

Argus Americas Crude

Crude market prices and analysis

Issue 23-3 | Thursday 5 January 2023

OVERVIEW

- WTI crude futures rose for the first day in three as a US government report showed domestic gasoline and diesel stockpiles declined last week. February Nymex WTI rose by 83¢/bl to \$73.67/bl. March Ice Brent rose by 85¢/bl to \$78.69/bl. The March Brent-March WTI spread widened to \$4.77/bl.
- Heavy sour grades reversed course to firm against the CMA Nymex WTI this session.
- WTI loading in early to mid-February was heard trading at least twice on Thursday at a discount to April Ice Brent narrower than \$4/bl, although specific details were unclear.
- Latin American spot crude assessments were mostly steady this session, while Argentina's Medanito firmed slightly ahead of a tender expected to close this week.
- US imports of Canadian crude fell as refinery throughputs slipped in the third session of the February trade window.

IN THE NEWS

Infrastructure

- Colonial shuts Line 3 at Virginia station
- Marathon Los Angeles refinery plans flaring
- High swells slow Mexico's Salina Cruz port

Industry

- US crude stocks rise by 1.7mn bl
- US crude exports ease from record high in Nov
- Alaska oil output, US west coast demand slip
- Alberta AWB bitumen extraction rose in Nov
- Canadian throughputs down in all regions
- Enbridge, band await crude pipeline ruling

KEY PRICES

All-day weighted average assessments							
	Diff to WTI	Diff to LLS	Price	±			
LLS St James	+1.53		75.20	+0.88			
WTI Cushing		-1.53	73.67	+0.83			
WTI Midland	+0.52	-1.01	74.19	+0.96			
WTI Houston	+0.85	-0.68	74.52	+1.02			
Mars Clovelly	-4.59	-6.12	69.08	+1.27			
WCS Hardisty	-26.50	-27.72	47.48	+0.82			
WCS Cushing	-17.98	-19.20	56.00	+1.31			
WCS Houston	-17.00	-18.22	56.98	+1.49			

Forward curve: Locational spreads \$/L					
	WTI/Brent 4:30pm London	WTI/Brent 1:30pm Houston	LLS/Brent 1:30pm Houston		
Mar	-4.78	-4.77	-3.47		
Apr	-4.71	-4.68	-3.50		
May	-4.52	-4.50	-3.40		
1:30pm Houston	LLS/WTI	Mars/WTI	Mars/LLS		
Feb	+1.55	-4.75	-6.30		
Mar	+1.40	-4.65	-6.05		
Apr	+1.26	-4.75	-6.01		

Forward curve: Time spreads						
1:30pm Houston	ICE Brent	CME WTI	LLS	Mars		
Mar/Apr	-0.13	-0.22	-0.08	-0.12		
Apr/May	+0.02	-0.16	-0.46	-0.36		
May/Jun	+0.14	-0.04	-0.34	-0.24		

Forward curve: Outright prices	\$/bl		
1:30pm Houston	LLS	WTI Midland	Mars
Feb	75.22	74.22	68.92
Mar	75.32	74.62	69.27
Apr	75.40	74.79	69.39

^{*}Tables include hyperlinks to those values maintained in the Argus database.

Contents	
WTI, Gulf coast, midcontinent, waterborne	2-6
Latin America	7
Canada	8
CME Nymex and Ice	8
Americas crude pipeline deals	9
News	13

