

Crude Oil Marketwire

Volume 44 / Issue 135 / July 12, 2023

Key benchmarks (\$/barrel)

			Mid	Change
(PGA page 2210)				
Dubai (Sep)	PCAT00	79.89–79.91	79.900	+1.100
Dubai (Oct)	PCAU00	78.99–79.01	79.000	+1.000
Dubai (Nov)	PCAAV00	78.29–78.31	78.300	+0.990
MEC (Sep)	AAWSA00	79.89–79.91	79.900	+1.100
MEC (Oct)	AAWSB00	78.99–79.01	79.000	+1.000
MEC (Nov)	AAWSC00	78.29–78.31	78.300	+0.990
Brent/Dubai (Sep)	AAJMS00	-0.41/-0.39	-0.400	-0.080
(PGA page 1212)				
Brent (Dated)	PCAS00	80.24–80.26	80.250	+0.720
Dated North Sea Light	AAOFD00	80.24–80.26	80.250	+0.720
Dated Brent (CIF)	PCAKM00		81.290	+0.695
Brent (Sep)	PCAAQ00	80.03–80.05	80.040	+0.890
Brent (Oct)	PCAR00	79.69–79.71	79.700	+0.870
Brent (Nov)	PCARR00		79.260	+0.840
Sulfur de-escalator	AAUXL00		0.20	
Oseberg QP (Jul)	AAXDW00		1.6079	
Oseberg QP (Aug)	AAXDX00		1.3083	
Ekofisk QP (Jul)	AAXDY00		1.2021	
Ekofisk QP (Aug)	AAXDZ00		1.0796	
Troll QP (Jul)	ATFNB00		2.3165	
Troll QP (Aug)	ATFNA00		1.8663	
(PGA page 210)				
Platts AGS	AGSAA00		77.900	+0.930
WTI FOB USGC Decades Avg	ADECA00		77.890	+0.930
WTI (Aug)	PCACG00	75.80–75.82	75.810	+0.980
WTI (Sep)	PCACH00	75.53–75.55	75.540	+0.830
WTI (Oct)	AAGIT00	75.24–75.26	75.250	+0.810
Light Houston Sweet	AAXEW00		77.510	+0.930
Light Houston Sweet M2	AAYRY00		77.140	+0.730
LOOP Sour (Aug)	AALSM01		77.110	+0.630
LOOP Sour (Sep)	AALSM02		76.240	+0.580
LOOP Sour (Oct)	AALSM03		75.400	+0.610
Bakken	AAXPP00		76.950	+0.820
Eagle Ford Marker	AAYA00		76.400	+1.020
ACM* (Aug)	AAQH00	76.75–76.77	76.760	+0.630
ACM* (Sep)	AAQH00	75.88–75.90	75.890	+0.580
ACM* (Oct)	AAQHP00	75.04–75.06	75.050	+0.610

*Americas Crude Marker.

Forward Dated Brent (\$/barrel) (PGA page 1250)

			Mid	Change
North Sea Dated strip	AAKWH00	80.15–80.16	80.155	+0.840
Mediterranean Dated strip	AALDF00	80.15–80.17	80.160	+0.840
33-63 Day Dated strip	AALF00	79.71–79.73	79.720	+0.820
BTC Dated strip	AAUFI00	80.10–80.12	80.110	+0.835
15-45 Day Dated strip	AALGM00	79.97–79.98	79.975	+0.805
30-60 Day Dated strip	AAXRK00	79.76–79.77	79.765	+0.825
North Sea CIF Dtd strip	AAHXE00		80.140	+0.840
23-63 Day Dated Strip	ADBRA00		79.795	+0.825

Brent/WTI spreads and EFPs (PGA page 218)

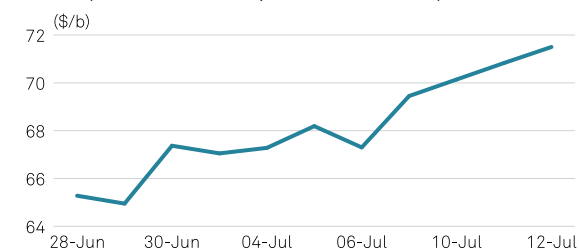
			Mid	Change
Brent/WTI 1st	AALAU00	4.56/4.58	4.570	-0.100
Brent/WTI 2nd	AALAV00	4.56/4.58	4.570	-0.060
Brent/WTI 3rd	AALAY00		4.490	-0.070
Brent EFP (Sep)	AAGVX00	0.02/0.04	0.030	+0.030
Brent EFP (Oct)	AAGVY00	0.03/0.05	0.040	+0.030
Brent EFP (Nov)	AAMVY00		0.040	+0.030
WTI EFP (Aug)	AAGVT00	0.05/0.07	0.060	+0.060
WTI EFP (Sep)	AAGVU00	-0.01/0.01	0.000	0.000
WTI EFP (Oct)	AAGVV00	-0.01/0.01	0.000	0.000

Middle East (\$/barrel)

			Mid	Change
(PGA page 2210)				
Oman (Sep)	PCABS00	79.89–79.91	79.900	+1.100
Oman (Oct)	AAHZF00	78.99–79.01	79.000	+1.000
Oman (Nov)	AAHZH00	78.29–78.31	78.300	+0.990
Upper Zakum (Sep)	AAOUQ00	79.88–79.92	79.900	+1.100
Murban (Sep)	AAKNL00	80.03–80.07	80.050	+1.150
Murban (Oct)	MBNSA00		79.150	+1.050
Murban (Nov)	MBNSB00		78.450	+1.040
Al Shaheen	AAPEV00	79.92–79.96	79.940	+1.100
Spread vs Dubai				
Dubai	DBDDC00		1.600	+0.110
Oman	DBDOC00		1.600	+0.110
Murban	AARBZ00		1.750	+0.160
Al Shaheen	AAPEW00	1.59–1.69	1.640	+0.110
Upper Zakum	DBDUZ00		1.600	+0.110
Quality Premiums				
Murban QP	AASVA00		0.0000	

(PGA page 2658)				
Dubai Swap (Aug)	AAHBM00	78.98–79.02	79.000	+1.000
Dubai Swap (Sep)	AAHBN00	78.28–78.32	78.300	+0.990
Dubai Swap (Oct)	AAHBO00	77.66–77.70	77.680	+0.950

ESPO (FOB Kozmino, London Close)



Source: S&P Global Commodity Insights

Market Commentary

Platts Middle East Sour Crude Daily Market Analysis

- ADNOC issues August OSPs
- Trades emerge for Sep-loading Dubai crude

The Middle East sour crude complex on July 12 saw trades emerge for September-loading barrels and the issuance of Abu Dhabi National Oil Co.'s official selling price differentials from Iraq.

ADNOC has set the OSP for its flagship Murban crude oil grade at \$75.61/b for August, and its Upper Zakum grade 60 cents/b lower than Murban, the UAE state oil producer said July 12.

(continued on page 3)

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Asia Pacific and Middle East crude assessments (\$/barrel)

(Asia MOC)				
API Gravity	Code		Mid	Change
Condensate				
NW Shelf	61.9	PCAGX00	66.09–66.13	66.110 +1.170
Ichthys FC	48.9	ICFCA00		73.360 +1.170
DFC	56.82	ADFC00	72.23–72.27	72.250 +1.040
Qatar LSC	56.9	AARB00	71.63–71.67	71.650 +1.040
South Pars	57.4	AARAV00	67.38–67.42	67.400 +1.040
Senipah	54.4	AAEOE00	64.04–64.08	64.060 +1.170
Light crude				
Cossack	47.7	PCAGZ00	73.14–73.18	73.160 +1.170
Tapis	45.2	PCACB00	82.69–82.73	82.710 +1.070
Belida	45.1	PCAF00	67.74–67.78	67.760 +1.170
Kutubu	44.3	PCAFJ00	71.49–71.53	71.510 +1.170
Attaka	42.3	PCAAJ00	67.64–67.68	67.660 +1.170
Ardjuna	38	PCACQ00	73.09–73.13	73.110 +1.070
Banyu Urip	32	PCAFQ00		83.210 +1.070
Sakhalin Blend	45.5	AARBN00	66.38–66.42	66.400 +1.090
ESPO M1	34.8	AARWF00	71.03–71.07	71.050 +1.040
ESPO M2	34.8	AAWFE00	70.31–70.35	70.330 +1.000
Sokol	39.7	AASCJ00	70.38–70.42	70.400 +1.090
Kikeh	34.9	AAWUH00	85.44–85.48	85.460 +1.070
Miri Light	32.3	PCABQ00	85.14–85.18	85.160 +1.070
Labuan	32	PCABL00	86.89–86.93	86.910 +1.070
Kimanis	38.6	AASCL00		86.610 +1.070
Medium crude				
Su Tu Den	36.8	AARAR00	84.39–84.43	84.410 +1.070
Bach Ho	40.7	PCAHY00	85.44–85.48	85.460 +1.070
Nanhai	40	PCAFR00	74.44–74.48	74.460 +1.070
Nile Blend	33.9	AAPLC00	76.79–76.83	76.810 +1.070
Daqing	32.2	PCAAZ00	75.84–75.88	75.860 +1.070
Heavy crude				
Dar Blend	25	AARAB00	77.14–77.18	77.160 +1.020
Shengli	24.2	PCABY00	78.69–78.73	78.710 +1.020
Duri	20.8	PCABA00	82.04–82.08	82.060 +1.020
Vincent	18.3	AARAK00		83.760 +1.020

(Asia MOC)			
Code		Mid	Change
Diff to Dubai			
ADFCB00	-6.10/-6.00	-6.050	+0.050
AARB00	-6.70/-6.60	-6.650	+0.050
AARAX00	-10.95/-10.85	-10.900	+0.050
Diff to ICP			
AAE0K00	-8.10/-8.00	-8.050	+0.050
Diff to ICP			
PCAFM00	-4.70/-4.60	-4.650	+0.050
PCAAK00	-5.60/-5.50	-5.550	+0.050
PCACR00	-1.70/-1.60	-1.650	0.000
PCAQQ00		2.350	0.000
Diff to Dubai			
AARCN00	-11.95/-11.85	-11.900	+0.100
AASEU00	-7.30/-7.20	-7.250	+0.050
AAWFG00	-7.40/-7.30	-7.350	+0.050
AASCK00	-7.95/-7.85	-7.900	+0.100
Diff to ICP			
PCABB00	2.55/2.65	2.600	-0.050

(Asia close)		
Code	Mid	Change
(PGA page 2212)		
Diff to Asian Dated Brent		
AAPAI00	-12.850	+0.100
ICFCB00	-5.600	+0.100
ADFC00	-6.710	-0.030
AARBC00	-7.310	-0.030
AARAW00	-11.560	-0.030
AAPBE00	-14.900	+0.100
(PGA page 2214)		
Diff to Asian Dated Brent		
AAPAC00	-5.800	+0.100
AAOZW00	3.750	0.000
AAPBQ00	-11.200	+0.100
AAPAE00	-7.450	+0.100
AAPBC00	-11.300	+0.100
AAPBG00	-5.850	0.000
AAPBU00	4.250	0.000
AARDN00	-12.560	+0.020
(PGA page 2216)		
Diff to Asian Dated Brent		
AARAS00	5.450	0.000
AAPAK00	6.500	0.000
AAPAG00	-4.500	0.000
AAPAM00	-2.150	0.000
AAPAW00	-3.100	0.000
(PGA page 2218)		
Diff to Asian Dated Brent		
AARAC00	-1.800	-0.050
AAPAY00	-0.250	-0.050
AAPBM00	3.100	-0.050
AARAL00	4.800	-0.050

(London close)		
Code	Mid	Change
(PGA page 2213)		
AAPAH00	66.630	+0.920
ADFC00	72.770	+0.790
AARBA00	72.170	+0.790
AARAU00	67.920	+0.790
AAPBD00	64.580	+0.920
(PGA page 2215)		
AAPAB00	73.680	+0.920
AAOZV00	83.230	+0.820
AAPBP00	68.280	+0.920
AAPAD00	72.030	+0.920
AAPBB00	68.180	+0.920
AAPBF00	73.630	+0.820
AAPBR00	83.730	+0.820
AAREN00	66.920	+0.840
(PGA page 2217)		
AAPAN00	70.920	+0.840
AAOZX00	85.980	+0.820
AAPAR00	85.680	+0.820
AAPAP00	87.430	+0.820
AASCN00	87.130	+0.820
(PGA page 2219)		
AARAQ00	84.930	+0.820
AAPAJ00	85.980	+0.820
AAPAF00	74.980	+0.820
AAPAL00	77.330	+0.820
AAPAV00	76.380	+0.820
AARAA00	77.680	+0.770
AAPAX00	79.230	+0.770
AAPBL00	82.580	+0.770
AARAJ00	84.280	+0.770

Delivered - Asia spot crude assessments (\$/barrel) (PGA page 2238)

US Delivered - Asia Spot Crudes			
WTI Midland (DES Singapore)	WTMSA00	81.230	+1.100
WTI Midland (DES Yeosu)	WTMYA00	81.730	+1.100
Brazil Delivered-Asia Spot Crudes			
Tupi (DES Qingdao)	LUQDA00	82.280	+1.150

Diff to Dubai		
WTMSD00	3.550	+0.150
WTMYD00	4.050	+0.150
LUQDD00	4.600	+0.200

Diff to Asian Dated Brent		
WTMSB00	2.710	+0.060
WTMYB00	3.210	+0.060
LUQDB00	3.760	+0.110

Middle East spot assessments (\$/barrel) (PGA page 2220)

			Mid	Change		Spread vs Dubai	Mid	Change		Spread vs OSP	Mid	Change
Umm Lulu	AUFAA00		80.200	+1.150	DBDUL00		1.900	+0.160				
Das Blend	AAXOF00	79.33–79.37	79.350	+1.150	DBDS00		1.050	+0.160				
Qatar Land	AAKNP00	78.63–78.67	78.650	+1.150	QALDA00		0.350	+0.160	AAKUJ00	0.10/0.20	0.150	+0.100
Qatar Marine	AAKNR00	78.83–78.87	78.850	+1.100	QAMDA00		0.550	+0.110	AAKUJ00	0.15/0.25	0.200	+0.050
Banoco Arab Medium	AAKNT00	79.53–79.57	79.550	+1.100					AAKUD00	-1.15/-1.05	-1.100	+0.050
Basrah Medium M1	BSMAM01	–	79.500	+1.100					BSMBM01		0.100	+0.100
Basrah Medium M2	BSMAM02	–	78.600	+1.100					BSMBM02		0.050	+0.050
Basrah Heavy M1	AALZC00	–	76.500	+1.100					AALZJ00		0.150	+0.100
Basrah Heavy M2	AALZD00	–	75.550	+1.100					AALZK00		0.050	+0.050

The Murban OSP increased 2 cents/b from July, while the Upper Zakum discount widened by 8 cents/b. The Umm Lulu OSP was set at a premium of 15 cents/b to the Murban OSP, compared with a premium of 20 cents/b in July. The Das Blend OSP was rolled over from the previous month at a discount of 70 cents/b to the Murban OSP.

Trades have emerged for September-loading barrels of Dubai crude, with one of the cargoes heard traded into Malaysia at a premium in the low-20s cents/b to the Dubai OSP, market sources said. Another cargo of the grade was also heard sold to a trading house. Details of the trades were not available.

Market participants had mixed views on the impact of a narrower Brent-Dubai exchange of swaps spread on light sour crude grades.

“The Brent-Dubai spread is very narrow now, so there’s opportunity for crudes from the other regions to come in,” said a Singapore-based trader.

Another Asia-based trader said that the impact on lighter sour crude barrels was yet to be seen.

“A lot of Midland crude has been done into Asia. Of course it’s competing because of the EFS narrowing but the volumes are only marginally higher than usual,” the trader said.

The Brent-Dubai exchange of futures for swaps averaged 96 cents/b over July 1-11, narrowing from an average of \$1.08/b in June, S&P Global Commodity Insights data showed.

Asian market parity prices (\$/barrel) (PGA page 2280)

					(Asia close)	Mid	Change			(London close)	Mid	Change
Minas	PCAB000					74.640	+1.310	AAPAZ00			75.160	+1.060
Cinta	PCAAX00					65.130	+1.705	AAPBJ00			65.650	+1.455
Widuri	PCAFE00					62.900	+1.620	AAPBN00			63.420	+1.370
Cambay	AMPPA00					78.650	+1.135					
Ravva	AMPPB00					83.935	+1.365					
Rajasthan	AMPPC00					77.910	+0.985					

Asian Crude Indices (\$/barrel) (PGA page 2206)

16:30 Singapore		Interim Asian Close		Diff to Dated Brent		Final London Close
Asian Dated Brent (ADB)	AAXPG00	79.880				
ADB Strip Asia	AARBV00	78.960			AARBX00	79.480
ADB Strip Middle East	AARBW00	78.960			AARBY00	79.480
ADB Strip M3	ADBS003	78.520				

For definitions see <http://www.platts.com/IM.Platts.Content/MethodologyReferences/MethodologySpecs/Crude-oil-methodology.pdf>

Platts is part of S&P Global Commodity Insights.

Platts Mideast Sour Crude Daily Rationales & Exclusions

Dubai Mo01 <PCAAT00> assessment rationale: The September cash Dubai assessment on July 12 took into consideration bids for cash Dubai partials that traded at \$79.90/b toward the end of the Platts Markets on Close assessment process that demonstrated value to be higher day on day.

Oman Blend Mo01 <PCABS00> assessment rationale: The September cash Oman assessment on July 12 took into consideration values heard in the

broader market.

Exclusions: No market data was excluded from the Middle East sour crude Market on Close assessment process.

Platts is part of S&P Global Commodity Insights.

