Northwest European propane prices pared some recent oil-fueled gains off Monday's one-month high, while the show of discounted spot tons continued. However, bidders prevailed.

Public physical discussion culminated in an Anglo-Dutch oil major’s sale of a 3-7 June cargo to a Geneva-based trader at a fully fixed $375/t, which defined OPIS’ spot price assessment. It marked a $3/t discount to June swaps, which dealt at $378/t on average during 4:00-4:30pm BST.

Having flagged a separate bid for the same date at $377/t and -$4/t to June, the buyer pounced on the offer when price ideas had largely converged.

A second bid came from a British oil major on the lookout for a 9-13 June delivery at $377/t and a $1/t discount to bal. May, which equated to a slightly stronger $1.5/t discount versus June marker swaps.

Whilst the higher bid on the backend of the 10-20 forward-day pricing range partly reflected a mild nearby-curve contango, with bal. May/June at -$1/t for most of the day, it chimed in with whispers of stronger cash differentials in private trade.

“I wouldn't go as far as saying that the market is long,” a trader said on current cash discounts in the public space. “I'm hearing much better numbers outside of the window, but nothing confirmed.”

Overseas supply projections for June are currently limited to U.S.-origin cargoes, expected to be carried on the VLGCs Cratis and the Gas Leo, “but otherwise nothing (Continued on Page 3)
### OPIS Global Spot LPG Prices ($/mt)

<table>
<thead>
<tr>
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### OPIS 44,000mt VLGC Freight Rates ($/mt)

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### OPIS Global Propane Forward Prices ($/mt)

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spectacular is coming in to flood the market," the same
source said. "And I don’t think enough material is around for
full propane cracking."

However, North Sea production was described as “high,”
despite more planned works coming up at the Kollsnes plant
from June 5, initially with a volume impact of 24.5 million
cbm/day which will increase in the second half of the month
when two turnaround projects will be pursued.

In April, NGL production at a rate of 377,000 b/d had
outpaced the official projection by 41,000 b/d, amid signs that
turnarounds only moderately impacted activity, provisional
data from the country’s petroleum authority (NPD) indicate.

Against March, NGL output had slowed by 3,000 b/d. The
end-2016 forecast foresees May production of about 317,000
b/d.

The midsize Knokke was observed in the Karsto area,
alongside a gathering of smaller vessels, while the vessel
Symi docked at Mongstad.

In the NWE butane segment, large cargoes were valued
around 80% of naphtha, although the focus was on coasters,
talked at a high-70s percentile, with buying interest noted
from the petrochemicals segment.

A butane June future dealt in the afternoon at $364.5/t.
OPIS Europe LPG & Naphtha Report

OPIS Europe LPG & Naphtha Report Methodology
OPIS assesses daily spot propane and butane and naphtha prices at the key trading hubs in northwest Europe and the Mediterranean region. Editors record and confirm deals, bids and offers, analyse supply and demand fundamentals, and gauge market sentiment and outlook. Prices are quoted in US dollars per metric ton. Times quoted are that of the United Kingdom.

In the northwest European propane market, OPIS assesses cargoes CIF basis. Flushing for 10-20 days forward delivery. The grade and quality, delivery and nomination terms are based on the prevailing, industry-accepted forward contract, such as the TOT contract. Positions referencing alternative forward delivery contracts will be considered if the dates fall into the 10-20 day forward delivery range. The cargo quantity considered for assessment is between 18,400-23,100 metric tons in seller’s option.

Butane prices are for field grade mixed butane cargoes above 4,000mt delivered 5-20 days forward basis CIF ArA.

In the Mediterranean, OPIS assesses field grade and refinery grade propane and butane FOB basis Lavera 5-15 days forward. Cargo sizes are 1,500mt and above. The physical flat naphtha price assessment is based on public physical spot deals transacted between 4:00-4:30pm London time. The delivery period assessed is a forward 10-25 delivery window basis CIF NWE, also termed CIF Rotterdam. The typical cargo size for assessment purposes will be in the range 12.5-25kt and deals done in larger volumes may at times be included at the discretion of the editor.

OPIS assesses on a full day basis for the Open Spec and for Paraffinic grade (LVN) naphtha (basis min 80% paraffins).