WTI										\$/bl
	Timing	Low	High	WTI formula basis price	WTI formula basis MTD	Roll to next month	Argus do	cumenta	tion links:	
WTI Cushing	Feb	73.65	73.69	73.67	77.23	+0.25				
WTI Cushing	Mar	73.90	73.94	73.92		+0.22	Argus Am			
WTI Cushing	Apr	74.12	74.16			+0.16		logy and	Specificat	ion
WTI Cushing	May	74.28	74.32				Guide			
	Timing	Price	1 ITW	lymex spread			Argus Glo	bal Com	pliance Po	licv
CMA Nymex	Feb	73.98		-0.31					•	
CMA Nymex	Mar	74.20		-0.28				dia Edito	orial Code	of
CMA Nymex	Apr	74.31					Conduct			
CMA Nymex	May	74.32			D.166	21661172				
	Timing	Basis	Diff low	Diff high	Diff weighted average	Diff MTD weighted average	Low	High	Weighted average	MTD Weighted Average
Argus AGS Marker	Feb				u		74.48	74.63	74.53	77.94
Argus AGS	Feb	Feb WTI	+0.81	+0.96	+0.86	+0.70	74.48	74.63	74.53	
WTI Houston	Feb	Feb WTI	+0.80	+0.95	+0.85	+0.69	74.47	74.62	74.52	
WTI Houston	Mar	Mar WTI	+1.00	+1.05	+1.03	+0.82	74.92	74.97	74.95	
WTI Midland	Feb	Feb WTI	+0.50	+0.60	+0.52	+0.38	74.17	74.27	74.19	
WTI Midland	Mar	Mar WTI	+0.60	+0.70	+0.65	+0.56	74.52	74.62	74.57	
WTI Midland Enterprise	Feb	Feb WTI	+0.50	+0.60	+0.52	+0.38	74.17	74.27	74.19	
WTI diff to CMA Nymex	Feb	CMA	-0.23	-0.20	-0.21	-0.10				
WTI postings-plus	Feb	Postings	+3.15	+3.18	+3.17	+3.28				
Midcontinent										\$/bl
maconement					Diff	Diff MTD				Ç, D.
	Timing	Basis	Diff low	Diff high	weighted average	weighted average	Low	High	Weighted average	
Bakken DAPL	Feb	CMA Nym	+0.75	+0.80	+0.75	+0.85	74.73	74.78	74.73	
Bakken Patoka	Feb	CMA Nym	+1.00	+1.10	+1.05	+1.12	74.73	75.08	75.03	
Bakken Clearbrook	Feb	CMA Nym	+2.10	+2.15	11.03	-1112	76.08	76.13	73.03	
Bakken Cushing	Feb	Feb WTI	+0.60	+0.80	+0.70	+0.74	74.27	74.47	74.37	
Light Sweet Guernsey	Feb	CMA Nym	-0.30	-0.20	-0.25	+0.18	73.68	73.78	73.73	
DJ Light	Feb	Feb WTI	-0.40	-0.30	-0.35	-0.32	73.27	73.37	73.32	
White Cliffs	Feb	Feb WTI	-0.40	-0.30	-0.35	-0.32	73.27	73.37	73.32	
Niobrara	Feb	Feb WTI	+1.25	+1.30	+1.29	+1.09	74.92	74.97	74.96	
WCS Cushing	Feb	CMA Nym	-18.00	-17.85	-17.98	-17.19	55.98	56.13	56.00	
Canadian High TAN Cush-	Feb	CMA Nym	-19.10	-18.95	-19.03	-18.38	54.88	55.03	54.95	
ing			_	_		_	_			\$/bl
Texas										V/h/
					Diff	Diff MTD				ŞIDC
	Timing	Basis	Diff low	Diff high	Diff weighted average	Diff MTD weighted average	Low	High	Weighted average	ŞIBC
WTL Midland	Timing Feb	Basis Feb WTI	Diff low	Diff high	weighted	weighted	Low 73.39	High 73.49	_	<i>ŞIB</i> t
Bakken Beaumont-Ned-	Feb	Feb WTI CMA Nymex + Argus	-0.28	-0.18	weighted average -0.24	weighted average -0.57	73.39	73.49	average 73.43	Şi bi
Bakken Beaumont-Ned- erland	Feb Feb	Feb WTI CMA Nymex + Argus WTI diff to CMA	-0.28 +1.10	-0.18 +1.35	weighted average -0.24 +1.23	weighted average -0.57 +1.21	73.39 74.87	73.49 75.12	73.43 75.00	Şi Di
Bakken Beaumont-Ned- erland WTS	Feb Feb Feb	Feb WTI CMA Nymex + Argus WTI diff to CMA Feb WTI	-0.28 +1.10 -3.00	-0.18 +1.35 -2.40	weighted average -0.24 +1.23 -2.73	weighted average -0.57 +1.21 -2.12	73.39 74.87 70.67	73.49 75.12 71.27	73.43 75.00 70.94	<i>Şib</i> t
Bakken Beaumont-Ned- erland WTS WTS	Feb Feb Mar	Feb WTI CMA Nymex + Argus WTI diff to CMA Feb WTI Mar WTI	-0.28 +1.10 -3.00 -2.15	-0.18 +1.35 -2.40 -1.60	weighted average -0.24 +1.23 -2.73 -1.88	weighted average -0.57 +1.21 -2.12 -1.32	73.39 74.87 70.67 71.77	73.49 75.12 71.27 72.32	73.43 75.00 70.94 72.04	Şi Di
Bakken Beaumont-Ned- erland WTS WTS Southern Green Canyon	Feb Feb Mar Feb	Feb WTI CMA Nymex + Argus WTI diff to CMA Feb WTI Mar WTI Feb WTI	-0.28 +1.10 -3.00 -2.15 -4.75	-0.18 +1.35 -2.40 -1.60 -4.00	weighted average -0.24 +1.23 -2.73 -1.88 -4.50	weighted average -0.57 +1.21 -2.12 -1.32 -4.38	73.39 74.87 70.67 71.77 68.92	73.49 75.12 71.27 72.32 69.67	73.43 75.00 70.94 72.04 69.17	Şi bi
Bakken Beaumont-Ned- erland WTS WTS Southern Green Canyon WCS Houston	Feb Feb Mar	Feb WTI CMA Nymex + Argus WTI diff to CMA Feb WTI Mar WTI	-0.28 +1.10 -3.00 -2.15	-0.18 +1.35 -2.40 -1.60	weighted average -0.24 +1.23 -2.73 -1.88	weighted average -0.57 +1.21 -2.12 -1.32	73.39 74.87 70.67 71.77	73.49 75.12 71.27 72.32	73.43 75.00 70.94 72.04	Şi bi
Bakken Beaumont-Ned- erland WTS WTS Southern Green Canyon	Feb Feb Mar Feb	Feb WTI CMA Nymex + Argus WTI diff to CMA Feb WTI Mar WTI Feb WTI	-0.28 +1.10 -3.00 -2.15 -4.75	-0.18 +1.35 -2.40 -1.60 -4.00	weighted average -0.24 +1.23 -2.73 -1.88 -4.50	weighted average -0.57 +1.21 -2.12 -1.32 -4.38	73.39 74.87 70.67 71.77 68.92	73.49 75.12 71.27 72.32 69.67	73.43 75.00 70.94 72.04 69.17	Şi bi
Bakken Beaumont-Ned- erland WTS WTS Southern Green Canyon WCS Houston Canadian High TAN	Feb Feb Mar Feb Feb	Feb WTI CMA Nymex + Argus WTI diff to CMA Feb WTI Mar WTI Feb WTI CMA Nym	-0.28 +1.10 -3.00 -2.15 -4.75 -17.10	-0.18 +1.35 -2.40 -1.60 -4.00 -16.90	weighted average -0.24 +1.23 -2.73 -1.88 -4.50 -17.00	weighted average -0.57 +1.21 -2.12 -1.32 -4.38 -16.20	73.39 74.87 70.67 71.77 68.92 56.88	73.49 75.12 71.27 72.32 69.67 57.08	73.43 75.00 70.94 72.04 69.17 56.98	\$/bl
Bakken Beaumont-Ned- erland WTS WTS Southern Green Canyon WCS Houston Canadian High TAN Houston	Feb Feb Mar Feb Feb	Feb WTI CMA Nymex + Argus WTI diff to CMA Feb WTI Mar WTI Feb WTI CMA Nym	-0.28 +1.10 -3.00 -2.15 -4.75 -17.10	-0.18 +1.35 -2.40 -1.60 -4.00 -16.90	weighted average -0.24 +1.23 -2.73 -1.88 -4.50 -17.00	weighted average -0.57 +1.21 -2.12 -1.32 -4.38 -16.20	73.39 74.87 70.67 71.77 68.92 56.88	73.49 75.12 71.27 72.32 69.67 57.08	73.43 75.00 70.94 72.04 69.17 56.98	
Bakken Beaumont-Nederland WTS WTS Southern Green Canyon WCS Houston Canadian High TAN Houston Louisiana	Feb Feb Mar Feb Feb Feb Timing	Feb WTI CMA Nymex + Argus WTI diff to CMA Feb WTI Mar WTI Feb WTI CMA Nym CMA Nym	-0.28 +1.10 -3.00 -2.15 -4.75 -17.10 -18.45	-0.18 +1.35 -2.40 -1.60 -4.00 -16.90 -18.35	weighted average -0.24 +1.23 -2.73 -1.88 -4.50 -17.00 -18.40 Diff weighted average	weighted average -0.57 +1.21 -2.12 -1.32 -4.38 -16.20 -17.53 Diff MTD weighted average	73.39 74.87 70.67 71.77 68.92 56.88 55.53	73.49 75.12 71.27 72.32 69.67 57.08 55.63	73.43 75.00 70.94 72.04 69.17 56.98 55.58 Weighted average	
Bakken Beaumont-Nederland WTS WTS Southern Green Canyon WCS Houston Canadian High TAN Houston Louisiana	Feb Feb Mar Feb Feb Feb Timing	Feb WTI CMA Nymex + Argus WTI diff to CMA Feb WTI Mar WTI Feb WTI CMA Nym CMA Nym Basis Feb WTI	-0.28 +1.10 -3.00 -2.15 -4.75 -17.10 -18.45 Diff low +1.40	-0.18 +1.35 -2.40 -1.60 -4.00 -16.90 -18.35 Diff high	weighted average -0.24 +1.23 -2.73 -1.88 -4.50 -17.00 -18.40 Diff weighted average +1.53	weighted average -0.57 +1.21 -2.12 -1.32 -4.38 -16.20 -17.53 Diff MTD weighted average +1.53	73.39 74.87 70.67 71.77 68.92 56.88 55.53	73.49 75.12 71.27 72.32 69.67 57.08 55.63 High	73.43 75.00 70.94 72.04 69.17 56.98 55.58 Weighted average 75.20	
Bakken Beaumont-Nederland WTS WTS Southern Green Canyon WCS Houston Canadian High TAN Houston Louisiana LLS LLS	Feb Feb Mar Feb Feb Feb Timing Feb Mar	Feb WTI CMA Nymex + Argus WTI diff to CMA Feb WTI Mar WTI Feb WTI CMA Nym CMA Nym Basis Feb WTI Mar WTI	-0.28 +1.10 -3.00 -2.15 -4.75 -17.10 -18.45 Diff low +1.40 +1.35	-0.18 +1.35 -2.40 -1.60 -4.00 -16.90 -18.35 Diff high +1.75 +1.40	weighted average -0.24 +1.23 -2.73 -1.88 -4.50 -17.00 -18.40 Diff weighted average +1.53 +1.38	weighted average -0.57 +1.21 -2.12 -1.32 -4.38 -16.20 -17.53 Diff MTD weighted average +1.53 +1.31	73.39 74.87 70.67 71.77 68.92 56.88 55.53 Low	73.49 75.12 71.27 72.32 69.67 57.08 55.63 High 75.42 75.32	73.43 75.00 70.94 72.04 69.17 56.98 55.58 Weighted average 75.20 75.30	
Bakken Beaumont-Nederland WTS WTS Southern Green Canyon WCS Houston Canadian High TAN Houston Louisiana LLS LLS LLS HLS	Feb Feb Mar Feb Feb Timing Feb Mar Feb	Feb WTI CMA Nymex + Argus WTI diff to CMA Feb WTI Mar WTI Feb WTI CMA Nym CMA Nym Basis Feb WTI Mar WTI Feb WTI Feb WTI	-0.28 +1.10 -3.00 -2.15 -4.75 -17.10 -18.45 Diff low +1.40 +1.35 -2.00	-0.18 +1.35 -2.40 -1.60 -4.00 -16.90 -18.35 Diff high +1.75 +1.40 -1.90	weighted average -0.24 +1.23 -2.73 -1.88 -4.50 -17.00 -18.40 Diff weighted average +1.53 +1.38 -1.98	weighted average -0.57 +1.21 -2.12 -1.32 -4.38 -16.20 -17.53 Diff MTD weighted average +1.53 +1.31 -2.11	73.39 74.87 70.67 71.77 68.92 56.88 55.53 Low 75.07 75.27 71.67	73.49 75.12 71.27 72.32 69.67 57.08 55.63 High 75.42 75.32 71.77	73.43 75.00 70.94 72.04 69.17 56.98 55.58 Weighted average 75.20 75.30 71.69	
Bakken Beaumont-Nederland WTS WTS Southern Green Canyon WCS Houston Canadian High TAN Houston Louisiana LLS LLS LLS HLS Thunder Horse	Feb Feb Mar Feb Feb Timing Feb Mar Feb Feb	Feb WTI CMA Nymex + Argus WTI diff to CMA Feb WTI Mar WTI Feb WTI CMA Nym CMA Nym Basis Feb WTI Mar WTI Feb WTI Feb WTI Feb WTI Feb WTI Feb WTI Feb WTI	-0.28 +1.10 -3.00 -2.15 -4.75 -17.10 -18.45 Diff low +1.40 +1.35 -2.00 -1.59	-0.18 +1.35 -2.40 -1.60 -4.00 -16.90 -18.35 Diff high +1.75 +1.40 -1.90 -1.40	weighted average -0.24 +1.23 -2.73 -1.88 -4.50 -17.00 -18.40 Diff weighted average +1.53 +1.38 -1.98 -1.50	weighted average -0.57 +1.21 -2.12 -1.32 -4.38 -16.20 -17.53 Diff MTD weighted average +1.53 +1.31 -2.11 -2.07	73.39 74.87 70.67 71.77 68.92 56.88 55.53 Low 75.07 75.27 71.67 72.08	73.49 75.12 71.27 72.32 69.67 57.08 55.63 High 75.42 75.32 71.77 72.27	73.43 75.00 70.94 72.04 69.17 56.98 55.58 Weighted average 75.20 75.30 71.69 72.17	
Bakken Beaumont-Nederland WTS WTS Southern Green Canyon WCS Houston Canadian High TAN Houston Louisiana LLS LLS LLS HLS	Feb Feb Mar Feb Feb Timing Feb Mar Feb	Feb WTI CMA Nymex + Argus WTI diff to CMA Feb WTI Mar WTI Feb WTI CMA Nym CMA Nym Basis Feb WTI Mar WTI Feb WTI Feb WTI	-0.28 +1.10 -3.00 -2.15 -4.75 -17.10 -18.45 Diff low +1.40 +1.35 -2.00	-0.18 +1.35 -2.40 -1.60 -4.00 -16.90 -18.35 Diff high +1.75 +1.40 -1.90	weighted average -0.24 +1.23 -2.73 -1.88 -4.50 -17.00 -18.40 Diff weighted average +1.53 +1.38 -1.98	weighted average -0.57 +1.21 -2.12 -1.32 -4.38 -16.20 -17.53 Diff MTD weighted average +1.53 +1.31 -2.11	73.39 74.87 70.67 71.77 68.92 56.88 55.53 Low 75.07 75.27 71.67	73.49 75.12 71.27 72.32 69.67 57.08 55.63 High 75.42 75.32 71.77	73.43 75.00 70.94 72.04 69.17 56.98 55.58 Weighted average 75.20 75.30 71.69	



