 -0.750 0.000 CPC Blend CFD (Jun) AAOFX00 -2.070 0.000 Urals NWE CFD (Apr) UNCM001 -1.86/-1.84 -1.850 +0.050 Urals NWE CFD (May) UNCM002 -1.81/-1.79 -1.800 0.000	Syrian Lt	AAHMM00	61.98-62.01	61.995	-0.095	AALOU00	-1.23/-1.21	-1.220	+0.145
CPC Blend FOB Suez AALVX00 59.53—59.57 59.550 +0.050 AALVZ00 -3.72/-3.70 -3.710 +0.245  CPC Blend FOB Afra AAOFV00 58.86—58.90 58.880 +0.260 AAOFW00 -4.39/-4.37 -4.380 +0.455  Urals Med CFD (Apr) AAMDU00 -0.91/-0.89 -0.900 0.000 CPC Blend CFD (Apr) AAOFX00 -2.500 0.000 CPC Blend CFD (May) AAOFX00 -2.220 0.000 Urals Med CFD (Jun) UMCM003 -0.76/-0.74 -0.750 0.000 CPC Blend CFD (Jun) AAOFX00 -2.220 0.000 Urals Med CFD (Apr) AAOFX00 -2.220 0.000 Urals Med CFD (Apr) UNCM001 -1.86/-1.84 -1.850 +0.050 Urals NWE CFD (May) UNCM002 -1.81/-1.79 -1.800 0.000	Syrian Hvy	AAHMN00	57.60-57.62	57.610	-0.085	AALOV00	-5.61/-5.60	-5.605	+0.155
CPC Blend FOB Afra AA0FV00 58.86–58.90 58.880 +0.260 AA0FW00 -4.39/-4.37 -4.380 +0.455  (PPE page 1616) Urals Med CFD (Apr) AAMBU00 -0.91/-0.89 -0.900 0.000 CPC Blend CFD (Apr) AA0FX00 -2.500 0.000 CPC Blend CFD (May) AA0FY00 -2.220 0.000 CPC Blend CFD (May) AA0FY00 -2.220 0.000 Urals Med CFD (Jun) UMCM003 -0.76/-0.74 -0.750 0.000 CPC Blend CFD (Jun) AA0FX00 -2.200 0.000 CPC Blend CFD (Jun) AA0FX00 -2.200 0.000 CPC Blend CFD (Jun) AA0FX00 -2.200 0.000 Urals NWE CFD (Apr) UNCM001 -1.86/-1.84 -1.850 +0.050 Urals NWE CFD (May) UNCM002 -1.81/-1.79 -1.800 0.000	CPC Blend CIF	AAGZU00				AAHPL00			
(PPE page 1616)         Urals Med CFD (Apr)         AAMDUØØ         -0.91/-0.89         -0.900         0.000         CPC Blend CFD (Apr)         AAOFXØØ         -2.500         0.000           Urals Med CFD (May)         AAMEAØØ         -0.81/-0.79         -0.800         0.000         CPC Blend CFD (May)         AAOFXØØ         -2.220         0.000           Urals Med CFD (Jun)         UMCMØØØ         -0.76/-0.74         -0.750         0.000         CPC Blend CFD (Jun)         AAOFXØØ         -2.070         0.000           Urals NWE CFD (Apr)         UNCMØØ1         -1.86/-1.84         -1.850         +0.050         +0.050         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         -0.000         <	CPC Blend FOB Suez	AALVX00	59.53-59.57	59.550	+0.050	AALVZ00	-3.72/-3.70	-3.710	+0.245
Urals Med CFD (Apr)         AAMDU00         -0.91/-0.89         -0.900         0.000         CPC Blend CFD (Apr)         AAOFX00         -2.500         0.000           Urals Med CFD (May)         AAMEA00         -0.81/-0.79         -0.800         0.000         CPC Blend CFD (May)         AAOFY00         -2.220         0.000           Urals Med CFD (Jun)         UMCM003         -0.76/-0.74         -0.750         0.000         CPC Blend CFD (Jun)         AAOFZ00         -2.070         0.000           Urals NWE CFD (Apr)         UNCM001         -1.86/-1.84         -1.850         +0.050           Urals NWE CFD (May)         UNCM002         -1.81/-1.79         -1.800         0.000	CPC Blend FOB Afra	AAOFV00	58.86-58.90	58.880	+0.260	AAOFW00	-4.39/-4.37	-4.380	+0.455
Urals Med CFD (May)         AAMEA00         -0.81/-0.79         -0.800         0.000         CPC Blend CFD (May)         AA0FY00         -2.220         0.000           Urals Med CFD (Jun)         UMCM003         -0.76/-0.74         -0.750         0.000         CPC Blend CFD (Jun)         AA0FZ00         -2.070         0.000           Urals NWE CFD (Apr)         UNCM001         -1.86/-1.84         -1.850         +0.050           Urals NWE CFD (May)         UNCM002         -1.81/-1.79         -1.800         0.000	(PPE page 1616)								
Urals Med CFD (Jun)         UMCM003         -0.76/-0.74         -0.750         0.000         CPC Blend CFD (Jun)         AA0FZ00         -2.070         0.000           Urals NWE CFD (Apr)         UNCM001         -1.86/-1.84         -1.850         +0.050           Urals NWE CFD (May)         UNCM002         -1.81/-1.79         -1.800         0.000	Urals Med CFD (Apr)	AAMDU00	-0.91/-0.89	-0.900	0.000	CPC Blend CFD (Apr) AA0FX00			0.000
Urals NWE CFD (Apr)         UNCM001         -1.86/-1.84         -1.850         +0.050           Urals NWE CFD (May)         UNCM002         -1.81/-1.79         -1.800         0.000	Urals Med CFD (May)	AAMEA00	-0.81/-0.79	-0.800	0.000	CPC Blend CFD (May) AAOFY00		-2.220	0.000
Urals NWE CFD (May) UNCM002 -1.81/-1.79 -1.800 0.000	Urals Med CFD (Jun)	UMCM003	-0.76/-0.74	-0.750	0.000	CPC Blend CFD (Jun) AAOFZ00		-2.070	0.000
	Urals NWE CFD (Apr)	UNCM001	-1.86/-1.84	-1.850	+0.050				
Urals NWE CFD (Jun) UNCM003 -1.81/-1.79 -1.800 0.000	Urals NWE CFD (May)	UNCM002	-1.81/-1.79	-1.800	0.000				
	Urals NWE CFD (Jun)	UNCM003	-1.81/-1.79	-1.800	0.000				

### CANADA, MAR 29 (PGA page 230)

(\$/barrel)		Mid	Change
33-63 Day Dated Strip AALEJ00	63.26-63.27	63.265	-0.345
Terra Nova AAJUH00	62.90-62.93	62.915	-0.345
Hibernia AAJKK00	63.05-63.08	63.065	-0.345
White Rose AAVJX00	63.80-63.83	63.815	-0.345
	Spread vs fwd DTD Brent	Mid	Change
Terra Nova AAJUJ00	-0.36/-0.34	-0.350	0.000
Hibernia AAJKM00	-0.21/-0.19	-0.200	0.000
White Rose AAVJY00	0.54/0.56	0.550	0.000

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

Mar 29			Mid	Change
Dated Brent	AAPYR00	53.74-53.75	53.745	-0.345
Dated Brent (CIF)	PCAKN00		54.524	-0.292
Urals (Mediterranean)	AAPYS00	52.25-52.27	52.260	-0.095
WTI (May)	AAPYT00	51.51-51.52	51.515	-0.175
WTI MEH (May)	AAYSA00		52.493	-0.046
Mars (May)	AAPYU00	51.68-51.69	51.685	-0.175

Euro/US\$ forex rate: 1.177. Platts Euro denominated crude oil assessments are based on market values and a Euro/US\$ forex rate at 4:30 PM local London time.

### **CRUDE PRICE ASSESSMENTS**

### UNITED STATES (\$/barrel), MAR 29 (PGA pages 210, 214 & 230)

			Mid	Change
Platts AGS	AGSAA00		62.540	+0.400
WTI (May)	PCACG00	61.55-61.57	61.560	+0.590
WTI (Jun)	PCACH00	61.52-61.54	61.530	+0.570
WTI (Jul)	AAGIT00	61.29-61.31	61.300	+0.540
WTI EFP (May)	AAGVT00	-0.01/0.01	0.000	0.000
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		62.710	+0.740
Light Houston Sweet M2	AAYRY00		62.780	+0.770
LOOP Sour (May)	AALSM01		61.660	+0.590
LOOP Sour (Jun)	AALSM02		61.630	+0.620
LOOP Sour (Jul)	AALSM03		61.400	+0.690
Eagle Ford Marker	AAYAJ00		63.240	+0.850
Mars (May)	AAMBR00	61.75-61.77	61.760	+0.590
Mars (Jun)	AAMBU00	61.72-61.74	61.730	+0.620
Mars (Jul)	AAMBX00	61.49-61.51	61.500	+0.690
Mars/WTI (May)	AAGWH00	0.19/0.21	0.200	0.000
Mars/WTI (Jun)	AAKTH00	0.19/0.21	0.200	+0.050
Mərs/WTI (Jul)	AAMB000	0.19/0.21	0.200	+0.150
LOOP/WTI (May)	AALOM01		0.100	0.000
LOOP/WTI (Jun)	AALOM02		0.100	+0.050
LOOP/WTI (Jul)	AALOM03		0.100	+0.150
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	64.12-64.14	64.130	+0.260
P-Plus WTI	PCACI00	3.47/3.49	3.480	+0.030
P-5 WTI	AAFEN00		58.080	+0.550
WTI-Delta	AAEJK00	0.09/0.11	0.100	+0.030
Kern River	РСАВЈ00	61.66-61.68	61.670	+2.400