Platts Oil Mideast Sour Crude Convergences

None reported

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Platts Middle East Sour Crude Bids, Offers, Trades

Bids:

PLATTS DUBAI: SEP23: VITOL BIDS 25KB AT \$79.80

PLATTS DUBAI: SEP23: EQUINOR NO LONGER BIDS

AFTER TRADE

PLATTS DUBAI: SEP23: GUNVOR NO LONGER BIDS

AFTER TRADE

PLATTS DUBAI: SEP23: PETROCHINA NO LONGER BIDS 25KB AT \$79.55 AFTER WITHDRAWAL (08:28:17)

Offers:

PLATTS DUBAI: SEP23: BP OFFERS 25KB AT \$79.95

PLATTS DUBAI: SEP23: TRAFIGURA OFFERS 25KB

AT \$79.95

PLATTS DUBAI: SEP23: PETROCHINA OFFERS 25KB AT \$79.95

PLATTS DUBAI: SEP23: VITOL OFFERS 25KB

AT \$79.95

PLATTS DUBAI: SEP23: MITSUI OFFERS 25KB

AT \$80.00

PLATTS DUBAI: SEP23: UNIPEC OFFERS 25KB

AT \$80.05

PLATTS DUBAI: SEP23: RELIANCE NO LONGER

OFFERS AFTER TRADE

PLATTS DUBAI: SEP23: EXXONMOBIL NO LONGER

OFFERS AFTER TRADE

PLATTS DUBAI: SEP23: GUNVOR NO LONGER

OFFERS 25KB AT \$80.20 AFTER WITHDRAWAL

(08:29:33)

Trades:

PLATTS DUBAI: SEP23: PETROCHINA SELLS TO EQUINOR* 25KB AT \$79.85 (08:28:25)

PLATTS DUBAI: SEP23: EQUINOR BUYS FROM TRAFIGURA* 25KB AT \$79.95 (08:28:39)

PLATTS DUBAI: SEP23: MITSUI SELLS TO EQUINOR* 25KB AT \$79.90 (08:29:01)

PLATTS DUBAI: SEP23: PETROCHINA SELLS TO GUNVOR* 25KB AT \$79.90 (08:29:04)

PLATTS DUBAI: SEP23: PETROCHINA SELLS TO

North Sea spot crude assessments (\$/barrel) (PGA page 1212)

			Mid	Change	Spread vs fwd Dated Brent		Mid	Change
Dated Brent Diff					AAXEZ00	0.09/0.10	0.095	-0.120
BNB	AAVJA00	80.46-80.48	80.470	+0.845	AAVJB00	0.31/0.32	0.315	+0.005
Forties	PCADJ00	80.39-80.40	80.395	+0.850	AAGWZ00	0.23/0.25	0.240	+0.010
Oseberg	PCAEU00	81.97-81.99	81.980	+0.850	AAGXF00	1.82/1.83	1.825	+0.010
Ekofisk	PCADI00	81.81-81.83	81.820	+0.860	AAGXB00	1.66/1.67	1.665	+0.020
Troll	AAWEX00	82.75-82.77	82.760	+0.850	AAWEY00	2.60/2.61	2.605	+0.010
FOB N Sea WTI Midland	ALNDA00		80.250	+0.700	ALNDB00		0.095	-0.140
Statfjord	PCAE00	81.95-81.96	81.955	+0.840	AAGXD00	1.79/1.81	1.800	0.000
Flotta Gold	PCACZ00	80.95-80.96	80.955	+0.840	AAGXH00	0.79/0.81	0.800	0.000
Duc	AAWEZ00	81.20-81.21	81.205	+0.840	AAWFL00	1.04/1.06	1.050	0.000
Grane Blend	PCALA00		82.305	+1.240	PCALB00		2.150	+0.400
Johan Sverdrup	AJSVA00		82.190	+1.240	AJSVB00		2.035	+0.400
Statfjord (CIF)	AASAS00	83.03-83.05	83.040	+0.840	AASAT00	2.89/2.91	2.900	0.000
Gullfaks (CIF)	AASAU00	83.33-83.35	83.340	+0.840	AASAV00	3.19/3.21	3.200	0.000
Alvheim (CIF)	ALVHA00		83.540	+0.840	ALVHB00		3.400	0.000
Asgard (CIF)	ASGCA00		81.490	+0.840	ASGCB00		1.350	0.000
North Sea basket	AAGIZ00	81.16-81.17	81.165	+0.850				
North Sea Dated Strip	AAKWH00	80.15-80.16	80.155	+0.840				
European Sour Crude Index	CSBEA00		82.163	+1.220	CSBEB00		2.008	+0.380
Spread vs fwd CIF Dated Brent								
Dated Brent (CIF)	AAVJG00		81.290	+0.695	AAVJF00		1.150	-0.145
BNB (CIF)	PCAKP00		82.550	+0.880	AAVJC00		2.410	+0.040
Forties (CIF)	PCAKR00		81.625	+0.660	AAHXC00		1.485	-0.180
Oseberg (CIF)	PCAKT00		83.280	+0.870	AAHXD00		3.140	+0.030
Ekofisk (CIF)	PCAKV00		82.985	+0.885	AAHXB00		2.845	+0.045
Troll (CIF)	AAXJO00		84.070	+0.875	AAXJN00		3.930	0.035
WTI Midland (CIF)	WMCRD00		81.290	+0.695	WMCRB00		1.150	-0.145
North Sea CIF Dated Strip	AAHXE00		80.140	+0.840				

Freight Adjustment Factors

(\$/barrel)		Change
Sullom Voe-Rotterdam	FSVRM00	1.6647 -0.0059
Hound Point-Rotterdam	FHPRM00	1.1565 -0.0039
Sture-Rotterdam	FSTRM00	1.0518 -0.0036
Teesside-Rotterdam	FTSRM00	0.9314 -0.0032
Mongstad-Rotterdam	FMGRM00	1.0590 -0.0036
North Sea-Rotterdam	FSFRM00	1.0543 -0.0036
(%)		
FAF Weighting	FAFWA00	0.80

European US Spot Crude Assessments (\$/barrel) (PGA page 1238)

		Mid	Change	Spread vs fwd Dated Brent		Mid	Change
WTI Midland (DAP Rotterdam)	AWTIC00	81.225	+0.730	AWTID00		1.430	-0.095
WTI Midland (DAP Augusta)	AWTIA00	81.875	+0.730	AWTIB00		2.080	-0.095
Eagle Ford 45 (DAP Rotterdam)	AEFAC00	80.325	+0.730	AEFAD00		0.530	-0.095
Eagle Ford 45 (DAP Augusta)	AEFAA00	80.975	+0.730	AEFAB00		1.180	-0.095

EQUINOR* 25KB AT \$79.90 (08:29:13)

PLATTS DUBAI: SEP23: TRAFIGURA SELLS TO
GUNVOR* 25KB AT \$79.90 (08:29:16)

PLATTS DUBAI: SEP23: EXXONMOBIL SELLS TO
EQUINOR* 25KB AT \$79.90 (08:29:20)

PLATTS DUBAI: SEP23: MITSUI SELLS TO GUNVOR*
25KB AT \$79.90 (08:29:24)

PLATTS DUBAI: SEP23: TRAFIGURA SELLS TO
EQUINOR* 25KB AT \$79.90 (08:29:25)

PLATTS DUBAI: SEP23: EXXONMOBIL SELLS TO
EQUINOR* 25KB AT \$79.90 (08:29:34)

PLATTS DUBAI: SEP23: TRAFIGURA SELLS TO
GUNVOR* 25KB AT \$79.90 (08:29:38)

PLATTS DUBAI: SEP23: EQUINOR BUYS FROM
RELIANCE* 25KB AT \$79.92 (08:29:40)

PLATTS DUBAI: SEP23: PETROCHINA SELLS TO
EQUINOR* 25KB AT \$79.90 (08:29:41)

PLATTS DUBAI: SEP23: PETROCHINA SELLS TO
EQUINOR* 25KB AT \$79.90 (08:29:49)

PLATTS DUBAI: SEP23: PETROCHINA SELLS TO
EQUINOR* 25KB AT \$79.90 (08:29:54)

PLATTS DUBAI: SEP23: EQUINOR BUYS FROM
EXXONMOBIL* 25KB AT \$79.94 (08:29:59)

This assessment commentary applies to the
following market data codes: Dubai M1 <PCAAT00>,
Oman M1 <PCABS00>

Platts Dubai Derivatives Bids Summary

BIDS ON CLOSE

NO BIDS REPORTED
WITHDRAWALS

NO WITHDRAWALS REPORTED

Platts' End-of-Day assessments for Dubai
derivatives prices can be found on PPA2606.

Platts Oil Paper Bids, Offers and Trade Page Index
found on <PGA4000>

Platts has defined standards for entities it

Dated Brent/BFOE swaps (\$/barrel) (PGA page 1214)

Week	Week Date			Brent CFD*	Mid	Change	Dated Brent swap		Mid	Change
CFD Week 1	(Oct)	Jul 10-14	PCAKA00	0.55/0.57	0.560	+0.010	AAJNV00	80.25/80.27	80.260	+0.880
CFD Week 2	(Oct)	Jul 17-21	PCAKC00	0.62/0.64	0.630	-0.010	AAJOS00	80.32/80.34	80.330	+0.860
CFD Week 3	(Oct)	Jul 24-28	PCAKE00	0.60/0.62	0.610	-0.030	AAJOU00	80.30/80.32	80.310	+0.840
CFD Week 4	(Oct)	Jul 31-04	PCAKG00	0.42/0.44	0.430	0.000	AAJOW00	80.12/80.14	80.130	+0.870
CFD Week 5	(Oct)	Aug 07-11	AAGLU00	0.31/0.33	0.320	0.000	AAJPC00	80.01/80.03	80.020	+0.870
CFD Week 6	(Oct)	Aug 14-18	AAGLV00	0.15/0.17	0.160	-0.080	AAJPE00	79.85/79.87	79.860	+0.790
CFD Week 7	(Oct)	Aug 21-25	AALCZ00	0.05/0.07	0.060	-0.110	AALAW00	79.75/79.77	79.760	+0.760
CFD Week 8	(Oct)	Aug 28-01	AALDA00	-0.05/-0.03	-0.040	-0.150	AALAX00	79.65/79.67	79.660	+0.720

Brent Swaps Weeks 1 to 8 are differentials to Brent Mo02 (Oct) PCAAR00 found on page 1.

Dated Brent/Brent Frontline Swaps (DFL) (\$/barrel) (PPE page 1614)

		Swaps	Change		DFL	Change
Balance month* (Jul 23)	BDLBM00	80.330	+0.850	ABWFZ00	0.340	-0.010
Month 1 (Aug 23)	BDLM001	79.920	+0.850	AAEAA00	0.280	+0.010
Month 2 (Sep 23)	BDLM002	79.480	+0.820	AAEAB00	0.280	+0.010
Month 3 (Oct 23)	BDLM003	79.050	+0.810	AAEAC00	0.290	+0.030
Month 4 (Nov 23)	BDLM004	78.610	+0.770	AAEAD00	0.280	+0.010

*Balance month swaps are assessed from the 1st through the 20th of the month.

Cash BFOE intraday assessments (\$/barrel) (PGA page 1216)

		Cash BFOE	Change		Inter-Month Spread
10:30 London Time					
BFOE M1 (Sep)	PBCAAM1	79.490	+1.670		
BFOE M2 (Oct)	PBCAAM2	79.140	+1.570	Sep/Oct	PBAM1M2 0.350
BFOE M3 (Nov)	PBCAAM3	78.700	+1.510	Oct/Nov	PBAM2M3 0.440
12:30 London Time					
BFOE M1 (Sep)	PBCABM1	79.530	+1.430		
BFOE M2 (Oct)	PBCABM2	79.170	+1.330	Sep/Oct	PBBM1M2 0.360
BFOE M3 (Nov)	PBCABM3	78.750	+1.290	Oct/Nov	PBBM2M3 0.420
14:30 London Time					
BFOE M1 (Sep)	PBCACM1	80.180	+1.850		
BFOE M2 (Oct)	PBCACM2	79.800	+1.740	Sep/Oct	PBCM1M2 0.380
BFOE M3 (Nov)	PBCACM3	79.360	+1.690	Oct/Nov	PBCM2M3 0.440
16:30 London Time					
BFOE M1 (Sep)	PCAAQ00	80.040	+0.890		
BFOE M2 (Oct)	PCAAR00	79.700	+0.870		
BFOE M3 (Nov)	PCARR00	79.260	+0.840		
19:30 London Time					
BFOE M1 (Sep)	PBCADM1	NA	-		
BFOE M2 (Oct)	PBCADM2	NA	-	Sep/Oct	PBDM1M2 NA
BFOE M3 (Nov)	PBCADM3	NA	-	Oct/Nov	PBDM2M3 NA

considers to be related and verifies through a variety of inputs whether counterparties in reported trades meet these criteria.

Platts Dubai Derivatives Offers Summary

OFFERS ON CLOSE

NO OFFERS REPORTED
WITHDRAWALS

NO WITHDRAWALS REPORTED

Platts' End-of-Day assessments for Dubai derivatives prices can be found on PPA2606.

Platts Oil Paper Bids, Offers and Trade Page Index found on <PGA4000>

Platts has defined standards for entities it considers to be related and verifies through a variety of inputs whether counterparties in reported trades meet these criteria.

Platts Dubai Derivatives Trades Summary

TRADES SUMMARY

NO TRADES REPORTED

Platts' End-of-Day assessments for Dubai derivatives prices can be found on PPA2606.

Platts Oil Paper Bids, Offers and Trade Page Index found on <PGA4000>

Platts has defined standards for entities it considers to be related and verifies through a variety of inputs whether counterparties in reported trades meet these criteria.

Platts Dubai Derivatives Exclusions

Exclusions: No market data was excluded from the July 12, 2023 Dubai derivatives assessment process.

Urals/ESPO spot assessments (\$/barrel) (PGA page 1220)

			Mid	Change	Spread vs fwd Dated Brent	Mid	Change
Urals (Rotterdam)	PCAFW00	63.41-63.45	63.430	+0.875	AAGXJ00	-16.74/-16.72	-16.730 +0.035
Urals (Mediterranean)	PCACE00	63.80-63.83	63.815	+0.840	AAGXX00	-16.35/-16.34	-16.345 0.000
Urals FOB Novo Suez	AAGZS00	61.14-61.18	61.160	+0.840	AAHPH00	-19.01/-18.99	-19.000 0.000
Urals FOB Novo Afra	AAOTH00	60.24-60.28	60.260	+0.840	AAOTI00	-19.91/-18.99	-19.900 0.000
Urals (Ex-Baltic)	AAGZT00	61.14-61.18	61.160	+0.840	AAHPI00	-19.01/-18.99	-19.000 0.000
Urals (Primorsk)	AAWVH00	61.14-61.18	61.160	+0.840	AAWVI00	-19.01/-18.99	-19.000 0.000
Urals RCMB (Recombined)	AALIN00	63.89-63.92	63.905	+0.720			
ESPO (FOB Kozmino)	AARWD00	71.49-71.51	71.500	+0.670	AARWE00	-7.99/-7.97	-7.980 -0.150
KEBCO	KBCOA00		82.210	+1.090	KBCOB00		2.050 +0.250
Urals (DAP India)	DWCUA00		72.220	+0.850	DWCUB00		-7.700 0.000
KEBCO/Russian Urals	AKEBA00		18.395	+0.250			
Number of days							
Observed Delivery Factor	AODFA00		6				

Urals Med/NWE CFD assessments (\$/barrel)

			Urals CFD	Mid	Change
Mediterranean (PPE page 1617)					
Urals Med CFD (Aug)	AAMDU00	-16.32/-16.30	-16.310	0.000	
Urals Med CFD (Sep)	AAMEA00	-16.32/-16.30	-16.310	0.000	
Urals Med CFD (Oct)	UMCM003	-16.32/-16.30	-16.310	0.000	
Northwest Europe (PPE page 1617)					
Urals NWE CFD (Aug)	UNCM001	-16.74/-16.72	-16.730	0.000	
Urals NWE CFD (Sep)	UNCM002	-16.74/-16.72	-16.730	0.000	
Urals NWE CFD (Oct)	UNCM003	-16.74/-16.72	-16.730	0.000	
Mediterranean (PPE page 1617)					
CPC Blend CFD (Aug)	AAOFX00		-1.900	0.000	
CPC Blend CFD (Sep)	AAOFY00		-1.750	0.000	
CPC Blend CFD (Oct)	AAOFZ00		-1.650	0.000	

Mediterranean spot crude assessments (\$/barrel)

			Mid	Change	Spread vs fwd Dated Brent	Mid	Change
Azeri and BTC (PGA page 1222)							
Azeri Lt CIF	AAGZX00	84.09-84.13	84.110	+0.835	AAHPM00	3.99/4.01	4.000 0.000
Azeri Lt FOB Ceyhan Suez	AAUFM00	83.09-83.13	83.110	+0.835	AAUFN00	2.99/3.01	3.000 0.000
Azeri Lt FOB Ceyhan Afra	AAUFK00	82.66-82.70	82.680	+0.835	AAUFL00	2.56/2.58	2.570 0.000
Azeri Lt FOB Supsa	AATHM00	81.70-81.73	81.715	+0.835	AATHN00	1.60/1.61	1.605 0.000
BTC FOB Ceyhan	AAUFH00	82.88-82.91	82.895	+0.835	AAUFJ00	2.78/2.79	2.785 0.000
Black Sea (PGA page 1220)							
Siberian Light CIF	AAGZW00	65.80-65.83	65.815	+0.840	AAHPK00	-14.35/-14.34	-14.345 0.000
CPC Blend CIF	AAGZU00	78.29-78.33	78.310	+0.835	AAHPL00	-1.81/-1.79	-1.800 0.000
CPC Blend FOB Suez	AALVX00	75.89-75.93	75.910	+0.835	AALVZ00	-4.21/-4.19	-4.200 0.000
CPC Blend FOB Afra	AAOFV00	75.02-75.05	75.035	+0.835	AAOFW00	-5.08/-5.07	-5.075 0.000
Additional War Risk Premium	AWARA00		1.000	0.000			
Middle East & North Africa (PGA page 1234)							
Suez Blend	PCACA00	78.89-78.93	78.910	+1.090	AAGYD00	-1.26/-1.24	-1.250 +0.250
Es Sider	PCACO00	80.19-80.23	80.210	+0.835	AAGYH00	0.09/0.11	0.100 0.000
Kirkuk	AAEJD00	78.09-78.13	78.110	+1.090	AAGYF00	-2.06/-2.04	-2.050 +0.250
Iranian Light FOB Kharg Island (Med)	ATLKA00		80.420	+0.850	ATLKB00		0.260 +0.010
Iranian Heavy FOB Kharg Island (Med)	ATHKA00		78.720	+0.850	ATHKB00		-1.440 +0.010
Saharan Blend	AAGZY00	80.44-80.48	80.460	+0.685	AAHPN00	0.34/0.36	0.350 -0.150

Platts Asia Pacific Sweet Crude Daily Market Analysis

- PV Oil offers Thang Long, Su Tu Den for September loading
- Seven cargoes of Kimanis crude offered in September loading program

A slew of Vietnamese crude oil tenders emerged in the Asia-Pacific regional sweet crude market July 12.

Vietnam's PV Oil was seen in the spot market offering 250,000 barrels of Thang Long crude for Sept. 11-15 loading, in a tender closing July 14, with validity until July 21, sources said.

In its previous tender, PV Oil awarded a similar-sized cargo of the crude for loading July 16-20 to ExxonMobil at a premium of around \$5s/b over Dated Brent crude assessments, FOB, sources said.

PV Oil was also seen offering two 300,000-barrel cargoes of Su Tu Den crude for loading over Sept. 4-10 and Sept. 20-26, respectively, in a tender closing July 19, with validity until July 21.

In its previous tender, PV Oil awarded a cargo of 300,000 barrels, 350,000 barrels or 400,000 barrels of the crude for Aug. 23-29 loading to an end-user at a premium of around \$5.50/b to Platts Dated Brent crude assessments, FOB, traders said.

In the medium sweet crude complex, seven 600,000-barrel cargoes of Malaysia's flagship Kimanis crude were heard scheduled for September-loading, similar to the previous month.

Further details of the cargoes were not yet available.

"Substantial supply could affect premiums," said a regional crude oil trader.

Platts Asia Light Sweet Crude Daily Rationale & Exclusions

ESPO FOB Kozmino Mo01 Spore vs Dubai Mo01 <AASEU00> assessment rationale: The ESPO

West African spot crude assessments (\$/barrel) (PGA page 1230)

			Mid	Change	Spread vs fwd Dated Brent		Mid	Change
WAF Index	AWAFA00		81.540	+0.950	AWAFB00		1.775	+0.125
Nigeria Spot Crude Assessments								
Bonny Light	PCAIC00	81.20–81.23	81.215	+0.825	AAGXL00	1.44/1.46	1.450	0.000
Qua Iboe	PCAI00	81.45–81.48	81.465	+1.025	AAGXN00	1.69/1.71	1.700	+0.200
Forcados	PCABC00	81.60–81.63	81.615	+1.025	AAGXP00	1.84/1.86	1.850	+0.200
Agbami	AAQZB00	78.50–78.53	78.515	+0.925	AAQZC00	-1.26/-1.24	-1.250	+0.100
Escravos	AAEIZ00	81.95–81.98	81.965	+0.925	AAGXR00	2.19/2.21	2.200	+0.100
Brass River	AAEJB00	80.30–80.33	80.315	+1.025	AAGXV00	0.54/0.56	0.550	+0.200
Akpo	PCNGA00	78.50–78.53	78.515	+0.925	PCNGB00	-1.26/-1.24	-1.250	+0.100
Bonga	PCNGC00	81.85–81.88	81.865	+0.925	PCNGD00	2.09/2.11	2.100	+0.100
Usan	AAXUQ00		77.265	+0.825	AAXUR00		-2.500	0.000
Erha	AAXUO00		81.765	+0.825	AAXUP00		2.000	0.000
Egina	AFONA00		83.715	+1.025	AFONB00		3.950	+0.200
Angola spot crude assessments (\$/barrel) (PGA page 1232)								
Cabinda	PCAFD00	81.60–81.63	81.615	+0.925	AAGXT00	1.84/1.86	1.850	+0.100
Nemba	AAQYZ00	79.25–79.28	79.265	+0.825	AAQZA00	-0.51/-0.49	-0.500	0.000
Dalia	AAQYX00	79.75–79.78	79.765	+0.825	AAQYY00	-0.01/0.01	0.000	0.000
Girassol	AASNL00	82.15–82.18	82.165	+0.825	AASJD00	2.39/2.41	2.400	0.000
Hungo	AASLJ00	79.45–79.48	79.465	+0.825	AASJF00	-0.31/-0.29	-0.300	0.000
Kissanje	AASLK00	80.00–80.03	80.015	+0.825	AASJE00	0.24/0.26	0.250	0.000
Pazflor	PCNGG00	79.75–79.78	79.765	+0.825	PCNGH00	-0.01/0.01	0.000	0.000
Plutonio	PCNGI00	78.75–78.78	78.765	+0.825	PCNGJ00	-1.01/-0.99	-1.000	0.000
Ghana spot crude assessments (PGA page 1230)								
Jubilee	AAXUS00		80.915	+1.025	AAXUT00		1.150	+0.200
Republic of Congo spot crude assessments								
Djeno	PCNGE00	78.55–78.58	78.565	+0.825	PCNGF00	-1.21/-1.19	-1.200	0.000
Chad spot crude assessments								
Doba	AAXUU00		77.915	+0.825	AAXUV00		-1.850	0.000

West Africa market parity prices (\$/barrel) (PGA page 1270)

		Mid	Change	Spread vs fwd Dated Brent	Mid	Change
Abo Blend	AAXTL00	80.920	+0.875	ABOOM00	1.155	+0.050
Aje	APIRP00	81.290	+0.960	APIRA00	1.525	+0.135
Amenam Blend	AAXTI00	80.160	+0.910	AMENA00	0.395	+0.085
Antan Blend	APIRQ00	82.960	+0.895	APIRB00	3.195	+0.070
Asaramatoru	AAXTV00	80.955	+0.990	ASARA00	1.190	+0.165
CJ Blend	APIRR00	82.130	+0.960	APIRC00	2.365	+0.135
EA Blend	AAXTJ00	82.090	+0.855	AEABL00	2.325	+0.030
Ebok	APIRS00	76.910	+0.760	APIRD00	-2.855	-0.065
Eremor	APIRT00	79.060	+0.835	APIRE00	-0.705	+0.010
Ima	APIRU00	82.940	+1.210	APIRF00	3.175	+0.385
Jones Creek Blend	APIRV00	79.810	+0.885	APIRG00	0.045	+0.060
Okono Blend	APIRW00	81.920	+0.895	APIRH00	2.155	+0.070
Okoro	APIRX00	80.760	+0.995	APIRI00	0.995	+0.170
Okwori	APIRY00	82.325	+0.965	APIRJ00	2.560	+0.140
Otakikpo	APIRZ00	80.575	+1.020	APIRK00	0.810	+0.195
Oyo	APIRIA00	80.685	+1.035	APIRL00	0.920	+0.210
Pennington	APIRB00	79.610	+0.955	APIRM00	-0.155	+0.130
Rabi Light	ARABA00	79.015	+0.885	ARABB00	-0.750	+0.060
Sankofa	APRIC00	77.275	+0.975	APIRN00	-2.490	+0.150

M1 September assessment on July 12 took into consideration latest trade indications heard in the broader market.

