



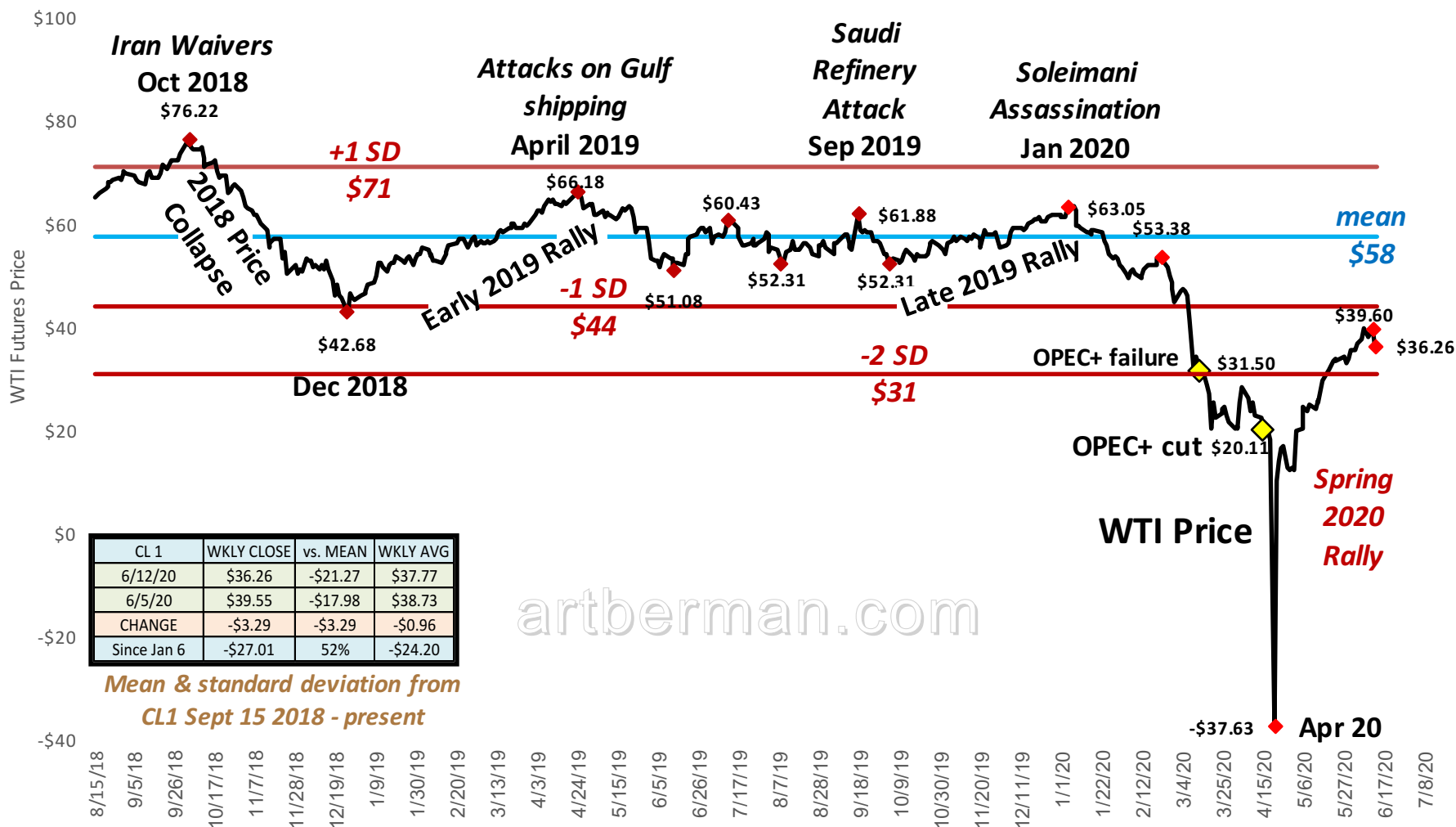
Art Berman

MacroVoices June 15, 2020



OPEC+ production cut was a great achievement

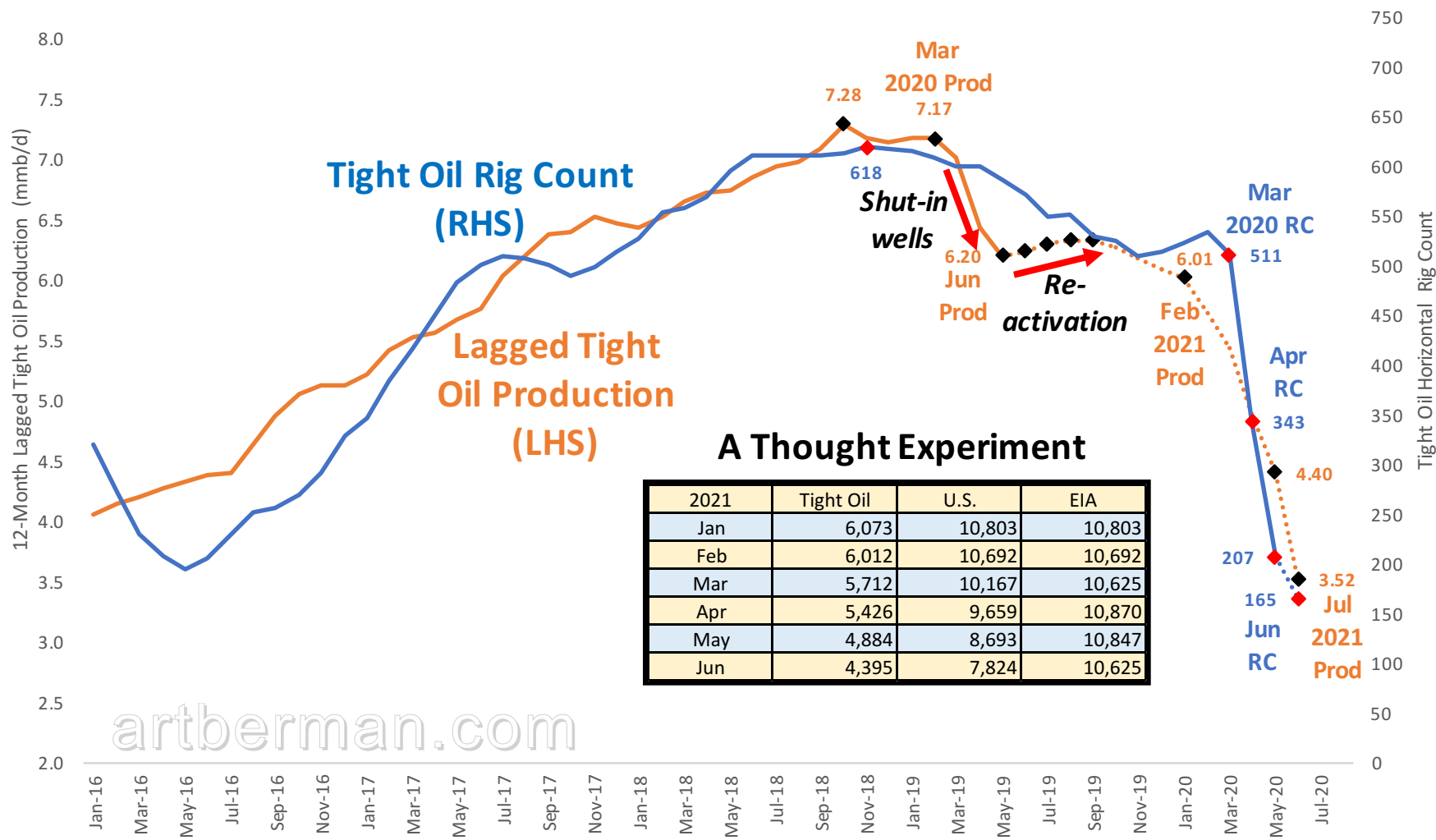
Spring 2020 rally peaked at lowest oil price in 51 months



Source: Quandl & Labyrinth Consulting Services, Inc.