### US DOMESTIC CRUDE ASSESSMENTS LONDON CLOSE

(PGA page 1240)		\$/barrel	Mid	Change
WTI (May)	AAQAR00	60.63-60.65	60.640	-0.330
WTI (Jun)	AAQAT00	60.59-60.61	60.600	-0.360
WTI (Jul)	AAQAV00	60.38-60.40	60.390	-0.370
WTI MEH (May)	AAYRZ00		61.790	-0.180
WTI MEH (Jun)	AAXYD00		61.850	-0.160
LLS (May)	AAQBB00	62.73-62.75	62.740	-0.330
LLS (Jun)	AAQBD00	62.74-62.76	62.750	-0.360
Mars (May)	AAQAX00	60.83-60.85	60.840	-0.330
Mars (Jun)	AAQAZ00	60.79-60.81	60.800	-0.310
		<u>Spread</u>	Mid	Change
WTI (May)	AAQAS00	<u>Spread</u> -0.01/0.01	<b>Mid</b> 0.00	Change 0.000
WTI (May) WTI (Jun)	AAQAS00 AAQAU00			•
,		-0.01/0.01	0.00	0.000
WTI (Jun)	AAQAU00	-0.01/0.01 -0.01/0.01	0.00	0.000
WTI (Jun) WTI (Jul)	00UAQAA	-0.01/0.01 -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 -0.01/0.01	0.00 0.000 0.000 1.150	0.000 0.000 0.000 +0.150
WTI (Jun) WTI (Jul) WTI MEH (May) WTI MEH (Jun)	AAQAU00 AAQAW00 AAYTA00 AAYWA00	-0.01/0.01 -0.01/0.01 -0.01/0.01	0.00 0.000 0.000 1.150 1.250	0.000 0.000 0.000 +0.150 +0.200
WTI (Jun) WTI (Jul) WTI MEH (May) WTI MEH (Jun) LLS (May)	AAQAU00 AAQAW00 AAYTA00 AAYWA00 AAQBC00	-0.01/0.01 -0.01/0.01 -0.01/0.01 -0.01/2.01	0.00 0.000 0.000 1.150 1.250 2.100	0.000 0.000 0.000 +0.150 +0.200 0.000

			Mid	Change		Spread vs WTI	Mid	Change
WTI Midland	PCACJ00	62.10-62.12	62.110	+0.740	AAGVZ00	0.54/0.56	0.550	+0.150
WTI Midland (2nd month)	AAYZA00	02.10 02.12	62.130	+0.720	AAXXF00	0.54/0.50	0.600	+0.150
LLS (1st month)	PCABN00	63.60-63.62	63.610	+0.690	AAGWN00	2.04/2.06	2.050	+0.100
LLS (2nd month)	AAURC00	63.62–63.64	63.630	+0.670	AAURD00	2.09/2.11	2.100	+0.100
HLS (1st month)	PCABD00	62.80–62.82	62.810	+0.690	AAGWP00	1.24/1.26	1.250	+0.100
HLS (2nd month)	AAURE00	62.82–62.84	62.830	+0.670	AAURF00	1.29/1.31	1.300	+0.100
WTS (1st month)	PCACK00	61.70-61.72	61.710	+0.590	AAGWB00	0.14/0.16	0.150	0.000
WTS (2nd month)	AAURG00	61.72-61.74	61.730	+0.570	AAURH00	0.19/0.21	0.200	0.000
WTI MEH	AAYRG00		62.710	+0.740	AAYRH00		1.150	+0.150
WTI MEH (2nd month)	AAXXE00		62.780	+0.770	AAYYA00		1.250	+0.200
Poseidon	ААВНК00	61.00-61.02	61.010	+0.590	AAGWL00	-0.56/-0.54	-0.550	0.000
Eugene Island	PCAFC00	62.10-62.12	62.110	+0.590	AAGWD00	0.54/0.56	0.550	0.000
Thunder Horse Blend	AAWZK00	63.10-63.12	63.110	+0.590	AAWZL00	1.54/1.56	1.550	0.000
Wyoming Sweet	PCACM00	61.05-61.07	61.060	+0.540	AAGWR00	-0.51/-0.49	-0.500	-0.050
Basrah Light	AAEJH00	65.73-65.75	65.740	+0.660	AAGWV00	4.20/4.22	4.210	+0.090
Bonito	PCAIE00	62.10-62.12	62.110	+0.590	AAGWF00	0.54/0.56	0.550	0.000
SGC	AASOI00	61.05-61.07	61.060	+0.590	AASOJ00	-0.51/-0.49	-0.500	0.000
					Sprea	d vs NYMEX WTI C	MA	
ANS (Cal)	PCAAD00	64.79–64.83	64.810	+0.410	AAGWX00	3.34/3.36	3.350	-0.150
WCS ex-Cushing	AAWTY00	58.10–58.12	58.110	+0.560	AAWTZ00	-3.36/-3.34	-3.350	0.000
WCS ex-Nederland	AAYAY00		59.360	+0.560	AAYAX00		-2.100	0.000
Bakken Williston	AAXPP00		61.510	+0.610	AASRX00		0.050	+0.050
Bakken Guernsey	AASRR00	61.05–61.07	61.060	+0.560	AASRV00	-0.41/-0.39	-0.400	0.000
Bakken Clearbrook	AASRU00	62.25-62.27	62.260	+0.560	AASRW00	0.79/0.81	0.800	0.000
Bakken USGC Pipe	ABAKA00		62.460	+0.710	ABAKB00		1.000	+0.150
Americas Crude Marker (May)	AAQHN00	61.00–61.02	61.010	+0.590				
Americas Crude Marker (Jun)	AAQH000	60.97-60.99	60.980	+0.620				
Americas Crude Marker (Jul)	AAQHP00	60.74–60.76	60.750	+0.690				
Thums	PCACD00	63.28–63.30	63.290	+2.400				
Line 63	PCABM00	67.64–67.68	67.660	+0.590				
P-Plus Line 63	PCAFV00	2.39/2.41	2.400	0.000				
Fools Ford costings ave			E0 E00	.0.500		ed vs Eagle Ford Yi		0.000
Eagle Ford postings avg.	AAYAH00	OD LICCO	58.500	+0.560	AAYAI00	ICCO Canadana NIV	-4.740	-0.290
Platts AGS	AGSAA00	OB USGC	62.540	+0.400	AGSAC00	JSGC Spread vs NY	1.030	-0.160
Bakken	ABAKC00		62.340	+0.400	ABAKD00		0.830	-0.160
Eagle Ford Crude	AAYAT00		62.040	+0.400	AAYAU00		0.530	-0.160
Eagle Ford Condensate	AAYAR00		61.090	+0.400	AAYAS00		-0.420	-0.160
WTI	AAYBA00		62.540	+0.400	AAYAZ00		1.030	-0.160
WII		ad vs Dated Brent S		70.400	AATAZOO		1.000	0.100
Platts AGS	AGSAB00	oo to botto brent	-1.640	-0.090				
Bakken	ABAKE00		-1.840	-0.090				
Eagle Ford Crude	AEFCA00		-2.140	-0.090				
Eagle Ford Condensate	AEFCB00		-3.090	-0.090				
WTI	AWTUA00		-1.640	-0.090				
<b>US CRUDE ASSESSMEN</b>	NTS SINGAPO	RE CLOSE						
(\$/barrel)			Mid	Change				
(PCA 0200 2208)				-				
(PGA page 2208)								
LOOP Sour (May)	AAZDA00		60.400	+0.290				
LOOP Sour (Jun)	AAZDB00		60.340	+0.230				
LLS (May)	AAZDC00		62.250	+0.290				
LLS (Jun)	AAZDD00		62.290	+0.320				
Southern Green Canyon	AAZDE00		59.800	+0.290				

61.300

61.340

AAZDF00

AAZDG00

+0.290

+0.320

WTI MEH (May)

WTI MEH (Jun)

### **CRUDE PRICE ASSESSMENTS**

### **CANADIAN SPOT CRUDE ASSESSMENTS, MAR 29**

(PGA pages 230 & 232)		C\$/cu m	Mid	Change
Lloyd Blend	AALRM00	408.755-408.914	408.834	+4.334
Mixed Sweet	AALRT00	469.356-469.514	469.435	+4.319
Light Sour Blend	AALRZ00	466.187-466.345	466.266	+4.320
Midale	AAUCD00	459.057-459.216	459.137	+4.322
Condensates	AALSH00	493.913-494.071	493.992	+4.313
Syncrude Sweet Prem.	AASOL00	506.191-506.349	506.270	+4.309
WCS	AAPP000	404.794-404.953	404.874	+4.336
Cold Lake	AASZY00	404.002-404.161	404.081	+4.335
		<u>\$/barrel</u>		
Lloyd Blend	AALRK00	51.600-51.620	51.610	+0.560
Mixed Sweet	AALRR00	59.250-59.270	59.260	+0.560
Light Sour Blend	AALRX00	58.850-58.870	58.860	+0.560
Midale	AAUCC00	57.950-57.970	57.960	+0.560
Condensates	AALSF00	62.350-62.370	62.360	+0.560
Syncrude Sweet Prem.	AASOK00	63.900-63.920	63.910	+0.560
WCS	AAPPN00	51.100-51.120	51.110	+0.560
Cold Lake	AASZX00	51.000-51.020	51.010	+0.560
	<u>s</u>	pread vs Canada Basi	s	
Lloyd Blend	AALRP00	-9.860/-9.840	-9.850	0.000
Mixed Sweet	AALRV00	-2.210/-2.190	-2.200	0.000
Light Sour Blend	AALSD00	-2.610/-2.590	-2.600	0.000
Midale	AAUCE00	-3.510/-3.490	-3.500	0.000
Condensates	AALSJ00	0.890/0.910	0.900	0.000
Syncrude Sweet Prem.	AASOM00	2.440/2.460	2.450	0.000
WCS	AAPPP00	-10.360/-10.340	-10.350	0.000
Cold Lake	AASZZ00	-10.460/-10.440	-10.450	0.000