Exclusions: No market data was excluded from the Asia Pacific Crude Market on Close assessment process.

Platts is part of S&P Global Commodity Insights.

Platts Asia Light Sweet Crude Bids, Offers, Trades

Bids: No bids

Offers: No offers

Trades: No trades

This assessment commentary applies to the following market data code: ESPO M1 vs Dubai M2 <AASEU00>

Platts North Sea Crude Daily Market Analysis

- Effects of OPEC+ cuts begin to show in physical market
- August-loading Johan Sverdrup differentials surge
The effects of recent crude production cuts from OPEC+ member were being increasingly reflected in the physical markets, North Sea traders said July 12, with differentials surging even further in sourer crudes while light sweet grades rallied.

A combination of strong refinery margins, recent OPEC+ production cuts and a lack of European sour crude supplies sent refineries quickly reaching for available barrels across most sections of the market.

“Margins are good, supply cuts from OPEC and the end of the SPR...Sours went first, desirable sweets next, WTI barrels last,” one trader said.

August-loading Johan Sverdrup's value has jumped with European buyers scrambling to get hold of sourer barrels.

The scarcity of sourer grades in Europe and

West Africa market parity prices (continued)

		Mid	Change	Spread vs fwd Dated Brent	Mid	Change
TEN	AAXTW00	79.035	+0.970	ATENM00	-0.730	+0.145
Ukpokiti	APRID00	81.665	+0.915	APIRO00	1.900	+0.090
Yoho Light	AAXTK00	82.320	+0.975	AYOH000	2.555	+0.150
Zafiro	AAXTU00	83.140	+0.820	AZAFB00	3.375	-0.005

US West Coast Crude Assessments (\$/barrel) (PGA page 214)

			Mid	Change	Spread to NYMEX WTI CMA	Mid	Change
ANS/Long Beach	PCAAD00	81.77-81.81	81.790	+0.740	AAGWX00	6.65/6.67	6.660 -0.070
ANS/Long Beach					Spread to ICE BRENT CMA		
					AANSA00	2.401	-0.004

US spot crude assessments (\$/barrel) (PGA pages 210 & 214)

			Mid	Change				Mid	Change
Mars (Aug)	AAMBR00	77.20-77.22	77.210	+0.630					
Mars (Sep)	AAMBU00	76.33-76.35	76.340	+0.580					
Mars (Oct)	AAMBX00	75.49-75.51	75.500	+0.610					
Mars/WTI (Aug)	AAGWH00	1.39/1.41	1.400	-0.350					
Mars/WTI (Sep)	AAKTH00	0.79/0.81	0.800	-0.250					
Mars/WTI (Oct)	AAMBO00	0.24/0.26	0.250	-0.200					
LOOP/WTI (Aug)	AALOM01		1.300	-0.350					
LOOP/WTI (Sep)	AALOM02		0.700	-0.250					
LOOP/WTI (Oct)	AALOM03		0.150	-0.200					
LOOP/Mars (Aug)	AALPM01		-0.100	0.000					
LOOP/Mars (Sep)	AALPM02		-0.100	0.000					
LOOP/Mars (Oct)	AALPM03		-0.100	0.000					
WTI-Delta	AAEJK00	0.35/0.37	0.360	+0.160					
P-Plus WTI	PCACI00	3.73/3.75	3.740	+0.160					
P-5 WTI*	AAFEN00		72.300	+0.970					

*P-5 WTI is a crude oil postings-based index. Posted prices by the following companies are used in the index: ConocoPhillips, Plains, Energy Transfer, Shell, and Valero. The index will not be calculated until all postings are submitted each day. If a posting is submitted the following day the P-5 WTI Average will update in the database.

			Mid	Change	Spread vs 1st line WTI	Mid	Change
WTI (Midland)	PCACJ00	77.30-77.32	77.310	+0.930	AAGVZ00	1.49/1.51	1.500 -0.050
WTS (1st month)	PCACK00	77.05-77.07	77.060	+0.930	AAGWB00	1.24/1.26	1.250 -0.050
WTI MEH	AAYRG00		77.510	+0.930	AAYRH00		1.700 -0.050
Bonito	PCAIE00	77.05-77.07	77.060	+0.630	AAGWF00	1.24/1.26	1.250 -0.350
SGC	AASOI00	76.90-76.92	76.910	+0.630	AASOJ00	1.09/1.11	1.100 -0.350
Poseidon	AABHK00	76.75-76.77	76.760	+0.630	AAGWL00	0.94/0.96	0.950 -0.350
LLS (1st month)	PCABN00	78.45-78.47	78.460	+0.930	AAGWN00	2.64/2.66	2.650 -0.050
HLS (1st month)	PCABD00	78.00-78.02	78.010	+0.930	AAGWP00	2.19/2.21	2.200 -0.050
Wyoming Sweet	PCACM00	75.15-75.17	75.160	+0.830	AAGWR00	-0.66/-0.64	-0.650 -0.150
Thunder Horse	AAWZK00	78.60-78.62	78.610	+0.630	AAWZL00	2.79/2.81	2.800 -0.350

subsequent elevated values meant fewer barrels were likely to go east with Asian bids unlikely to outcompete a European market starved of sour crude.

“With Urals out, Europe sort of needs it and Asia would have to pull pretty hard to get it,” the trader said.

Given the extreme sweet/sour values spreads some refineries were said to be seeking to alter their slates to the more abundant lighter, sweeter crudes with grades from Libya or Nigeria likely to benefit.

In upstream news, UK independent Deltic Energy has doubled its estimate of the Shell-operated Pensacola resource in the North Sea to 99 million barrels of oil equivalent of recoverable resources, and now believes the find to include oil as well as gas, with a roughly 30% liquids share.

“While the expected presence of oil in the south of the prospect represents highly material upside, the discovered gas volumes in the northern part of the Pensacola prospect are better constrained and therefore the gas is still likely to be the initial focus of near-term appraisal and development activity,” Deltic said.

Platts North Sea Dated Brent, BFOE, CFD Assessment Rationales & Exclusions

Dated Brent <PCAAS00> assessment rationale:

Of the six grades in the Dated Brent basket Brent Blend, Forties, Ekofisk, Oseberg and WTI Midland were seen in the Platts Market on Close assessment process. Brent, Forties, Oseberg, Ekofisk and Troll were assessed unchanged July 22-Aug. 11 with a flat structure rolled over back-end dates in the absence of indications challenging the July 11 assessments. FOB WTI Midland was assessed lower reflecting a lower CIF Rotterdam assessment and a lower freight adjustment factor on the day. CIF WTI Midland was assessed in a flat structure July 24-27 using an outstanding offer July 25-27. July 27-30 was assessed in a 5 cents/day contango using an outstanding bid July 30. July 30 to Aug. 4 was assessed in a flat structure using an

US spot crude assessments (continued)

				<u>Spread vs 2nd line WTI</u>			
WTI MEH (2nd month)	AAXXE00	77.140	+0.730	AAYYA00	1.600	-0.100	
WTI Midland (2nd month)	AAYZA00	76.990	+0.780	AAXXF00	1.450	-0.050	
WTS (2nd month)	AAURG00	76.43-76.45	+0.680	AAURH00	0.89/0.91	0.900	-0.150
LLS (2nd month)	AAURC00	77.98-78.00	+0.680	AAURD00	2.44/2.46	2.450	-0.150
HLS (2nd month)	AAURE00	77.53-77.55	+0.680	AAURF00	1.99/2.01	2.000	-0.150
				<u>Spread vs NYMEX WTI CMA</u>			
WCS ex-Cushing	AAWTY00	72.24-72.26	+0.820	AAWTZ00	-3.21/-3.19	-3.200	0.000
WCS ex-Nederland	AAYAY00		+0.820	AAYAX00		-2.200	0.000
Bakken Williston	AAXPP00		+0.820	AASRX00		1.500	0.000
Bakken Guernsey	AASRR00	75.14-75.16	+0.820	AASRV00	-0.31/-0.29	-0.300	0.000
Bakken Clearbrook	AASRU00	79.14-79.16	+1.270	AASRW00	3.69/3.71	3.700	+0.450
Bakken USGC Pipe	ABAKA00		+0.920	ABAKB00		2.300	+0.100
<u>FOB USGC</u>				<u>FOB USGC Spread vs NYMEX WTI Strip</u>			
Platts AGS	AGSAA00	77.900	+0.930	AGSAC00		2.410	+0.100
Bakken	ABAKC00	77.900	+0.930	ABAKD00		2.410	+0.100
Eagle Ford Crude	AAYAT00	77.000	+0.930	AAYAU00		1.510	+0.100
Eagle Ford Condensate	AAYAR00	75.500	+0.930	AAYAS00		0.010	+0.100
WTI	AAYBA00	77.900	+0.930	AAYAZ00		2.410	+0.100
				<u>WTI FOB USGC vs WTI MEH (by decade)</u>			
WTI FOB USGC First Decade	ADECB00	77.910	+0.930	ADECD00		0.400	0.000
WTI FOB USGC Second Decade	ADECE00	77.910	+0.930	ADECG00		0.400	0.000
WTI FOB USGC Third Decade	ADECH00	77.860	+0.930	ADECJ00		0.350	0.000
WTI FOB USGC Decades Average	ADECA00	77.890	+0.930				
<u>FOB USGC Spread vs Dated Brent Strip</u>				<u>WTI FOB USGC vs Dated Brent Basis (by decade)</u>			
Platts AGS	AGSAB00	-2.200	+0.280	ADECC00	-2.170	+0.210	
Bakken	ABAKE00	-2.200	+0.280	ADECF00	-2.170	+0.210	
Eagle Ford Crude	AEFCA00	-3.100	+0.280	ADECI00	-2.220	+0.210	
Eagle Ford Condensate	AEFCB00	-4.600	+0.280				
WTI	AWTUA00	-2.200	+0.280				
<u>Global Benchmarks at US Close</u>				<u>WTI FOB USGC vs ICE Brent Basis (by decade)</u>			
Americas Dated Brent	AAQBF00	80.360-80.380	+0.560	ADECK00	-1.890	+0.220	
				ADECL00	-1.890	+0.220	
				ADECM00	-1.940	+0.220	

outstanding bid July 30 to Aug. 1 and a traded bid Aug. 2-4. Aug. 4-5 was assessed in a 5 cents/day contango using a withdrawn offer Aug. 5. Aug. 5-7 was assessed in a 10 cents/day contango using an outstanding bid Aug. 7-9. Aug. 9-12 was assessed in a flat structure. WTI Midland was the most competitive grade in the Dated Brent assessment July 22 to Aug. 12.

BFOE (PCAAQ00-PCAR00,PCARR00) assessment rationale:

September Cash BFOE was assessed using a September EFP heard during the day. October Cash

BFOE was assessed using a September/October EFP roll heard during the day. November Cash BFOE was assessed using an October/November EFP roll heard during the day.

CFD (PCAKA00-AALDA00) assessment rationale:

July 17-21 was assessed using an outstanding offer. July 24-28 was assessed using a July 24-28 versus July 31 to Aug. 4 CFD roll heard during the day. July 31 to Aug. 4 was assessed using multiple traded offers. Aug. 7-11 was assessed using a multiple traded offers. Aug. 14-18 was assessed using an Aug. 14-18 versus Aug. 7-11

CFD roll heard during the day.

Johan Sverdrup FOB North Sea (AJSVA00, AJSVB00) assessment rationale:

Johan Sverdrup was assessed higher across the 10-day to month-ahead assessment period reflecting strengthening sour market fundamentals and stronger heard values through the day in the absence of indications testing the July 11 assessment.

Exclusions: PLATTS CASH BFOE: SEP23:

PETROINEOS OFFERS 100KB AT \$80.12

Platts is part of S&P Global Commodity Insights

Platts North Sea Dated Brent, BFOE, CFD Bids, Offers, Trades

Bids:

NORTH SEA:

Platts NSEA Brent/Ninian FOB bss Sullom Voe, TOTSA bids Aug 7-Aug 9 100% Dtd .. \$0.15 for 700000-700000

Platts NSEA Forties FOB bss Hound Point, TRAFI bids Aug 7-Aug 9 100% Dtd .. \$0.10 for 700000-700000

Platts NSEA Forties FOB bss Hound Point, TOTSA bids Aug 7-Aug 9 100% Dtd .. \$0.15 for 700000-700000

Platts NSEA Oseberg FOB bss Sture, TOTSA bids Aug 8-Aug 10 100% Dtd .. \$1.55 for 700000-700000

Platts NSEA Ekofisk FOB bss Teesside, TOTSA bids Aug 7-Aug 9 100% Dtd .. \$1.55 for 700000-700000

Platts NSEA Ekofisk FOB bss Teesside, MERCURIASA bids Jul 30-Aug 14 100% Dtd .. \$1.60 for 700000-700000

Platts NSEA WTI Midland CIF bss Rotterdam, TOTSA bids Aug 11-Aug 15 100% Dtd .. \$1.10 for 700000-700000

Platts NSEA WTI Midland CIF bss Rotterdam, TOTSA bids Aug 6-Aug 10 100% Dtd .. \$1.10 for 700000-700000

Platts NSEA WTI Midland CIF bss Rotterdam, TOTSA bids Jul 29-Aug 2 100% Dtd .. \$1.05 for 700000-700000

Platts NSEA WTI Midland CIF bss Rotterdam, TRAFI bids Aug 6-Aug 10 100% Dtd .. \$1.30 for 700000-700000
CASH BFOE: None

US domestic crude assessments London close (\$/barrel) (PGA page 1240)

			Mid	Change	Spread to NYMEX light sweet crude	Mid	Change
WTI (Aug)	AAQAR00	75.68-75.70	75.690	+1.110	AAQAS00	-0.01/0.01	0.000 0.000
WTI (Sep)	AAQAT00	75.46-75.48	75.470	+0.990	AAQAU00	-0.01/0.01	0.000 0.000
WTI (Oct)	AAQAV00	75.12-75.14	75.130	+0.930	AAQAW00	-0.01/0.01	0.000 0.000
			Mid	Change	Spread to same-month cash WTI	Mid	Change
WTI MEH (Aug)	AAYRZ00		77.390	+1.060	AAYTA00		1.700 -0.050
WTI MEH (Sep)	AAXYD00		77.070	+0.890	AAYWA00		1.600 -0.100
LLS (Aug)	AAQBB00	78.33-78.35	78.340	+1.060	AAQBC00	2.64/2.66	2.650 -0.050
LLS (Sep)	AAQBD00	77.91-77.93	77.920	+0.840	AAQBE00	2.44/2.46	2.450 -0.150
MARS (Aug)	AAQAX00	77.08-77.10	77.090	+0.760	AAQAY00	1.39/1.41	1.400 -0.350
MARS (Sep)	AAQAZ00	76.21-76.23	76.220	+0.690	AAQBA00	0.74/0.76	0.750 -0.300

Americas close (\$/barrel) (PGA page 210)

		Mid	Change
Americas Dated Brent	AAQBF00	80.36-80.38	80.370 +0.560

Americas Dated Brent reflects market value for Dated Brent at 2:30pm Eastern Time.

US crude assessments Singapore close (\$/barrel) (PGA page 2208)

		Mid	Change
LOOP Sour (Aug)	AAZDA00	76.600	+1.070
LOOP Sour (Sep)	AAZDB00	75.770	+0.950
LLS (Aug)	AAZDC00	77.650	+1.070
LLS (Sep)	AAZDD00	77.420	+1.150
Southern Green Canyon	AAZDE00	76.400	+1.270
WTI MEH (Aug)	AAZDF00	76.700	+1.170
WTI MEH (Sep)	AAZDG00	76.520	+1.150

CFR North Asia Assessments Singapore Close (\$/barrel) (PGA page 2202)

		Mid	Change
Dubai CFR North Asia	PCAQA00	81.700	+1.070
Oman CFR North Asia	PCAQJ00	81.690	+1.070
Upper Zakum CFR North Asia	PCAQB00	81.660	+1.060
Qatar Marine CFR North Asia	PCAQC00	80.620	+1.060
Murban CFR North Asia	PCAQE00	81.740	+1.110
Basrah Medium CFR North Asia	BASNA00	80.410	+1.060
ESPO CFR North Asia	PCAQD00	73.620	+1.040
Forties CFR North Asia	PCAQF00	83.365	+1.045
Dalia CFR North Asia	PCAQG00	82.040	+1.060
WTI MEH CFR North Asia	PCAQH00	81.750	+1.140
LOOP Sour CFR North Asia	PCAQI00	80.520	+1.040

BRENT CFDS: PLATTS BRENT DIFF: JUL17-JUL21 (SEP): DV TRADING BIDS 100KB AT \$0.22
 PLATTS BRENT DIFF: JUL17-JUL21 (SEP): MERCURIA BIDS 100KB AT \$0.20
 PLATTS BRENT DIFF: JUL17-JUL21 (SEP): PETROCHINA BIDS 100KB AT \$0.20
 PLATTS BRENT DIFF: JUL17-JUL21 (SEP): DARE BIDS 100KB AT \$0.20
 PLATTS BRENT DIFF: JUL17-JUL21 (SEP): UNIPEC BIDS 100KB AT \$0.20
 PLATTS BRENT DIFF: JUL17-JUL21 (SEP): TRAFIGURA BIDS 100KB AT \$0.20
 PLATTS BRENT DIFF: JUL17-JUL21 (SEP): ONYX BIDS 100KB AT \$0.15
 PLATTS BRENT DIFF: JUL17-JUL21 (SEP): PETRACO BIDS 100KB AT \$0.15
 PLATTS BRENT DIFF: JUL24-JUL28 (SEP): ONYX BIDS 100KB AT \$0.24
 PLATTS BRENT DIFF: JUL24-JUL28 (SEP): DV TRADING BIDS 100KB AT \$0.23
 PLATTS BRENT DIFF: JUL24-JUL28 (SEP): MERCURIA BIDS 100KB AT \$0.20
 PLATTS BRENT DIFF: JUL24-JUL28 (SEP): PETRACO BIDS 100KB AT \$0.20
 PLATTS BRENT DIFF: JUL24-JUL28 (SEP): TRAFIGURA BIDS 100KB AT \$0.20
 PLATTS BRENT DIFF: JUL24-JUL28 (SEP): UNIPEC BIDS 100KB AT \$0.20
 PLATTS BRENT DIFF: JUL24-JUL28 (SEP): EXXONMOBIL BIDS 100KB AT \$0.15
 PLATTS BRENT DIFF: JUL24-JUL28 (SEP): PETROCHINA BIDS 100KB AT \$0.15
 PLATTS BRENT DIFF: JUL24-JUL28 (SEP): DARE BIDS 100KB AT \$0.15
 PLATTS BRENT DIFF: AUG7-AUG11 (OCT): TOTAL BIDS 100KB AT \$0.30
 PLATTS BRENT DIFF: AUG7-AUG11 (OCT): DV TRADING BIDS 100KB AT \$0.29
 PLATTS BRENT DIFF: AUG7-AUG11 (OCT): DARE BIDS 100KB AT \$0.25

Canadian spot crude cargo assessments (\$/barrel) (PGA page 230)

			Mid	Change		Spread vs fwd Dated Brent	Mid	Change
Hebron	AHEBA00		80.970	+1.020	AHEBC00		1.250	+0.200
Terra Nova	AAJU00	80.30-80.34	80.320	+0.920	AAJUJ00	0.59/0.61	0.600	+0.100
Hibernia	AAJKB00	81.20-81.24	81.220	+1.020	AAJKB00	1.49/1.51	1.500	+0.200
White Rose	AAVJX00	81.35-81.39	81.370	+0.920	AAVJY00	1.64/1.66	1.650	+0.100

The published spreads for Canadian cargo assessments reflect the market value at which these grades are trading versus Dated Brent around loading time. The spreads and fixed price assessments reflect a typical forward loading window of 33-63 days forward. For further explanation see www.platts.com.