US GULF COAST AND MIDCONTINENT

Heavy sour grades reversed course to firm against the CMA Nymex WTI this session.

Western Canadian Select (WCS) and Cold Lake traded at a \$17/bl discount to the CMA Nymex in the Houston area, while Wednesday's session saw trade at discounts between \$17.50-\$18/bl, which was about \$1/bl wider than Tuesday's assessment level. Access Western Blend (AWB) traded in the Houston area this session at CMA -18.45/-18.35. AWB is a heavy sour grade delivered from Canada with a high total acid number (TAN).

Cold Lake traded in Cushing at CMA -18.00/-17.85, firming by about $50 \, \text{¢/bl}$.

Medium sour Mars for February delivered firmed against the WTI Formula Basis by 44¢/bl, with the high end of reported trade at a \$4.40/bl discount, about 60¢/bl narrower than the weighted-average discount from the prior session. Falling freight rates for VLCCs could incentivize more waterborne activity for Mars, which would tighten supply in the pipeline market.

Elsewhere, Bakken DAPL traded in Johnson's Corner and Epping at premiums to the CMA Nymex WTI of $75 \rlap/e/bl$. Bakken DAPL was also heard trading at a $95 \rlap/e/bl$ premium, but this was not confirmed. On Wednesday, Bakken DAPL posted a $69 \rlap/e/bl$ premium to the CMA Nymex.

In other news, total commercial crude inventories rose by 1.7mn bl for the week ended 30 December according to the Energy Information Administration (EIA), as refinery runs were cut due to a winter storm and the US Strategic Petroleum Reserve (SPR) released 2.7mn bl of supply. The percent utilization of refineries at the US Gulf coast fell by 16.6pc, while it slid 12.1pc at the US Midcontinent. Imports of crude at the US Gulf coast and Midcontinent fell by 578,000 bl and 224,000 bl, respectively, likely as a result of the shutdown of the Keystone crude pipeline, which resumed operations on 29 December. Total commercial inventories ended the week at roughly 421mn bl, while production rose by 100,000 b/d to 12.1mn b/d.

Assessment rationale

The minimum volume was met and volume-weighted average calculated according to the methodology for Bakken Cushing month, LLS, Mars, Poseidon, Southern Green Canyon, WCS Cushing, WCS Houston, WTI Diff to CMA Nymex, WTI Houston, WTI Midland Enterprise, WTI Midland, WTL Midland and WTS. The Bakken at Clearbrook assessment was set on the basis of fresh trade. Bakken at Clearbrook sold at a premium of \$2.10-\$2.15/bl.

ANNOUNCEMENT

Argus successfully completes annual losco assurance review

Argus has completed the 11th external assurance review of its price benchmarks covering crude oil, oil products, LPG, chemicals, thermal and coking coal, natural gas, biofuels, biomass, metals, fertilizers and agricultural markets. The review was carried out by professional services firm PwC. Annual independent, external reviews of oil benchmarks are required by international regulatory group losco's Principles for Oil Price Reporting Agencies, and losco encourages extension of the reviews to non-oil benchmarks. For more information and to download the review visit our website https://www.argusmedia.com/en/about-us/governance-compliance



ARGUS AGS

Midland-quality WTI at the US Gulf coast strengthened in an active trade session as freight rates fell, which could support export economics.

The AGS Marker rose by \$1.02/bl to a \$74.53/bl volume-weighted average, supported in part by the AGS index differential to Nymex rising by 19¢/bl to an 86¢/bl premium.

Liquidity was based at the Magellan East Houston (MEH) terminal, where 22 deals totaling 57,000 b/d were transacted at premiums to the Nymex light sweet crude futures contract between 80 pl and 95 pl.

Reported AGS spot trade volume has totaled 208,000 b/d since the 27 December start to the February US trade month, up by roughly 7pc compared to the 195,000 b/d reported over the same period of the January trade month.

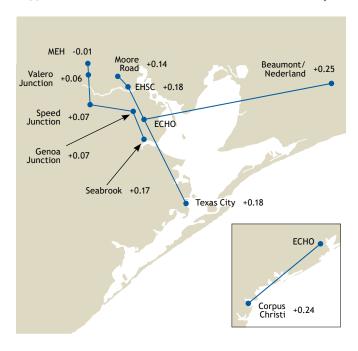
The AGS Marker has averaged \$77.94/bl so far in the February trade month, down by \$2.13/bl from an average \$80.07/bl a month prior amid renewed concerns over a possible recession for one-third of the global economy. The AGS index has meanwhile narrowed its average premium to Nymex by 30¢/bl to 70¢/bl month-to-date.

Separately, US Gulf coast crude inventories rose by 2.28mn bl to 233.94mn bl in the week ended 30 December, while stocks at Cushing, Oklahoma, rose by 244,000 bl to 25.27mn bl, according to the latest available weekly statistics published this session by the US Energy Information Administration (EIA). Inventories earmarked by the US Strategic Petroleum Reserve (SPR) declined by 2.75mn bl to 372.38mn bl.

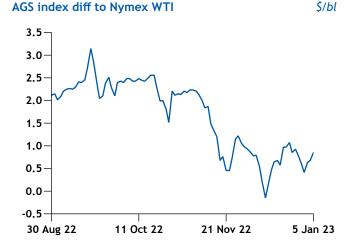
Argus AGS					\$/bl
	Timing		Low/high	VWA	VWA MTD
Argus AGS Marker	Feb		74.48/74.63	74.53	77.94
Argus AGS	Feb		74.48/74.63	74.53	
	Timing	Basis	Diff low/high	VWA	VWA MTD
Argus AGS	Feb	Feb WTI	+0.81/+0.96	+0.86	+0.70

AGS locational differentials vs Echo

\$/bl







US WATERBORNE



Freight rate	\$ lumpsum
Route	Daily Worldscale
USGC Aframax reverse lightering	475,000

Dirty tanker rates out of the US Gulf coast fell for the third consecutive trade session, helping sustain export activity on signs of an improving arbitrage.