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

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

		Mid	Change			Chance	Dill to	Mid	
US Delivered-Asia Spot Crudes		Mid	Change		Mid	Change		Mid	Change
WTI Midland (DES Singapore)	WTMSA00	63.970	+0.720	WTMSD00	2.650	-0.050	WTMSB00	1.000	-0.060
WTI Midland (DES Yeosu)	WTMYA00	64.470	+0.720	WTMYD00	3.150	-0.050	WTMYB00	1.500	-0.060
Brazil Delivered-Asia Spot Crudes									
Tupi (DES Qinadao)	LUODA00	64.320	+0.720	LUODD00	3.000	-0.050	LUODB00	1.350	-0.060

Diff to Dubai

Diff to Asian Dated Brent

### LATIN AMERICA CRUDE (\$/barrel), MAR 29 (PGA page 280)

		FOB Crude	Mid	Change		Diff to	I	Diff to Futures	S	Diff to Dated
						<u>WTI strip</u>		Brent strip		<u>Brent strip</u>
Oriente	PCADE00	61.28–61.33	61.305	+0.515	PCAGU00	-0.200	AAXBW00	-3.105	AAXBH00	-2.835
Vasconia	PCAGI00	61.49-61.53	61.510	+0.370	PCAGR00	0.005	AAXCB00	-2.900	AAXBN00	-2.630
Roncador	AAQTL00	62.19-62.23	62.210	+0.370	AAQTK00	0.705	AAXBT00	-2.200	AAXAY00	-1.930
Escalante	PCAGC00	66.39-66.43	66.410	+0.370	PCAG000	4.905	AAXBS00	2.000	AAXAX00	2.270
Loreto	PCAGH00	60.38-60.43	60.405	+0.515	PCAGQ00	-1.100	AAXBV00	-4.005	AAXBG00	-3.735
Mesa 30	AAITB00	61.94-61.98	61.960	+0.570	AAITH00	0.455	AAXCC00	-2.450	AAXB000	-2.180
Santa Barbara	AAITD00	63.58-63.63	63.605	+0.715	AAITJ00	2.100	AAXBU00	-0.805	AAXAZ00	-0.535
Marlim	AAITF00	62.24-62.28	62.260	+0.370	AAITL00	0.755	AAXBY00	-2.150	ААХВЈ00	-1.880
Napo	AAMCA00	58.98-59.03	59.005	+0.515	AAMCD00	-2.500	AAXBX00	-5.405	AAXBI00	-5.135
Castilla Blend	AAVEQ00	60.09-60.13	60.110	+0.370	AAVEQ01	-1.395	AAXBZ00	-4.300	AAXBK00	-4.030
Magdalena	AAWFR00	58.49-58.53	58.510	+0.370	AAWFS00	-2.995	AAXCA00	-5.900	AAXBL00	-5.630
Lizə	ALIZA00		64.260	+0.320	ALIZD00	2.755	ALIZC00	-0.150	ALIZB00	0.120
Latin America WTI strip	AAXBP00		61.505	+0.565						
Latin America Futures Brent strip	AAXBQ00		64.410	+0.370						
Latin America Dated Brent strip	AAXBR00		64.140	+0.440						

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

			Cilalige
26Mar	AAEUQ00	62.560	+0.930

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.

### **CRUDE OIL POSTINGS**

ONODE GIET GOTINGO			Effective date			Effective date			Effective date			Effective date
US (\$/barrel) (PGA page 250)												
		<u>Plains</u>			<u>Shell</u>			Sunoco			<u>Valero</u>	
WTI	PSADF09	58.04*	29MAR21	PSADI09	58.20*	29MAR21	PSADG09	58.00*	29MAR21	PSACS09	58.00*	29MAR21
WTS	PSAED09	57.04	29MAR21	PSAEG09	58.54	29MAR21	PSAEE09	53.00	29MAR21			
LLS	PSAM009	56.54	29MAR21	PSAMQ09	56.54	29MAR21	PSAMP09	56.50	29MAR21	PSATF09	60.13	29MAR21
0k. Swt.	PSUS191	58.04	29MAR21	PSANX09	57.95	29MAR21	PSANW09	58.00	29MAR21			
Kansas	PSAPL09	48.39	29MAR21	PSUS112	50.68	29MAR21				PSAPE09	57.00	29MAR21
Wyo. Swt	PSAQZ09	55.14	29MAR21									
Eugene Island	AALBB00	53.54	29MAR21									
Eagle Ford							PSUS100	58.00	29MAR21			
Eagle Fd Cond							PSUS110	57.00	29MAR21			
		Phillips66			FlintHIs						Coffey	
WTI	PSACP09	58.18*	29MAR21	AAUQN00	58.00	29MAR21				PSUS066	58.25	29MAR21
WTS	PSAD009	58.04	29MAR21									
LLS	PSAMC09	56.93	29MAR21									
0k. Swt	PSASL09	57.98	29MAR21							PSUS064	58.00	29MAR21
Kansas										PSUS060	51.75	29MAR21
Wyo. Swt.				PSUS264	55.25	29MAR21						
Wyo. Sr.				PSUS261	48.75	29MAR21						

<sup>\*</sup>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.