For further details on the LPG or naphtha methodology see www.opisnet.com/about/methodology.aspx

OPIS contacts a cross-section of market participants daily. Information published is according to the best available data on the day and is subject to change. Please direct any enquiries to energygeurope@opisnet.com

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(Continued from Page 3)

The reaction in the FOB U.S. Gulf Coast propane resale market to the 1.5 million-bbl propane stocks build reported Wednesday was relatively neutral, with a wait-and-see approach still largely being adopted. While the build was a touch higher than expectations, arb spreads were steady after gaining some ground early this week. An easing in the Baltic index to below $28/t also provided some hope that it would translate to a fall in ex-U.S. Gulf freight levels.

The effect of cargo cancellations in May finally emerged in this week’s inventory figures after disappointing market pundits last week - the EIA reported U.S. propane exports dropped to 841kb/d, down by a third from the previous week.

Clarification on further June cancellations was murky, with up to six slots tallied but not all deemed firm.

One lifter anticipated three of their cargoes to be cancelled in June, although said just one cancellation was official so far.

OPIS assessed FOB propane resale differentials unchanged at 3.75-4.25c/gal over Mont Belvieu.

WEAKER GASOLINE BLENDING DEMAND ADDS TO NAPHTHA WEAKNESS

In spite of higher Brent, lower gasoline and naphtha swap values dragged the northwest European naphtha flat price down by $3.75/t to $446.25/t day-on-day. Naphtha crack spreads and a deepening contango for the front-month flat price structure completed the picture of naphtha softness Wednesday.

A single 5,000 ton BALMO swap cleared between 4:00-4:30pm BST at $446.25/t. The flat price was set in line with this swap. BALMO swaps in the like session Tuesday averaged $450/t, while 20,000 tons of June swaps cleared over the same timeframe to average $450.42/t.

Underscoring naphtha’s weakness in the prompt, open-specification grades were still seen by a market source as trading at a discount of 33c/t to the flat price.

The same source felt that only LVN being sold into the United States could realistically expect to fetch a premium of $10/t over the flat price. LVN placed into the European blending pool would command a lower mark-up. OPIS, therefore, adjusted the LVN to flat price differential downwards by 2c/t to +$8/t. N4, a more inferior blending component, was heard sold at $4/t over the flat price - reflecting its inferior blending properties compared with LVN.

A 4.4 million barrel drawdown in U.S. crude stocks helped lift the 4:30pm BST Brent mark by 10cts/bbl to $54.12/bbl. Most players were side-lined as they waited OPEC’s decision on whether it would make larger cuts in output at its ministerial meeting tomorrow. The market has already factored in an extension of the current production agreement.

The May naphtha crack spread decreased by 8cts/bbl to -$3.79/bbl, with June falling by 10cts/bbl to -$3.75/bbl. The May/June contango was unchanged at -$2.50/t.

Higher U.S. gasoline production overshadowed the draw in U.S. gasoline inventories, sending gasoline tumbling on the day. The RBOB gasoline crack spread narrowed by 39cts/bbl to $15.27/bbl, with EBOB declining by 25cts/bbl to $11.52/bbl.

The gasoline/naphtha spread shrank to 98.94/t Wednesday from Tuesday’s $100.31/t. Even though the spread encourages gasoline blending in theory, in practice it

(Continued on Page 5)
is unlikely to do so. European gasoline exports have tailed-off, as high European gasoline prices have made it difficult to work gasoline arbitrages out of Europe. Buying interest for European gasoline exports had been the main stimulant for gasoline blending demand.

The East/West naphtha spread contracted to $11.50/t from its prior $11.75/t.

### NWE LPG IMPORTS

**JUNE**
- Gas Leo, ex-Marcus Hook, ldg late May, est. 46kt C3, dest NW Europe**
- Navigator Libra, ex-Ust Luga, ldg end-May/early June, 11.5kt C3, dest TBD**
- Navigator Luga, ex-Ust Luga, ldg late May, 12.5kt C3, dest TBD**
- Cratis, ex-Nederland, ldg 17 May, est. 46kt C3, ETA Teesside 2 June