Canadian spot crude assessments (\$/barrel) (PGA page 230)

			Mid	Change		Spread vs Canada basis	Mid	Change
Lloyd Blend	AALRK00	64.29-64.31	64.300	+0.470	AALRP00	-11.16/-11.14	-11.150	-0.350
Mixed Sweet	AALRR00	75.19-75.21	75.200	+1.320	AALRV00	-0.26/-0.24	-0.250	+0.500
Light Sour Blend	AALRX00	73.74-73.76	73.750	+1.070	AALSD00	-1.71/-1.69	-1.700	+0.250
Midale	AAUCC00	71.64-71.66	71.650	+1.070	AAUCE00	-3.81/-3.79	-3.800	+0.250
Condensates	AALSF00	70.74-70.76	70.750	+1.770	AALSJ00	-4.71/-4.69	-4.700	+0.950
Syncrude Sweet Prem.	AASOK00	79.44-79.46	79.450	+1.070	AASOM00	3.99/4.01	4.000	+0.250
WCS Hardisty	AAPPN00	63.59-63.61	63.600	+0.470	AAPPP00	-11.86/-11.84	-11.850	-0.350
Cold Lake Hardisty	AASZX00	63.44-63.46	63.450	+0.470	AASZZ00	-12.01/-11.99	-12.000	-0.350
WTI CMA (1st mo)	AAVSNO0		75.450	+0.820				

Latin American assessments (\$/barrel) (PGA page 280)

			Mid	Change		Diff to WTI strip		Diff to Futures Brent strip		Diff to Dated Brent strip
Escalante	PCAGC00	77.73-77.78	77.755	+0.705	PCAGO00	2.365	AAXBS00	-1.900	AAXAX00	-2.180
Medanito	AMTOA00		74.755	+0.705	AMTOC00	-0.635	AMTOB00	-4.900	AMTOD00	-5.180
Santa Barbara	AAITD00	78.27-78.31	78.290	+0.815	AAITJ00	2.900	AAXBUB00	-1.365	AAXAZ00	-1.645
Loreto	PCAGH00	70.42-70.46	70.440	+1.215	PCAGQ00	-4.950	AAXBV00	-9.215	AAXBG00	-9.495
Oriente	PCADE00	71.32-71.36	71.340	+1.215	PCAGU00	-4.050	AAXBW00	-8.315	AAXBH00	-8.595
Napo	AAMCA00	69.32-69.36	69.340	+1.215	AAMCD00	-6.050	AAXBX00	-10.315	AAXBI00	-10.595
Tupi	ATUPA00		80.455	+0.555	ATUPC00	5.065	ATUPB00	0.800	ATUPD00	0.520
Marlim	AAITF00	75.98-76.03	76.005	+0.705	AAITL00	0.615	AAXBY00	-3.650	AAXBJ00	-3.930
Castilla Blend	AAVEQ00	73.13-73.18	73.155	+0.705	AAVEQ01	-2.235	AAXBZ00	-6.500	AAXBK00	-6.780
Vasconia	PCAGI00	75.63-75.68	75.655	+0.705	PCAGR00	0.265	AAXCB00	-4.000	AAXBN00	-4.280
Mesa 30	AAITB00	77.13-77.18	77.155	+0.605	AAITH00	1.765	AAXCC00	-2.500	AAXB000	-2.780
Liza	ALIZA00		80.255	+0.705	ALIZD00	4.865	ALIZC00	0.600	ALIZB00	0.320
Latin America WTI strip	AAXBPO0		75.390							
Latin America Futures Brent strip	AAXBQ00		79.655							
Latin America Dated Brent strip	AAXBR00		79.935							

Latin America market parity prices (\$/barrel) (PGA page 270)

		Mid	Change
Maya	AAYMP00	72.845	+0.917
Merrey 16	AMERA00	71.754	+0.897

Platts euro-denominated assessments (€/barrel) (PGA page 1252)

			Mid	Change
European crude oil benchmarks				
Dated Brent	AAPYR00	72.130-72.140	72.135	-0.224
Dated Brent (CIF)	PCAKN00		73.070	-0.258
Urals (Mediterranean)	AAPYS00	57.350-57.380	57.362	+0.065
US crude oil benchmarks				
WTI (Aug)	AAPYT00	68.030-68.040	68.036	+0.180
WTI MEH (Aug)	AAYSA00		69.564	+0.116
Mars (Aug)	AAPYU00	69.290-69.300	69.294	-0.154

Euro/US\$ forex rate: 1.1125. Platts Euro denominated crude oil assessments are based on market values and a Euro/US\$ forex rate at 4:30 PM local London time.

PLATTS BRENT DIFF: AUG7-AUG11 (OCT): MERCURIA
BIDS 100KB AT \$0.15

PLATTS BRENT DIFF: AUG14-AUG18 (OCT): ONYX
BIDS 100KB AT \$0.15

PLATTS BRENT DIFF: AUG14-AUG18 (OCT): DV
TRADING BIDS 100KB AT \$0.15

PLATTS BRENT DIFF: AUG14-AUG18 (OCT): DARE
BIDS 100KB AT \$0.10

PLATTS BRENT DIFF: AUG14-AUG18 (OCT):
TRAFIGURA BIDS 100KB AT \$0.10

PLATTS BRENT DIFF: AUG14-AUG18 (OCT): OMV
BIDS 100KB AT \$0.05

PLATTS BRENT DIFF: AUG14-AUG18 (OCT):
MERCURIA BIDS 100KB AT \$0.00

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): DV
TRADING BIDS 100KB AT \$0.41

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): ONYX BIDS
100KB AT \$0.40

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): DARE BIDS
100KB AT \$0.40

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): OMV BIDS
100KB AT \$0.35

PLATTS BRENT DIFF: JUL31-AUG4 (OCT):
TRAFIGURA BIDS 100KB AT \$0.35

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): UNIEPEC
BIDS 100KB AT \$0.35

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): MERCURIA
BIDS 100KB AT \$0.35

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): TOTAL
BIDS 100KB AT \$0.25

Offers:

NORTH SEA:

Platts NSEA Forties FOB bss Hound Point, VITOL-
VITOLBRK offers Jul 26-Jul 28 100% Dtd .. \$0.20 for
700000-700000

Platts NSEA Forties CIF bss Rotterdam,
GLENCOREUK offers Jul 24-Jul 28 100% Dtd .. \$1.40 for
700000-700000

Platts NSEA WTI Midland CIF bss Rotterdam, VITOL-
VITOLBRK offers Jul 24-Jul 28 100% Dtd .. \$1.00 for

Ruble-denominated Russian assessments (Rb/barrel) (PGA page 1224)

			Mid	Change
Russian crude oil benchmarks				
Urals FOB Novorossiysk	AAUJP00	5527.060-5530.670	5528.864	+78.952
Urals FOB Baltic	AAUJQ00	5527.060-5530.670	5528.864	+78.952
Urals FOB Novorossiysk 80kt	AAUJR00	5445.700-5449.310	5447.504	+78.907
Urals CIF Mediterranean	AAUJS00	5767.520-5770.230	5768.876	+79.085
Urals CIF Rotterdam	AAUJT00	5732.260-5735.880	5734.072	+82.228

US\$/Ruble forex rate: 90.4000. Platts Ruble denominated crude oil assessments are based on market values and a US\$/Ruble forex rate at 4:30 PM local London time.

Platts CAD-denominated Canada spot crude assessments (C\$/cu m) (PGA page 232)

			Mid	Change
Lloyd Blend	AALRM00	533.187-533.352	533.269	+1.161
Mixed Sweet	AALRT00	623.585-623.751	623.668	+7.780
Light Sour Blend	AALRZ00	611.560-611.726	611.643	+5.759
Midale	AAUCD00	594.143-594.309	594.226	+5.848
Condensates	AALSH00	586.679-586.845	586.762	+11.722
Syncrude Sweet	AASOL00	658.832-658.998	658.915	+5.514
WCS Hardisty	AAPPO00	527.381-527.547	527.464	+1.192
Cold Lake Hardisty	AASZY00	526.137-526.303	526.220	+1.198

Daily US\$ vs EURO exchange rate (PGA page 1151)

		Mid	Change
July 12, 2023	AAFCW00	1.1125	+0.013

Asia close Brent and WTI spot assessments (\$/barrel) (PGA page 2210)

			Mid	Change
Brent (Sep)	PCAJG00	79.48-79.52	79.500	+1.020
Brent (Oct)	PCAJI00	79.12-79.16	79.140	+0.950
Brent (Nov)	PCAJ000		78.700	+0.930
WTI (Aug)	AAFFU00	74.93-74.97	74.950	+1.270
WTI (Sep)	AAFFW00	74.80-74.84	74.820	+1.200
WTI (Oct)	AAFFY00	74.51-74.55	74.530	+1.190

Oman OSPs and derivatives (\$/barrel) (PGA pages 2658 & 2210)

			Mid	Change
Oman/Dubai Swap (Aug)	AAIHJ00	-0.02/0.02	0.000	0.000
Oman/Dubai Swap (Sep)	AAIHL00	-0.02/0.02	0.000	0.000
Oman/Dubai Swap (Oct)	AAIHN00	-0.02/0.02	0.000	0.000
Oman Swap (Aug)	AAHZP00	78.98-79.02	79.000	+1.000
Oman Swap (Sep)	AAHZR00	78.28-78.32	78.300	+0.990
Oman Swap (Oct)	AAHZT00	77.66-77.70	77.680	+0.950

Daily OPEC Basket Price (\$/barrel) (PGA page 207)

		Mid	Change
July 11, 2023	AAEUQ00	79.670	+0.580

700000-700000

Platts NSEA WTI Midland CIF bss Rotterdam,
GUNVORSA offers Jul 24-Jul 28 100% Dtd .. \$1.40 for
700000-700000

Platts NSEA WTI Midland CIF bss Rotterdam, VITOL-
VITOLBRK offers Aug 2-Aug 6 100% Dtd .. \$1.60 for
700000-700000

Platts NSEA WTI Midland CIF bss Rotterdam,
EQUINOR offers Aug 2-Aug 6 100% Dtd .. \$1.40 for
700000-700000

CASH BFOE: PLATTS CASH BFOE: SEP23:
PETROINEOS OFFERS 100KB AT \$80.13

BRENT CFDS: PLATTS BRENT DIFF: JUL17-JUL21
(SEP): GLENCORE OFFERS 100KB AT \$0.30

PLATTS BRENT DIFF: JUL17-JUL21 (SEP): ONYX
OFFERS 100KB AT \$0.30

PLATTS BRENT DIFF: JUL17-JUL21 (SEP): DARE
OFFERS 100KB AT \$0.30

PLATTS BRENT DIFF: JUL17-JUL21 (SEP): DV
TRADING OFFERS 100KB AT \$0.35

PLATTS BRENT DIFF: JUL17-JUL21 (SEP): BP OFFERS
100KB AT \$0.55

PLATTS BRENT DIFF: JUL24-JUL28 (SEP): VITOL
OFFERS 100KB AT \$0.30

PLATTS BRENT DIFF: JUL24-JUL28 (SEP):
GLENCORE OFFERS 100KB AT \$0.30

PLATTS BRENT DIFF: JUL24-JUL28 (SEP): DARE
OFFERS 100KB AT \$0.30

PLATTS BRENT DIFF: JUL24-JUL28 (SEP):
PETROCHINA OFFERS 100KB AT \$0.30

PLATTS BRENT DIFF: JUL24-JUL28 (SEP): DV
TRADING OFFERS 100KB AT \$0.35

PLATTS BRENT DIFF: JUL24-JUL28 (SEP): ONYX
OFFERS 100KB AT \$0.50

PLATTS BRENT DIFF: AUG7-AUG11 (OCT): PETRACO
OFFERS 100KB AT \$0.33

PLATTS BRENT DIFF: AUG7-AUG11 (OCT): DARE
OFFERS 100KB AT \$0.34

PLATTS BRENT DIFF: AUG7-AUG11 (OCT): DV
TRADING OFFERS 100KB AT \$0.35

Futures Settlements

	Settlement	Change	Low	High	Volume*	Open interest	PNT****
NYMEX Light Sweet crude (\$/barrel) (PGA page 705)							
Aug 23	NMCL001	75.75	+0.92	74.67	76.15	327421	247033
Sep 23	NMCL002	75.54	+0.83	74.53	75.94	232009	332454
Oct 23	NMCL003	75.25	+0.81	74.26	75.61	117428	188527
Nov 23	NMCL004	74.91	+0.80	73.95	75.23	37136	79384
Total	NMCL000					918851	XNCLP00 23701
ICE Brent (\$/barrel) (PGA page 704)							
Sep 23	ICLL001	80.11	+0.71	79.21	80.55	401833	452148
Oct 23	ICLL002	79.79	+0.72	78.85	80.18	242058	405979
Nov 23	ICLL003	79.39	+0.74	78.44	79.72	130574	222742
Dec 23	ICLL004	78.98	+0.75	78.02	79.27	155496	294410
Total	ICLL000					1171482	XILLP00 33993
ICE WTI (\$/barrel) (PGA page 704)							
Aug 23	ICIC001	75.75	+0.92	74.70	76.14	42386	61073
Sep 23	ICIC002	75.54	+0.83	74.56	75.94	63181	95067
Oct 23	ICIC003	75.25	+0.81	74.29	75.60	38684	66069
Nov 23	ICIC004	74.91	+0.80	74.01	75.17	22073	30655
Total	ICIC000					196006	XIICP00 12768
ICE BWAVE (\$/barrel) (PGA page 704)							
BWAVE data refer to previous day.							
Sep 23	XIBW001	78.67					
Oct 23	XIBW002	78.35					
DME Oman crude (\$/barrel)** (PGA pages 702 & 2710)							
Sep 23	XDOA001	79.91	+1.11			2180	
Sep 23	DMOQ001	80.45	+0.61	79.77	80.45	2222	7056
Oct 23	DMOQ002	80.13	+0.62	80.13	80.13	958	15
Nov 23	DMOQ003	79.65	+0.64	79.65	79.65	958	10
Dec 23	DMOQ004	79.22	+0.64	79.22	79.22	0	0
Total Volume	DMOQ000					4862	XDOQP00 0
IFAD Murban crude (\$/barrel) (PGA page 703)							
Sep 23	AMIFA00	80.050					
Murban vs Dubai***	AMIFB00	1.750					
NYMEX ULSD (\$/gal) (PGA page 705)							
Aug 23	NMHO001	2.5996	+0.0159	2.5714	2.6250	45072	64040
Sep 23	NMHO002	2.5920	+0.0173	2.5627	2.6151	49765	59661
Oct 23	NMHO003	2.5847	+0.0175	2.5547	2.6056	27449	38264
Nov 23	NMHO004	2.5737	+0.0175	2.5477	2.5907	12822	29927
Total	NMHO000					166896	XNHOP00 4860
NYMEX RBOB unleaded gasoline (\$/gal) (PGA page 705)							
Aug 23	NMRB001	2.6670	+0.0443	2.6173	2.6788	50351	83029
Sep 23	NMRB002	2.5935	+0.0457	2.5421	2.6041	67226	88872
Oct 23	NMRB003	2.3615	+0.0380	2.3160	2.3686	29409	59070
Nov 23	NMRB004	2.2914	+0.0338	2.2487	2.2980	14394	30241
Total Volume	NMRB000					190657	XNRBP00 10911
NYMEX Natural Gas (\$/MMBtu) (PGA page 705)							
Aug 23	NMNG001	2.632	-0.099	2.618	2.750	136470	146910
Sep 23	NMNG002	2.597	-0.095	2.586	2.712	81966	294855
Oct 23	NMNG003	2.683	-0.095	2.667	2.791	44445	102914
Nov 23	NMNG004	3.105	-0.089	3.086	3.210	20449	89629
Total Volume	NMNG000					342563	XNNGP00 5510

PLATTS BRENT DIFF: AUG7-AUG11 (OCT): GLENCORE OFFERS 100KB AT \$0.40

PLATTS BRENT DIFF: AUG7-AUG11 (OCT): ONYX OFFERS 100KB AT \$0.45

PLATTS BRENT DIFF: AUG14-AUG18 (OCT): DV TRADING OFFERS 100KB AT \$0.24

PLATTS BRENT DIFF: AUG14-AUG18 (OCT): DARE OFFERS 100KB AT \$0.25

PLATTS BRENT DIFF: AUG14-AUG18 (OCT): PHILLIPS 66 OFFERS 100KB AT \$0.25

PLATTS BRENT DIFF: AUG14-AUG18 (OCT): ONYX OFFERS 100KB AT \$0.25

PLATTS BRENT DIFF: AUG14-AUG18 (OCT): OMV OFFERS 100KB AT \$0.25

PLATTS BRENT DIFF: AUG14-AUG18 (OCT): GLENCORE OFFERS 100KB AT \$0.25

PLATTS BRENT DIFF: AUG14-AUG18 (OCT): PETRACO OFFERS 100KB AT \$0.30

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): VITOL OFFERS 100KB AT \$0.45

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): PHILLIPS 66 OFFERS 100KB AT \$0.45

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): GLENCORE

Futures Settlements (continued)

	Settlement	Change	Low	High	Volume*	Open interest	PNT****
ICE low sulfur gasoil (\$/mt) (PGA page 704)							
Jul 23	ICLO001	761.25	+0.00	754.50	767.75	2030	2257
Aug 23	ICLO002	754.25	+5.25	744.00	762.00	102667	144726
Sep 23	ICLO003	749.00	+4.50	740.00	756.00	80142	101797
Oct 23	ICLO004	747.00	+4.25	738.50	753.25	49856	93615
Total Volume	ICLO000					338030	XILOP00 8109
ICE Midland WTI American Gulf Coast (\$/barrel) (PGA page 704)							
Aug 23	IHO001	77.38	+0.81	76.46	77.76	1756	10144
Sep 23	IHO002	77.15	+0.76	76.39	77.53	1395	4792
Oct 23	IHO003	76.80	+0.72	76.12	77.03	1329	4334
Nov 23	IHO004	76.45	+0.71	76.45	76.45	417	4073

*Volume, open interest and PNT reflect prior trading day. PNT reflect volume for Privately Negotiated Trades or off-exchange. **Oman settlements are Post Close settlements. ***IFAD Murban spread to 1st Line (Sep 23) Platts Dubai crude futures. ****Privately Negotiated Trade values found on PGA page 710

Futures at Platts' Market on Close (\$/barrel) (PGA page 703)

Singapore*			London*		Houston*		Singapore*			London*		Houston*	
ICE Brent							NYMEX WTI						
Sep	XILLA01	79.50	AAYES00	80.01	AAQBG00	80.13	M1	XNCLA01	74.95	AASCR00	75.69	NYCRM01	75.77
Oct	XILLA02	79.13	AAYET00	79.66	AAQBH00	79.80	M2	XNCLA02	74.82	AASCS00	75.47	NYCRM02	75.58
Nov			AAXZY00	79.22	AAXZZ00	79.41	M3					NYCRM03	75.28
Dec			AAYAM00	78.78	AAYAL00	79.00	M4					NYCRM04	74.94
Oman							*Singapore and London MOC close at precisely 16:30 local time while Houston MOC closes at precisely 13:30 local time. MOC times are usually earlier on the day preceding major local holidays.						
Sep	XDOA001	79.91											
Volume	XDOAV01	2180											

*Singapore and London MOC close at precisely 16:30 local time while Houston MOC closes at precisely 13:30 local time. MOC times are usually earlier on the day preceding major local holidays.