From	То		Size (mt)		WS		Rate (\$/mt
Clean							
(PGT page 1910)							
Med	UKC	PFADCSZ	30k	PFADC10	202.50	TCABA00	22.44
Med	USAC	PFACWSZ	37k	PFACW10	155.00	TCABC00	24.43
Med	Med	PFADBSZ	30k	PFADB10	192.50	TCAAY00	10.59
UKC	UKC	PFALYSZ	22k	PFALY00	201.25	TCABV00	10.57
UKC	USAC	PFAMASZ	37k	PFAMA00	155.00	TCABX00	20.46
UKC	USGC	PFAMBSZ	37k	PFAMB00	150.00	TCACA00	27.14
BSea	Med	PFABXSZ	30k	PFABX00	202.50	TCAAP00	21.40
(PGT page 2920)							
AG	India	PFABMSZ	35k	PFABM10	192.00	TCAAF00	13.40
AG	Japan	PFABNSZ	35k	PFABN10	137.00	ТСААН00	28.85
Sing	Japan	PFAEBSZ	30k	PFAEB10	148.00	TCABP00	15.38
Sing	HK	PFAKWSZ	30k	PFAKW10	360.00*	TCADI00	12.00
(PGT page 2922)							
AG	Japan	PFAEYSZ	55k	PFAEY10	132.00	TCAAI00	27.80
AG	Japan	PFAMTSZ	75k	PFAMT00	138.00	ТСААЈ00	29.06
	USGC	PFANZSZ	50k	PFANZ00	157.50	TDABA00	14.32
Carib	USGC	PFANZSZ DEALTSZ	50k	PFANZ00	157.50	TDABA00	14.32
Carib Carib	USGC USAC	PFANZSZ PFALTSZ	50k 70k	PFANZ00 PFALT10	157.50 92.50	TDABA00 TDAAY00	14.32 8.76
Carib Carib (PGT page 1960)	USAC	PFALTSZ	70k	PFALT10	92.50	TDAAY00	8.76
(PGT page 1962) Carib Carib (PGT page 1960) Med Med	USAC Med	PFALTSZ PFAJPSZ	70k 80k	PFAJP10	92.50	TDAAY00	8.76 11.87
Carib Carib (PGT page 1960) Med Med	USAC Med USGC	PFAJPSZ PFAJOSZ	70k 80k 80k	PFAJP10 PFAJ010	92.50 150.00 85.00	TDABL00 TDABU00	8.76 11.87 16.48
Carib Carib (PGT page 1960) Med Med UKC	Med USGC UKC	PFAJPSZ PFAJOSZ PFAKDSZ	70k 80k 80k 80k	PFAJP10 PFAJO10 PFAKD10	92.50 150.00 85.00 110.00	TDABL00 TDABU00 TDACD00	8.76 11.87 16.48 7.51
Carib Carib (PGT page 1960) Med Med UKC UKC	USAC Med USGC	PFAJPSZ PFAJOSZ	70k 80k 80k	PFAJP10 PFAJ010	92.50 150.00 85.00	TDABL00 TDABU00	8.76 11.87 16.48
Carib Carib (PGT page 1960) Med Med UKC UKC (PGT page 1970)	Med USGC UKC USAC	PFALTSZ  PFAJPSZ  PFAJOSZ  PFAKDSZ  PFAKESZ	70k 80k 80k 80k 80k	PFALT10  PFAJP10  PFAJ010  PFAKD10  PFAKE10	92.50 150.00 85.00 110.00 80.00	TDAAY00  TDABL00  TDABU00  TDACD00  TDACG00	8.76 11.87 16.48 7.51 11.06
Carib Carib (PGT page 1960) Med Med UKC UKC (PGT page 1970) WAF	Med USGC UKC	PFAJPSZ PFAJOSZ PFAKDSZ	70k 80k 80k 80k	PFALT10  PFAJP10  PFAJ010  PFAKD10  PFAKE10  PFAIA10	92.50 150.00 85.00 110.00	TDAAY00  TDABL00 TDABU00 TDACD00 TDACG00  TDACV00	8.76 11.87 16.48 7.51 11.06
Carib Carib (PGT page 1960) Med Med UKC UKC (PGT page 1970) WAF UKC	Med USGC UKC USAC	PFALTSZ  PFAJPSZ PFAJOSZ PFAKDSZ PFAKESZ  PFAKESZ	70k 80k 80k 80k 80k	PFALT10  PFAJP10  PFAJ010  PFAKD10  PFAKE10	92.50 150.00 85.00 110.00 80.00	TDAAY00  TDABL00  TDABU00  TDACD00  TDACG00	8.76 11.87 16.48 7.51 11.06
Carib Carib (PGT page 1960) Med Med UKC UKC (PGT page 1970) WAF UKC	Med USGC UKC USAC  USGC USAC	PFALTSZ  PFAJPSZ PFAJOSZ PFAKDSZ PFAKESZ  PFAKESZ  PFAIASZ PFAHNSZ	70k 80k 80k 80k 80k 130k	PFALT10  PFAJP10  PFAJ010  PFAKD10  PFAKE10  PFAIA10  PFAHN10	92.50 150.00 85.00 110.00 80.00 72.50 62.50	TDAAY00  TDABL00 TDABU00 TDACD00 TDACG00  TDACV00 TDACH00	8.76 11.87 16.48 7.51 11.06
Carib Carib (PGT page 1960)	Med USGC UKC USAC  USGC USGC USGC USGC	PFALTSZ  PFAJPSZ PFAJOSZ PFAKDSZ PFAKESZ  PFAIASZ PFAHMSZ PFAHGSZ	70k 80k 80k 80k 80k 130k	PFALT10  PFAJP10  PFAJO10  PFAKD10  PFAKE10  PFAIA10  PFAIA10  PFAHN10  PFAHG10	92.50 150.00 85.00 110.00 80.00 72.50 62.50	TDAAY00  TDABL00 TDABU00 TDACD00 TDACG00  TDACV00 TDACH00 TDACH00 TDACH00	8.76 11.87 16.48 7.51 11.06 14.33
Carib Carib (PGT page 1960) Med Med UKC UKC (PGT page 1970) WAF UKC Med (PGT page 2970) AG	Med USGC UKC USAC  USGC USAC	PFALTSZ  PFAJPSZ PFAJOSZ PFAKDSZ PFAKESZ  PFAKESZ  PFAIASZ PFAHNSZ	70k  80k 80k 80k 80k 130k 135k 135k	PFALT10  PFAJP10  PFAJ010  PFAKD10  PFAKE10  PFAIA10  PFAHN10	92.50 150.00 85.00 110.00 80.00 72.50 62.50 62.50	TDAAY00  TDABL00 TDABU00 TDACD00 TDACG00  TDACV00 TDACH00	8.76 11.87 16.48 7.51 11.06 14.33 11.34 12.12
Carib Carib (PGT page 1960) Med Med UKC UKC (PGT page 1970) WAF UKC Med (PGT page 2970) AG (PGT page 2980)	Med USGC UKC USAC  USGC USGC USGC USGC USGC	PFALTSZ  PFAJPSZ PFAJOSZ PFAKOSZ PFAKESZ  PFAIASZ PFAHNSZ PFAHGSZ  PFAJDSZ	70k  80k 80k 80k 80k 130k 135k 135k	PFALT10  PFAJP10  PFAJO10  PFAKD10  PFAKE10  PFAIA10  PFAIA10  PFAHN10  PFAHD10	92.50 150.00 85.00 110.00 80.00 72.50 62.50 62.50	TDAAY00  TDABL00 TDABU00 TDACD00 TDACG00  TDACH00 TDACH00 TDACH00 TDACH00 TDABS00	8.76 11.87 16.48 7.51 11.06 14.33 11.34 12.12
Carib Carib Carib (PGT page 1960) Med Med UKC UKC (PGT page 1970) WAF UKC Med (PGT page 2970) AG (PGT page 2980) AG	Med USGC UKC USAC  USGC USGC USGC USGC	PFALTSZ  PFAJPSZ PFAJOSZ PFAKDSZ PFAKESZ  PFAIASZ PFAHMSZ PFAHGSZ	70k  80k 80k 80k 80k 130k 135k 135k	PFALT10  PFAJP10  PFAJO10  PFAKD10  PFAKE10  PFAIA10  PFAIA10  PFAHN10  PFAHG10  PFAJD10	92.50 150.00 85.00 110.00 80.00 72.50 62.50 62.50	TDAAY00  TDABL00 TDABU00 TDACD00 TDACG00  TDACH00 TDACH00 TDACH00 TDAAB00	8.76 11.87 16.48 7.51 11.06 14.33 11.34 12.12
Carib Carib Carib (PGT page 1960) Med Med UKC UKC (PGT page 1970) WAF UKC Med (PGT page 2970) AG (PGT page 2980) AG AG	Med USGC UKC USAC  USGC USGC USGC USGC USGC  Asia  Asia USGC	PFALTSZ  PFAJPSZ PFAJOSZ PFAKDSZ PFAKESZ  PFAIASZ PFAHNSZ PFAHGSZ  PFAJDSZ	70k  80k 80k 80k 80k 130k 135k 135k 270k	PFALT10  PFAJP10  PFAJO10  PFAKD10  PFAKE10  PFAIA10  PFAIA10  PFAHN10  PFAHD10	92.50 150.00 85.00 110.00 80.00 72.50 62.50 62.50 107.50	TDAAY00  TDABL00 TDABU00 TDACD00 TDACG00  TDACH00 TDACH00 TDACH00 TDACH00 TDABS00	8.76  11.87 16.48 7.51 11.06  14.33 11.34 12.12  18.43  6.88
Carib Carib Carib (PGT page 1960) Med Med UKC UKC (PGT page 1970) WAF UKC Med (PGT page 2970) AG (PGT page 2980) AG AG AG *values are in lum	Med USGC UKC USAC  USGC USGC USGC USGC USGC USGC USGC	PFALTSZ  PFAJPSZ PFAJOSZ PFAKDSZ PFAKESZ  PFAIASZ PFAHNSZ PFAHGSZ  PFAJDSZ  PFAJDSZ	70k  80k 80k 80k 80k  130k 135k 135k 270k 280k	PFALT10  PFAJP10  PFAJ010  PFAKD10  PFAKE10  PFAIA10  PFAHN10  PFAHG10  PFAJD10  PFAJD10	92.50  150.00  85.00  110.00  80.00  72.50  62.50  62.50  107.50  34.75  20.00	TDAAY00  TDABL00 TDABU00 TDACD00 TDACG00  TDACH00 TDACH00 TDACH00 TDAAB00	8.76  11.87 16.48 7.51 11.06  14.33 11.34 12.12  18.43  6.88
Carib Carib Carib (PGT page 1960) Med Med UKC UKC (PGT page 1970) WAF UKC Med (PGT page 2970) AG (PGT page 2980) AG AG *Values are in lum  PLATTS FU	Med USGC UKC USAC  USGC USGC USGC USGC USGC  Asia  Asia USGC USGC	PFALTSZ  PFAJPSZ PFAJOSZ PFAKDSZ PFAKESZ  PFAIASZ PFAHNSZ PFAHGSZ  PFAJDSZ  PFAJDSZ	70k  80k 80k 80k 80k  130k 135k 135k 270k 280k	PFALT10  PFAJP10  PFAJO10  PFAKD10  PFAKE10  PFAIA10  PFAIA10  PFAHN10  PFAHG10  PFAJD10  PFAOC00  PFAOC00  PFAOG00	92.50  150.00  85.00  110.00  80.00  72.50  62.50  62.50  107.50  34.75  20.00	TDAAY00  TDABL00 TDABU00 TDACD00 TDACG00  TDACH00 TDACH00 TDACH00 TDAAB00	8.76  11.87 16.48 7.51 11.06  14.33 11.34 12.12  18.43  6.88
Carib Carib Carib (PGT page 1960) Med Med UKC UKC (PGT page 1970) WAF UKC Med (PGT page 2970) AG (PGT page 2980) AG AG AG *values are in lum PLATTS FU*	Med USGC UKC USAC  USGC USGC USGC USGC USGC  Asia  Asia USGC USGC	PFALTSZ  PFAJPSZ PFAJOSZ PFAKOSZ PFAKESZ  PFAIASZ PFAHNSZ PFAHGSZ  PFAJDSZ  PFAOCSZ PFAOCSZ PFAOGSZ	70k  80k 80k 80k 80k 130k 135k 135k 270k 280k  20RE MOC, MA	PFALT10  PFAJP10  PFAJO10  PFAKD10  PFAKE10  PFAIA10  PFAHN10  PFAHD10  PFAJD10  PFAJD10  PFAOC00  PFAOC00  PFAOG00  NYMEX NY ULSD	92.50  150.00  85.00  110.00  80.00  72.50  62.50  62.50  107.50  34.75  20.00	TDAAY00  TDABL00 TDABU00 TDACD00 TDACG00  TDACH00 TDACH00 TDACH00 TDAAB00 TDAAB00 TDAAB00	8.76  11.87 16.48 7.51 11.06  14.33 11.34 12.12  18.43  6.88 7.43
Carib Carib Carib (PGT page 1960) Med Med UKC UKC (PGT page 1970) WAF UKC Med (PGT page 2970) AG (PGT page 2980) AG AG *values are in lum  PLATTS FU* NYMEX RBOB (¢	Med USGC UKC USAC  USGC USGC USGC USGC USGC  Asia  Asia USGC USGC	PFALTSZ  PFAJPSZ PFAJOSZ PFAKDSZ PFAKESZ  PFAIASZ PFAHNSZ PFAHGSZ  PFAJDSZ  PFAOCSZ PFAOCSZ PFAOGSZ  MENTS SINGAF	70k  80k 80k 80k 80k 130k 135k 135k 270k 280k  PORE MOC, MA	PFALT10  PFAJP10  PFAJO10  PFAKD10  PFAKE10  PFAIA10  PFAHN10  PFAHG10  PFAG000  PFAG000  PFAG000  RR 29 (PGA page 703)  NYMEX NY ULSD	92.50  150.00  85.00  110.00  80.00  72.50  62.50  62.50  107.50  34.75  20.00	TDAAY00  TDABL00 TDABU00 TDACD00 TDACG00  TDACH00 TDACH00 TDAAB00 TDAAB00 TDAAB00 TDAAN00	8.76  11.87 16.48 7.51 11.06  14.33 11.34 12.12  18.43  6.88 7.43
Carib Carib Carib (PGT page 1960) Med Med UKC UKC (PGT page 1970) WAF UKC Med (PGT page 2970) AG (PGT page 2980) AG AG AG *values are in lum PLATTS FU*	Med USGC UKC USAC  USGC USGC USGC USGC USGC  Asia  Asia USGC USGC	PFALTSZ  PFAJPSZ PFAJOSZ PFAKOSZ PFAKESZ  PFAIASZ PFAHNSZ PFAHGSZ  PFAJDSZ  PFAOCSZ PFAOCSZ PFAOGSZ	70k  80k 80k 80k 80k 130k 135k 135k 270k 280k  20RE MOC, MA	PFALT10  PFAJP10  PFAJO10  PFAKD10  PFAKE10  PFAIA10  PFAHN10  PFAHD10  PFAJD10  PFAJD10  PFAOC00  PFAOC00  PFAOG00  NYMEX NY ULSD	92.50  150.00  85.00  110.00  80.00  72.50  62.50  62.50  107.50  34.75  20.00	TDAAY00  TDABL00 TDABU00 TDACD00 TDACG00  TDACH00 TDACH00 TDACH00 TDAAB00 TDAAB00 TDAAB00	8.76  11.87 16.48 7.51 11.06  14.33 11.34 12.12  18.43  6.88 7.43