WTI loading in early to mid-February was heard trading at least twice this session at a discount to April Ice Brent narrower than \$4/bl, although specific details were unclear. The US light sweet crude was assessed at discounts to the benchmark between \$4.05/bl and \$3.80/bl this session to reflect bids and offers heard at premiums to the WTI Houston pipeline index between 25¢/bl and 50¢/bl.

February WTI Houston had firmed by roughly $20 \, \epsilon / bl$ against the Nymex light sweet crude futures contract this session to change hands in the pipeline market at premiums between $80 \, \epsilon / bl$ and $95 \, \epsilon / bl$, reflecting a volume-weighted average \$4.30/bl under April Ice Brent as prompt Nymex settled at a \$5.15/bl discount to the international basis.

West Texas Light (WTL) was meanwhile pegged at an

US Gulf coast waterborne \$/bl					
	Timing	Basis	Diff low/high	Low/High	
WTI fob USGC	Prompt	Feb CMA Nymex	+0.79/+1.04	74.77-75.02	
	Prompt	Feb WTI Houston	+0.25/+0.50		
	Prompt	Apr Ice	-4.05/-3.80		
Bakken fob Beau- mont/Nederland	Prompt	Feb CMA Nymex	+0.89/+1.39	74.87-75.37	
	Prompt	Feb WTI Houston	+0.35/+0.85		
	Prompt	Apr Ice	-3.95/-3.45		

WTI intramonth spreads \$/bl					
Load window (dates)	Timing	Basis	Diff low/high	Diff midpoint	
1-10 M1	Feb	Feb WTI Houston	+0.25/+0.40	+0.33	
	Feb	Apr Ice	-4.05/-3.90	-3.98	
11-20 M1	Feb	Feb WTI Houston	+0.30/+0.50	+0.40	
	Feb	Apr Ice	-4.00/-3.80	-3.90	
21-28 M1	Feb	Feb WTI Houston	+0.30/+0.50	+0.40	
	Feb	Apr Ice	-4.00/-3.80	-3.90	

estimated trade value between discounts to April Ice Brent of \$4.45/bl and \$4.30/bl on an fob basis at the US Gulf coast this session.

Meanwhile, WTI delivered to the Netherlands port of Rotterdam was heard valued at a premium to North Sea Dated stronger than \$1.20/bl for cargoes arriving in February and at a premium around \$1.80/bl for cargoes arriving in March.

A \$1.20/bl premium to Dated Brent would this session reflect a roughly \$4.80/bl discount to April Ice Brent on an equivalent fob basis at the US Gulf coast if departing in February via Aframax. The delivered premium for March would reflect a roughly \$3.95/bl discount to the benchmark on an equivalent fob basis, suggesting the arbitrage to buy crude at the US Gulf coast in late February to sell on a delivered-Europe basis in early March could be workable.

The dirty Aframax rate from the US Gulf coast to Europe fell by more than \$1/bl to a five-month low at \$4.77/bl for

Anticipated US crude export cargoes — 15-45 days forward						
Tanker name	Approximate volume '000 bl	Estimated grade	Load window	Load port	Chartered destination	ETA
Nissos Nikouria	2,100	WTI	20 Jan	tbd	Europe	tbd
Cyan Nova	2,100	WTI	27 Jan	Corpus Christi, Texas	Europe	tbd
Miltiadis Junior	2,100	WTI	29 Jan	tbd	Asia-Pacific	tbd



WTI-quality cargoes. Traders might still opt to load larger vessel sizes, with VLCC and Suezmax rates on the same route assessed around roughly \$2.25/bl and \$2.75/bl, respectively.

Separately, Alaskan North Slope (ANS) for March delivery to the US west coast sold twice, with discounts to CMA Ice Brent reported at \$3.10/bl. ANS for March sold four times in the prior trade session at discounts between \$3-3.25/bl.

ANS output fell by roughly 1,000 b/d to around 500,500 b/d in the week ended 31 December, according to the Alaska Department of Revenue. The Port of Valdez ended the week holding roughly 4.2mn bl of crude inventories, up by about 700,000 bl from the prior week.

The volume of ANS in transit to the US west coast declined by 1mn bl to 3mn bl, according to the latest available weekly statistics published by the US Energy Information Administration (EIA).

Fresh data released Thursday by the US Census Bureau meanwhile indicated US crude exports eased by 2.7pc from October's record high to 4.04mn b/d in November, still reflecting a nearly 30pc increase compared to the same month last year.

Monthly export flows were expected to weaken from October on the back of cold weather patterns in the Gulf of Mexico that had shut down all lightering and reverse lightering operations across the US Gulf coast for a week starting on 15 November due to high waves.

Flows to Asia-Pacific destinations comprised 1.92mn b/d, or about 47.5pc of US crude exports, while Europe took 37.5pc at roughly 1.5mn b/d. The remaining 620,000 b/d of US crude

US west coast pipel	\$/bl		
	Basis	Diff to Ice Brent	Outright
Light postings avg	Mar	-3.82	74.02
Heavy postings avg	Mar	-7.68	70.16

US west coast waterborne \$/bl							
	Timing	Basis	Diff low/high	Low/High			
ANS del	Mar	CMA Nym	+1.45/+1.55	75.65-75.75			
	Mar	CMA Ice	-3.15/-3.05				
ANS del concurrent	Mar	Mar WTI	+1.45/+1.55	75.37-75.47			

ANS del USWC m	onthly volume-weighted average	\$/bl
	Basis	Diff
Dec	Ice CMA	+2.02
Jan	Ice CMA	+2.77
Feb	Ice CMA	-2.23
Mar	Ice CMA	-3.08

exports were destined for other locations within the Americas.

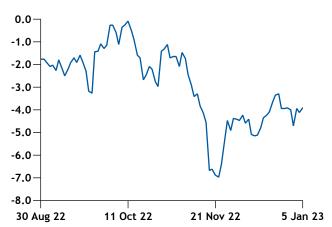
This morning's shipping fixture reports indicate BP is planning to charter the Aframax *Philotimos* from the US Gulf coast to the eastern coast of Canada starting 13 January.

Assessment rationale

WTI fob Houston diff to WTI Houston

The minimum volume was met and assessment calculated according to methodology for ANS.









\$/bl

\$/bl

LATIN AMERICA

Argentinian Medanito inched higher against April Ice Brent to a discount between \$9.20/bl and \$10.20/bl, ahead of a tender expected to close this week offering a February-loading cargo of the light sweet grade.

February-loading heavy sweet Escalante moved in line with Medanito to discounts between \$3.50/bl and \$2.50/bl to April Ice Brent.

Colombia's medium sour Vasconia was steady at a discount between \$8.90/bl and \$9.90/bl against the international basis. The grade receded by roughly $20 \rlap/e/bl$ in the prior trade session tracking lower values for competing crude at the US west coast.

At the US west coast, a major hub for Latin American grades, refinery runs last week fell by 25,000 b/d to around 2.15mn b/d, while the region's refinery utilization rates decreased by about 1.4 percentage points to 86pc, according to Energy Information Administration (EIA) data.

Separately, Indonesia's state-owned refiner Pertamina was set to close a tender this session seeking crude supplies for its April requirement.

The tender short listed Brazil's Lula and Guyana's Liza crudes for delivery expected between 5-20 April to the Cilacap port. Offers were due on an fob or delivered basis and will remain valid until 9 January.

The refiner closed a tender in the previous trade session seeking crude for March delivery. Several Latin American grades were listed, but details were slow to emerge.

In shipping, fixture reports indicate ExxonMobil plans to charter the Suezmax *Seaways Hatteras* around 20 January from Guyana to Europe.

Shell placed the VLCC *DHT Osprey* on subjects to load crude from Brazil around 5 February and unload in South Africa.

Several Aframaxes were booked for a journey from the east coast of Mexico to the US Gulf coast beginning next week. Eni and Atmi booked the *Iridescent* and *Spirit II*, respectively, beginning 12 January. Marathon expects to load crude the following day aboard a Vitol-operated tanker.