**MAY**
- Sibur Tobol, ex-Ust Luga, ldg late May, 12.1kt C4, dest TBD**
- Navigator Leo, ex-Ust Luga, ldg after 22 May, 11.2kt C3, ETA Stenungsund 26 May
- Sumire Gas, ex-EPIC, ldg 9-10 May, est. 46kt C3/C4, dest (1) Morocco 23 May (2) Terneuzen late-May
- Marcellus Lady, ex-Freeport, ldg 30 Apr-1 May, est. 20kt C3, ETA Antwerp (AGT) around 25 May
- Sibur Tobol, ex-Ust Luga, ldg mid-May, 12.1kt C4, moored outside Terneuzen since 23 May
- Navigator Libra, ex-Ust Luga, ldg 12-14 May, 11.5kt C3, arr Canvey Island 18 May
- Navigator Leo, ex-Ust Luga, ldg after 10 May, 12.1kt C4, arr Flushing 16 May
- Rourd El Fares, ex-Arzew, ldg early May, 20kt C3, arr Antwerp (AGT) 11 May
- Sibur Voronezh, ex-Ust Luga, ldg 7-8 May, 11.8kt (6.1kt C3+5.7kt C4), arr Stenungsund 12 May
- Navigator Luga, ex-Ust Luga, ldg early May, 12.5kt C3, arr Brunsbuettel 7 May
- Sahara Gas, ex-Marcus Hook, ldg late April, 6kt C3 (+C4 for WAF), arr Le Havre 13 May
- Sibur Voronezh, ex-Ust Luga, ldg late April, 11.7kt (6kt C3+5.7kt C4), arr Stenungsund 4 May
- Navigator Leo, ex-Ust Luga, 27-28 April, 12.1kt C4, arr Le Havre 4 May
- BW Princess, ex-Freeport, ldg 13-15 April, est. 46kt LPG, arr Stenungsund 3 May
- Clipper Sun, ex-Houston, H1 April, est. 46kt C3, arr (1) Antwerp 25 April (2) Terneuzen 1 May

**INEOS CEMENTS NORTH SEA POSITION WITH $1 BILLION DONG ACQUISITION**

U.K.-based chemicals producer Ineos has acquired the entire oil and gas business from Denmark's Dong Energy A/S for $1.05 billion, the group announced Wednesday.

Ineos will further make contingent payments of $150 million for the Fredericia stabilization plant and up to $100 million subject to the development of the Rosebank field.

Terms of the acquisition include Ineos taking over Dong's decommissioning liabilities of approximately DKK 7 billion ($1.05 billion), the Danish energy group stated.

Ineos stated that the deal places them as the biggest private enterprise operating in the North Sea and a top 10 company in that energy basin. The transaction will enable Ineos to significantly expand its trading and shipping activities, making it a major trader in the sector, the group said.

The portfolio has assets producing 100,000 barrels of oil equivalent per day (boe/d) in 2016, as well as 570 million boe of commercial and potential gas reserves in Denmark, Norway and the U.K. This includes three world class fields: Ormen Lange, the largest field in Dong's energy portfolio and the second largest field in Norwegian waters; Laggan-Tomore is a new gas field west of Shetland; and Syd Arne, the largest field in Denmark.

Ineos, one of the world's largest petrochemical companies with sales of $40 billion, has focussed more recently on expanding its Upstream Exploration and Production sector, which started out with acquisitions of DEA and and Fairfield in the U.K. in 2015 and the BP's Forties Pipeline System more recently.

Meanwhile, Dong Energy, which began divesting oil and gas assets in 2016, plans to focus on transforming into a leading pure play renewables company.

About 440 Dong staff are planned to transfer to Ineos Upstream.

The completion of the deal is targeted to complete in Q3 2017, subject to regulatory approval.
1.5 MILLION-BBL PROPANE/PROPYLENE BUILD REPORTED BY EIA

U.S. propane and propylene stocks built by 1.5 million bbl to 43.7 million bbl in the week ended May 19, according to the U.S. Energy Information Administration (EIA).

The build was 200,000 bbl higher than the average projection of polled respondents to an OPIS survey yesterday.

Total U.S. inventories sit 30.4 million bbl below their level from the same week last year.

Regionally, Gulf Coast (PADD 3) stocks rose 400,000 bbl, to 24.9 million bbl; Midwest (PADD 2) stocks built 700,000 bbl, to 14.0 million bbl; East Coast (PADD 1) supplies rose 400,000 bbl, to 3.0 million bbl; and inventories in PADDs 4 and 5 were flat to last week at 1.8 million bbl.

Propylene stocks fell 100,000 bbl, to 3.1 million bbl, implying a propane-only build of 1.6 million bbl.

Exports fell to 841,000 b/d from 1.25 million b/d the week prior. Product supplied, a measure of implied demand, jumped to 912,000 b/d from 548,000 b/d the week before.

Imports of propane and propylene bumped up 14,000 b/d, to 95,000 b/d, and refinery production of propane and propylene was 66,000 b/d higher than the week prior, rising to 1.869 million b/d.