### PLATTS FUTURES ASSESSMENTS, MAR 29

NYMEX light sweet crude	(\$/barrel	) (PGA	page 701	I)
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	CME 2:30 PM	ET settlement
May	AAWS001	61.560
Jun	AAWS002	61.530
Jul	AAWS003	61.300
Aug	AAWS004	60.870
	Platts 2:30 PM ET	futures assessmen
May	NYCRM01	61.560
Jun	NYCRM02	61.540
Jul	NYCRM03	61.310
Aug	NYCRM04	60.880
	CME 2:30 PM vs PI	atts 2:30 PM spread
May	AAWD001	0.000
Jun	AAWD002	-0.010
Jul	AAWD003	-0.010
Aug	AAWD004	-0.010
NYMEX RBOB (¢/gal) (F	PGA page 701)	
		ET settlement
Apr	AARS001	199.520
May	AARS002	200.090
Jun	AARS003	199.350
0011		futures assessmen
Apr	NYRBM01	199.580
May	NYRBM02	200.140
Jun	NYRBM03	199.380
0011		atts 2:30 PM spread
Apr	AARD001	-0.060
May	AARD002	-0.050
Jun	AARD003	-0.030
NYMEX NY ULSD (¢/ga		0.000
NTMEX NT OLSD (¢/ga		FT
Aor		ET settlement
Apr	AAHS001	180.980
May	AAHS002	181.150
Jun	AAHS003	181.430
Λ		futures assessmen
Apr	NYHOM01	180.940
May	NYHOMO2	181.120
Jun	NYHOMO3	181.400
Aor		atts 2:30 PM spread
Apr	AAHD001	0.040
May	AAHD002	0.030
Jun	AAHD003	0.030
ICE Brent crude (\$/bai		
		futures assessmen
May	AAQBG00	65.000
Jun	AAQBH00	64.920
Jul	AAXZZ00	64.380
Aug	AAYALOO	63.930

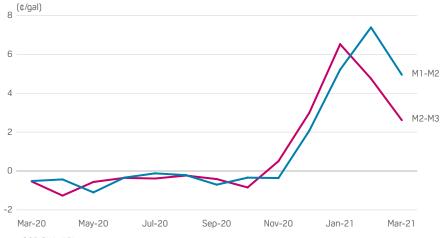
RES SETT		
	st F	PNT***
Light sweet c		
NM	XNCLP00	14583
NY ULSD (\$/g		
NM		
NMI	XNHOP00	7832
RBOB unlead		
NM		
NM		
NM		
NMI		
NM	XNRBP00	7551
Natural Gas (		
NMI		
NMI		
NMI		
NM		
NMI	XNNGP00	918
nan crude (\$/		
Asia xp		
DM	XDOQP00	0
nt (\$/barrel) (I		
IC	XILLP00	12862
nt (\$/barrel) (I		

		Settlement	Change	Low	High	Volume*	Open inter	est	PNT***
ICE BWAVE (B	rent weighted	futures avera	ge)(\$/barı	r <b>el)</b> (PGA pa	ge 704)				
May 21	XIBW001	63.94							
Jun 21	XIBW002	63.76							
BWAVE data re	fer to previous d	ау.							
ICE WTI (\$/ba	rrel) (PGA page 7	<b>'</b> 04)							
May 21	ICIC001	61.56	+0.59	59.43	61.70	89	52835		
Jun 21	ICIC002	61.53	+0.57	59.43	61.64	94	86947		
Jul 21	ICIC003	61.30	+0.54	59.40	61.44	5	31773		
Aug 21	ICIC004	60.87	+0.47	59.26	61.05	34067	17908		
Total	ICIC000					282084		XIICP00	13350
ICE low sulfu	r Gasoil (\$/mt)	(PGA page 704)							
Apr 21	ICL0001	505.25	-5.50	501.50	515.75	22	106747		
May 21	ICL0002	507.25	-5.50	503.00	517.50	85905	180840		
	ICL0003	509.25	-5.00	505.25	519.25	52238	131631		
Jun 21	1010000								
Jun 21 Jul 21	ICL0003	510.75	-4.75	506.50	520.25	20000	70324		

<sup>\*</sup>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. \*\*\*Privately Negotiated Trade values found on PGA page 710

Source: CQG

### USGC PROPANE BACKWARDATION EASES WITH WARMER WEATHER



### FIVE-DAY ROLLING AVERAGES, FIVE DAYS ENDING MARCH 29

Nachtha (DCA cocc 24)			Conversion	
Naphtha (PGA page 34)		\$/barrel		¢/gal
Singapore	PAAAP00	61.96–62.00	(/.42)	147.52–147.61
egopere	1700000	\$/mt	(/:)	¢/gal
Japan C/F	PAAAD00	567.70-572.75	(/3.78)	150.19-151.52
Arab Gulf	PAAAA00	535.83-540.88	(/3.78)	141.75–143.09
CIF NWE physical	PAAAL00	548.30-548.80	(/3.78)	145.05-145.19
Rotterdam barge	PAAAM00	544.30-544.80	(/3.78)	143.99–144.13
FOB Med	PAAAI00	522.55-523.05	(/3.78)	138.24-138.37
CIF Genoa	РАААНОО	537.70-538.20	(/3.78)	142.25–142.38
		¢/gal	(, , , , ,	\$/mt
US Gulf FOB cargo	AAXJP00	142.75 –142.85	(*3.54669)	539.70 -539.80
US Gulf DAP LSR parcel	AAXQK00	137.88	(*4.0083)	552.65
Jet Kerosene (PGA page 35)	•			
( a. paga aa)		\$/mt		¢/gal
CIF NWE cargo	РЈААЏ00	518.10-518.60	(/7.89)	156.35-156.50
Rotterdam barge	РЈАВА00	519.20-519.70	(/7.89)	156.68-156.83
FOB Med	AAIDL00	497.00-497.50	(/7.89)	149.98-150.13
CIF Genoa	AAZBN00	516.60-517.10	(/7.89)	155.89-156.04
Carib cargo	PJAAD00	536.04-536.10	(/7.7)	165.96-165.97
		¢/gal		\$/mt
US Gulf water	РЈАВМ00	160.01-160.11	(*.42)	530.25-530.59
US Gulf pipe	РЈАВООО	158.51-158.61	(*.42)	525.28-525.62
NY barge	PJAAW00	162.79-162.89	(*.42)	537.21-537.54
LA pipeline	РЈААР00	164.93-165.03	(*.42)	526.14-526.46
Group 3	PJAAI00	170.04-170.14	(*.42)	563.49-563.82
Chicago	РЈААГ00	171.84–171.94	(*.42)	569.44-569.77
Crude Oil, FOB Source				
		\$/barrel		
West Texas Int	PCACG00	59.97–59.99		
NYMEX Crude	XNCL001	60.00		
Mars	AAMBR00	60.31–60.33		
Brent (DTD)	PCAAS00	62.76–62.77		
Brent (First month)	PCAAQ00	63.46–63.48		
Dubai (First Month)	PCAAT00	62.27–62.29		
Oman (First Month)	PCABS00	62.37–62.39		
Urals CIF med	PCACE00	60.75–60.78		
WTI Posting Plus	PCACI00	3.37 –3.39		
Gasoline, U.S. Market (PGA page 36)				
(¢/gal)		<u>Unleaded</u>		Premium
US Gulf water	PGACU00	192.00–192.10	PGAIX00	199.40-199.50
US Gulf pipe	PGACT00	190.00–190.10	PGAJB00	197.40-197.50
Group 3			PGABD00	205.13-205.23
LA Pipeline			PGABG00	217.21–217.31
SF Pipeline	PGADG00	202.00–202.10	PGAB000	218.80-218.90
Chicago	PGACR00	186.29–186.39	PPASQ00	204.04–204.14
NYMEX Unl	XNRB001	194.67		