South America				\$/Ы
	Timing	Basis	Diff low/high	Low/High
Colombia				
Vasconia	Prompt	Apr WTI	-5.22/-4.22	68.92-69.92
vascoma	Trompt	Apr Ice	-9.90/-8.90	00.72 07.72
Castilla	Prompt	Apr WTI	-12.32/-11.32	61.82-62.82
Castilla	Trompt	Apr Ice	-17.00/-16.00	01.02 02.02
Argentina		Apr Icc	17.007 10.00	
_	Drompt	Apr WTI	.1 10/.2 10	75.32-76.32
Escalante	Prompt	Apr WTI	+1.18/+2.18	/5.32-/6.32
11 1 3	5 .	Apr Ice	-3.50/-2.50	(0 (2 (0 (2
Medanito	Prompt	Apr WTI	-5.52/-4.52	68.62-69.62
		Apr Ice	-10.20/-9.20	
Ecuador	_			
Oriente	Prompt	Mar WTI	-10.00/-9.00	63.92-64.92
		Mar Ice	-14.77/-13.77	
Napo	Prompt	Mar WTI	-15.30/-14.30	58.62-59.62
		Mar Ice	-20.07/-19.07	
Mexico				\$/Ы
	Timing	Basis	Diff	Price
Maya				
	Jan	Fob Nymov	-14.32	59.35
Excluding USWC USWC	Jan	Feb Nymex		67.10
		Feb Nymex		
Europe	Jan	Mar Dated I		63.54
India	Jan	Mar Dated I		61.99
Asia-Pacific	Jan	Mar Dubai	-7.94	66.62
Isthmus				
Excluding USWC	Jan	Feb Nymex		65.25
USWC	Jan	Feb Nymex	-9.82	63.85
Europe	Jan	Mar Dated I	Brent -11.82	65.29
India	Jan	Mar Dated I	Brent -15.97	61.14
Asia-Pacific	Jan	Mar Dubai	-4.44	70.12
Olmeca				
Americas	Jan	Feb Nymex	-5.67	68.00
Europe	Jan	Mar Dated E	Brent -5.62	71.49
India	Jan	Mar Dated E	Brent -9.57	67.54
Mexico K-factors				\$/Ы
	Timing			K-factor
Have USCC	_			
Maya USGC	Jan			-16.65
Maya USWC	Jan			-8.90
Maya Europe	Jan			-15.15
Maya India	Jan			-16.70
Maya Asia Isthmus USGC	Jan			-8.25 -10.75
	Jan			-10.75
Isthmus USWC	Jan			-12.15
Isthmus Europe	Jan			-13.40
Isthmus India	Jan			-17.55
Isthmus Asia	Jan			-4.75
Olmeca USGC	Jan			-8.00
Olmeca Europe	Jan			-7.20 -11.15



-11.15

Olmeca India

Jan

Canada domestic									\$/bl
	Timing	Basis	Diff low	Diff high	Diff weighted average	Diff MTD weighted average	Low	High	Weighted average
Syncrude (SSP)	Feb	CMA Nym	+1.55	+2.05	+1.80	+1.80	75.53	76.03	75.78
WCS	Feb	CMA Nym	-26.75	-26.25	-26.50	-27.64	47.23	47.73	47.48
WCS Cushing	Feb	CMA Nym	-18.00	-17.85	-17.98	-17.19	55.98	56.13	56.00

Canada domestic \$/ba							
	Timing	Basis	Diff low/high	Low/High			
AWB	Feb	CMA Nym	-29.15/-28.65	44.83-45.33			
CDB	Feb	CMA Nym	-27.90/-27.40	46.08-46.58			
Cold Lake	Feb	CMA Nym	-27.00/-26.50	46.98-47.48			
Condensate	Feb	CMA Nym	+3.25/+3.75	77.23-77.73			
MSW	Feb	CMA Nym	-2.90/-1.45	71.08-72.53			
LSB	Feb	CMA Nym	-3.10/-2.90	70.88-71.08			
LLB	Feb	CMA Nym	-26.50/-24.60	47.48-49.38			

Canada wa	aterborne pri	ces		\$/bl
	Timing	Basis	Diff low/high	Low/High
Hibernia	Dated	North Sea	+1.65/+1.85	78.76-78.96

CME Nymex light sweet							
Timing	Open	Low	High	4:30pm London	1:30pm Houston settle	±	
Feb	73.25	72.46	74.92	74.06	73.67	+0.83	
Mar	73.51	72.74	75.15	74.31	73.92	+0.82	
Apr	73.75	72.97	75.33	74.52	74.14	+0.81	
May	73.77	73.17	75.43	74.70	74.30	+0.79	

Ice Brent						\$/bl
Timing	Open	Low	High	4:30pm London	1:30pm Houston settle	±
Mar	78.16	77.61	79.97	79.09	78.69	+0.85
Apr	78.35	77.77	80.07	79.23	78.82	+0.81
May	78.33	77.76	79.96	79.22	78.80	+0.79

CANADA

US imports of Canadian crude fell as refinery throughputs slipped in the third session of the February trade window.

US imports of Canadian crude fell by 16pc to 2.95mn b/d in the week ended 30 December, according to the US Energy Information Administration (EIA).

This is down from US Canadian crude imports of 3.5mn b/d in the week prior, and down from 3.8mn b/d in the same week a year previous.

The four-week average of crude imported into the US from Canada now stands at 3.33mn b/d.

Canadian refinery throughputs decreased in the week ended 27 December, with losses in all regions, according to data from the Canada Energy Regulator (CER).

Total Canadian refinery throughputs fell by 2.6pc weekover-week to 1.66mn b/d, a seven-week low. In the same week a year prior, throughputs totalled 1.62mn b/d.

In Ontario, throughputs decreased by 4.6pc to 379,000 b/d, the lowest level since the week ended 26 July. Ontario's refinery utilization declined by 4.5 percentage points to 92.1pc.

In the US, Bakken at Clearbrook, Minnesota, was heard trading between a \$2.10/bl to \$2.15/bl premium to the February Nymex WTI CMA, with at least 3,000 b/d trading within this range.

Producers of Access Western Blend (AWB) increased bitumen extraction in November on gains from CNRL's Jackfish project, according to data from the Alberta Energy Regulator (AER).

MEG Energy and Canadian Natural Resources (CNRL) extracted 232,000 b/d of bitumen in November, up from 229,000 b/d in the prior month and up from 217,000 b/d a year earlier. The bitumen extracted at MEG Energy's Christina Lake project and CNRL's Jackfish project is destined to become AWB.

MEG Energy's Christina Lake project decreased bitumen extraction to 108,000 b/d from 109,000 b/d in the month previous. In November 2021, the project extracted 97,000 b/d of bitumen.

CNRL's Jackfish project increased output to 123,000 b/d of bitumen, up from 120,000 b/d in the month prior. In November 2021, the Jackfish project extracted 120,000 b/d of bitumen.

Assessment rationale

The minimum volume was met and volume-weighted average calculated according to the methodology for WCS Cushing and WCS Houston.



DEALS DONE

Argus AGS deals done						\$/Ы	
				Adjus	ted		
	Differential	Reported		AGS index	AGS Marker	Volume	
Location	basis	differential	price	differential	price	b/d	ы
Magellan East Houston	Feb WTI	+0.80		+0.81	74.48	2,000	
Magellan East Houston	Feb WTI	+0.85		+0.86	74.53	2,000	
Magellan East Houston	Feb WTI	+0.80		+0.81	74.48	3,000	
Magellan East Houston	Feb WTI	+0.85		+0.86	74.53	2,000	
Magellan East Houston	Feb WTI	+0.90		+0.91	74.58	3,000	
Magellan East Houston	Feb WTI	+0.80		+0.81	74.48	1,000	
Magellan East Houston	Feb WTI	+0.85		+0.86	74.53	5,000	
Magellan East Houston	Feb WTI	+0.85		+0.86	74.53	3,000	
Magellan East Houston	Feb WTI	+0.90		+0.91	74.58	3,000	
Magellan East Houston	Feb WTI	+0.90		+0.91	74.58	3,000	
Magellan East Houston	Feb WTI	+0.90		+0.91	74.58	1,000	
Magellan East Houston	Feb WTI	+0.90		+0.91	74.58	2,000	
Magellan East Houston	Feb WTI	+0.80		+0.81	74.48	2,000	
Magellan East Houston	Feb WTI	+0.80		+0.81	74.48	1,000	
Magellan East Houston	Feb WTI	+0.80		+0.81	74.48	3,000	
Magellan East Houston	Feb WTI	+0.80		+0.81	74.48	5,000	
Magellan East Houston	Feb WTI	+0.80		+0.81	74.48	5,000	
Magellan East Houston	Feb WTI	+0.90		+0.91	74.58	3,000	
Magellan East Houston	Feb WTI	+0.90		+0.91	74.58	2,000	
Magellan East Houston	Feb WTI	+0.90		+0.91	74.58	2,000	
Magellan East Houston	Feb WTI	+0.95		+0.96	74.63	3,000	
Magellan East Houston	Feb WTI	+0.95		+0.96	74.63	1,000	
*Table shows deals as reported and	also normalized values for t	the calculation of VWAs					