Platts

S&P Global
Commodity Insights

Crude Oil Marketwire

Contact Client Services: ci.support@spglobal.com; Americas: +1-800-752-8878; Europe & Middle East: +44-20-7176-6111; Asia Pacific: +65-6530-6430

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Reported spot cash transactions (PGA page 3)

Trans. Date	Cargo / Spread Dates	Cargo Load Range / CFD Week	CFD Roll Week	Crude Grade(s)	Reported Status	Outright / Diff. Price (\$/barrel)	Basis	Barrels	Seller	Buyer
Platts Americas										
07/12/2023	August			Bakken Clearbrook	Heard	3.70	NYMEX WTI CMA			
07/12/2023	August			Bakken Cushing	Heard	0.55	Cash WTI			
07/12/2023	August			Bakken Patoka	Heard	2.45	NYMEX WTI CMA			
07/12/2023	August			C5 Fort Saskatchewan	Heard	-4.65	NYMEX WTI CMA			
07/12/2023	August			C5 Peace	Heard	-5.20	NYMEX WTI CMA			
07/12/2023	August			Mars	Heard	1.65	Cash WTI			
07/12/2023	August			Mars	Heard	1.40	Cash WTI			
07/12/2023	August			Mixed Sweet (MSW) Edmonton	Heard	-0.25	NYMEX WTI CMA			
07/12/2023	August			Mixed Sweet (MSW) Edmonton	Heard	-0.10	NYMEX WTI CMA			
07/12/2023	August			WCS Hardisty	Heard	-11.85	NYMEX WTI CMA			
07/12/2023	August			WTI MEH	Heard	1.70	Cash WTI			
07/12/2023	August			WTI Midland	Heard	1.50	Cash WTI			
07/12/2023	August			WTI Midland	Heard	1.50	Cash WTI			
Platts Asia										
7/12/2023	September			Dubai Partial	Done	79.9		25000	Trafigura	Gunvor
7/12/2023	September			Dubai Partial	Done	79.9		25000	EXTAP	Equinor
7/12/2023	September			Dubai Partial	Done	79.9		25000	Mitsui	Gunvor
7/12/2023	September			Dubai Partial	Done	79.95		25000	Trafigura	Equinor
7/12/2023	September			Dubai Partial	Done	79.9		25000	Petrochina	Equinor
7/12/2023	September			Dubai Partial	Done	79.9		25000	Petrochina	Gunvor
7/12/2023	September			Dubai Partial	Done	79.9		25000	Petrochina	Equinor
7/12/2023	September			Dubai Partial	Done	79.94		25000	EXTAP	Equinor
7/12/2023	September			Dubai Partial	Done	79.9		25000	Mitsui	Equinor
7/12/2023	September			Dubai Partial	Done	79.85		25000	Petrochina	Equinor
7/12/2023	September			Dubai Partial	Done	79.9		25000	Trafigura	Gunvor
7/12/2023	September			Dubai Partial	Done	79.9		25000	Petrochina	Equinor
7/12/2023	September			Dubai Partial	Done	79.9		25000	Trafigura	Equinor
7/12/2023	September			Dubai Partial	Done	79.92		25000	Reliance	Equinor
7/12/2023	September			Dubai Partial	Done	79.9		25000	EXTAP	Equinor
7/12/2023	September			Dubai Partial	Done	79.9		25000	Petrochina	Equinor
Platts EMEA										
07/12/2023	July/August	31	4	Brent CFD	Done	0.42	Cash BFOE Oct	100000	Equinor	DV Trading
07/12/2023	July/August	31	4	Brent CFD	Done	0.43	Cash BFOE Oct	100000	Petraco	Dare Global
07/12/2023	August	7	11	Brent CFD	Done	0.32	Cash BFOE Oct	100000	PetroChina	TotalEnergies
07/12/2023	July/August	31	4	Brent CFD	Done	0.43	Cash BFOE Oct	100000	PetroChina	Dare Global
07/12/2023	August	7	11	Brent CFD	Done	0.30	Cash BFOE Oct	100000	BP	Onyx
07/12/2023	August	7	11	Brent CFD	Done	0.32	Cash BFOE Oct	100000	Dare Global	TotalEnergies
07/12/2023	August	7	11	Brent CFD	Done	0.32	Cash BFOE Oct	100000	PetroChina	TotalEnergies
07/12/2023	August	1	5	WTI Midland	Done	1.10	Dated Brent	700000	BP	TotalEnergies

Please note that all deals that are stated as "Done" were reported and published through the Platts Market on Close assessment process. Deals that are stated as "Reported" were not reported through the MOC, and may reflect transactions that were reported before or after the MOC process. Platts seeks to confirm non-MOC information to the fullest extent possible prior to publication.

OFFERS 100KB AT \$0.45

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): DARE

OFFERS 100KB AT \$0.45

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): DV

TRADING OFFERS 100KB AT \$0.50

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): OMV

OFFERS 100KB AT \$0.55

Trades:

NORTH SEA: Platts NSEA WTI Midland CIF bss Rotterdam, BP - TOTS* Aug 1, 2023-Aug 5, 2023 100% Dtd . . \$1.10 for 700000-700000

CASH BFOE: None

BRENT CFDS: PLATTS BRENT DIFF: AUG7-AUG11 (OCT): TOTAL BUYS FROM DARE* 100KB AT \$0.32 (15:28:57)

PLATTS BRENT DIFF: AUG7-AUG11 (OCT): TOTAL BUYS FROM PETROCHINA* 100KB AT \$0.32 (15:28:58)

PLATTS BRENT DIFF: AUG7-AUG11 (OCT): BP SELLS TO ONYX* 100KB AT \$0.30 (15:29:54)

PLATTS BRENT DIFF: AUG7-AUG11 (OCT): TOTAL BUYS FROM PETROCHINA* 100KB AT \$0.32 (15:29:59)

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): DV TRADING BUYS FROM EQUINOR* 100KB AT \$0.42 (15:29:40)

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): DARE BUYS FROM PETRACO* 100KB AT \$0.43 (15:29:50)

PLATTS BRENT DIFF: JUL31-AUG4 (OCT): DARE BUYS FROM PETROCHINA* 100KB AT \$0.43 (15:29:55)

This assessment commentary applies to the following market data codes: Dated Brent <PCAAS00> CFD Week 1 <PCAKA00> CFD Week 2 <PCAKC00> Brent Mo01 <PCAAQ00> CFD Week 3 <PCAKE00> Brent Mo02 <PCAAR00> CFD Week 4 <PCAKG00> Brent Mo03 <PCARR00> CFD Week 5 <AAGLU00> CFD Week 6 <AAGLV00> CFD Week 7 <AALCZ00> CFD Week 8 <AALDA00> Johan Sverdrup FOB North Sea <AJSVA00> Johan Sverdrup FOB North Sea vs North Sea Dtd Strip <AJSVB00>

Platts WTI Midland Crude DAP Europe Assessment Rationale & Exclusions

WTI Crude DAP Europe <AWTIC00> assessment rationale:

WTI DAP Rotterdam was assessed 10 cents/b lower between Aug. 1 and Sep. 9, with a 0.5 cent/day contango structure rolled over back-end dates reflecting weakness seen in delivered European sweet markets. There were no bids, offers or trades in the Platts Market on Close assessment process.

WTI Crude DAP Augusta <AWTIA00> assessment rationale:

WTI DAP Augusta was assessed lower owing to the decrease in the DAP Rotterdam differential. There were no bids, offers or trades in the MOC.

Exclusions: None

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Platts WTI Midland Crude DAP Europe Bids, Offers, Trades

Bids: None

Offers: None

Trades: None

This assessment commentary applies to the following market data codes: WTI Midland DAP basis Rotterdam <AWTIC00> WTI Midland DAP basis Rotterdam vs Fwd Dated Brent <AWTID00> WTI Midland DAP basis Augusta <AWTIA00> WTI Midland DAP basis Augusta vs Fwd Dated Brent <AWTIB00>

Platts Mediterranean & Black Sea Sweet Crude Daily Commentary

- Azerbaijan H1 oil exports down 5.2% as output slips 7.9%
- Azeri Light crude benefits from seasonal demand, Es Sider fears

Azerbaijan's oil exports over the first half of 2023 averaged 514,315 b/d, down 5.2% on the year, data

released in a tweet by Azerbaijan's energy minister Parviz Shabazov showed.

Meanwhile, oil production during the same period averaged 615,558 b/d, down 7.9% year on year.

In June, exports averaged 513,100 b/d, up 3.3% from May and 1.6% from June 2022. Production averaged 610,833 b/d, marginally higher than the 610,000 b/d announced by Azerbaijan's energy ministry July 11, the data showed.

The 610,833 b/d figure represents a 0.2% fall from May and a 3.8% year-on-year drop from the 635,267 b/d reported for June 2022.

No data was given for crude production by the BP-led consortium operating Azerbaijan's main ACG oil field, for condensate production from the country's main Shah Deniz gas field, or for production from fields operated by Azerbaijan's state oil company Socar.

Azeri Light, a light sweet crude, is Azerbaijan's main crude oil grade. Platts assessed Azeri Light at a \$4/b premium to North Sea benchmark Dated Brent on July 11.

The Azerbaijani grade is reaching a near seven-month high, as performance is generally strong across the Mediterranean sweet crude complex.

Demand for Azeri Light could also be benefiting from renewed fears of disruption to Es Sider crude supplies.

Khalifa Haftar, head of the self-styled Libyan National Army, warned July 3 that his forces should be on standby to resume blockades on Libyan oil fields and ports until a new committee starts work to equitably distribute oil wealth within the country.

"Azeri Light is a pure sweet grade, and tightness has been caused by the potential Libyan outage," one trader said. "Some people may have a natural thinking to skip [Es Sider] if there is an alternative."

However, traders also cautioned that the strength of Mediterranean sweet grades is affected by fluctuations in seasonal demand. A second trader said buyers were showing some "summer fever" and taking

larger volumes than usual to “cover for holidays.”

Platts is part of S&P Global Commodity Insights

Platts NWE and Med Urals Sour Crude Daily Market Analysis

- Russian output down 440,000 b/d from Feb baseline
- Urals above \$60/b for first time since G7 price cap
Urals has hit \$60/b for the first time since the US-led G7 coalition rolled out its price cap on Russian crude last December, with the rise in price set to test the shipping industry's resolve to continue transporting the country's oil.

Platts, part of S&P Global Commodity Insights, assessed Urals on an FOB Primorsk basis at \$60.32/b on July 11, the highest since mid-November before the \$60/b price cap on Russian crude came into force.

Designed to keep Russian oil flowing to world markets while hitting government revenues, G7 restrictions on shipping Russian crude bought for more than \$60/b came into effect on Dec. 5.

The price cap targets the provision of shipping insurance and other maritime services for cargoes of Russian crude acquired for FOB prices over \$60/b.

As Urals had been trading well below \$60/b since December, traders and shippers only now have to worry about falling foul of the price cap on Russian crude.

Urals has been lifted along with other medium sour crude grades after Saudi Arabia and Russia pledged to cut their crude output by 1 million b/d and exports by 500,000 b/d, respectively, in August.

An ongoing impasse between Iraq and Turkey blocking 450,000 b/d of sour Kurdish crude flow via Ceyhan is also supporting the market.

According to the latest Platts OPEC+ survey, released July 11, Russian crude output was down 440,000 b/d from February's baseline at 9.42 million b/d. That brought Russia closer to its separate pledge of cutting production by 500,000 b/d from

February levels.

Urals was a popular medium sour crude among European buyers but the invasion of Ukraine saw it widely shunned by traditional Western customers, providing a glut of cheap crude for willing buyers in China and India.

“Tighter supply from OPEC+ cuts, as well as higher domestic refinery run rates, have helped to push differentials up,” one European oil trader said. “Demand remains strong from Indian buyers but there is a shorter Urals program which means there is more competition.”

Platts EMEA Urals and Med Brent Crude Daily Rationales & Exclusions

Urals CIF Augusta differential <AAGXX00> assessment rationale:

Urals CIF Augusta was assessed unchanged. There were no bids or offers in the Platts Market on Close assessment process. The Urals CIF Augusta differential was assessed using a net-forward to the Urals FOB Aframax and Suezmax assessment. The FOB differentials were assessed unchanged.

Urals CIF Med <PCACE00> assessment rationale:
The Urals CIF Mediterranean assessment reflected the value of the Mediterranean Dated Brent Strip (AALDF00) plus the Urals CIF Augusta differential assessment (AAGXX00).

Urals RCMB (Recombined) <AALIN00> assessment rationale:

The Urals RCMB (Recombined) assessment reflected the value of the Platts Dated Brent assessment (PCAAS00) plus the Urals CIF Augusta differential assessment (AAGXX00).

Urals CIF Rdam <PCAFW00> assessment rationale:
Urals CIF Rotterdam was assessed 3.5 cents/b higher. There were no bids or offers in the Platts Market on Close assessment process. The Urals CIF Rotterdam differential was assessed as a net-forward to the Urals FOB Baltic assessment. The FOB differentials were

assessed unchanged.

Med Dated Brent Strip 13-28 Day <AALDF00> assessment rationale:

The Mediterranean Dated Brent Strip reflected the value of Forward Dated Brent 13-28 days ahead of the day of publication. Forward Dated Brent is assessed as a function of Platts assessments of second-month Cash BFOE (PCAAR00) and BFOE CFD differentials (PCAKA00, PCAKC00, PCAKE00, PCAKG00, AAGLU00, AAGLV00, AALCZ00).

CPC Blend CIF Augusta vs BTC Dtd Strip <AAHPL00> assessment rationale:

CPC Blend was assessed unchanged. Firm CPC Blend demand in Europe is supporting differentials, with values said to be around a \$1.80/b discount to Dated Brent for August-loading cargoes.

Exclusions: None

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Platts EMEA Urals & Med Brent Crude Bids, Offers, Trades

Bids: None

Offers: None

Trades: None

This assessment commentary applies to the following market data codes: Urals CIF Med <PCACE00> Urals CIF Rdam <PCAFW00> ESPO FOB Kozmino Mo01 London <AARWD00> CPC CIF Augusta Diff <AAHPL00>

Platts West African Crude Daily Commentary

- WAF barrels unsold ahead of upcoming program releases

- Nigerian production rises for second successive month

In the West African crude market July 12, traders continued to report a lack of activity out of Nigeria with

offers remaining at higher levels.

“There are high offers and no one is buying,” one trader in West Africa said, while a second said: “Indications coming from sellers are very high, not grabbing any interest at all.”

Elsewhere in the complex, between six and eight spot cargoes remained unsold from the August-loading program in Angola, with a further four Congolese Djeno stems available, according to a third trader.

In other news, Nigerian oil production increased for a second successive month in June, rising 3.7% month on month to 1.48 million b/d, as the OPEC member continues its efforts to ramp up output.

The country’s oil industry regulator, the Nigerian Upstream Petroleum Regulatory Commission, said production of crude and condensate in June was 1,480,078 b/d on average, up from 1,427,616 b/d in May and 1,245,028 b/d in April. It was the first time production has risen in successive months in 2023.

Crude production alone rose to 1.25 million b/d from 1.18 million b/d.

In other news, Tullow Oil is set to nearly double its crude production with the “imminent” startup of the Jubilee South East project offshore Ghana.

“This is an exciting time for Tullow and a pivotal moment in 2023 as we are on the cusp of the startup of Jubilee South East, a project that demonstrates our operational capability and continued investment in Ghana’s world class Jubilee field,” CEO Rahul Dhir said.

“Gross production from the field is expected to exceed 100,000 b/d which will mark the outset of increased cash flow generation to materially deleverage our business,” he said.

Platts West African Crude Daily Rationale & Exclusions

Of the four crudes in the Nigerian basket, Bonny Light was assessed unchanged and Bonga was assessed 10 cents/b higher, with Qua Iboe and Forcados assessed 20 cents/b higher. The assessment

was based on indications heard through the day, while traders continued to report high traded levels due to strong middle-distillate cracks.

Qua Iboe FOB Nigeria <PCAID00>

Bonny Light FOB Nigeria London <PCAIC00>

Forcados FOB Nigeria <PCABC00>

Bonga FOB Nigeria <PCNGC00>

Exclusions: None

Platts is part of S&P Global Commodity Insights

Platts West African Crude Bids, Offers, Trades

Bids: None

Offers: None

Trades: None

This assessment commentary applies to the following market data code: WAF Index <AWAFB00> The WAF Index is calculated using the following market data codes: Qua Iboe FOB Nigeria <PCAID00> Bonny Light FOB Nigeria London <PCAIC00> Forcados FOB Nigeria <PCABC00> Bonga FOB Nigeria <PCNGC00>

Platts US Pipeline Crude Daily Commentary

- USGC crude differentials come under pressure
- Mars down 35 cents/b on day
- USGC crude stockpiles grow 7.973 million barrels: EIA

Differentials for US crude grades came under pressure July 12 as a narrower Brent/WTI spread and sharply higher crude inventories weighed on values.

Platts assessed closely watched medium sour crude Mars 35 cents/b weaker on July 12 at a \$1.40/b premium to cash WTI, the value at which the grade was last heard to trade. Tracking with Mars, other sour grades like Poseidon and Thunder Horse were also assessed 35 cents/b weaker on the day at a 95 cents/b premium to cash WTI and a \$2.80/b premium

to cash WTI, respectively.

But the weakening on differentials were not limited to sour grades. West Texas Intermediate crude at the Magellan East Houston terminal was assessed 5 cents/b weaker on the day at a \$1.70/b premium to cash WTI, the value at which the grade was last heard to trade. Similarly, WTI crude in Midland, Texas, was assessed 5 cents/b weaker on the day at \$1.50/b premium to cash WTI, following the last heard trade for the grade at that level.

Tracking with WTI MEH, Light Louisiana Sweet crude, too, was assessed 5 cents/b weaker at a \$2.65/b premium to cash WTI.

The softer crude differentials come as the Brent/WTI swaps spread, one indicator of the competitiveness of US crude on the international market, narrowed by 13 cents/b on July 12 to \$4.29/b. As the swaps spread narrows, WTI-based crudes are often viewed as becoming less competitive in relation to their Brent-based counterparts, thus pressuring values weaker.

Adding additional pressure was a 7.973 million-barrel build on US Gulf Coast crude stocks over the week ended July 7 to 252.468 million barrels, a July 12 report from the US Energy Information Administration showed. Nationally, crude stockpiles rose by 5.946 million barrels to 458.128 million barrels.

The build on crude stocks comes despite refinery runs in the USGC increasing by 349,000 b/d to 8.972 million b/d, according to EIA data, while refining runs nationwide rose by 629,000 b/d to 16.659 million b/d.

Platts is a part of S&P Global Commodity Insights.

Platts US Gulf Coast Export Crude Daily Commentary

- WTI FOB USGC values strengthen vs ICE Brent
- US weekly crude exports see lowest level last week since early Jan: EIA

A narrower Brent/WTI spread helped send differentials for August loading West Texas

Intermediate FOB values stronger against October ICE Brent July 12, while against WTI crude at the Magellan East Houston terminal, values were assessed unchanged.

August loading WTI FOB values were assessed 22 cents/b stronger against October ICE Brent futures July 12, with first and second decade, or the first and second ten day intervals of the month, loadings assessed at a \$1.89/b discount to October ICE Brent, while third decade loadings were also assessed 22 cents/b stronger to a \$1.94/b discount. Against WTI MEH, first and second decade loadings were assessed unchanged at a 40 cents/b premium, while those loading in the third decade were assessed at a 35 cents/b premium.

The strengthening against ICE Brent comes as the Brent/WTI swaps spread narrowed by 13 cents/b to \$4.29/b. This marks the narrowest swaps spread since June 7, when the Brent/WTI swaps spread sat at just \$4.21/b.

In market news, US crude exports fell to a six-month low over the first week of July, continuing a trend that has emerged in crude export data over the last year-and-a-half where the first week of the month sees low export volumes.

US crude exports averaged 2.144 million b/d last week, down 1.757 million b/d from the week prior, US Energy Information Administration data showed July 12.

Exports are at their lowest since the 2.137 million b/d for the week ended Jan. 6, according to EIA data.

This continues a trend where US crude exports have logged their lowest weekly levels for a given month in the first week of the month. A trading source familiar with shipping practices said there is preference in the US export market to have cargo-loading slots outside of the first week of the month, causing export volumes outside of the first week of the month to be elevated.

Nevertheless, US crude exports to Asia were down sharply, falling 486,700 b/d to just 295,000 b/d over the week ended July 7, according to Kpler shipping data.