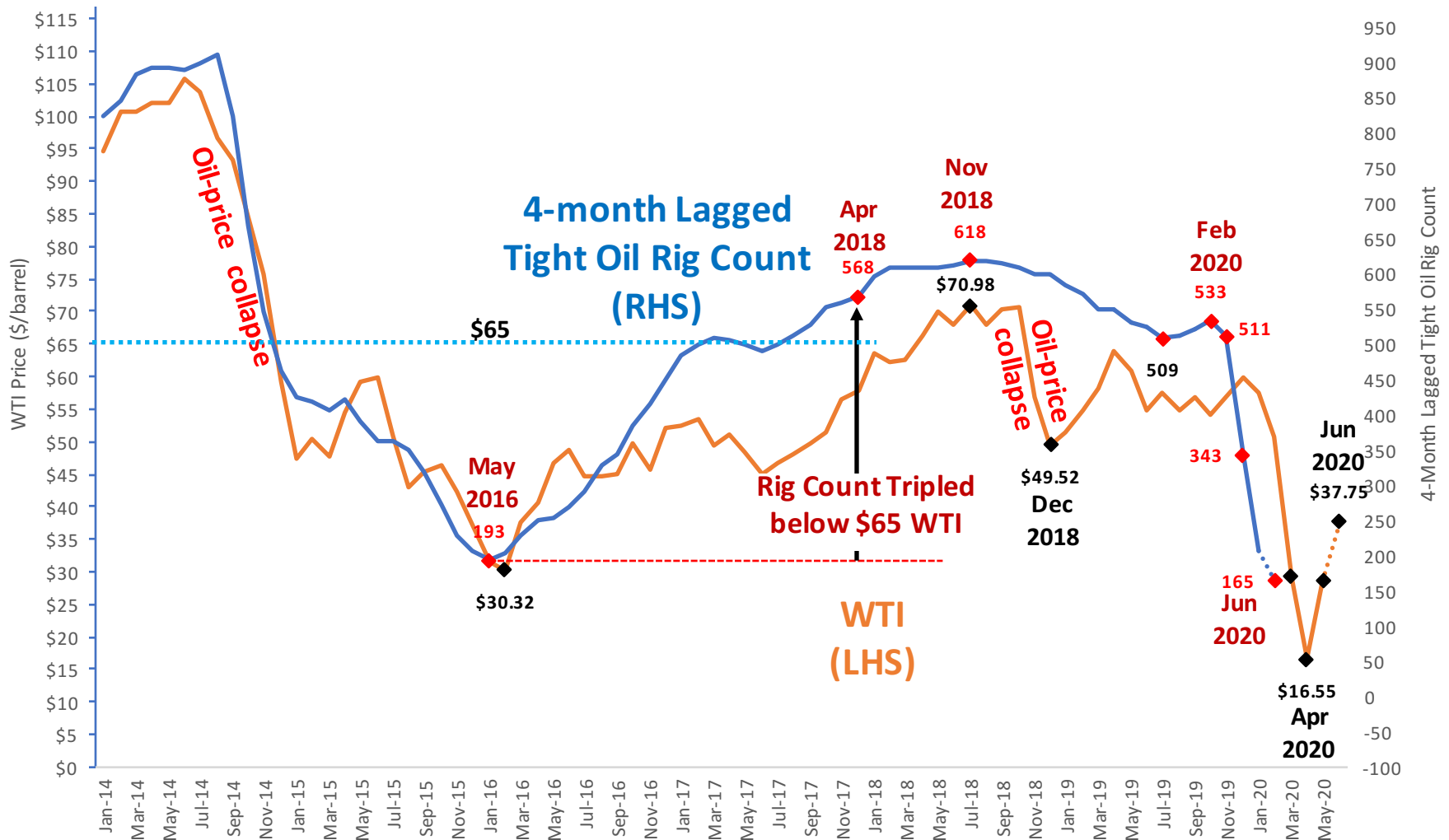
Oil & Gas General/Futures & Future Spreads/CL1&CL7 Futures

500 tight oil rigs to maintain 6 mmb/d tight oil/11 mmb/d total U.S. output
May tight rig count was 216 so decline to U.S. 9 mmb/d by Q2 2021 is unavoidable
Production should increase this summer with shut-in re-activation then fall in Q4 2020



Source: Baker Hughes, EIA DPR, Drilling Info & Labyrinth Consulting Services, Inc.

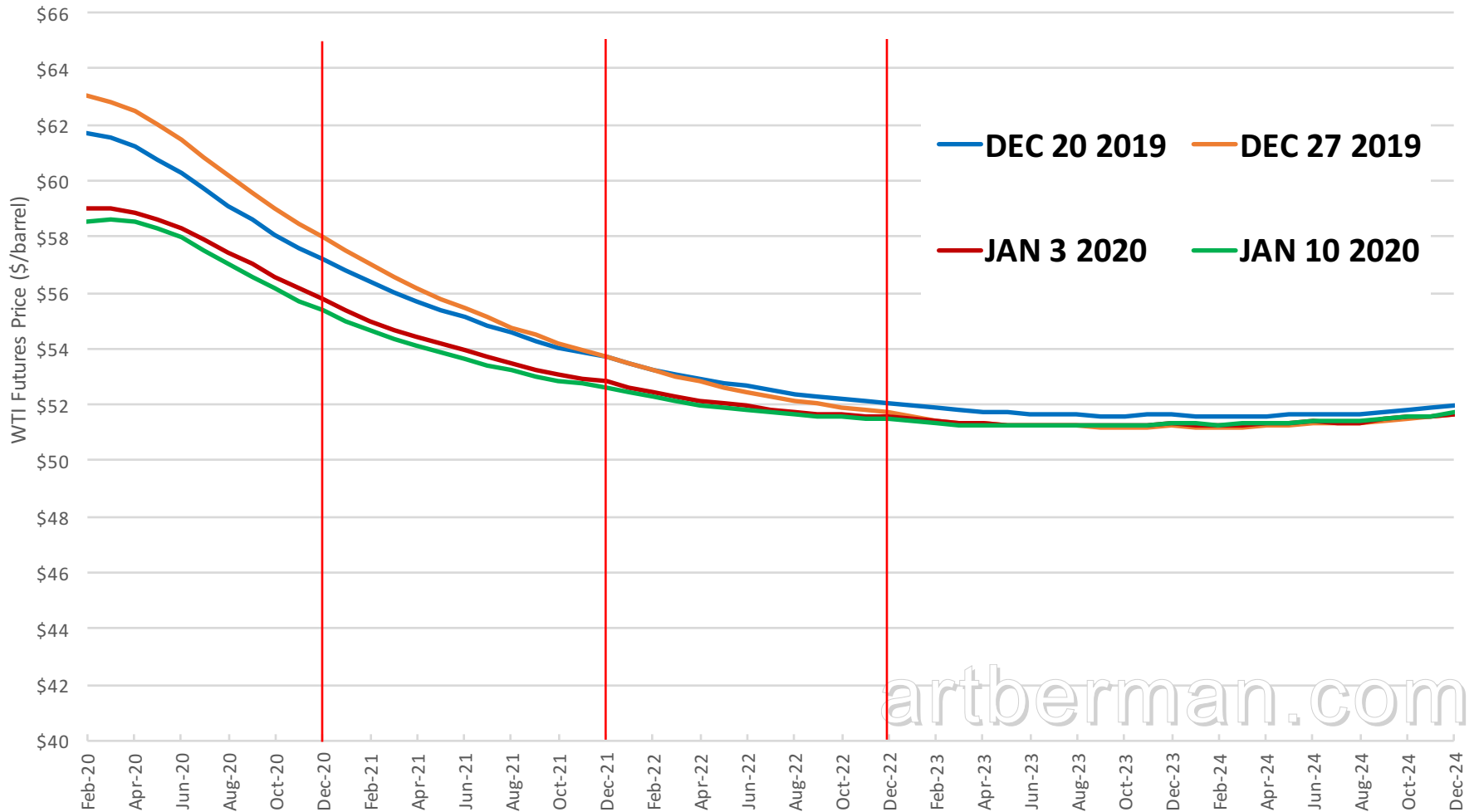
**Tight oil rig count generally lags WTI price by about 4 months
Assuming this pattern holds in Covid-19 economic conditions,
rig count will continue to fall for at least another two months**