Gasoline, Intl. Market			Conversion	
		Prem (\$/mt)		¢/gal
R'dam Barge Prem unl	PGABM00	605.20-605.70	(/3.51)	172.42-172.56
Gasoil/Heating Oil (PGA page 32)				
		\$/barrel		¢/gal
Singapore	POABC00	66.59-66.63	(/.42)	158.54-158.63
Arab Gulf	POAAT00	64.19-64.23	(/.42)	152.82-152.92
		\$/mt		¢/gal
0.1 CIF ARA	AAYWS00	500.55-501.05	(/3.133)	159.92-160.08
50 ppm Rotterdam barge	AAUQC00	494.95-495.45	(/3.133)	158.13-158.29
0.1 Rotterdam barge	AAYWT00	489.30-489.80	(/3.133)	156.33-156.49
0.1 FOB NWE	AAYWR00	485.05-485.55	(/3.133)	154.97-155.13
0.1 CIF Med	AAVJJ00	500.75-501.25	(/3.133)	159.98-160.14
(PGA page 33)				
		¢/gal		\$/barrel
L.A. LS diesel	POAET00	185.38-185.48	(*3.07)	569.13-569.44
S.F. LS diesel	POAEY00	185.26-185.36	(*3.07)	568.74-569.05
		¢/gal		\$/mt
NY barge	POAEG00	153.54–153.64	(*3.15)	483.66–483.97
US Gulf water	POAEE00	162.33-162.43	(*3.08)	499.99–500.30
US Gulf pipe	POAED00	157.83-157.93	(*3.08)	486.13-486.44
NYMEX NY ULSD	XNH0001	179.23	(*3.08)	564.58
Low Sulfur Resid Fuel Oil (PGA page 38)				
		\$/mt		\$/barrel
CIF ARA 1%	PUAAL00	413.90–414.40	(/6.35)	65.18–65.26
Rot bar 1%	PUAAP00	402.25–402.75	(/6.35)	63.35-63.43
NWE FOB 1%	PUAAM00	403.50-404.00	(/6.35)	63.54–63.62
Med FOB 1%	PUAAK00	409.75–410.25	(/6.35)	64.53-64.61
		\$/barrel		\$/mt
NY Cargo .3% HP	PUAAE00	75.85–75.87	(*6.7)	508.21-508.34
NY Cargo .3% LP	PUAAB00	75.85–75.87	(*6.7)	508.21-508.34
NY Cargo .7% Max	PUAAH00	66.28–66.30	(*6.5)	430.81–430.94
NY Cargo 1% Max	PUAA000	62.27–62.29	(*6.5)	404.77–404.90
US Gulf 1%	PUAAI00	63.06–63.08	(*6.11)	398.56–398.69
Hi Sulfur Resid Fuel Oil (PGA page 39)		** .		
0		\$/mt	(15.3=)	\$/barrel
Singapore 180	PUADV00	371.23–371.27	(/6.35)	58.46-58.47
Singapore 380	PPXDK00	364.55–364.59	(/6.35)	57.41-57.42
Arab Gulf 180	PUABE00	358.20–358.24	(/6.35)	56.41–56.42
CIF ARA 3.5%	PUABA00	348.75–349.25	(/6.35)	54.92-55.00
NWE FOB 3.5%	PUABB00	334.85–335.35	(/6.35)	52.73–52.81
Med FOB 3.5%	PUAAZ00	340.45–340.95	(/6.35)	53.61–53.69
CIF Med 3.5%	PUAAY00	351.90–352.40	(/6.35)	55.42-55.50
		\$/barrel	(10.0=)	\$/mt
USAC HSF0	PUAAX00	55.70–55.72	(*6.35)	353.68–353.81
USGC HSFO	PUAFZ00	53.41–53.43	(*6.35)	339.18–339.31
Carib 2.0%	PUAAS00	53.14–53.16	(*6.4)	340.11–340.22