This is the lowest weekly export level since the week ended Aug. 17, 2018, when crude exports averaged 263,000 b/d, Kpler data showed.

While fixtures data from Kpler points to a rebound in export flows to Asia in late July, the figure is well below the 1.6 million b/d on average to Asia in the first half of 2023.

Exports to Europe were estimated at 1.512 million b/d last week, down 874,893 b/d from the week prior, and below the around 1.75 million b/d averaged in the first half of the year, according to Kpler data.

Platts is a part of S&P Global Commodity Insights.

Platts Canadian Pipeline Crude Daily Commentary

- Mixed Sweet strongest in over a year
- Refinery activity remains strong

The differential for Mixed Sweet at Edmonton rose July 12 to its strongest value in almost 14 months as robust US refinery activity continued to underpin prices.

Although Mixed Sweet at Edmonton was heard to trade as strong as WTI CMA minus 10 cents/b earlier in the day, Platts assessed the lighter barrel 50 cents/b stronger over the previous day at WTI CMA minus 25 cents/b, as it was last heard to trade there. This is the strongest value for the crude since May 27, 2022, when Platts assessed it at WTI CMA plus 50 cents/b.

Other light sweet Canadian grades also narrowed their discounts to the WTI CMA on the day, with Platts assessing Syncrude Sweet Premium at Edmonton at WTI CMA plus \$4/b, based on market indications, and Condensate at Fort Saskatchewan at WTI CMA minus \$4.70/b, after it was heard offered at WTI CMA minus \$4.65/b.

Platts assessed Western Canadian Select at Hardisty, Alberta, 35 cents/b weaker day on day at WTI CMA minus \$11.85/b, after it was heard to trade there.

Sweeter Canadian crudes are seeing support as US

refinery activity remains high. According to recent data published by the US Energy Information Administration, refinery utilization rates rose by 2.6 percentage points to 93.7% of capacity the week ended July 7. Additionally, US refinery closures decreased 237,000 b/d the week ended July 7 to roughly 582,000 b/d.

US weekly imports of Canadian crude fell for the second week in a row the week ended July 7, according to the EIA. US refineries brought in approximately 3.39 million b/d of crude oil from Canada last week, down from 3.61 million b/d in the week ended June 30.

In addition, Midwest crude stocks fell about 2.6 million barrels over the week to about 125 million barrels the week ended July 7, EIA data showed.

Platts is part of S&P Global Commodity Insights.

Platts Latin American Crude Daily Commentary

- Ecuadorian differentials strengthen as medium and heavy sours see global support
- Brazil's Tupi heard offered stronger for delivery into China

Ecuadorian differentials led gains among the Latin crudes assessed by Platts July 12, as heavier crudes globally continued to see support from production cuts.

Platts assessed Ecuador's Oriente at a discount of \$4.05/b to the Latin WTI strip, up 40 cents/b day on day. The move helps to normalize Oriente relative to other heavy crudes and medium sours, which have risen across the board in recent weeks.

The value of Russia's Urals crude export grade, for example, hit \$60/b for the first time July 11 since the US-led G7 coalition rolled out its price cap on Moscow's oil.

Urals values have been lifted along with other medium sour crude grades after Saudi Arabia and Russia pledged to slash their crude output by 1 million b/d and exports by 500,000 b/d respectively in August.

An ongoing impasse between Turkey and Iraq blocking some 450,000 b/d of sour Kurdish crude flow via Ceyhan is also supporting sour crude values.

In Brazil, Platts assessed Tupi at a premium of 52 cents/b to Dated Brent, down 15 cents/b day on day. The weaker differential resulting from higher freight costs, with Platts assessing the Brazil-China route at w49, up 5.4% day on day. While the differential moved lower on the day, sources said they had seen recent offers as high as a premium of \$5/b against Dated Brent, delivered into China.

Platts is part of S&P Global Commodity Insights.

Subscriber Notes

Platts to add additional carbon intensity calculations, carbon offset premiums

Platts, part of S&P Global Commodity Insights, has decided to launch monthly carbon intensity calculations and daily carbon offset premium assessments for 13 additional crude oil fields, eight crude grades and 13 transportation routes, effective July 14, 2023.

Platts proposed to add these new assessments and calculations on June 1, which can be found here: <https://www.spglobal.com/commodityinsights/en/our-methodology/subscriber-notes/060123-platts-proposes-additional-carbon-intensity-calculations-carbon-offset-premiums>

These new values will be added to the list of Platts existing carbon intensity calculations, bringing the current total number of fields to 139, up from 126, and increasing transparency on carbon intensities in the global crude market.

The new fields will include:

- Falah
- Rashid
- Upper Zakum
- Lower Zakum

- Al-Shaheen
- Oman Basin
- Hassi Messaoud
- Khurais
- Abu Hadriya
- Umm Shaif
- Nasr
- El Bunduq
- Abu Al Bukhoosh

The new crude grades will include:

- Dubai Grade
- Oman Grade
- Al-Shaheen Grade
- Upper Zakum Grade
- Das Blend Grade
- Arab Light Grade
- Saharan Blend Grade
- Murban Grade

Platts upstream crude carbon intensity calculations measure the impact of greenhouse gas emissions in the production lifecycle from production to storage terminal. The methodology guide for Platts upstream carbon intensity, midstream carbon intensity, and carbon offset premiums is available here: Specifications Guide Carbon Intensity Assessments.

In line with the methodology for the current carbon intensity scores of the 126 crude fields that Platts publishes, the CI of these 13 new field will be calculated using Stanford's Oil Production Greenhouse Gas Emissions Estimator (OPGEE) 2.0 model, combined with proprietary research and data from S&P Global.

Platts carbon intensity premiums for both the upstream and midstream calculations reflect the cost to offset emissions from each of the crudes, in addition to a separate premium reflecting the offsetting cost for each specific transportation route. Crude streams and different transportation routes have a variety of carbon intensities depending on where the crude comes from and the distance to the refinery.

Depending on the carbon intensity of each crude

and carbon intensity of the route, the calculation is a \$/b indication of how much it would cost to use carbon removal credits to offset associated GHG emissions from the production of the crude, as well as the route in question.

The 13 new routes will include:

- Falah to Kiire
- Rashid to Kiire
- Upper Zakum to Zhoushan
- Lower Zakum to Sikka
- Al-Shaheen to Singapore
- Oman Basin to Tranmere
- Hassi Messaoud to Tranmere
- Khurais to Ain Sukhna
- Abu Hadriya to Ain Sukhna
- Umm Shaif to Sikka
- Nasr to Sikka
- El Bunduq to Sikka
- Abu Al Bukhoosh to Sikka

Please send any further feedback to Platts_Carbon@spglobal.com and pricegroup@spglobal.com.

For written comments, please provide a clear indication if comments are not intended for publication by Platts for public viewing. Platts will consider all comments received and will make comments not marked as confidential available upon request.

Platts to launch Russian Urals DAP India assessment as differential to Dubai

Platts, part of S&P Global Commodity Insights, will launch a differential for Russian Urals DAP India versus Dubai, Aug. 1, 2023.

The DAP (Delivered At Place) West Coast India (WCI) Russian Urals differential to M1 Dubai [PCAAT00] following market support for an assessment of Urals DAP WCI versus Dubai.

Platts launched DAP WCI Russian Urals assessments as both an outright value and as a differential to M1 forward Dated Brent, Jan. 18, 2023.

Please send all feedback, comments or questions to europa_crude@spglobal.com and pricegroup@spglobal.com.

For written comments, please provide a clear indication if comments are not intended for publication by Platts for public viewing.

Platts will consider all comments received and will make comments not marked as confidential available to the public upon request.

Platts to launch CIF Rotterdam KEBCO, FOB Ust-Luga and Novorossiisk netback assessments

Platts, part of S&P Global Commodity Insights, will launch new KEBCO (Kazakh Export Blend Crude oil) assessments, Aug. 1, 2023.

Platts received consistent market feedback in support of a KEBCO CIF Rotterdam assessment and FOB-netback values for KEBCO Ust-Luga and FOB Novorossiisk.

KEBCO FOB Ust-Luga value will be calculated as a freight netback from the KEBCO CIF Rotterdam assessment.

KEBCO FOB Novorossiisk will be calculated as a freight netback from the CIF Augusta assessment, also taking into account Turkish Strait delays and the Additional War Risk Premium (AWRP).

These assessments will be published as both differentials to the Med Dated Brent strip [AALDF00] and as outright values.

Platts launched a KEBCO CIF Augusta assessment, Nov. 1, 2022.

Please send all feedback, comments or questions to europa_crude@spglobal.com and pricegroup@spglobal.com.

For written comments, please provide a clear indication if comments are not intended for publication by Platts for public viewing. Platts will consider all comments received and will make comments not marked as confidential available to the public upon request.

Platts invites feedback on Global Crude Oil Market Parity Prices methodology

As part of its commitment to open and transparent pricing and product specifications, Platts, part of S&P Global Commodity Insights, would like to invite feedback on its Global Crude Oil Market Parity Prices methodology.

Platts Market Parity Prices (MPPs) provide a calculation of the equivalent market value of a given crude based on the value of its typical refined product yield, subtracting costs for transport and the refining process, and adjusting the resulting value based on its Gross Product Worth (GPW) benchmarked to a reference basket of relevant crude grades that are actively traded in the regional spot market.

As part of this review, Platts is inviting feedback from stakeholders on possible amendments to the model, including addition of new reference grades; changes to the underlying refinery model and GPW yields used in the calculations; as well as updates to transportation and processing cost for the various grades.

More details on Platts MPP models and methodology are available at: https://www.spglobal.com/commodityinsights/PlattsContent/assets/_files/en/our-methodology/methodology-specifications/market-parity-prices.pdf

Platts reviews all methodologies annually to ensure they continue to reflect the physical markets under assessment. Platts regularly assesses the relevance of methodologies through continuous contact with the market. Feedback on methodologies is always welcomed by Platts.

Platts is committed to providing advance notice in a clear time frame that gives users sufficient opportunity to analyze and comment on the impact of such proposed changes. Time frames vary depending on Platts analysis of the overall circumstances of a particular change.

Methodology changes that materially alter an

assessment and require an update to the methodology specification are preceded by extensive bilateral discussions with market stakeholders and open public forums. Routine changes or clarifications generally do not materially alter an assessment. Platts holds open public forums in which material methodology changes and feedback are presented, and at which further feedback may be given.

Please send all comments, feedback, and questions to europa_crude@spglobal.com, Asia_Crude@spglobal.com, and pricegroup@spglobal.com.

For written comments, please provide a clear indication if comments are not intended for publication by Platts for public viewing.

Platts will consider all comments received and will make comments not marked as confidential available upon request.

Platts clarifies CPC Blend assessment methodology

Platts, part of S&P Global Commodity Insights, clarifies the CPC Blend assessment methodology relating to emerging market practices for the AWRP cost and the title and risk transfer following Russia's invasion of Ukraine.

AWRP

Platts understands that in current market practice the Additional War Risk Premium (AWRP), an additional insurance product that emerged in the market following Russia's invasion of Ukraine, is for the seller's account.

As such, for CPC delivered Augusta bids, offers and trades in the Platts Market on Close assessment process, Platts will reflect value with the AWRP cost being paid by the seller.

TITLE AND RISK

Platts understands that some buyers of delivered CPC Blend cargoes in the wider market are requesting delayed transfer of title and risk. Platts understands buyers are requesting that the title and risk passes

at the point the vessel has passed through the Dardenelles, rather than at loadport.

Platts also understands that while this may not be market practice for every trade, many sellers are willing to agree to delayed title and risk transfer.

As such, Platts will publish bids and offers requiring delayed transfer of title and risk in the MOC, but these may be subject to normalization for assessment purposes.

CERTIFICATE OF ORIGIN

Platts previously announced on Sept. 23, 2022, that cargoes carrying a Russian certificate of origin (COO) would be excluded from CPC Blend assessments from Oct. 3, 2022. As such, bids, offers and trades reported in the MOC will need to be performed upon with cargoes carrying a Kazakh-origin COO.

The subscriber note for that change can be found here:

<https://www.spglobal.com/commodityinsights/en/our-methodology/subscriber-notes/092322-platts-to-exclude-russian-origin-cargoes-from-cpc-blend-assessments-amend-fob-netback-calculations>

Please send all feedback, comments or questions to europa_crude@spglobal.com and pricegroup@spglobal.com.

For written comments, please provide a clear indication if comments are not intended for publication by Platts for public viewing.

Platts will consider all comments received and will make comments not marked as confidential available upon request.

Platts extends feedback period on proposal to amend Canadian Condensate methodology

Platts, part of S&P Global Commodity Insights, is extending the feedback period on its proposal to amend the Canadian condensate (C5) methodology to reflect Fort Saskatchewan as the basis of the assessment.

Platts is extending the feedback period to July 21,

for any potential change to be effective Aug. 28.

Platts specifically invites feedback on the most common trading basis for Canadian condensate in the Edmonton area, specifically Fort Saskatchewan, and more information about how the different streams are valued and trade in the market.

Platts understands that there are many streams of Canadian condensate trading in the Edmonton area. Platts has proposed to reflect Fort Saskatchewan based on a historical analysis of bids, offers, and trades heard in the market, as well as feedback from market participants that it is the most liquidly traded. Under this proposal, Platts may normalize bids, offers and trades from any other location or stream of condensate back to a Fort Saskatchewan basis.

Please send all questions and comments to oilgroup@spglobal.com and pricegroup@spglobal.com by July 21.

For written comments, please provide a clear indication if comments are not intended for publication by Platts for public viewing. Platts will consider all comments received and will make comments not marked as confidential available upon request.

Platts reminds subscribers of Middle East crude cargo nomination procedures, laycans

Platts, part of S&P Global Commodity Insights, would like to remind participants in the Middle East Market on Close crude oil price assessment process that for cargoes of Dubai, Oman, Upper Zakum, Al Shaheen or Murban, loading dates starting in the last three calendar days of the month should not be nominated except by mutual agreement between the buyer and the seller.

For Al-Shaheen cargoes, sellers should pass loading dates to buyers as soon as possible and at the latest before the end of the last trading day of the month of trade execution.

For other grades, buyers typically nominate loading dates in the month after trade execution.

In either case, buyers and sellers should not nominate cargoes with loading dates commencing in the last three calendar days of a month.

This is to avoid slippage risk — the risk that end-month loading dates of a cargo will spill over into the next month with different pricing implications.

For example, a cargo loading in August, which has 31 days, should have its nominated laycan end no later than on Aug. 29, e.g. an Aug. 28-29 loading cargo.

Platts reflects partial cargoes of crude oil in its physical assessments for Dubai, Oman, Upper Zakum, Al-Shaheen and Murban crudes.

Under the partials mechanism, the seller declares a full 500,000-barrel cargo of crude oil to the buyer after a total of 20 partials have been traded for the same loading month between the companies.

For Dubai partials, the seller has the option to deliver a Dubai, Oman, Upper Zakum or Al-Shaheen cargo, or a Murban cargo with a quality premium, to the buyer.

Please send all comments, feedback and questions to Asia_crude@platts.com and pricegroup@platts.com.

For written comments, please provide a clear indication if comments are not intended for publication by Platts for public viewing.

Platts will consider all comments received and will make comments not marked as confidential available upon request.

Platts launches fallback demurrage mechanism for WTI Midland CIF Rotterdam cargoes basis USGC demurrage rates

Platts, part of S&P Global Commodity Insights, has launched a demurrage fallback mechanism for WTI Midland CIF Rotterdam cargoes traded in the Platts Market on Close assessment process that is based on US Gulf Coast (USGC) demurrage rates, effective June 23.

If no agreement can be reached between buyer

and seller on demurrage costs, Platts proposes that counterparties use Platts Aframax USGC demurrage assessment (ADERD00) for the period 22-27 days prior to the delivery laycan. This time period is equivalent to what Platts understands the typical USGC Aframax fixing period to be of 5-10 days prior to USGC loading, assuming a 17-day sailing time to Rotterdam.

Platts understands that currently the standard market practice for demurrage on WTI Midland cargoes to be commensurate with Aframax demurrage rates in the US Gulf Coast.

Please send all feedback, comments or questions to europa_crude@spglobal.com and pricegroup@spglobal.com.

For written comments, please provide a clear indication if comments are not intended for publication by Platts for public viewing.

Platts will consider all comments received and will make comments not marked as confidential available upon request.

Platts to include Seaway Texas City Terminal into Brent complex assessment process for June

Platts, part of S&P Global Commodity Insights, will include Seaway Texas City Terminal as a loading terminal for WTI Midland crude oil into its Dated Brent and Cash BFOE Market on Close assessment process for June deliveries.

Sellers would be able to nominate WTI Midland meeting Platts specification loaded from Seaway Texas City Terminal for inclusion into the Dated Brent/Cash BFOE assessment process starting with the June 2023 delivery period.

The terminal, in Texas City, Texas, is wholly owned by Seaway Crude Holdings LLC, L.P., a joint venture between Enterprise Seaway L.P. and Enbridge Holdings (Seaway) L.L.C.

The terminal has two docks which can fit up to a VLCC size vessel and 4 million barrels of storage capacity for crude oil.

Platts decision to include WTI Midland into the Brent complex, and clarification of the review process by which loading terminals are included in the assessment process, can be found here.

Please send all feedback to PriceGroup@spglobal.com and Europe_Crude@spglobal.com.

For written comments, please provide a clear indication if they are not intended for publication by Platts for public viewing.

Platts launches WTI Midland FOB USGC assessments by monthly decade basis

Platts, a part of S&P Global Commodity Insights, has launched assessments on a monthly-decade basis for WTI Midland crude oil cargoes loading on an FOB basis out of the US Gulf Coast, effective July 5, 2023.

The prices are published as differentials to the Platts assessment of the first month WTI at the Magellan East Houston Terminal (WTI MEH) and the relevant underlying value of Dated Brent and ICE Brent at the US close for the loading period. Platts publishes the outright values of the three decades as well as a single outright value representing the average of the three decades.

TIMING AND BASIS

The prices reflect values for cargoes loaded within three segments of each calendar month: first decade: 1-10 of a month; second decade: 11-20 of a month; and third decade: 21-end of the month. The assessment month aligns with the US Gulf Coast pipeline schedule and rolls to the new months assessment the first business day following the 25th of each month. For example, from Jan. 26 to Feb. 25 the prompt month for US domestic pipeline barrels is March. During this time Platts would be publishing values for the first, second and third decades of March loadings, and they would be published against the March WTI MEH pipeline assessment and the March Dated

Brent basis. On Feb. 26, the prompt month for US domestic pipeline barrels shifts to April, and Platts assessments would roll to publishing first, second and third decades for April loadings against the April WTI MEH pipeline assessment and the April Dated Brent basis. The Dated Brent basis is formed using the relevant underlying prompt-month ICE Brent futures settle at the US close with the relevant Platts assessment of the Brent DFL financial differential at the time of loading. Dated Brent-related differentials reflect values relative to the value of Dated Brent that prevails at the time of loading. For example, on Feb. 1 Platts would be publishing the first, second and third decade assessments for March. The prompt ICE Brent futures contract for March loadings would be May, so the Dated Brent basis would be formed using the May ICE Brent settle with the March DFL differential. The ICE Brent basis reflects the value of the relevant contract month price of ICE Brent futures settles at the US close.

Specifications

The new assessments of WTI FOB values by domestic pipeline trade-month decades reflects the established specifications from the Platts WTI Midland FOB USGC assessment. The assessments, therefore, reflect the value for an Aframax cargo of Platts WTI Midland-spec crude on an FOB basis loading from locations along the US Gulf Coast, including Corpus Christi, Texas City, Houston, Beaumont, Nederland, and Port Arthur. The most competitive location, on a cargo-size normalized adjusted basis, will inform the value for the WTI FOB USGC assessment. The assessments reflect a typical volume of 700,000 barrels. Bids, offers, and trades that are smaller or larger than the cargo-size typical may be normalized to reflect the freight economics of the typical cargo size using that day's US to UK Aframax freight assessment (Platts symbol: TDUCF00). The assessments reflect WTI Midland crude supplied directly from the Permian Basin on one or

more of the following designated pipelines: BridgeTex, Longhorn, Midland-to-Echo I/ II, Cactus I/II/III, EPIC, Gray Oak, Permian Express, and Wink-to-Webster.

Crude reflected in this assessment must meet Platts' comprehensive, globally-accepted WTI Midland specifications, which can be found here: [https://www.spglobal.com/commodityinsights/en/our-methodology/subscriber-notes/080320-platts-to-implement-comprehensive-platts-wti-midland-](https://www.spglobal.com/commodityinsights/en/our-methodology/subscriber-notes/080320-platts-to-implement-comprehensive-platts-wti-midland-specifications)

specifications.