Source: Baker Hughes, EIA DPR, Drilling Info & Labyrinth Consulting Services, Inc.

Rig Count Current/MONTHLY SHALE GAS-TIGHT OIL RIG COUNT

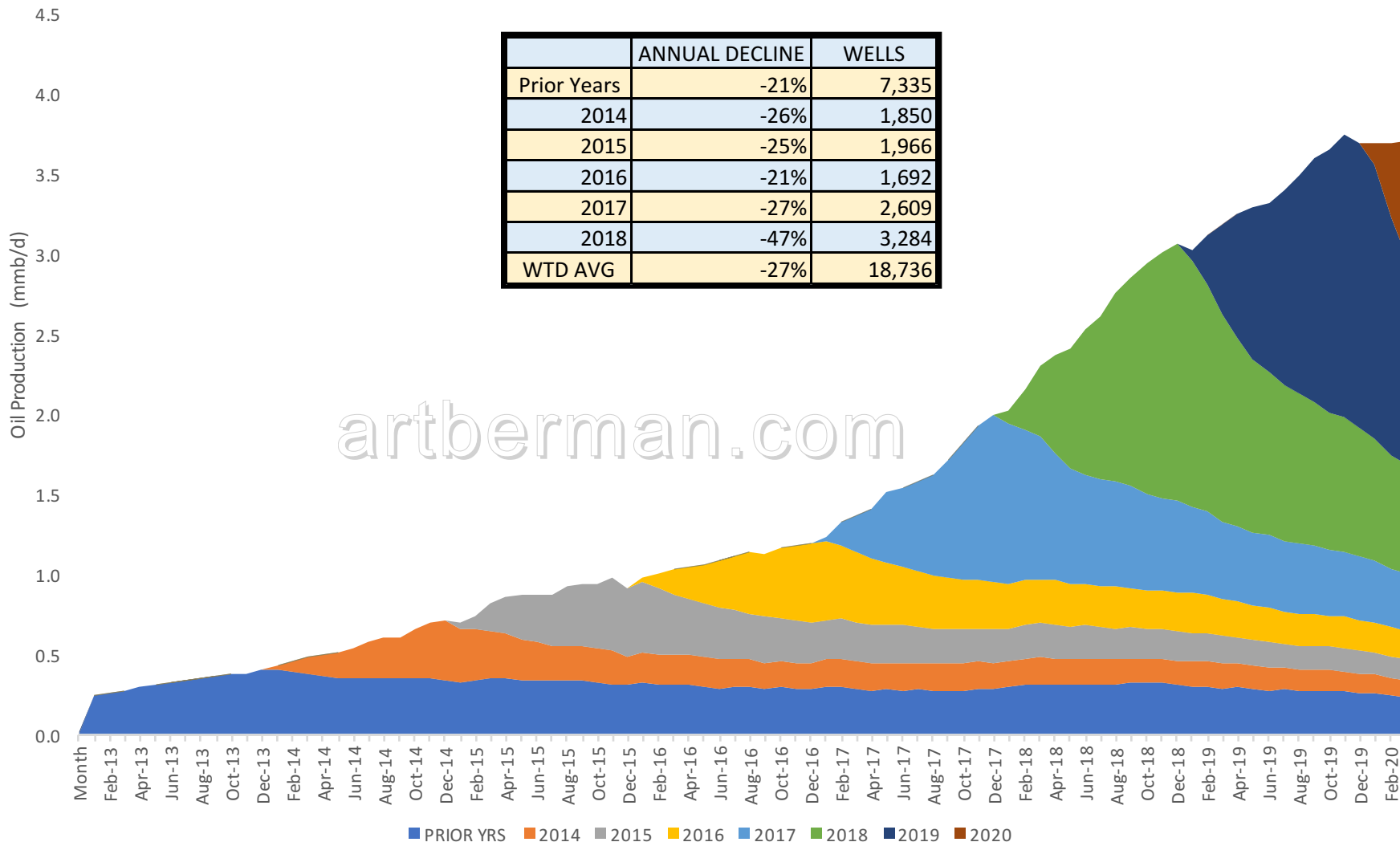
Tight oil companies hedged 2020 production above \$55/barrel and 2021 production above \$52/barrel



Source: CME & Labyrinth Consulting Services, Inc.