### US WHOLESALE POSTED PRICES EFFECTIVE MAR 29

PADD 1	<u>Unleaded</u>	Midgrade	<u>Premium</u>	Kerosene	Diesel No.2	ULSD
Albany, NY	DR198ZY 182.65-188.00	DM198ZY 187.45-199.00	DP198ZY 194.25-219.00	DK198ZY 205.50-215.80		DU198ZY 186.00-195.83
Allentown	DR235ZY 181.00-187.85	DM235ZY 187.87-202.79	DP235ZY 198.50-224.68		DH235ZY -	DU235ZY 186.25-189.20
tlanta	DR048ZY 186.50-207.30	DM048ZY 193.10-209.33	DP048ZY 202.00-243.85			DU048ZY 186.65-191.04
altimore (a)	DR123ZY 181.98-200.73	DM123ZY 186.55-212.80	DP123ZY 195.00-249.45	DK123ZY 195.00-219.42	DH123ZY -	DU123ZY 182.73-197.06
inghamton	DR200ZY 185.85-189.07	DM200ZY 193.69-207.86	DP200ZY 196.50-208.07			DU200ZY 190.86-193.35
oston (a)	DR121ZY 180.25-184.10	DM121ZY 185.35–188.55	DP121ZY 191.65-194.37	DK121ZY 227.50-227.50		DU121ZY 188.10-191.10
harleston	DR250ZY 191.57-206.32	DM250ZY 200.30-207.05	DP250ZY 230.30-240.87			DU250ZY 199.82-210.48
harlotte	DR169ZY 181.65-192.91	DM169ZY 192.97-221.35	DP169ZY 203.35-243.70			DU169ZY 186.15-192.63
airfax (a)	DR299ZY 188.73-206.64	DM299ZY 200.20-226.64	DP299ZY 212.30-251.64			DU299ZY 186.45-191.71
Greensboro				DK171ZY 225.50-225.50	BU0207V 100 00 105 70	DU171ZY 188.10-192.17
fiami	DR034ZY 179.75-189.61	DM034ZY 184.85-197.69	DP034ZY 190.80-218.66	DK034ZY 227.20–227.20	DU039ZY 186.80-195.70 DH034ZY -	DU034ZY 186.20-190.56
lew Haven (a) lew York City (a)	DR204ZY 179.75-189.61 DR204ZY 183.20-184.36	DM204ZY 184.85-197.69 DM204ZY 188.30-188.99	DP204ZY 190.80-218.66 DP204ZY 194.75-197.71	DK034ZY 221.2U-221.2U	DH034ZY -	DU204ZY 186.20-190.56 DU204ZY 187.41-209.01
lewark (a)	DR189ZY 177.98-187.42	DM189ZY 180.98-192.25	DP189ZY 186.79–213.40	DK189ZY 212.95-212.95		DU189ZY 182.50–188.05
lorfolk (a)	DR300ZY 185.10-195.87	DM300ZY 200.65-212.87	DP300ZY 221.88-253.64	DK16921 212.95-212.95		DU300ZY 183.33-190.15
Irlando	DR041ZY 187.75-194.98	DM041ZY 201.00-210.04	DP041ZY 213.95-244.67			DU041ZY 187.00-204.50
Philadelphia (a)	DR242ZY 180.33-198.16	DM242ZY 184.25-202.83	DP242ZY 190.13-211.51		DH242ZY -	DU242ZY 185.00-197.60
Pittsburgh	DR243ZY 177.25-186.30	DM243ZY 189.75-215.76	DP243ZY 200.30-236.23	DK243ZY -	DH243ZY -	DU243ZY 184.02-194.52
rovidence (a)	DR248ZY 180.45-204.40	DM248ZY 186.10-217.40	DP248ZY 192.05-236.65	DRE-SET	DI124321	DU248ZY 190.41-191.81
Portland	DR126ZY 182.30-189.04	DM126ZY 187.45-193.68	DP126ZY 194.00-199.57		DH126ZY -	DU126ZY 188.20-200.56
taleigh						DU168ZY 192.75-192.75
tichmond	DR301ZY 189.74-205.00	DM301ZY 200.40-221.64	DP301ZY 212.15-254.65	DK301ZY 227.00-227.00		DU301ZY 188.60-194.20
avannah	DR054ZY 196.05-198.25	DM054ZY 210.60-215.25	DP054ZY 245.15-245.25			DU054ZY 201.90-202.45
Spartanburg	DR252ZY 180.05-193.75	DM252ZY 190.50-205.60	DP252ZY 201.10-236.60			DU252ZY 187.00-195.85
ampa					DU045ZY 184.60-203.50	
PADD 2						
Aberdeen	DR253ZY 188.75-198.42	DM253ZY 195.75-205.07	DP253ZY 203.75-211.24			DU253ZY 197.33-202.49
Cape Girardeau	DR144ZY 190.46-216.37		DP144ZY 270.51-295.75			DU144ZY 182.85-208.70
Chattanooga	DR260ZY 190.95-204.60	DM260ZY 199.15-221.38	DP260ZY 221.75-254.38			DU260ZY 186.13-190.99
Chicago (a)	DR075ZY 194.00-223.71	DM075ZY 216.00-217.82	DP075ZY 249.15-257.75	DK075ZY 229.49-274.00		DU075ZY 188.00-194.45
Cleveland	DR212ZY 198.10-205.71	DM212ZY 210.67-227.12	DP212ZY 217.19-248.10	DK212ZY 273.20-273.20		DU212ZY 188.22-202.44
Columbus	DR213ZY 193.56-211.03	DM213ZY 212.82-236.03	DP213ZY 223.79-275.03	DK213ZY 269.15-269.15		DU213ZY 187.14-200.26
Duluth	DR138ZY 190.50-194.20	DM138ZY 197.56-201.51	DP138ZY 210.66-215.09			DU138ZY 197.05-199.05
Des Moines	DR059ZY 187.00-202.77	DM059ZY 192.70-235.28	DP059ZY 195.88-243.28			DU059ZY 192.12-212.25
Detroit	DR130ZY 190.33-195.40	DM130ZY 204.94-224.40	DP130ZY 217.75-255.90	DK130ZY 267.85-267.85		DU130ZY 188.20-198.12
argo	DR174ZY 185.67-196.49	DM174ZY 192.11-201.63	DP174ZY 198.54-205.43			DU174ZY 193.75-203.31
Green Bay	DR313ZY 197.00-197.00	DM313ZY -	DP313ZY 232.00-232.00	DK313ZY -		DU313ZY 205.70-205.70
ndianapolis	DR088ZY 187.68-199.35	DM088ZY 208.25-223.25	DP088ZY 234.25-244.35	DK088ZY 271.12-272.10		DU088ZY 193.03-200.16
Kansas City	DR099ZY 186.54–190.60 DR261ZY 185.70–200.20	DM099ZY 192.11–206.17 DM261ZY 195.47–217.20	DP099ZY 214.19-241.35	DV2C47V		DU099ZY 190.74-201.11 DU261ZY 187.25-193.90
Knoxville Milwaukee	DR261ZY 185.70–200.20 DR316ZY 196.35–201.10	DM261ZY 195.47–217.20 DM316ZY 204.40–218.25	DP261ZY 208.00–250.20 DP316ZY 219.35–258.25	DK261ZY - DK316ZY 275.15-275.15		DU261ZY 187.25–193.90 DU316ZY 193.05–197.00
Minneapolis/St.Paul	DR141ZY 182.55-193.71	DM141ZY 190.05-199.56	DP141ZY 201.30-211.52	DK141ZY 221.80-221.80		DU141ZY 188.55-202.65
Oklahoma City	DR226ZY 184.01-196.10	DM226ZY 189.33-206.00	DP226ZY 193.03-219.00	DR14121 221.00-221.00		DU226ZY 187.72–197.69
Omaha Omaha	DR185ZY 187.50-198.99	DM185ZY 193.27–207.50	DP185ZY 196.97–239.99			DU185ZY 192.71–206.30
Sioux Falls	DR256ZY 186.65-200.51	DM256ZY 191.00–197.78	DP256ZY 187.01–203.95			DU256ZY 192.71-200.30
St. Louis (a)	DR154ZY 190.83-196.09	DM154ZY 200.00-220.69	DP154ZY 208.75-244.09			DU154ZY 199.10-200.78
PADD 3	DRIJ421 130.03-130.03	DH13421 200.00-220.03	DF13421 200.13-244.03			0015421 155.10-200.10
Albuquerque	DR192ZY 216.50-222.50	DM192ZY 235.50-242.50	DP192ZY 254.50-264.50			DU192ZY 226.80-245.00
Amarillo	DR265ZY 196.50-198.20	DM265ZY 212.50-212.95	DP265ZY 233.20–233.50			DU265ZY 204.00-206.20
Baton Rouge	DR115ZY 181.96-197.16	DM115ZY 199.77-206.46	DP115ZY 224.70–230.96			DU115ZY 183.20-190.50
Birmingham	DR003ZY 181.50-191.42	DM003ZY 185.80-209.80	DP003ZY 191.20-250.42	DK003ZY 216.57-216.57		DU003ZY 184.44-193.05
Corpus Christi	DR275ZY 192.13-192.75	DM275ZY 207.13-207.75	DP275ZY 238.13-239.00			DU275ZY 186.00-187.15
Pallas/Ft.Worth (a)	DR276ZY 182.25-193.05	DM276ZY 207.25-224.48	DP276ZY 232.25-243.05			DU276ZY 194.30-204.44
louston (a)	DR416ZY 184.00-194.62	DM416ZY 197.58-223.91	DP416ZY 219.25-240.85	DK416ZY 221.20-221.20		DU416ZY 186.05-212.29
ittle Rock	DR009ZY 190.75-214.30	DM009ZY 198.64-236.62	DP009ZY 207.85-273.45			DU009ZY 194.87-230.88
lew Orleans	DR119ZY 178.80-185.41	DM119ZY 196.79-205.12	DP119ZY 220.85-233.79			DU119ZY 179.20-182.25
San Antonio	DR289ZY 185.40-194.40	DM289ZY 202.69-211.40	DP289ZY 230.40-242.40			DU289ZY 194.05-197.33
ADD 4						
illings (b)	DR162ZY -		DP162ZY 229.19-229.34			DU162ZY 206.58-206.91
asper (b)	DR321ZY 207.60-207.65		DP321ZY 242.60-243.05		DU321ZY* 228.65-231.41	
lenver	DR028ZY 202.99-217.15	DM028ZY 223.99-237.15	DP028ZY 246.99-257.15			DU028ZY 201.82-221.72
Salt Lake City	DR298ZY 232.31-244.00	DM298ZY 249.94-259.00	DP298ZY 265.78-279.00			DU298ZY 256.57-272.00
PADD 5						
Anacortes	DR305ZY 214.75-227.64	DM305ZY 243.75-252.14	DP305ZY 250.75-263.64			DU305ZY 189.50-197.00
as Vegas (e)	DR196ZY 226.05-247.00	DM196ZY 238.55-258.00	DP196ZY 239.50-269.00			DU196ZY 212.25-236.00
os Angeles(e)	DR022ZY 248.50-252.53	DM022ZY 265.32-268.03	DP022ZY 278.50-283.53			DU022ZY 223.00-236.80
Phoenix	DR012ZY 199.00-228.80	DM012ZY 224.00-243.55	DP012ZY 239.00-259.80			DU012ZY 195.00-238.22
Portland	DR233ZY 196.90-216.00	DM233ZY 218.20-233.90	DP233ZY 225.20-251.00			DU233ZY 193.00-202.40
SanFranEBay (e)	DR025ZY 242.90-255.83	DM025ZY 256.15-277.83	DP025ZY 269.40-286.45			DU025ZY 228.00-242.51
Seattle/Tacoma	DR308ZY 197.65-204.90	DM308ZY 226.65-233.90	DP308ZY 233.65-240.90			DU308ZY 192.50-201.60
Spokane	DR309ZY 197.51-205.40	DM309ZY 212.70-223.40	DP309ZY 229.19-241.40			DU309ZY 197.50-211.17

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### US WHOLESALE POSTED PRICES EFFECTIVE MAR 27