North America pipeli	ne deals done					
Grade	Location	Trade month	Basis month	Differential basis	Differential P	rice \$/bl Volume b/d
HLS	Empire Louisiana	Feb	Feb	WTI	-2.00	2,000
HLS	Empire Louisiana	Feb	Feb	WTI	-2.00	2,000
HLS	Empire Louisiana	Feb	Feb	WTI	-2.00	4,000
HLS	Empire Louisiana	Feb	Feb	WTI	-1.90	2,000
LLS	St. James Louisiana	Feb	Feb	WTI	+1.40	2,000
LLS	St. James Louisiana	Feb	Feb	WTI	+1.50	1,000
LLS	St. James Louisiana	Feb	Feb	WTI	+1.50	5,000
LLS	St. James Louisiana	Feb	Feb	WTI	+1.75	2,000
Mars	Clovelly Louisiana	Feb	Feb	WTI	-4.75	1,000
Mars	Clovelly Louisiana	Feb	Feb	WTI	-4.60	2,000
Mars	Clovelly Louisiana	Feb	Feb	WTI	-4.60	3,000
Mars	Clovelly Louisiana	Feb	Feb	WTI	-4.40	1,000
Poseidon	Houma Louisiana	Feb	Feb	Mars	-1.10	2,000
Poseidon	Houma Louisiana	Feb	Feb	Mars	-1.10	2,000
WTS	Midland Texas	Feb	Feb	WTI Midland	-3.25	1,000
Southern Green Canyon	Nederland / Texas City	Feb	Feb	WTI	-4.50	2,000
WTI	Cushing Oklahoma	Feb	Feb	CMA Nymex trade days	-0.23	1,000
WTI	Cushing Oklahoma	Feb	Feb	CMA Nymex trade days	-0.23	3,000
WTI	Cushing Oklahoma	Feb	Feb	CMA Nymex trade days	-0.23	8,000
WTI	Cushing Oklahoma	Feb	Feb	CMA Nymex trade days	-0.22	5,000
WTI	Cushing Oklahoma	Feb	Feb	CMA Nymex trade days	-0.21	3,000



DEALS DONE (CONTINUED)

	pipeline deals done						
Grade	Location	Trade month	Basis month	Differential basis	Differential	Price \$/bl	Volume b/d
WTI	Cushing Oklahoma	Feb	Feb	CMA Nymex trade days	-0.21		3,000
WTI	Cushing Oklahoma	Feb	Feb	CMA Nymex trade days	-0.21		5,000
WTI	Cushing Oklahoma	Feb	Feb	CMA Nymex trade days	-0.21		5,000
WTI	Cushing Oklahoma	Feb	Feb	CMA Nymex trade days	-0.21		5,000
WTI	Cushing Oklahoma	Feb	Feb	CMA Nymex trade days	-0.20		2,000
WTI	Cushing Oklahoma	Feb	Feb	CMA Nymex trade days	-0.20		3,000
WTI	Cushing Oklahoma	Feb	Feb	CMA Nymex trade days	-0.20		4,000
WTI	Cushing Oklahoma	Feb	Feb	CMA Nymex trade days	-0.20		44,643
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		500
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		1,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		1,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		1,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		1,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		1,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		2,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		2,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		2,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		2,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		2,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		3,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		3,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		3,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		3,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		4,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		4,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		4,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		5,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		5,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		5,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		5,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		5,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		5,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.50		5,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.55		3,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.55		3,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.55		3,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.55		5,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.60		1,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.60		2,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.60		5,000
WTI	Midland Enterprise	Feb	Feb	WTI	+0.60		5,000
Thunder Horse	Clovelly Louisiana	Feb	Feb	WTI	-1.55		2,000
Thunder Horse	Clovelly Louisiana	Feb	Feb	WTI	-1.40		4,000
Thunder Horse	Clovelly Louisiana	Feb	Feb	Mars	+3.00		3,000
Bakken	Cushing Oklahoma	Feb	Feb	WTI	+0.70		2,000
Bakken	Cushing Oklahoma	Feb	Feb	WTI	+0.70		2,000
Bakken	Cushing Oklahoma	Feb	Feb	WTI	+0.70		2,000
Bakken	Cushing Oklahoma	Feb	Feb	WTI	+0.70		4,000
Bakken	Cushing Oklahoma	Feb	Feb	WTI	+0.70		5,000
Bakken	Cushing Oklahoma	Feb	Feb	WTI	+0.70		5,000
Bakken	Cushing Oklahoma	Feb	Feb	WTI	+0.70		5,000
Bakken	Cushing Oklahoma	Feb	Feb	WTI	+0.70		5,000



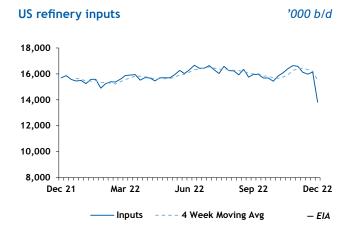
DEALS DONE (CONTINUED)