Oil & Gas General/Futures & Future Spreads/FUTURES CONTRACTS MASTER

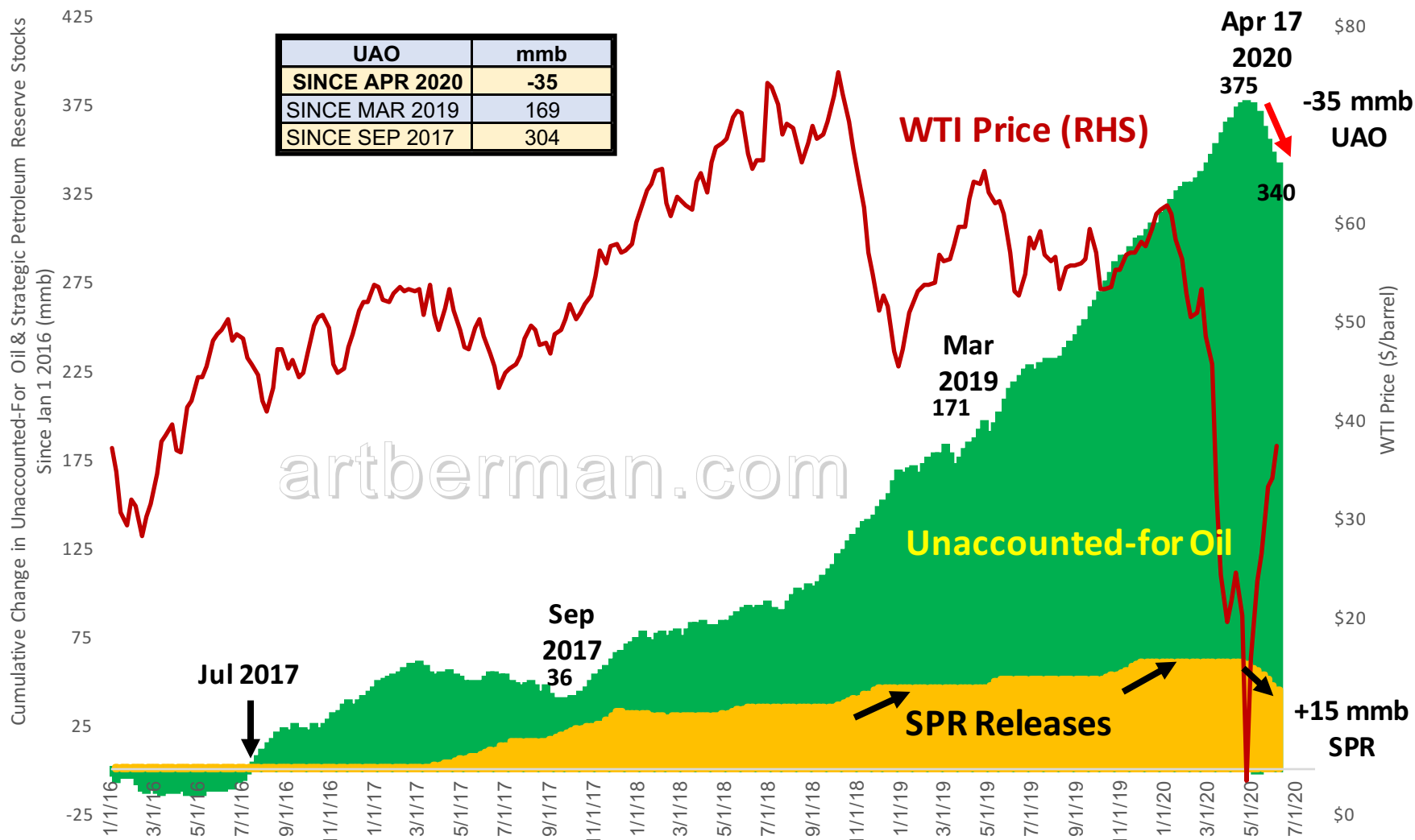
Permian basin annual decline rate is 27% for horizontal tight oil wells
Decline rates generally increase for wells drilled in more recent years
because of higher initial production rates



Source: Enverus & Labyrinth Consulting Services, Inc.

Shale Plays/Permian 2020/PERMIAN TIGHT OIL DECLINE JUN 2020

**Unaccounted-for oil has decreased an average of -5.8 mmb over last 6 weeks after increasing an average of +3.3 mmb per week since March 2019
+15 mmb added to Strategic Petroleum Reserve**

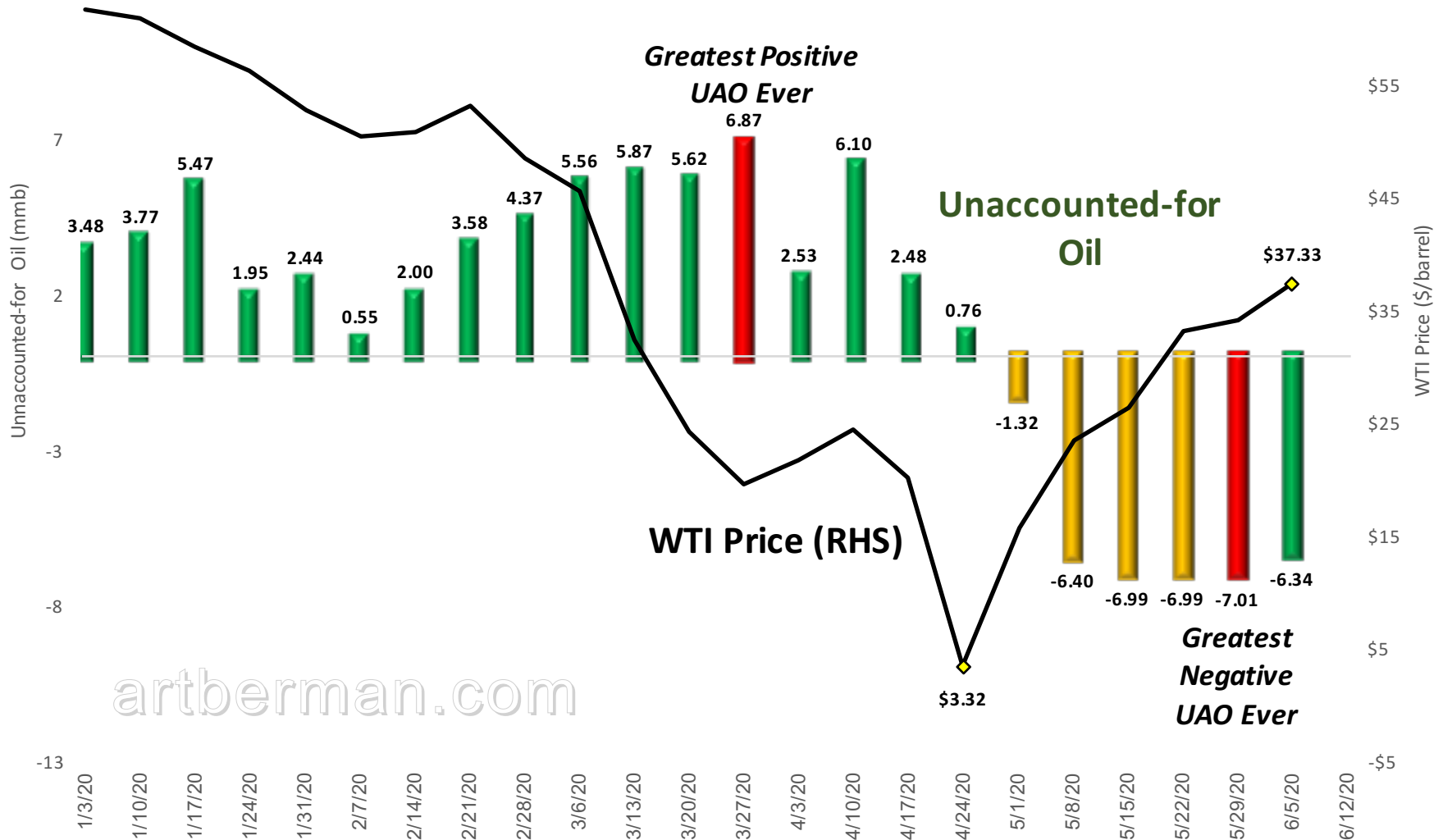


Source: EIA & Labyrinth Consulting Services, Inc.