Additionally, the assessments reflect value loading from terminals that have been approved by Platts for loading WTI Midland crude oil into its Dated Brent and Cash BFOE Market on Close assessment process. Loadings from non-approved terminals may be considered in the assessment, but normalized if appropriate.

Platts will continue to assess WTI Midland

FOB USGC loading 15-to-45-days forward on an FOB basis. Please send any feedback or questions to americas_crude@spglobal.com and pricegroup@spglobal.com. For written comments, please provide a clear indication if comments are not intended for publication by Platts for public viewing. Platts will consider all comments received and will make comments not marked as confidential available upon request.

Commodity Insights Analytics US Yields & Netbacks Effective July 12, 2023 (\$/barrel)

US Gulf Coast (PGA page 0833)

	Crack Yield		Freight		Crack Netback		Crude Price		Crack Margin	
Agbami	AGGCY00	93.86	AGGFA00	2.83	AGGCN00	91.03	AAQZB00	78.52	AGGCM00	11.86
Arab Berri	BEGCY00	93.42	TDDAC00	1.32	BEGCN00	92.11	AAXT00	86.51	BEGCM00	5.60
Arab Heavy	AHGCY00	85.66	TDDAJ00	1.39	AHGCN00	84.28	AAXDI00	84.61	AHGCM00	-0.33
Arab Light	LIGCY00	91.04	TDDAR00	1.35	LIGCN00	89.69	AAXCU00	84.36	LIGCM00	5.33
Arab Medium	MEGCY00	87.26	TDDAZ00	1.35	MEGCN00	85.91	AAXDN00	85.06	MEGCM00	0.85
Bakken	BKGCY00	93.69	TDDRP00	7.78	BKGCN00	85.91	AAXPP00	76.95	BKGCM00	8.96
Basrah Medium	BLGCY00	85.42	TDDBS00	2.39	BLGCN00	83.03	BSMAM01	79.50	BLGCM00	6.28
Bonny Light	YLGCY00	96.05	TDDBX00	3.09	YLGCN00	92.96	PCAIC00	81.22	YLGCM00	11.09
Brent	BRGCY00	93.32	TDDCB00	2.74	BRGCN00	90.58	AAXJA00	80.47	BRGCM00	9.45
Cabinda	CBGCY00	91.32	TDDCF00	3.33	CBGCN00	87.98	PCAFD00	81.62	CBGCM00	5.71
Eagle Ford	EAGCY00	94.35					AAYAT00	77.00	EAGCM00	17.35
Escalante	ECGCY00	86.56	TDDCV00	4.85	ECGCN00	81.71	PCAGC00	77.76	ECGCM00	3.42
Forties	FTGCY00	92.90	FTGFA00	2.58	FTGCN00	90.32	PCADJ00	80.40	FTGCM00	9.26
Isthmus	ISGCY00	91.82	TDDDJ00	1.29	ISGCN00	90.53	PDAT009	72.97	ISGCM00	17.56
LLS	LLGCY00	95.59	TDDQW00	0.55	LLGCN00	95.04	PCABN00	78.46	LLGCM00	16.58
Marlim	MLGCY00	89.39	TDDGK00	3.75	MLGCN00	85.63	AAITF00	76.01	MLGCM00	9.09
Mars	MRGCY00	89.08	TDDQY00	0.55	MRGCN00	88.53	AAMBR00	77.21	MRGCM00	11.32
Maya	MYGCY00	77.79	TDDDP00	1.36	MYGCN00	76.44	PDATS09	69.77	MYGCM00	6.67
Mesa	MSGCY00	89.69	TDDDV00	2.21	MSGCN00	87.48	AAITB00	77.16	MSGCM00	10.33
Olmecca	OLGCY00	93.94	TDDDY00	1.31	OLGCN00	92.63	PDATT09	73.22	OLGCM00	19.41
Poseidon	PDGCY00	89.77	PDGFA00	0.00	PDGCN00	89.77	AABHK00	76.76	PDGCM00	13.01
Saharan Blend	SHGCY00	94.10	TDDRD00	1.96	SHGCN00	92.14	AAGZY00	80.46	SHGCM00	11.03
Syncrude	SYGCY00	96.11	SYGFA00	8.52	SYGCN00	87.59	AASOK00	79.45	SYGCM00	8.14
Urals	URGCY00	90.53	TDDFM00	2.92	URGCN00	87.61	AAWVH00	61.16	URGCM00	25.80
WTI	WTGCY00	93.51					AAYRG00	77.51	WTGCM00	16.00
WTS	WSGCY00	91.45	TDDRJ00	6.89	WSGCN00	84.56	PCACK00	77.06	WSGCM00	7.50

US Gulf Coast (PGA page 0841)

	Coke Yield		Freight		Coke Netback		Crude Price		Coke Margin	
Arab Heavy	AHGOY00	89.99	TDDAJ00	1.39	AHGN00	88.61	AAXDI00	84.61	AHGOM00	4.00
Arab Light	LIGOY00	93.06	TDDAR00	1.35	LIGON00	91.71	AAXCU00	84.36	LIGOM00	7.35
Arab Medium	MEGOY00	89.50	TDDAZ00	1.35	MEGON00	88.15	AAXDN00	85.06	MEGOM00	3.09
Basrah Heavy	BHGOY00	86.67	BHGFA00	2.49	BHGN00	84.18	AALZC00	76.50	BHGOM00	11.88
Basrah Medium	BLGOY00	88.93	TDDBS00	2.39	BLGON00	86.54	BSMAM01	79.50	BLGOM00	9.80
Cabinda	CBGOY00	92.07	TDDCF00	3.33	CBGON00	88.74	PCAFD00	81.62	CBGOM00	6.47
Castilla Blend	CSGOY00	86.39	CSGFA00	2.34	CSGON00	84.05	AAVEQ00	73.16	CSGOM00	10.90
LLS	LLGOY00	95.64	TDDQW00	0.55	LLGON00	95.09	PCABN00	78.46	LLGOM00	16.63
Marlim	MLGOY00	90.22	TDDGK00	3.75	MLGON00	86.47	AAITF00	76.01	MLGOM00	9.92
Mars	MRGOY00	91.50	TDDQY00	0.55	MRGON00	90.95	AAMBR00	77.21	MRGOM00	13.74
Maya	MYGOY00	87.23	TDDDP00	1.36	MYGON00	85.87	PDATS09	69.77	MYGOM00	16.10
Napo	NPGOY00	84.68	NPGFA00	3.70	NPGON00	80.98	AAMCA00	69.34	NPGOM00	10.69
Oriente	ORGOY00	89.89	ORGFA00	3.50	ORGON00	86.39	PCADE00	71.34	ORGOM00	14.15
Urals	URGOY00	92.10	TDDFM00	2.92	URGON00	89.18	AAWVH00	61.16	URGOM00	27.36
Vasconia	VCGOY00	93.18	VCGFA00	2.27	VCGON00	90.91	PCAGI00	75.66	VCGOM00	15.25
WCS ex-Hardisty	WHGOY00	88.24	TDDRS00	8.50	WHGON00	79.74	AAPPN00	63.60	WHGOM00	16.14
WCS ex-Nederland	WNGOY00	88.24	WCGFA00	0.00	WNGON00	88.24	AAYAY00	73.25	WNGOM00	14.99
WTS	WSGOY00	94.00	TDDRJ00	6.89	WSGON00	87.11	PCACK00	77.06	WSGOM00	10.05

Commodity Insights Analytics US Yields & Netback (\$/barrel) (continued)

US Midwest (PGA page 0823)

	Crack Yield		Freight		Crack Netback		Crude Price		Crack Margin	
Bakken	BKTCY00	88.18	TDDR000	1.68	BKTCN00	86.50	AASRU00	79.15	BKTCM00	7.35
Syncrude	SYTCY00	87.48	TDDFP00	8.20	SYTCN00	79.28	AASOK00	79.45	SYTCM00	-0.17
WTI	WTTCY00	88.35	TDDRG00	2.39	WTTCN00	85.95	PCACG00	75.81	WTTCM00	10.14
WTS	WSTCY00	88.20	TDDRI00	3.08	WSTCN00	85.12	PCACK00	77.06	WSTCM00	8.06

US West Coast (PGA page 0843)

	Crack Yield		Freight		Crack Netback		Crude Price		Crack Margin	
ANS	ANWCY00	114.72					PCAAD00	81.79	ANWCM00	32.93
Bakken	BKWCY00	121.51	TDDRT00	11.74	BKWCN00	109.77	AAXPP00	76.95	BKWCM00	32.82

US Atlantic Coast (PGA page 0811)

	Crack Yield		Freight		Crack Netback		Crude Price		Crack Margin	
Agbami	AGACY00	98.58	AGAFA00	2.53	AGACN00	96.04	AAQZB00	78.52	AGACM00	16.87
Arab Light	LIACY00	93.16	TDDAU00	1.35	LIACN00	91.81	AAXCU00	84.36	LIACM00	7.45
Bakken	BKACY00	99.59	TDDRN00	7.20	BKACN00	92.39	AAXPP00	76.95	BKACM00	15.44
Bonny Light	YLACY00	99.03	TDDBZ00	2.77	YLACN00	96.26	PCAIC00	81.22	YLACM00	14.39
Brent	BRACY00	96.51	TDDCC00	2.57	BRACN00	93.93	AAVJA00	80.47	BRACM00	13.34
Cabinda	CBACY00	95.26	TDDCH00	3.02	CBACN00	92.24	PCAFD00	81.62	CBACM00	9.96
CPC Blend	CPACY00	98.90	CPAFA00	3.19	CPACN00	95.70	AALVX00	75.91	CPACM00	19.67
Forties	FTACY00	99.01	FTAFA00	2.47	FTACN00	96.54	PCADJ00	80.40	FTACM00	16.02
Saharan Blend	SHACY00	99.65	SHAFA00	1.64	SHACN00	98.01	AAGZY00	80.46	SHACM00	16.89
Urals	URACY00	92.55	URAFa00	2.25	URACN00	90.31	AAWVH00	61.16	URACM00	28.49

US Midwest (PGA page 0821)

	Coke Yield		Freight		Coke Netback		Crude Price		Coke Margin	
WCS	WCTOY00	83.20	TDDRL00	8.56	WCTON00	74.64	AAPPN00	63.60	WCTOM00	11.04
WTS	WSTOY00	88.37	TDDRI00	3.08	WSTON00	85.28	PCACK00	77.06	WSTOM00	8.22

US West Coast (PGA page 0841)

	Coke Yield		Freight		Coke Netback		Crude Price		Coke Margin	
ANS	ANWOY00	116.75					PCAAD00	81.79	ANWOM00	34.96
Arab Light	LIWOY00	118.98	TDDAT00	1.35	LIWON00	117.63	AAXCU00	84.36	LIWOM00	33.27
Arab Medium	MEWOY00	113.70	TDDBB00	1.35	MEWON00	112.35	AAXDN00	85.06	MEWOM00	27.29
Basrah Heavy	BHWOY00	113.24	BHWFA00	2.67	BHWON00	110.57	AALZC00	76.50	BHWOM00	38.81
Basrah Medium	BLWOY00	114.92	TDDBW00	2.56	BLWON00	112.36	BSMAM01	79.50	BLWOM00	36.15
Castilla Blend	CSWOY00	117.84	CSWFA00	5.39	CSWON00	105.89	AAVEQ00	73.16	CSWOM00	31.78
Maya	MYWOY00	113.05	MYWFA00	3.16	MYWON00	109.89	AAUPK00	70.37	MYWOM00	39.52
Napo	NPWOY00	111.70	NPWFA00	4.57	NPWON00	101.08	AAMCA00	69.34	NPWOM00	30.79
Oriente	ORWOY00	116.60	TDDEC00	4.31	ORWON00	105.71	PCADE00	71.34	ORWOM00	33.48
Vasconia	VCWOY00	124.43	VCWFA00	5.20	VCWON00	112.85	PCAGI00	75.66	VCWOM00	36.27

Commodity Insights Analytics European Yields & Netbacks Effective July 12, 2023 (\$/barrel)

Northwest Europe (PGA page 1811)

	Crack Yield		Freight		Crack Netback		Crude Price		Crack Margin	
Agbami	AGNCY00	95.67	AGNFA00	2.30	AGNCN00	93.36	AAQZB00	78.52	AGNCM00	14.85
Arab Berri	BENCY00	95.01	BENFA00	1.32	BENCN00	93.69	AAXDUB00	83.71	BENCM00	9.98
Arab Heavy	AHNCY00	86.29	TDDAN00	1.39	AHNCN00	84.91	AAXDH00	80.21	AHNCM00	4.70
Arab Light	LINCY00	92.35	TDDAV00	1.35	LINCN00	91.00	AAAXDK00	83.11	LINC�00	7.89
Arab Medium	MENCY00	88.44	TDDBD00	1.37	MENCN00	87.07	AAAXDM00	82.61	MENCM00	4.46
Azeri Light	ZLNCY00	96.45	TDDBI00	2.16	ZLNCN00	94.29	AATHM00	81.72	ZLNCM00	11.39
Basrah Medium	BLNCY00	86.87	TDDBU00	2.18	BLNCN00	84.68	BSMAM01	79.50	BLNCM00	8.13
Bonny Light	YLNCY00	97.33	YLNFA00	2.52	YLNCN00	94.81	PCAIC00	81.22	YLNCM00	13.59
Brent	BRNCY00	94.77	TDDCD00	2.17	BRNCN00	92.60	AAVJA00	80.47	BRNCM00	12.13
Cabinda	CBNCY00	92.26	TDDQR00	2.76	CBNCN00	89.50	PCAFD00	81.62	CBNCM00	7.88
CPC Blend	CPNCY00	95.50	CPNFA00	2.84	CPNCN00	92.66	AALVX00	75.91	CPNCM00	16.75
Dubai	DBNCY00	91.90	DBNFA00	2.15	DBNCN00	89.75	PCATAT00	79.90	DBNCM00	8.68
Eagle Ford	EANCY00	95.34	EANFA00	4.50	EANCN00	90.84	AAAYAT00	77.00	EANCM00	13.96
Ekofisk	EKNCY00	95.36	TDDCT00	1.44	EKNCN00	93.92	PCADI00	81.82	EKNCM00	12.10
Forties	FTNCY00	94.96	TDDZE00	1.67	FTNCN00	93.29	PCADJ00	80.40	FTNCM00	12.89
Iran Heavy	BHNCY00	91.22	TDDDG00	2.26	BHNCN00	88.96	AIHKA00	78.72	BHNCM00	9.58
Johan Sverdrup	JSNCY00	93.31	JSNFA00	1.78	JSNCN00	91.53	AJSVA00	82.19	JSNCM00	9.34
Kirkuk	KRNCY00	91.58	TDDGH00	2.78	KRNCN00	88.80	AAEJD00	78.11	KRNCM00	8.85
LLS	LLNCY00	98.09	LLNFA00	4.70	LLNCN00	93.40	AAQBB00	78.34	LLNCM00	15.06
Maya	MYNCY00	80.88	MYNFA00	4.84	MYNCN00	76.04	AAAYXE00	68.96	MYNCM00	7.08
Oman	OMNCY00	91.48	OMNFA00	2.11	OMNCN00	89.37	PCABS00	79.90	OMNCM00	8.31
Saharan Blend	SHNCY00	97.08	TDDGI00	1.79	SHNCN00	95.29	AAGZY00	80.46	SHNCM00	14.83
Urals*	URNCY00	93.33					PCAFW00	63.43	URNCM00	29.90
WTI MEH	WTNCY00	95.51	WTNFA00	4.57	WTNCN00	90.94	AAAYR00	77.39	WTNCM00	13.55

*Indicates the crude price is a CIF value

Mediterranean (PGA page 1821)

	Crack Yield		Freight		Crack Netback		Crude Price		Crack Margin	
Agbami	AGMCY00	95.11	AGMFA00	2.25	AGMCN00	92.87	AAQZB00	78.52	AGMCM00	14.35
Arab Heavy	AHMCY00	88.24	TDDAI00	1.39	AHMCN00	86.85	AAAXDH00	80.21	AHMCM00	7.39
Arab Light	LIMCY00	92.84	TDDAQ00	1.35	LIMCN00	91.49	AAAXDK00	83.11	LIMCM00	8.83
Arab Medium	MEMCY00	89.53	TDDAY00	1.37	MEMCN00	88.17	AAAXDM00	82.61	MEMCM00	5.81
Azeri Light*	ZLMCY00	96.29					AAGZX00	84.11	ZLMCM00	12.18
Basrah Medium	BLMCY00	88.34	TDDBR00	1.67	BLMCN00	86.68	BSMAM01	79.50	BLMCM00	10.12
Bonny Light	YLMCY00	97.04	YLMFA00	2.45	YLMCN00	94.59	PCAIC00	81.22	YLMCM00	13.37
Cabinda	CBMCY00	92.35	CBMFA00	2.69	CBMCN00	89.66	PCAFD00	81.62	CBMCM00	8.05
CPC Blend*	CPMCY00	94.85					AAGZU00	78.31	CPMCM00	16.54
Eagle Ford	EAMCY00	95.08	TNEIF00	4.92	EAMCN00	90.16	AAAYAT00	77.00	EAMCM00	13.28
Forties	FTMCY00	94.77	FTMFA00	2.57	FTMCN00	92.20	PCADJ00	80.40	FTMCM00	11.81
Iran Heavy	BHMCY00	92.01	TDDDF00	1.64	BHMCN00	90.38	AIHKA00	78.72	BHMCM00	10.99
Johan Sverdrup	JSMCY00	93.57	JSMFA00	2.74	JSMCN00	90.83	AJSVA00	82.19	JSMCM00	8.64
Kirkuk	KRMCY00	92.09	TDDFF00	1.66	KRMCN00	90.43	AAEJD00	78.11	KRMCM00	10.48
LLS	LLMCY00	97.69	LLMFA00	5.17	LLMCN00	92.52	AAQBB00	78.34	LLMCM00	14.18
Oman	OMMCY00	92.36	OMMFA00	1.50	OMMCN00	90.86	PCABS00	79.90	OMMCM00	9.80
Saharan Blend	SHMCY00	96.07	TDDFG00	1.40	SHMCN00	94.67	AAGZY00	80.46	SHMCM00	14.21
Urals*	URMCY00	92.94					PCACE00	63.82	URMCM00	29.13

Platts Analytics Asian Yields & Netbacks Effective July 12, 2023 (\$/barrel)

Singapore (PGA page 2811)

	Crack Yield		Freight		Crack Netback		Crude Price		Crack Margin	
Agbami	AGSCY00	86.51	AGSFA00	2.08	AGSCN00	84.43	AAQZB00	78.52	AGSCM00	6.43
Arab Berri	BESCY00	85.80	BESFA00	1.30	BESCN00	84.50	AAAXDV00	82.45	BESCM00	2.05
Arab Heavy	AHSCY00	79.76	TDDA000	1.34	AHSCN00	78.42	AAAXDG00	80.70	AHSCM00	-2.28
Arab Light	LISCY00	84.51	TDDAW00	1.32	LISCN00	83.19	AAAXDJ00	82.90	LISCM00	0.29
Arab Medium	MESCY00	80.56	TDDBE00	1.33	MESCN00	79.23	AAAXDL00	82.35	MESCM00	-3.12
Basrah Medium	BHSCY00	81.12	BHSFA00	1.33	BHSCN00	79.79	BSMAM01	79.50	BHSCM00	-0.01
Bonny Light	YLSCY00	89.06	YLSFA00	2.23	YLSCN00	86.83	PCAIC00	81.22	YLSCM00	6.12
Cabinda	CBSCY00	86.68	TDDQS00	2.16	CBSCN00	84.53	PCAFD00	81.62	CBSCM00	3.42
Castilla	CSSCY00	75.18	CSSFA00	3.90	CSSCN00	71.28	AAAVEQ00	73.16	CSSCM00	-1.24
Dalia	DLSCY00	88.74	DLSFA00	2.23	DLSCN00	86.51	AAQYX00	79.77	DLSCM00	7.26
Dubai	DBSCY00	84.56	TDDCQ00	1.26	DBSCN00	83.30	PCATAT00	79.90	DBSCM00	3.40
Duri	DRSCY00	86.14	TDDCR00	1.21	DRSCN00	84.93	PCABA00	82.06	DRSCM00	2.87
Eagle Ford	EASCY00	86.39	EASFA00	3.38	EASCN00	83.01	AAAYAT00	77.00	EASCM00	6.64
ESPO	ESSCY00	86.60	ESSFA00	1.09	ESSCN00	85.51	AARWF00	71.05	ESSCM00	14.46

*Indicates the crude price is a CIF value

Singapore (PGA page 2811)

	Crack Yield		Freight		Crack Netback		Crude Price		Crack Margin	
Forties	FTSCY00	85.10	TNEFD00	3.13	FTSCN00	81.96	PCADJ00	80.40	FTSCM00	2.08
Kimanis	KISCY00	94.98	KISFA00	1.10	KISCN00	93.88	AASCL00	86.61	KISCM00	7.27
LLS	LLSCY00	88.52	LLSFA00	3.52	LLSCN00	85.00	AAZDC00	77.65	LLSCM00	7.17
Mars	MRSCY00	83.29	MRSFA00	3.64	MRSCN00	79.64	AAMBR00	77.21	MRSCM00	3.06
Maya	MYSCY00	78.88	MYSFA00	3.82	MYSCN00	75.06	AAAYXG00	72.35	MYSCM00	2.71
Minas	MNSCY00	87.47	TDDDX00	1.10	MNSCN00	86.37	PCABO00	74.64	MNSCM00	11.73
Oman	OMSCY00	82.07	TDDDE00	1.20	OMSCN00	80.87	PCABS00	79.90	OMSCM00	0.97
Qua lboe	QBSYCY00	89.69	QBSFA00	2.24	QBSCN00	87.45	PCAID00	81.47	QBSCM00	6.50
Saharan Blend	SHSCY00	84.13	SHSFA00	2.37	SHSCN00	81.77	AAGZY00	80.46	SHSCM00	1.21
Tapis	TPSCY00	87.36	TDDEO00	1.09	TPSCN00	86.27	PCACB00	82.71	TPSCM00	3.56
Tupi*	LUSCY00	86.54					LUQDA00	82.28	LUSCM00	5.43
Urals	URSCY00	84.47	URSFA00	2.42	URSCN00	82.05	AAGZS00	61.16	URSCM00	21.40
WTI MEH	WTSCY00	86.16	WTSFA00	3.43	WTSCN00	82.73	AAZDF00	76.70	WTSCM00	5.85

Crude Carbon Intensity

A daily supplement to Crude Oil Marketwire

Platts crude carbon intensity assessments - grades, July 12, 2023 (PGA/PCR page 4206)

	Daily Carbon Intensity Premium		Monthly Carbon Intensity*		
	Symbol	\$/b	Symbol	Date	kg CO2 eq/b
North America (PGA/PCR page 4206)					
WTI Midland	WXTIC00	0.53	WXTIC40	May-23	37.85
Europe (PGA/PCR page 4206)					
Brent	BXREC00	0.82	BXREC40	May-23	58.42
Ekofisk	EXKOC00	0.33	EXKOC40	May-23	23.19
Forties	FXORC00	0.33	FXORC40	May-23	23.21
Oseberg	OXSEC00	1.25	OXSEC40	May-23	88.50
Troll	TXROC00	3.81	TXROC40	May-23	269.85

Upstream CI values are modelled on a marginal basis and are published monthly. CI Premiums are assessed daily.