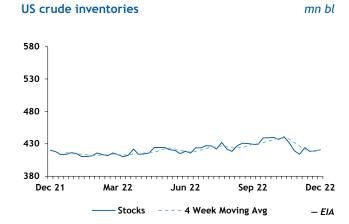
Niobrara Cushing Cushing Oklahoma Feb Feb WTI +1.25 4.00	North America pipel	line deals done						
Niobrara Cushing Cushing Oklahoma Feb Feb WTI 41.30 5,00 Niobrara Cushing Cushing Oklahoma Feb Feb WTI 41.30 10,00 Wick Cliffs Cushing Cushing Oklahoma Feb Feb WTI -0.35 2,00 WCS Houston Houston area Feb Feb CMA Nymex trade days -17.00 7,14 WCS Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -18.00 1,07 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -18.00 1,60 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -18.00 1,76 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -18.00 2,21 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -17.80 3,75 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -17.80	Grade	Location			Differential basis	Differential	Price \$/bl	Volume b/d
Niobrara Cushing Cushing Oklahoma Feb Feb WTI 41.30 10,00 White Cliffs Cushing Cushing Oklahoma Feb Feb WTI -0.35 2,00 WCS Houston Houston area Feb Feb Feb WTI -0.35 2,00 WCS Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -18.00 1,07 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -18.00 1,60 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -18.00 1,60 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -18.00 2,21 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -18.00 3,75 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -17.85 1,72 Cold Lake Dushing Oklahoma Feb Feb CMA Nymex trade days -17.85	Niobrara Cushing	Cushing Oklahoma	Feb	Feb	WTI	+1.25		4,000
White Cliffs Cushing Cushing Oklahoma Feb Feb WTI -0.35 2,00 WCS Houston Houston area Feb Feb CMA Nymex trade days -17.00 7,14 WCS Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -18.00 1,07 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -18.00 1,60 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -18.00 1,60 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -18.00 2,21 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -18.00 3,75 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -18.00 3,75 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days -17.00 17.78 1,92 Cold Lake Cushing Cushing Oklahoma Feb Feb	Niobrara Cushing	Cushing Oklahoma	Feb	Feb	WTI	+1.30		5,000
WCS Houston Houston area Feb Feb CMA Nymex trade days .17.00 7,14 WCS Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days .18.00 .1,07 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days .18.00 .1,07 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days .18.00 .1,06 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days .18.00 .2,21 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days .18.00 .3,75 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days .18.00 .3,75 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days .18.00 .2,21 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days .17.85 .19.20 WTL Midland Midland Texas Feb Feb WT	Niobrara Cushing	Cushing Oklahoma	Feb	Feb	WTI	+1.30		10,000
WCS Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days 18.00 1,07 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days 18.00 1,07 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days 18.00 1,60 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days 18.00 1,96 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days 18.00 1,96 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days 18.00 2,21 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days 18.00 3,75 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days 17.85 1,92 Cold Lake Cushing Cushing Oklahoma Feb Feb CMA Nymex trade days 17.85 1,92 Cold Lake Houston Houston area Feb Feb CMA Nymex trade days 17.00 17,85 MTL Midland Midland Texas Feb Feb WTI Midland Pick MIDLAND MIDLAN	White Cliffs Cushing	Cushing Oklahoma	Feb	Feb	WTI	-0.35		2,000
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Light Sweet Guernsey Guernsey Wyoming Feb Feb CMA Nymex trade days -0.25 1,00 AWB Houston Houston area Feb Feb CMA Nymex trade days -18.45 4,50 AWB Houston Houston area Feb Feb CMA Nymex trade days -18.35 2,21 AWB Houston Houston area Feb Feb CMA Nymex trade days -18.35 2,21 Bakken Patoka Illinois Feb Feb CMA Nymex trade days +1.05 3,57 Bakken Patoka Illinois Feb Feb CMA Nymex trade days +1.05 3,57 Bakken Patoka Illinois Feb Feb CMA Nymex trade days +1.05 7,14 Bakken DAPL North Dakota Feb Feb CMA Nymex trade days +0.75 1,00	Saddlehorn Light	Cushing Oklahoma	Feb	Feb	WTI	-0.35		3,000
AWB Houston Houston area Feb Feb CMA Nymex trade days -18.45 4,50 AWB Houston Houston area Feb Feb CMA Nymex trade days -18.35 2,21 AWB Houston Houston area Feb Feb CMA Nymex trade days -18.35 2,21 Bakken Patoka Illinois Feb Feb CMA Nymex trade days +1.05 3,57 Bakken Patoka Illinois Feb Feb CMA Nymex trade days +1.05 3,57 Bakken Patoka Illinois Feb Feb CMA Nymex trade days +1.05 7,14 Bakken DAPL North Dakota Feb Feb CMA Nymex trade days +0.75 1,000	Grand Mesa Light	Cushing Oklahoma	Feb	Feb	WTI	-0.35		2,000
AWB Houston Houston area Feb Feb CMA Nymex trade days -18.35 2,21 AWB Houston Houston area Feb Feb CMA Nymex trade days -18.35 2,21 Bakken Patoka Illinois Feb Feb CMA Nymex trade days +1.05 3,57 Bakken Patoka Illinois Feb Feb CMA Nymex trade days +1.05 3,57 Bakken Patoka Illinois Feb Feb CMA Nymex trade days +1.05 7,14 Bakken DAPL North Dakota Feb Feb CMA Nymex trade days +0.75 1,00	Light Sweet Guernsey	Guernsey Wyoming	Feb	Feb	CMA Nymex trade days	-0.25		1,000
AWB Houston Houston area Feb Feb CMA Nymex trade days -18.35 2,21 Bakken Patoka Illinois Feb Feb CMA Nymex trade days +1.05 3,57 Bakken Patoka Illinois Feb Feb CMA Nymex trade days +1.05 3,57 Bakken Patoka Illinois Feb Feb CMA Nymex trade days +1.05 7,14 Bakken DAPL North Dakota Feb Feb CMA Nymex trade days +0.75 1,00	AWB Houston	Houston area	Feb	Feb	CMA Nymex trade days	-18.45		4,500
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BakkenPatoka IllinoisFebFebCMA Nymex trade days+1.053,57BakkenPatoka IllinoisFebFebCMA Nymex trade days+1.057,14BakkenDAPL North DakotaFebFebCMA Nymex trade days+0.751,00	AWB Houston	Houston area	Feb	Feb	CMA Nymex trade days	-18.35		2,214
BakkenPatoka IllinoisFebFebCMA Nymex trade days+1.057,14BakkenDAPL North DakotaFebFebCMA Nymex trade days+0.751,00	Bakken	Patoka Illinois	Feb	Feb	CMA Nymex trade days	+1.05		3,571
Bakken DAPL North Dakota Feb Feb CMA Nymex trade days +0.75 1,000	Bakken	Patoka Illinois	Feb	Feb	CMA Nymex trade days	+1.05		3,571
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Bakken DAPL North Dakota Feb Feb CMA Nymex trade days +0.75 1,00	Bakken	DAPL North Dakota	Feb	Feb	CMA Nymex trade days	+0.75		1,000
	Bakken	DAPL North Dakota	Feb	Feb	CMA Nymex trade days	+0.75		1,000

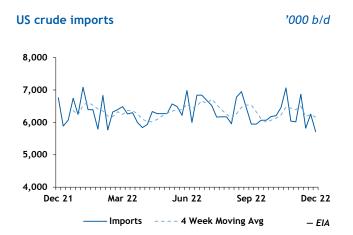


EIA WEEKLY DATA

Industry statistics		'000 b/d
	EIA	Change
Production	12,100	100
Imports	5,712	-540
Total Stocks	420,646	1,694
Runs	13,820	-2,329
Percent Utilization	79.6%	-12.4
Stocks Padd 1	7,575	-669
Stocks Padd 2	106,272	421
Stocks Padd 3	233,943	2,279
Stocks Padd 4	23,894	-479
Stocks Padd 5	48,962	142
Imports Padd 1-4	4,106	-910
Imports Padd 1	547	33
Imports Padd 2	2,344	-578
Imports Padd 3	877	-224
Imports Padd 4	338	-141
Imports Padd 5	1,607	370
Runs Padd 1	708	-57
Runs Padd 2	3,312	-505
Runs Padd 3	7,118	-1,697
Runs Padd 4	523	-47
Runs Padd 5	2,158	-25
	– EIA	







INFRASTRUCTURE NEWS

Colonial shuts Line 3 at Virginia station

Colonial Pipeline shut down a segment of its 5,000-mile (8,851km) system for maintenance on Wednesday after a spill of refined product at a Virginia delivery station.

Line 3 was shut on 4 January from the Witt delivery station near Danville, Virginia, to Linden, New Jersey, following the product release, which was contained to the property, the company said. A restart of operations along the pipeline route was tentatively scheduled for 7 January.

Line 3, with a capacity of 885,000 b/d, transports gasoline and distillates between Greensboro, North Carolina and Linden.

The operator did not comment on the volume or type of product that was released in the incident.

Operations along the rest of Colonial's system were unaffected the company said.

By Jason Metko

Marathon Los Angeles refinery plans flaring

Marathon Petroleum has scheduled a planned flaring event to start on Friday at its 363,500 b/d refinery in Los Angeles, California.

Flaring associated with shutdown/start-up operations in the Carson end of the refinery is scheduled to start at 1pm ET on Friday, and conclude at around 3am ET on 10 January, according to a filing with regional air quality monitors.

Marathon Petroleum does not comment on refinery operations.

High swells slow Mexico's Salina Cruz port

High swells have halted the arrival of smaller vessels into the port of Salina Cruz on Mexico's west coast since 4 January, disrupting some crude exports and deliveries of fuels produced at Pemex's 330,000 b/d refinery with the same name.

Mexico's meteorological service expects swells of 7-9 feet to continue for the next 24-48 hours, with wind speeds of 30-35 knots and visibility limited at 2-4 nautical miles because of fog, it said today in its 9am ET report.

The plant is operating with some modifications related to high swells, a source at the Salina Cruz refinery told *Argus*. Smaller vessels are needed to load and direct larger tankers.

Some Mexican media outlets reported a power supply disruption at the refinery, but a different source with state-owned Pemex said the electricity service is normal.

The Salina Cruz refinery, the country's largest, processed 159,000 b/d of crude in November, using 48pc of its capacity, according to the latest data available from the energy ministry (Sener).

No vessel congestion was reported. Four vessels — carrying LPG and fuel oil, among other products — were close to the port of Salina Cruz, Vortexa data showed today.

The port of Salina Cruz exports Maya crude primarily to refineries in California on the US west coast, while the Salina Cruz refinery delivers refined products for much of the Mexican west coast through tankers.

By Sergio Meana

INDUSTRY NEWS

US crude stocks rise by 1.7mn bl

US crude inventories last week increased by 1.7mn bl to 420.6mn bl as refinery runs slid, according to the Energy Information Administration (EIA).

Stocks at the Cushing storage hub in Oklahoma during the week ended 30 December rose to 25.3mn bl, up by 244,000 bl from the prior week.

US refiners processed about 13.8mn b/d of crude last week, down by 2.3mn b/d from the prior week, as winter storms curtailed operations. Refinery utilization rates on average slid to 79.6pc, the lowest since March 2021, from 92pc a week earlier.

Crude inventories at the US Strategic Petroleum Reserve (SPR) fell by 2.7mn bl to 372.4mn bl, the lowest level since December 1983. SPR stocks are not included in the overall EIA

commercial crude inventory figures.