EIA Current/Weekly Updates/PSW Master.xlsx

U.S. unaccounted-for oil volumes have been negative for the last 6 weeks

Greatest positive and negative WTI unaccounted-for oil volumes occurred within the last 11 weeks



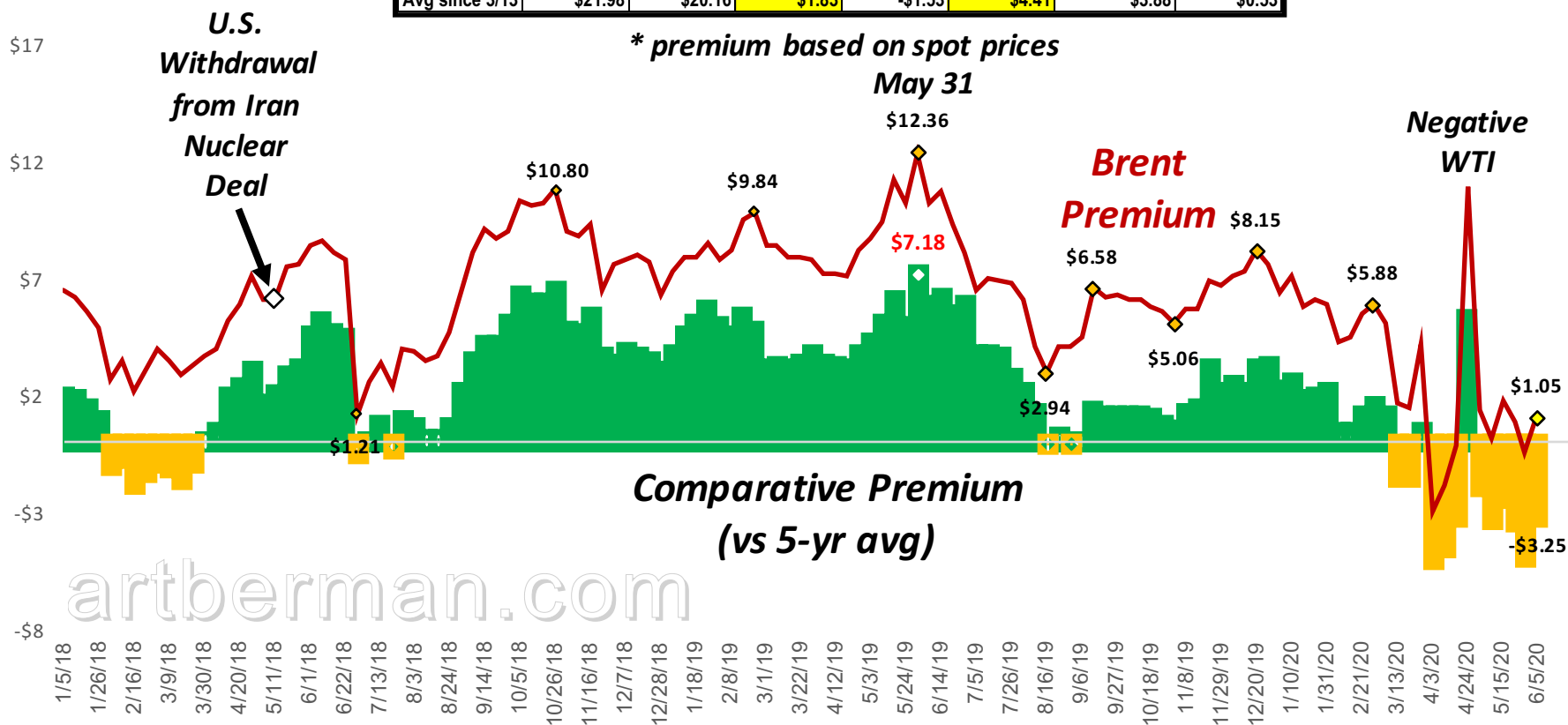
Source: EIA & Labyrinth Consulting Services, Inc.

EIA Current/Weekly Updates/PSW Master

U.S. crude oil exports sub-commercial at current Brent-WTI differential price
Brent-WTI premium moved to +\$1.05 week ending June 5
U.S. crude exports require ~\$1.41 Brent-WTI premium to break even

	Brent	WTI	Premium	Premium vs 5-Yr Avg	WTI export break-even	HCL-WTI Premium	HOU-ROT Shipping
6/5/20	\$38.37	\$37.32	\$1.05	-\$3.25	\$1.41	\$1.05	\$0.36
5/29/20	\$33.70	\$34.19	-\$0.49	-\$5.02	\$1.40	\$1.04	\$0.36
Change	\$4.67	\$3.13	\$1.54	\$1.76	\$0.01	\$0.01	\$0.00
Avg since 3/13	\$21.98	\$20.16	\$1.83	-\$1.53	\$4.41	\$3.88	\$0.53