PADD 1	<u>Unleaded</u>	Midgrade	<u>Premium</u>	<u>Kerosene</u>	Diesel No.2	ULSD
Albany, NY	DR198ZY 182.65-188.00	DM198ZY 187.45-199.00	DP198ZY 194.25-219.00	DK198ZY 205.50-215.80		DU198ZY 186.00-195.83
Allentown	DR235ZY 181.20-187.85	DM235ZY 187.87-202.79	DP235ZY 198.50-224.68		DH235ZY -	DU235ZY 186.25-189.20
tlanta	DR048ZY 186.50-207.30	DM048ZY 193.10-209.33	DP048ZY 202.00-243.85			DU048ZY 186.65-191.04
altimore (a)	DR123ZY 181.98-200.73	DM123ZY 186.55-212.80	DP123ZY 195.00-249.45	DK123ZY 195.00-220.42	DH123ZY -	DU123ZY 182.73-197.06
inghamton	DR200ZY 185.85-189.07	DM200ZY 193.69-207.86	DP200ZY 196.50-208.07			DU200ZY 190.86-193.35
oston (a)	DR121ZY 180.25-184.10	DM121ZY 185.35-188.55	DP121ZY 191.65-194.37	DK121ZY 227.50-227.50		DU121ZY 188.10-191.10
harleston	DR250ZY 191.57-206.32	DM250ZY 200.30-207.05	DP250ZY 230.30-240.87			DU250ZY 199.82-210.48
Charlotte	DR169ZY 181.65-192.91	DM169ZY 192.97-221.35	DP169ZY 203.35-243.70			DU169ZY 186.40-192.63
airfax (a)	DR299ZY 188.73-206.64	DM299ZY 200.20-226.64	DP299ZY 212.30-251.64			DU299ZY 186.64-191.71
Greensboro				DK171ZY 225.50-225.50	BU0207V 100 00 105 70	DU171ZY 188.10-192.17
flami	DR034ZY 179.75-189.61	DM034ZY 184.85-197.69	DP034ZY 190.80-218.66	DK034ZY 227.20–227.20	DU039ZY 186.80-195.70 DH034ZY -	DU034ZY 186.20-190.56
lew Haven (a) lew York City (a)	DR204ZY 179.75-189.61 DR204ZY 183.20-184.36	DM204ZY 184.85-197.69 DM204ZY 188.30-188.99	DP204ZY 190.80-218.66 DP204ZY 194.75-197.71	DK034ZY 221.2U-221.2U	DH034ZY -	DU204ZY 186.20-190.56 DU204ZY 187.41-209.01
lewark (a)	DR189ZY 177.98-187.42	DM189ZY 180.98-192.25	DP189ZY 186.79–213.40	DK189ZY 212.95-212.95		DU189ZY 182.50-188.05
lorfolk (a)	DR300ZY 185.29-195.87	DM300ZY 200.65-212.87	DP300ZY 221.88-253.64	DK18921 212.95-212.95		DU300ZY 183.33-190.15
Irlando	DR041ZY 187.75-194.98	DM041ZY 201.00-210.04	DP041ZY 213.95-244.67			DU041ZY 187.00-204.50
Philadelphia (a)	DR242ZY 180.33-198.16	DM242ZY 184.25-202.83	DP242ZY 190.13-211.51		DH242ZY -	DU242ZY 185.62-197.60
Pittsburgh	DR243ZY 177.25-186.30	DM243ZY 189.75-215.76	DP243ZY 200.30-236.23	DK243ZY -	DH243ZY -	DU243ZY 184.02-194.52
rovidence (a)	DR248ZY 180.45-204.40	DM248ZY 186.10-217.40	DP248ZY 192.05-236.65	DRETSET	DI124321	DU248ZY 190.41-191.81
Portland	DR126ZY 182.30-189.04	DM126ZY 187.45-193.68	DP126ZY 194.00-199.57		DH126ZY -	DU126ZY 188.20-200.56
Raleigh	2.12221 102.00					DU168ZY 192.75-192.75
Richmond	DR301ZY 189.74-205.00	DM301ZY 200.40-221.64	DP301ZY 212.15-254.65	DK301ZY 227.00-227.00		DU301ZY 188.60-194.20
avannah	DR054ZY 196.05-198.25	DM054ZY 210.60-215.25	DP054ZY 245.15-245.25			DU054ZY 201.90-202.45
Spartanburg	DR252ZY 180.05-193.75	DM252ZY 190.50-205.60	DP252ZY 201.10-236.60			DU252ZY 187.25-195.85
Гатра					DU045ZY 184.60-203.50	
PADD 2					- · · · · · · · · · · · · · · · · · · ·	
Aberdeen	DR253ZY 188.75-197.30	DM253ZY 195.75-203.97	DP253ZY 203.75-210.20			DU253ZY 198.33-202.49
Cape Girardeau	DR144ZY 190.46-216.37		DP144ZY 270.38-295.75			DU144ZY 186.88-208.70
Chattanooga	DR260ZY 190.95-204.60	DM260ZY 199.15-221.38	DP260ZY 221.75-254.38			DU260ZY 186.13-190.99
Chicago (a)	DR075ZY 194.00-223.71	DM075ZY 216.00-217.82	DP075ZY 249.15-257.75	DK075ZY 229.49-274.00		DU075ZY 188.00-194.45
Cleveland	DR212ZY 197.71-198.69	DM212ZY 205.87-227.12	DP212ZY 217.19-248.10	DK212ZY 273.20-273.20		DU212ZY 188.22-202.44
Columbus	DR213ZY 190.51-211.03	DM213ZY 203.82-236.03	DP213ZY 223.79-275.03	DK213ZY 269.15-269.15		DU213ZY 187.14-200.26
Duluth	DR138ZY 190.50-194.20	DM138ZY 197.56-201.51	DP138ZY 210.66-215.09			DU138ZY 197.05-199.05
Des Moines	DR059ZY 186.40-202.77	DM059ZY 192.70-235.28	DP059ZY 196.21-243.28			DU059ZY 192.12-212.25
Detroit	DR130ZY 183.08-195.40	DM130ZY 199.24-224.40	DP130ZY 217.75-255.90	DK130ZY 267.85-267.85		DU130ZY 188.20-198.12
Fargo	DR174ZY 185.67-196.49	DM174ZY 192.11-201.63	DP174ZY 198.54-205.43			DU174ZY 195.50-203.31
Green Bay	DR313ZY 197.00-197.00	DM313ZY -	DP313ZY 232.00-232.00	DK313ZY -		DU313ZY 205.70-205.70
Indianapolis	DR088ZY 187.68-199.35	DM088ZY 208.25-223.25	DP088ZY 234.25-244.35	DK088ZY 271.12-272.10		DU088ZY 193.03-200.16
Kansas City Knoxville	DR099ZY 186.09–190.60 DR261ZY 185.70–200.20	DM099ZY 191.36–206.17 DM261ZY 195.47–217.20	DP099ZY 214.19–241.35 DP261ZY 208.00–250.20	DK261ZY -		DU099ZY 190.34–201.11 DU261ZY 187.25–193.90
Milwaukee	DR316ZY 185.70-200.20 DR316ZY 196.35-201.10	DM316ZY 204.40-218.25	DP316ZY 219.35-258.25	DK316ZY - 275.15-275.15		DU316ZY 193.05-197.00
Minneapolis/St.Paul	DR141ZY 181.55-193.71	DM141ZY 189.05-199.56	DP141ZY 200.30-211.52	DK141ZY 221.80-221.80		DU141ZY 190.00-202.65
Oklahoma City	DR226ZY 184.08-196.10	DM226ZY 189.33-206.00	DP226ZY 193.03-219.00	DR14121 221.00-221.00		DU226ZY 187.47-197.69
Omaha	DR185ZY 187.10-198.99	DM185ZY 192.74–207.50	DP185ZY 196.44-239.99			DU185ZY 192.46–206.30
Sioux Falls	DR256ZY 186.65-200.51	DM256ZY 191.38–200.18	DP256ZY 187.01–206.49			DU256ZY 192.53–201.28
St. Louis (a)	DR154ZY 190.83-196.09	DM154ZY 200.00-220.69	DP154ZY 208.75-244.09			DU154ZY 199.10–200.78
PADD 3	DRES 121 100.00 100.00	21127121 200100 220100	21 23 121 200.10 2 1 1.00			2023 121 100110 200110
Albuquerque	DR192ZY 216.50-222.50	DM192ZY 235.50-242.50	DP192ZY 254.50-264.50			DU192ZY 226.80-245.00
Amarillo	DR265ZY 196.50-198.20	DM265ZY 212.50-212.95	DP265ZY 233.20-233.50			DU265ZY 204.00-206.20
Baton Rouge	DR115ZY 181.96-197.16	DM115ZY 199.77-206.46	DP115ZY 224.70-230.96			DU115ZY 183.20-190.50
Birmingham	DR003ZY 181.50-191.42	DM003ZY 185.80-209.80	DP003ZY 191.20-250.42	DK003ZY 216.57-216.57		DU003ZY 184.93-193.05
Corpus Christi	DR275ZY 192.13-192.75	DM275ZY 207.13-207.75	DP275ZY 238.13-239.00			DU275ZY 186.00-187.15
Dallas/Ft.Worth (a)	DR276ZY 182.25-193.05	DM276ZY 207.25-224.48	DP276ZY 232.25-243.05			DU276ZY 194.30-204.44
louston (a)	DR416ZY 184.25-194.62	DM416ZY 197.58-223.91	DP416ZY 219.25-240.85	DK416ZY 221.20-221.20		DU416ZY 186.05-212.29
ittle Rock	DR009ZY 190.75-214.30	DM009ZY 197.43-236.62	DP009ZY 206.50-273.45			DU009ZY 194.79-230.88
lew Orleans	DR119ZY 178.80-185.41	DM119ZY 196.79-205.12	DP119ZY 220.85-233.79			DU119ZY 179.20-182.25
San Antonio	DR289ZY 185.40-194.40	DM289ZY 202.69-211.40	DP289ZY 230.40-242.40			DU289ZY 194.05-197.33
ADD 4						
Billings (b)	DR162ZY -		DP162ZY 229.19-229.34			DU162ZY 206.58-206.91
Casper (b)	DR321ZY 207.60-207.65		DP321ZY 242.60-243.05		DU321ZY* 228.65-231.41	
Denver	DR028ZY 202.99-217.15	DM028ZY 223.99-237.15	DP028ZY 246.99-257.15			DU028ZY 201.82-221.72
Salt Lake City	DR298ZY 232.31-244.00	DM298ZY 249.94-259.00	DP298ZY 265.78-279.00			DU298ZY 256.57-272.00
PADD 5	DD2057V 2147F 227 24	DM20E7V 242 7F 2F2 14	DD20E7V 2E0 7E 200 04			DUDOETY 100 FO 107 CC
Anacortes	DR305ZY 214.75-227.64	DM305ZY 243.75-252.14	DP305ZY 250.75-263.64			DU305ZY 189.50-197.00
as Vegas (e)	DR196ZY 226.05-247.00	DM196ZY 238.55-258.00	DP196ZY 239.50-269.00			DU196ZY 212.25-236.00
Los Angeles(e)	DR022ZY 248.50-252.53	DM022ZY 265.32-268.03	DP022ZY 278.50-283.53			DU022ZY 226.00-236.80
Phoenix	DR012ZY 199.00-228.80	DM012ZY 224.00-243.55	DP012ZY 239.00-259.80			DU012ZY 197.00-238.22
Portland	DR233ZY 194.40-216.00	DM233ZY 223.40-233.90	DP233ZY 230.40-251.00			DU233ZY 193.00-202.40
SanFranEBay (e)	DR025ZY 242.90–255.83 DR308ZY 197.65–204.90	DM025ZY 256.15–277.83 DM308ZY 226.65–233.90	DP025ZY 269.40-286.45			DU025ZY 228.00-242.51
Seattle/Tacoma			DP308ZY 233.65-240.90			DU308ZY 192.50-201.60
Spokane	DR309ZY 197.51-206.40	DM309ZY 212.70-224.40	DP309ZY 229.19-242.40			DU309ZY 197.50-211.17

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