The US Department of Energy released 180mn bl from the SPR last year, with the final sale of 15.05mn bl of sweet and sour crude delivered to six companies last month.

President Joe Biden had authorized the sales as a "wartime bridge" to counter supply losses resulting from the war in Ukraine.

US crude imports fell by 540,000 b/d during the latest week to 5.7mn b/d. US crude exports rose by 742,000 b/d to 4.2mn b/d.

Domestic crude output rose by 100,000 b/d to 12.1mn b/d last week.

Production has lagged expectations due to cost inflation and supply-chain disruptions. Although output is poised to hit a record this year, many public explorers are still focused on improving shareholder returns rather than growing production.



INDUSTRY NEWS

Gasoline inventories last week fell by 0.3mn bl to 222.7mn bl and are about 6pc below the five-year average for this time of year.

By Stephen Cunningham

US crude exports ease from record high in Nov

US crude exports eased by 2.7pc in November but remained above 4mn b/d for a second month as global demand remained strong, while loading operations experienced disruptions.

The US exported 4.04mn b/d of crude in November, down by just 110,000 b/d compared to the record high of 4.15mn b/d set in October, but up by nearly 30pc compared to the 3.14mn b/d of US crude exported in November 2021, according to fresh data by the US Census Bureau.

Monthly export flows were expected to weaken from October on the back of cold weather patterns in the Gulf of Mexico that had shut down all lightering and reverse lightering operations across the US Gulf coast for a week starting on 15 November because of high waves.

India and South Korea remained the top two importers of US crude in November, lifting roughly 585,000 b/d and 521,000 b/d, respectively, up compared with 430,000-509,300 b/d in October.

Total flows to Asia-Pacific destinations comprised 1.92mn b/d, or about 47.5pc of US crude exports as refiners sought out economic alternatives to Mideast Gulf light sour Murban crude.

Meanwhile, US crude exports to Europe represented 37.5pc of market share at roughly 1.5mn b/d. The Netherlands and the UK were the top European buyers, taking roughly 410,000 b/d and 292,000 b/d, respectively.

The remaining 620,000 b/d of US crude exports were destined for other locations within the Americas.

By Amanda Hilow

Alaska oil output, US west coast demand slip

Alaskan North Slope (ANS) crude production last week slipped by about 1,000 b/d, while US west coast refineries decreased throughputs.

ANS output ticked down to around 500,500 b/d in the week ended 31 December, according to the Alaska Department of Revenue. The Port of Valdez ended the week holding roughly 4.2mn bl of crude inventories, up by about 700,000 bl from the prior week.

US west coast refinery runs last week fell by 25,000 b/d to around 2.15mn b/d, while the region's refinery utilization rates

decreased by about 1.4 percentage points to 86pc, according to Energy Information Administration data.

The volume of ANS in transit to the US west coast declined to 3.1mn bl, down by 1mn bl from the week prior.

ANS for March delivery to the US west coast has sold at discounts to CMA Ice Brent of between \$2.85-3.25/bl since the start of the trade cycle this week. ANS deals for February delivery ranged higher at discounts between \$1.70-3/bl. *By Giovann Rosales*

Alberta AWB bitumen extraction rose in Nov

Producers of Access Western Blend (AWB) increased bitumen extraction in November on gains from CNRL's Jackfish project, according to data from the Alberta Energy Regulator (AER).

MEG Energy and Canadian Natural Resources (CNRL) extracted 232,000 b/d of bitumen in November, up from 229,000 b/d in the prior month and up from 217,000 b/d a year earlier. The bitumen extracted at MEG Energy's Christina Lake project and CNRL's Jackfish project is destined to become AWB.

MEG Energy's Christina Lake project decreased bitumen extraction to 108,000 b/d from 109,000 b/d in the month previous. In November 2021, the project extracted 97,000 b/d of bitumen.

CNRL's Jackfish project increased output to 123,000 b/d of bitumen, up from 120,000 b/d in the month prior. In November 2021, the Jackfish project extracted 120,000 b/d of bitumen.

Once combined with diluent, the bitumen extracted from the projects will create about 347,000 b/d of marketable "dilbit," called AWB, at either Hardisty or Edmonton, Alberta. AWB output was 344,000 b/d in October and 326,000 b/d in November 2021.

AWB typically trades at a discount to Western Canadian Select (WCS) and has an API of approximately 22°.

CNRL and MEG's projects are about 100 miles (161 km) south of Fort McMurray, Alberta.

By Sam Duffy

Canadian throughputs down in all regions

Canadian refinery throughputs decreased in the week ended 27 December, with losses in all regions, according to data from the Canada Energy Regulator (CER).

Total Canadian refinery throughputs fell by 2.6pc weekover-week to 1.66mn b/d, a seven-week low. In the same week a year prior, throughputs totalled 1.62mn b/d.

Throughputs in Quebec and eastern Canada slipped by 0.8pc to 658,000 b/d. Utilization in the region fell by 0.8 per-



INDUSTRY NEWS

centage points to 93.8pc.

In Ontario, throughputs decreased by 4.6pc to 379,000 b/d, the lowest level since the week ended 26 July. Ontario's refinery utilization declined by 4.5 percentage points to 92.1pc.

Refiners in western Canada decreased throughputs by 3.2pc to 625,000 b/d on the week. Utilization in western Canada fell by 0.1 percentage points to 93.8pc.

Nationwide utilization slipped by 1.4pc to a six-week low of 93.4pc. This compares to nationwide utilization of 90.5pc in the same week a year prior.

By Sam Duffy

Enbridge, band await crude pipeline ruling

Enbridge and a Native American tribal group in Wisconsin await a court's decision after filing two separate proposals to mitigate spill risk on the 540,000 b/d Line 5 crude and natural gas liquids (NGL) pipeline.

Pipeline operator Enbridge and the Bad River Band were unable to agree to mitigation plans despite two lengthy meetings in December, so each filed separate "last, best offers" to the court on 23 December.

The two sides were directed in November by the US district judge William Conley to either submit a joint proposal regarding an "appropriate shutoff" plan relating to a specific river crossing in Wisconsin, or file independently.

Conley said a rupture could be "catastrophic" for the Bad River basin and potentially even Lake Superior — the world's largest freshwater lake astride the US-Canada border.

Counsel for the Bad River Band told Argus today it did not have an indication from the court for when to expect a decision on the proposals.

Discussions had progressed on the installation of emergency flow restriction devices (EFRD) on the reservation along with erosion control measures at a specific site where Line 5 crosses the Bad River, and talks are expected to continue even after the separate submissions. The Bad River Band had rejected opportunities to collaborate with Enbridge before, the judge said in November when he ordered the two parties to work together.

The band had argued for the line to be shut since filing a lawsuit against Enbridge in 2019, but the judge disagreed in September last year saying that a shutdown would be a "draconian" measure. Other options, even if imperfect, must be considered as areas of the US and Canada "depend upon" Line 5's operation, according to the judge.

The judge did side with the band over claims of trespassing and unjust enrichment, ruling the tribal group was entitled to a "profits-based remedy." The court will also make a ruling on that, but no timeline for that decision has been indicated either.

Enbridge has already made plans to reroute the pipeline around the territory if it were successful in obtaining permits, but construction would take about five years. The proposed 41-mile Line 5 Segment relocation project would bypass the Bad River Reservation.

About 12 miles of pipe crosses the reservation.

The pipeline, which runs from Superior, Wisconsin, through Michigan and on to Sarnia, Ontario, is a vital source of hydrocarbons to the US upper midcontinent. Enbridge and Michigan also have an ongoing battle in the courts, with the state government seeking the line's closure over a risk of a spill in the Strait of Mackinac.

About 10 days after the judge's order to expedite mitigation plans, the 622,000 b/d Keystone crude pipeline operated by competitor TC Energy spilled 14,000 bl of heavy crude in Kansas on 7 December.

By Brett Holmes

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Chief operating officer Matthew Burkley

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President, Oil Euan Craik

SVP, North America Matthew Oatway

Global SVP editorial Neil Fleming

Editor in chief Jim Washer

Managing editor Jim Kennett

Editor Gustavo Vasquez Tel: +1 713 968 0014 houstoncrude@argusmedia.com

Customer support and sales: support@argusmedia.com sales@argusmedia.com

London, Tel: +44 20 7780 4200 Houston, Tel: +1 713 968 0000 Singapore, Tel: +65 6496 9966





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