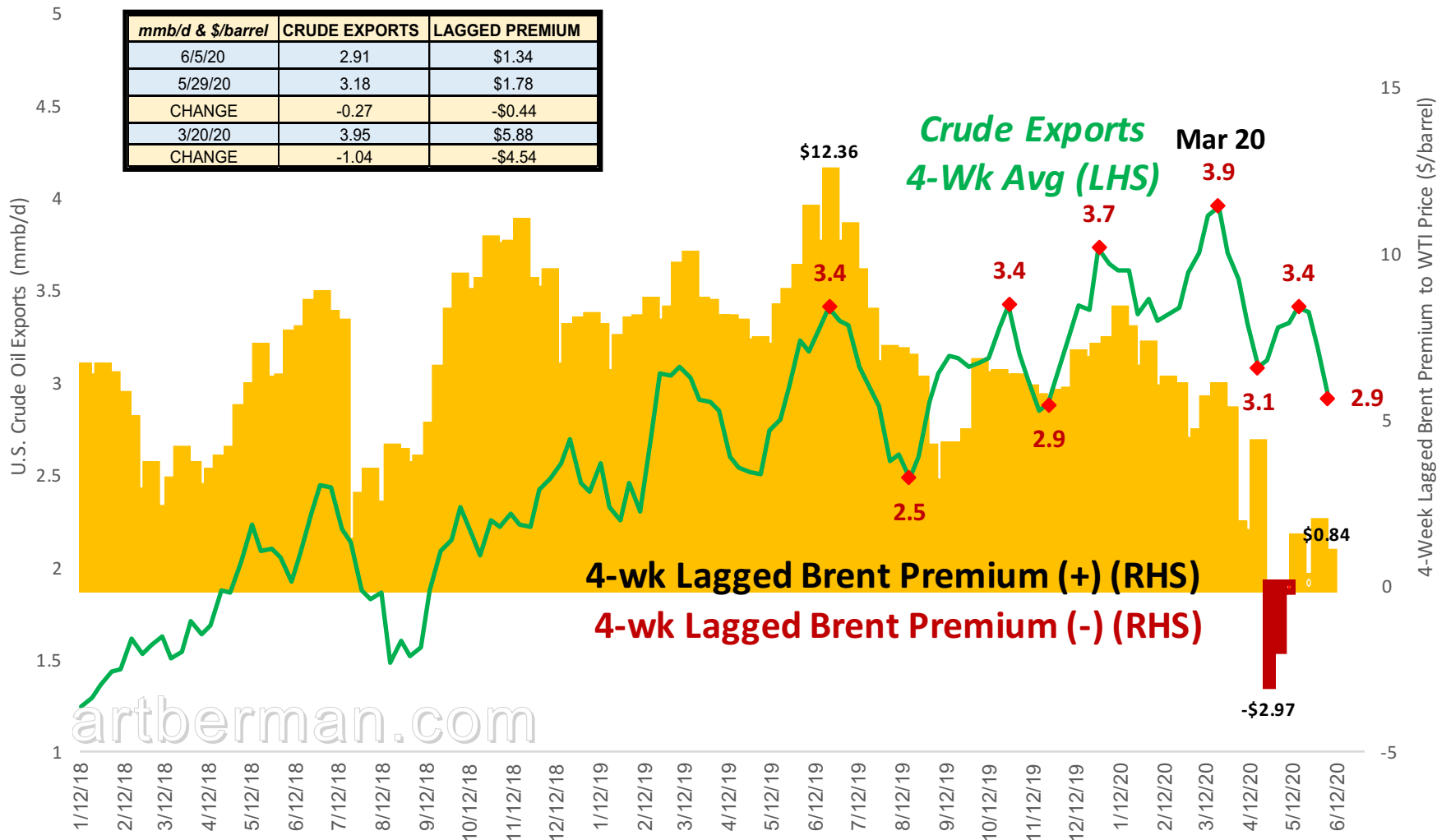
** premium based on spot prices*



Source: EIA & Labyrinth Consulting Services, Inc.

EIA Current/Weekly Updates/Brent Premium to WTI

U.S. crude exports have decreased 1 mmb/d since March 20 Brent premium to WTI has decreased making exports sub-commercial

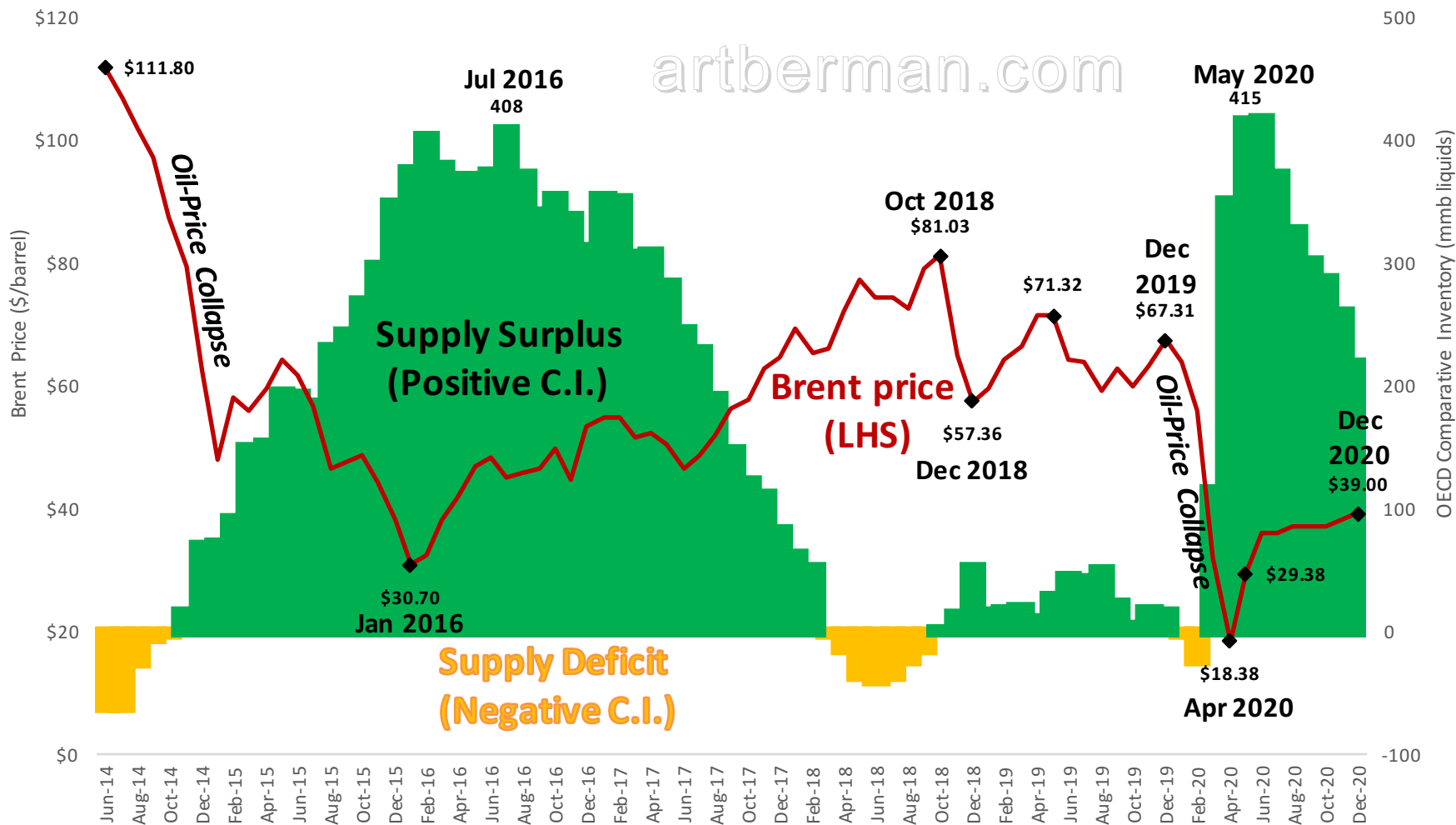


Source: EIA & Labyrinth Consulting Services, Inc.

EIA Current/Weekly Updates/Brent Premium to WTI

How bad is it?

OECD May comparative inventory at record high 415 mmb more than 5-year average
Brent spot monthly average expected to reach only \$39 by December 2020