*Upstream marginal CI value is assessed from the field to the storage terminal.

Details on the Platts methodology can be found at spglobal.com/commodityinsights/.

Platts crude carbon intensity assessments - fields, July 12, 2023 (PGA page 4200)

	Daily Carbon Intensity Premium		Monthly Carbon Intensity*			Daily Transport Carbon Intensity Premium			Monthly Transport Carbon Intensity**		
	Symbol	\$/boe	Symbol	Date	kg CO2 eq/boe	Route	Symbol	\$/b	Symbol	Date	kg CO2 eq/b
Asia Pacific & Middle East Fields (PGA/PCR page 4201)											
China											
Bozhong	BOZHC00	0.44	BOZHC40	May-23	30.93	Bohai Pengbo-Singapore	BOZHC10	0.06	BOZHC50	May-23	4.24
India											
Bombay High	MUMBC00	0.37	MUMBC40	May-23	26.03	Bombay High-Qingdao	MUMBC10	0.10	MUMBC50	May-23	6.80
Iran											
Marun	MARUC00	0.51	MARUC40	May-23	36.10	Kharg Island-Qingdao	MARUC10	0.13	MARUC50	May-23	8.96
Iraq											
Kirkuk	KIRKC00	0.72	KIRKC40	May-23	50.90	Ceyhan-R'dam	KIRKC10	0.06	KIRKC50	May-23	4.55
Rumaila	RUMAC00	0.30	RUMAC40	May-23	21.56	Al Basrah-Sikka	RUMAC10	0.03	RUMAC50	May-23	2.09
West Qurna-2	WESTC00	0.37	WESTC40	May-23	26.16	Al Basrah-Sikka	WESTC10	0.03	WESTC50	May-23	2.22
Zubair	ZUBAC00	0.76	ZUBAC40	May-23	53.82	Al Basrah-Sikka	ZUBAC10	0.03	ZUBAC50	May-23	2.09
Kuwait											
Burgan	BURGC00	0.24	BURGC40	May-23	16.73	Mina-Ulsan	BURGC10	0.13	BURGC50	May-23	9.31
Qatar											
Dukhan	DUKHC00	1.61	DUKHC40	May-23	114.47	Mesaieed-Singapore	DUKHC10	0.07	DUKHC50	May-23	5.03
Saudi Arabia											
Ghawar	GHWRC00	0.25	GHWRC40	May-23	17.57	Ras Tanura-Qingdao	GHWRC10	0.12	GHWRC50	May-23	8.33
Safaniya	SAFAC00	0.22	SAFAC40	May-23	15.56	Ras Tanura-Changxing	SAFAC10	0.13	SAFAC50	May-23	9.53
Zuluf	ZULUC00	0.32	ZULUC40	May-23	22.56	Ras Tanura-Changxing	ZULUC10	0.13	ZULUC50	May-23	9.24

Platts crude carbon intensity assessments - fields (continued) (PGA page 4200)

	Daily Carbon Intensity Premium		Monthly Carbon Intensity*			Daily Transport Carbon Intensity Premium			Monthly Transport Carbon Intensity**		
	Symbol	\$/boe	Symbol	Date	kg CO2 eq/boe	Route	Symbol	\$/b	Symbol	Date	kg CO2 eq/b
UAE											
Fateh	FATEC00	0.24	FATEC40	May-23	17.12	Fateh-Kiire	FATEC10	0.12	FATEC50	May-23	8.56
Murban	MURBC00	0.28	MURBC40	May-23	19.54	Fujairah-Chiba	MURBC10	0.12	MURBC50	May-23	8.55
Africa Fields (PGA/PCR page 4202)											
Angola											
Girassol	GRSLC00	0.17	GRSLC40	May-23	11.81	Girassol-Qingdao	GRSLC10	0.19	GRSLC50	May-23	13.18
Libya											
Waha	WAHAC00	0.48	WAHAC40	May-23	34.01	Zawia-Augusta	WAHAC10	0.01	WAHAC50	May-23	0.44
Nigeria											
Agbami	AGBAC00	0.37	AGBAC40	May-23	26.03	Agbami-Paradip	AGBAC10	0.15	AGBAC50	May-23	10.25
Bonga	BONGC00	0.17	BONGC40	May-23	12.35	Bonga-R'dam	BONGC10	0.09	BONGC50	May-23	6.26
Europe Fields (PGA/PCR page 4202)											
Azerbaijan											
Azeri	AZERC00	0.26	AZERC40	May-23	18.09	Ceyhan-Sarroch	AZERC10	0.03	AZERC50	May-23	1.93
Kazakhstan											
Tengiz	TNGZC00	0.28	TNGZC40	May-23	19.48	Novo-R'dam	TNGZC10	0.07	TNGZC50	May-23	4.62
Norway											
Alvheim	ALVHC00	0.11	ALVHC40	May-23	7.80	Alvheim-Le Havre	ALVHC10	0.01	ALVHC50	May-23	0.85
Brage	BRAGC00	1.07	BRAGC40	May-23	76.15	Sture - Brofjorden	BRAGC10	0.01	BRAGC50	May-23	0.48
Edvard-Grieg	EDVAC00	0.06	EDVAC40	May-23	4.29	Edvard Grieg-Sarroch	EDVAC10	0.04	EDVAC50	May-23	2.97
Ekofisk	EKFSC00	0.39	EKFSC40	May-23	27.32	Teesside-R'dam	EKFSC10	0.01	EKFSC50	May-23	0.36
Embla	EMBLC00	0.08	EMBLC40	May-23	5.34	Teesside-R'dam	EMBLC10	0.01	EMBLC50	May-23	0.36
Fram	FRAMC00	0.35	FRAMC40	May-23	25.01	Mongstad-R'dam	FORTD10	0.01	FORTD50	May-23	0.84
Goliat	GOLIC00	0.03	GOLIC40	May-23	2.14	Goliat-R'dam	GOLIC10	0.02	GOLIC50	May-23	1.73
Grane	GRANC00	0.06	GRANC40	May-23	4.43	Sture-Immingham	GRANC10	0.01	GRANC50	May-23	0.63
Gullfaks	GULLC00	0.21	GULLC40	May-23	15.21	Gullfaks-Brofjorden	GULLC10	0.01	GULLC50	May-23	0.46
Heidrun	HEIDC00	0.17	HEIDC40	May-23	12.25	Heidrun-R'dam	HEIDC10	0.02	HEIDC50	May-23	1.22
Ivar-Aasen	IVARC00	0.03	IVARC40	May-23	2.44	Ivar Aasen-R'dam	IVARC10	0.01	IVARC50	May-23	0.80
Johan Sverdrup	JSVRC00	0.02	JSVRC40	May-23	1.58	Mongstad-R'dam	JSVRC10	0.01	JSVRC50	May-23	0.79
Oseberg	OSEBC00	0.28	OSEBC40	May-23	19.78	Sture-R'dam	OSEBC10	0.01	OSEBC50	May-23	0.69
Snorre	SNORC00	0.20	SNORC40	May-23	13.93	Snorre-Statfjord	SNORC10	0.00	SNORC50	May-23	0.14
Statfjord	STATC00	3.19	STATC40	May-23	226.52	Statfjord-R'dam	STATC10	0.01	STATC50	May-23	0.75
Troll	TROLC00	0.28	TROLC40	May-23	19.71	Mongstad-R'dam	TROLC10	0.01	TROLC50	May-23	0.79
Ula	ULACC00	0.66	ULACC40	May-23	46.97	Teesside-R'dam	ULACC10	0.01	ULACC50	May-23	0.37
Valhall	VALHC00	0.08	VALHC40	May-23	5.47	Valhall-R'dam	VALHC10	0.01	VALHC50	May-23	0.35
United Kingdom											
Alwyn North	ALWYC00	0.07	ALWYC40	May-23	4.84	Sullom Voe-R'dam	ALWYC10	0.01	ALWYC50	May-23	0.81
Arbroath	ARBRC00	0.12	ARBRC40	May-23	8.60	Houndpoint-R'dam	ARBRC10	0.01	ARBRC50	May-23	0.55
Auk	AUKCD00	0.51	AUKCC40	May-23	35.92	Teesside-R'dam	AUKCC10	0.01	AUKCC50	May-23	0.37
Brae	BRAEC00	0.15	BRAEC40	May-23	10.93	Houndpoint-R'dam	BRAEC10	0.01	BRAEC50	May-23	0.56
Bruce	BRUCC00	0.80	BRUCC40	May-23	56.56	Houndpoint-R'dam	BRUCC10	0.01	BRUCC50	May-23	0.56
Buzzard	BZRDC00	0.30	BZRDC40	May-23	20.94	Houndpoint-R'dam	BZRDC10	0.01	BZRDC50	May-23	0.53
Captain	CAPTC00	0.36	CAPTC40	May-23	25.42	Captain-Hamburg	CAPTC10	0.01	CAPTC50	May-23	0.72
Catcher	CATCC00	0.22	CATCC40	May-23	15.24	Catcher-R'dam	CATCC10	0.01	CATCC50	May-23	0.48

Platts crude carbon intensity assessments - fields (continued) (PGA page 4200)

Daily Carbon Intensity Premium			Monthly Carbon Intensity*			Daily Transport Carbon Intensity Premium			Monthly Transport Carbon Intensity**		
	Symbol	\$/boe	Symbol	Date	kg CO2 eq/boe	Route	Symbol	\$/b	Symbol	Date	kg CO2 eq/b
Clair	CLAIC00	0.14	CLAIC40	May-23	10.02	Clair-Stanlow	CLAIC10	0.01	CLAIC50	May-23	0.91
Clyde	CLYDC00	0.33	CLYDC40	May-23	23.16	Teesside-R'dam	CLYDC10	0.01	CLYDC50	May-23	0.37
Cormorant	CORMC00	0.82	CORMC40	May-23	57.96	Sullom Voe-R'dam	CORMC10	0.01	CORMC50	May-23	0.82
Everest	EVERC00	0.20	EVERC40	May-23	14.02	Houndpoint-R'dam	EVERC10	0.01	EVERC50	May-23	0.55
Forties	FORTC00	0.22	FORTC40	May-23	15.33	Houndpoint-R'dam	FORTC10	0.01	FORTC50	May-23	0.56
Gannet	GANNC00	0.24	GANNC40	May-23	17.00	Teesside-R'dam	GANNC10	0.01	GANNC50	May-23	0.38
Golden-Eagle	GOLDC00	0.31	GOLDC40	May-23	22.08	Golden Eagle-Grangemouth	GOLDC10	0.00	GOLDC50	May-23	0.14
Joanne	JOANC00	0.08	JOANC40	May-23	5.86	Teesside-R'dam	JOANC10	0.01	JOANC50	May-23	0.37
Judy	JUDYC00	0.37	JUDYC40	May-23	26.40	Teesside-R'dam	JUDYC10	0.01	JUDYC50	May-23	0.38
Kraken	KRAKC00	0.26	KRAKC40	May-23	18.55	Kraken-R'dam	KRAKC10	0.01	KRAKC50	May-23	0.80
Magnus	MAGNC00	0.17	MAGNC40	May-23	12.08	Sullom Voe-R'dam	MAGNC10	0.01	MAGNC50	May-23	0.81
Mariner	MARIC00	0.27	MARIC40	May-23	18.97	Mariner-Pascagoula	MARIC10	0.10	MARIC50	May-23	6.85
Nelson	NELSC00	0.14	NELSC40	May-23	9.58	Houndpoint-R'dam	NELSC10	0.01	NELSC50	May-23	0.55
Ninian	NINIC00	1.99	NINIC40	May-23	141.27	Sullom Voe-R'dam	NINIC10	0.01	NINIC50	May-23	0.83
Schiehallion	SCHIC00	0.25	SCHIC40	May-23	17.61	Schiellhallion-R'dam	SCHIC10	0.01	SCHIC50	May-23	0.85
Scott	SCOTC00	0.15	SCOTC40	May-23	10.67	Houndpoint-R'dam	SCOTC10	0.01	SCOTC50	May-23	0.55
Tiffany	TIFFC00	0.20	TIFFC40	May-23	14.13	Houndpoint-R'dam	TIFFC10	0.01	TIFFC50	May-23	0.55
Toni	TONIC00	0.25	TONIC40	May-23	17.43	Houndpoint-R'dam	TONIC10	0.01	TONIC50	May-23	0.55
Russia											
Samotlor	SAMOC00	0.41	SAMOC40	May-23	29.00	Primorsk-R'dam	SAMOC10	0.03	SAMOC50	May-23	1.97
North America Fields											
Canada (PGA/PCR page 4204)											
Bakken-Canada	BAKKC00	0.51	BAKKC40	May-23	35.88	Canada-USMW	BAKKC10	0.06	BAKKC50	May-23	3.91
Cold Lake	CDLKC00	1.17	CDLKC40	May-23	82.95	W Canada-USMW	CDLKC10	0.07	CDLKC50	May-23	4.86
CVE Christina Lake	CVECC00	0.62	CVECC40	May-23	44.29	Canada-USMW	CVECC10	0.07	CVECC50	May-23	4.86
Foster Creek	FOSTC00	0.83	FOSTC40	May-23	58.69	Canada-USGC	FOSTC10	0.08	FOSTC50	May-23	5.69
Hebron	HEBRC00	0.14	HEBRC40	May-23	9.68	Hebron-Canada	HEBRC10	0.13	HEBRC50	May-23	8.89
Hibernia	HIBEC00	0.38	HIBEC40	May-23	27.16	Hibernia-Canada	HIBEC10	0.14	HIBEC50	May-23	9.82
Jackfish	JACKC00	0.95	JACKC40	May-23	67.46	Canada-USMW	JACKC10	0.06	JACKC50	May-23	4.37
MEG Christina Lake	MEGCC00	0.82	MEGCC40	May-23	58.06	Canada-USGC	MEGCC10	0.08	MEGCC50	May-23	5.99
Montney Shale	MONTC00	0.39	MONTC40	May-23	27.58	Montney-Canada	MONTC10	0.01	MONTC50	May-23	0.81
Surmont	SURMC00	0.90	SURMC40	May-23	63.92	Canada-USGC	SURMC10	0.08	SURMC50	May-23	5.54
United States (PGA/PCR page 4205)											
Bakken	BAKNC00	0.28	BAKNC40	May-23	19.50	Beaumont-R'dam	BAKNC10	0.09	BAKNC50	May-23	6.46
Denver-Julesburg	DENVC00	0.40	DENVC40	May-23	28.37	Denver-USGC	DENVC10	0.04	DENVC50	May-23	2.47
Eagle Ford	EGFDC00	0.24	EGFDC40	May-23	16.89	Houston-Qingdao	EGFDC10	0.18	EGFDC50	May-23	12.85
Mars-Ursa	MRURC00	0.19	MRURC40	May-23	13.72	Mars-Qingdao	MRURC10	0.20	MRURC50	May-23	14.04
Permian Delaware	PRDLC00	0.24	PRDLC40	May-23	17.21	Corpus Christi-R'dam	PRDLC10	0.09	PRDLC50	May-23	6.51
Permian Midland	PRMDC00	0.27	PRMDC40	May-23	18.96	Corpus Christi-R'dam	PRMDC10	0.09	PRMDC50	May-23	6.70
Prudhoe-Bay	PRUDC00	0.45	PRUDC40	May-23	32.03	Alaska-USWC	PRUDC10	0.04	PRUDC50	May-23	2.86
San-Joaquin	SANMC00	2.48	SANMC40	May-23	175.84	San Joaquin-SoCal	SANAC10	0.01	SANAC50	May-23	0.77
SCOOP-STACK	SCOOC00	0.46	SCOOC40	May-23	32.36	Oklahoma-USGC	SCOOC10	0.01	SCOOC50	May-23	1.01
Tahiti	TAHIC00	0.23	TAHIC40	May-23	16.53	Tahiti-Yeosu	TAHIC10	0.19	TAHIC50	May-23	13.15

Platts crude carbon intensity assessments - fields (continued) (PGA page 4200)

	Daily Carbon Intensity Premium		Monthly Carbon Intensity*			Daily Transport Carbon Intensity Premium			Monthly Transport Carbon Intensity**		
	Symbol	\$/boe	Symbol	Date	kg CO2 eq/boe	Route	Symbol	\$/b	Symbol	Date	kg CO2 eq/b
Latin America Fields (PGA/PCR page 4203)											
Brazil											
Tupi	TUPIC00	0.17	TUPIC40	May-23	12.19	Rio-Qingdao	TUPIC10	0.22	TUPIC50	May-23	15.64
Colombia											
Cusiana	CUSIC00	0.31	CUSIC40	May-23	21.98	Tolu-Houston	CUSIC10	0.03	CUSIC50	May-23	2.28
Ecuador											
Sacha	SACHC00	0.29	SACHC40	May-23	20.36	Esmeraldas-Long Beach	SACHC10	0.06	SACHC50	May-23	4.57
Mexico											
Cantarell	CNTLC00	0.22	CNTLC40	May-23	15.49	Cantarell-Bilbao	CNTLC10	0.10	CNTLC50	May-23	7.22
Venezuela											
Orinoco Oil Belt	ORINC00	3.81	ORINC40	May-23	270.03	Jose-Sikka	ORINC10	0.20	ORINC50	May-23	14.29

Upstream CI values are modelled on a marginal basis and are published monthly. Carbon Intensity Premiums are assessed daily. Venezuela's Orinoco Belt upstream marginal carbon intensity is calculated using only the Hamaca basin.

*Upstream marginal CI number is assessed from the field to the storage terminal. **Transport CI is calculated from storage terminal to refinery gate and for shipping routes assumes an Aframax vessel.

Details on the Platts methodology can be found at spglobal.com/commodityinsights/.

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