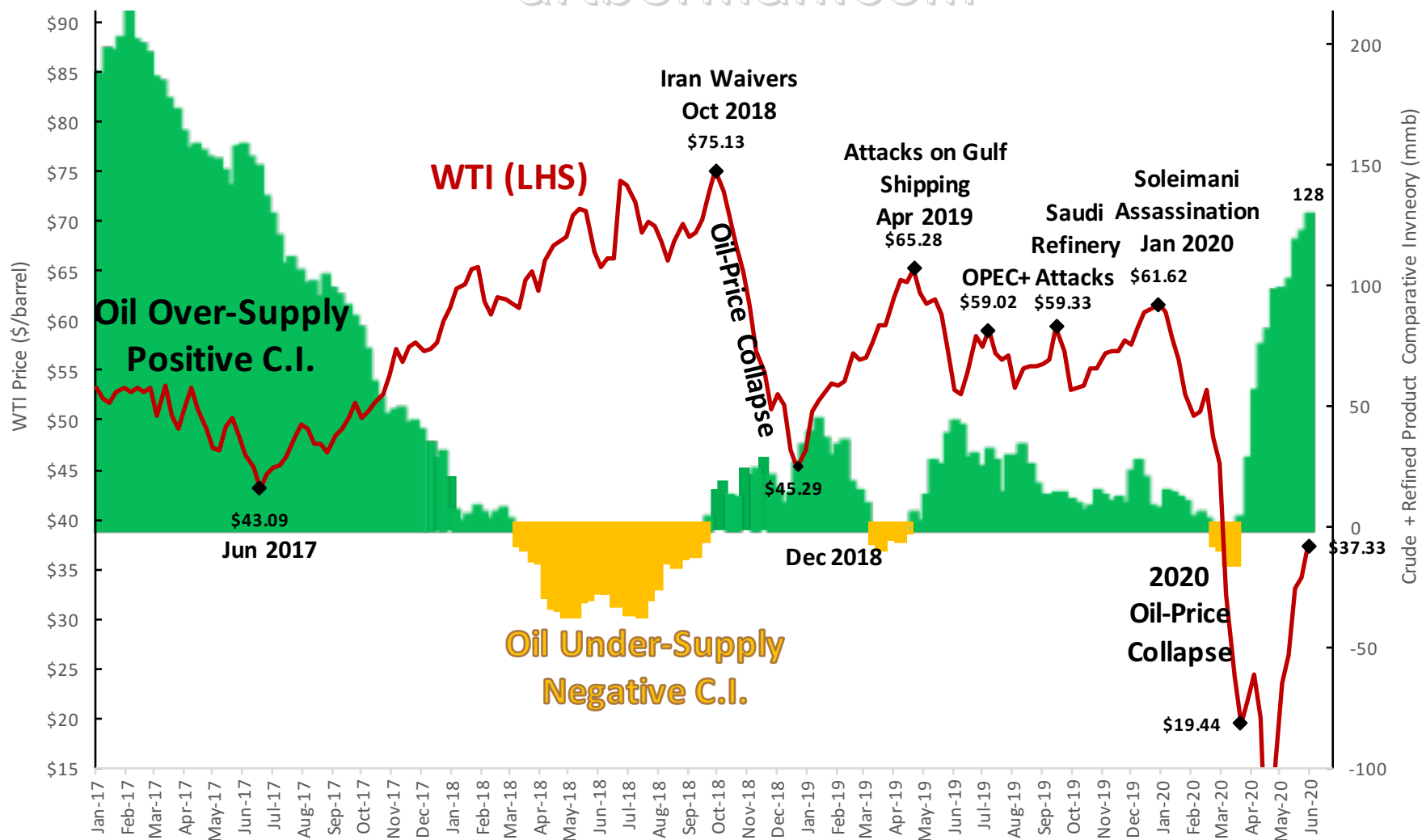


Source: EIA STEO & Labyrinth Consulting Services, Inc.

EIA Current/STEO/STEO Master.xlsx

2020 WTI comparative inventory has increased to mid-2017 levels

artberman.com



Source: EIA & Labyrinth Consulting Services, Inc.

EIA Current/Weekly Updates/Crude Oil & Refined Products Inventories & CI

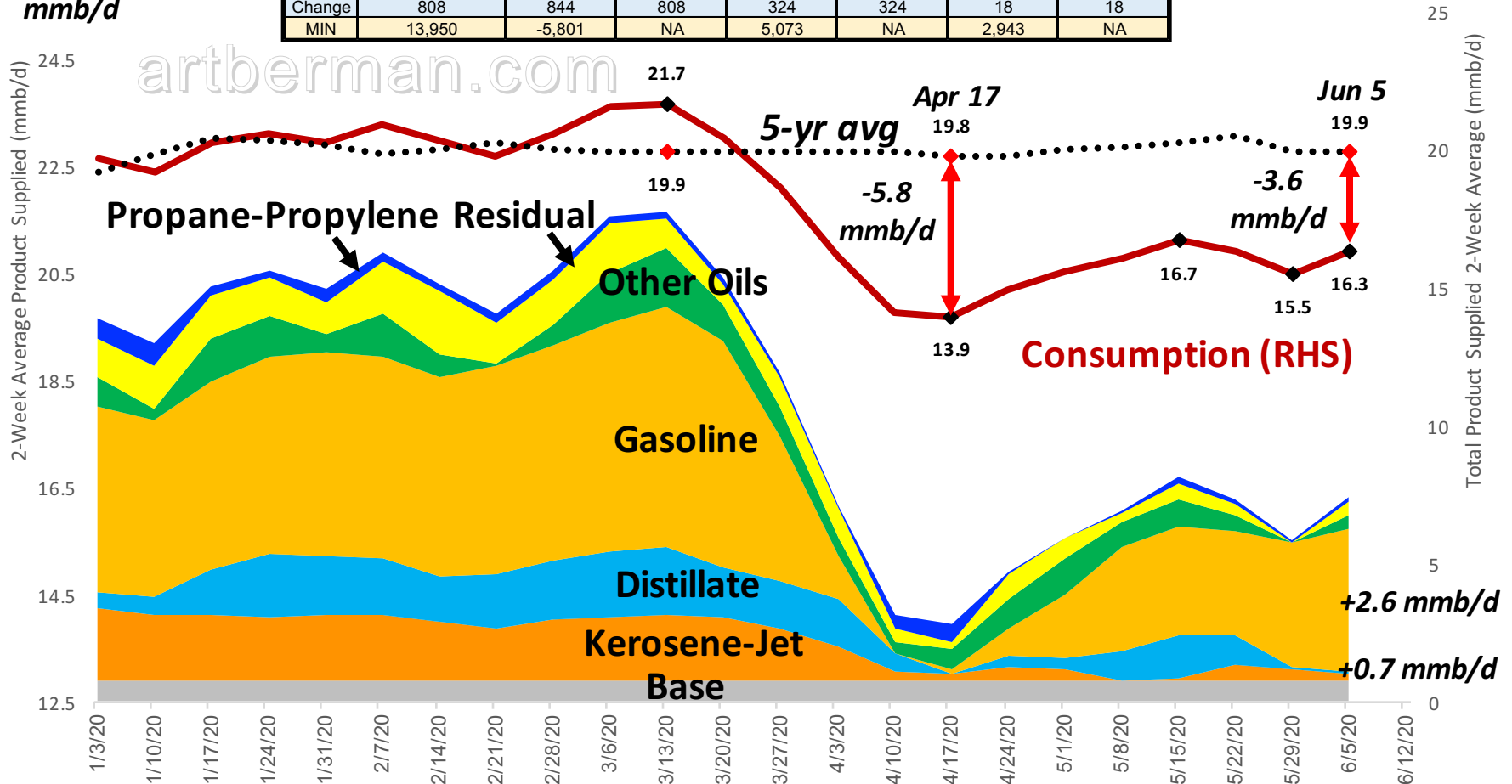
U.S. oil consumption rose +808 kb/d week ending June 5

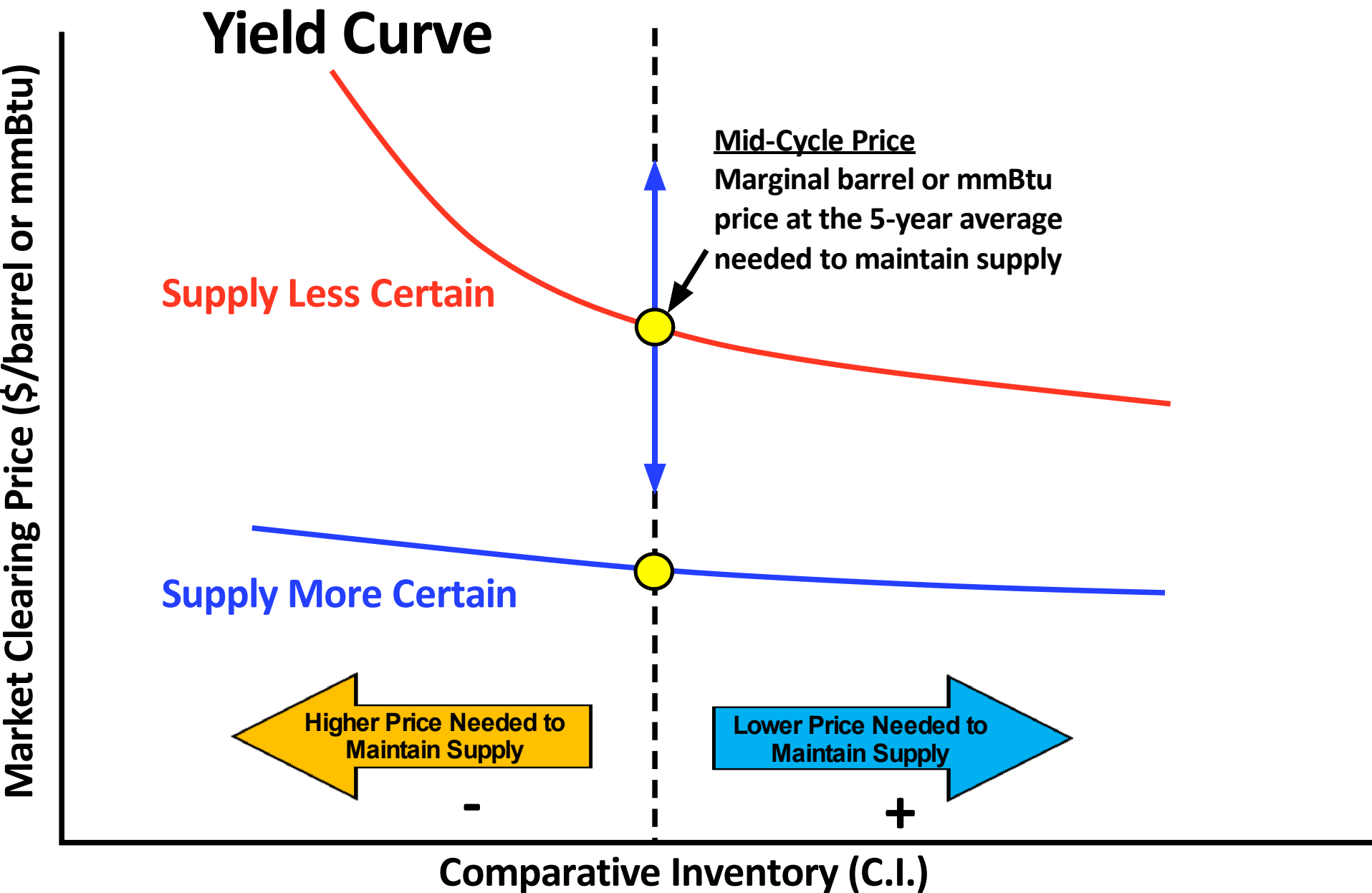
It increased to within 3.6 mmb/d (-18%) of 5-year average of 19.9 mmb/d for this week

Gasoline use increased +324 kb/d but diesel only increased +18 kb/d from last week

**Incremental
mmb/d**

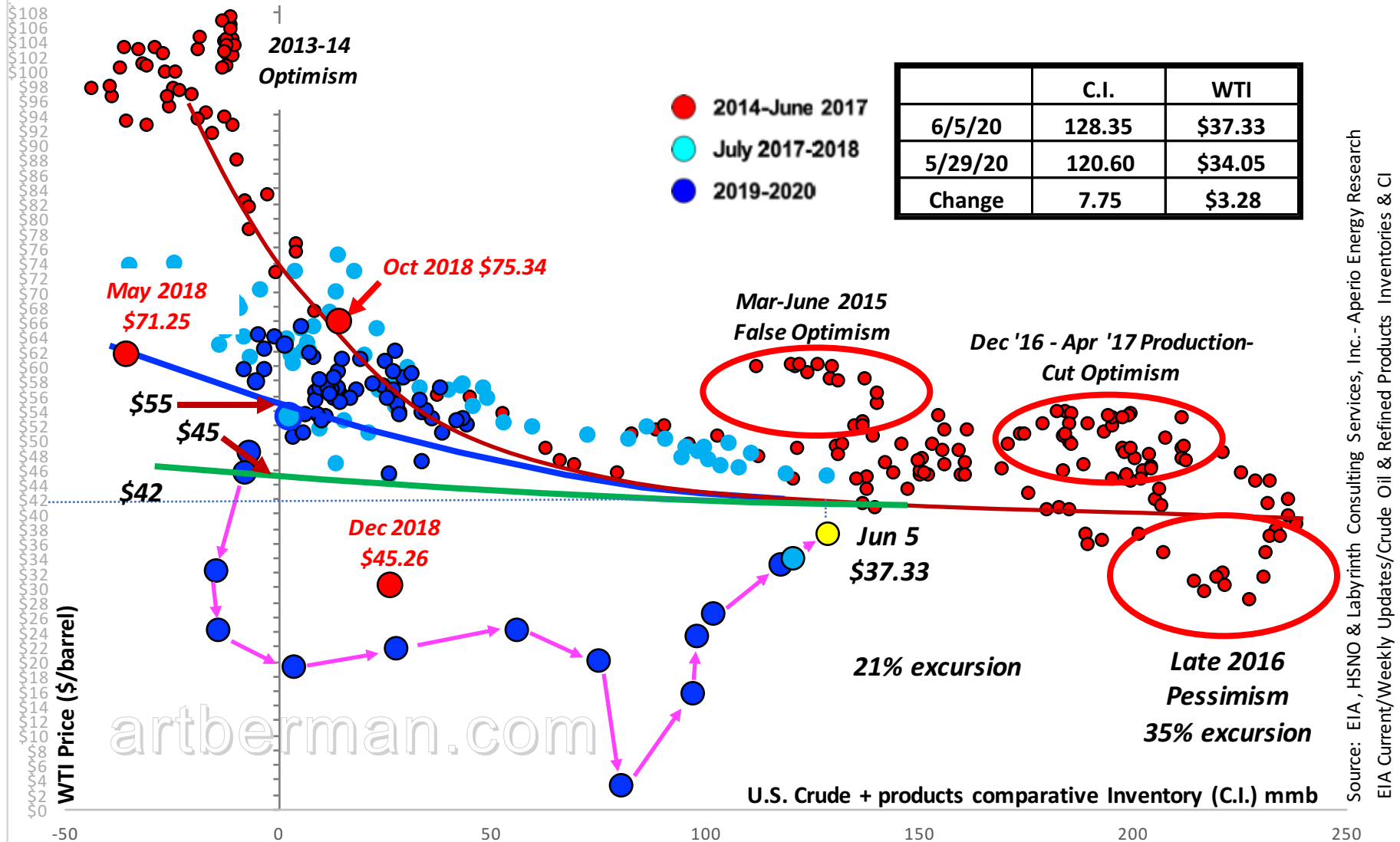
kb/d	Product Supplied	vs 5 Yr Avg	vs Min	Gasoline	vs Min	Diesel	vs Min
6/5/20	16,321	-3,559	2,371	7,725	2,652	3,010	68
5/29/20	15,513	-4,403	1,563	7,401	2,328	2,992	50
Change	808	844	808	324	324	18	18
MIN	13,950	-5,801	NA	5,073	NA	2,943	NA





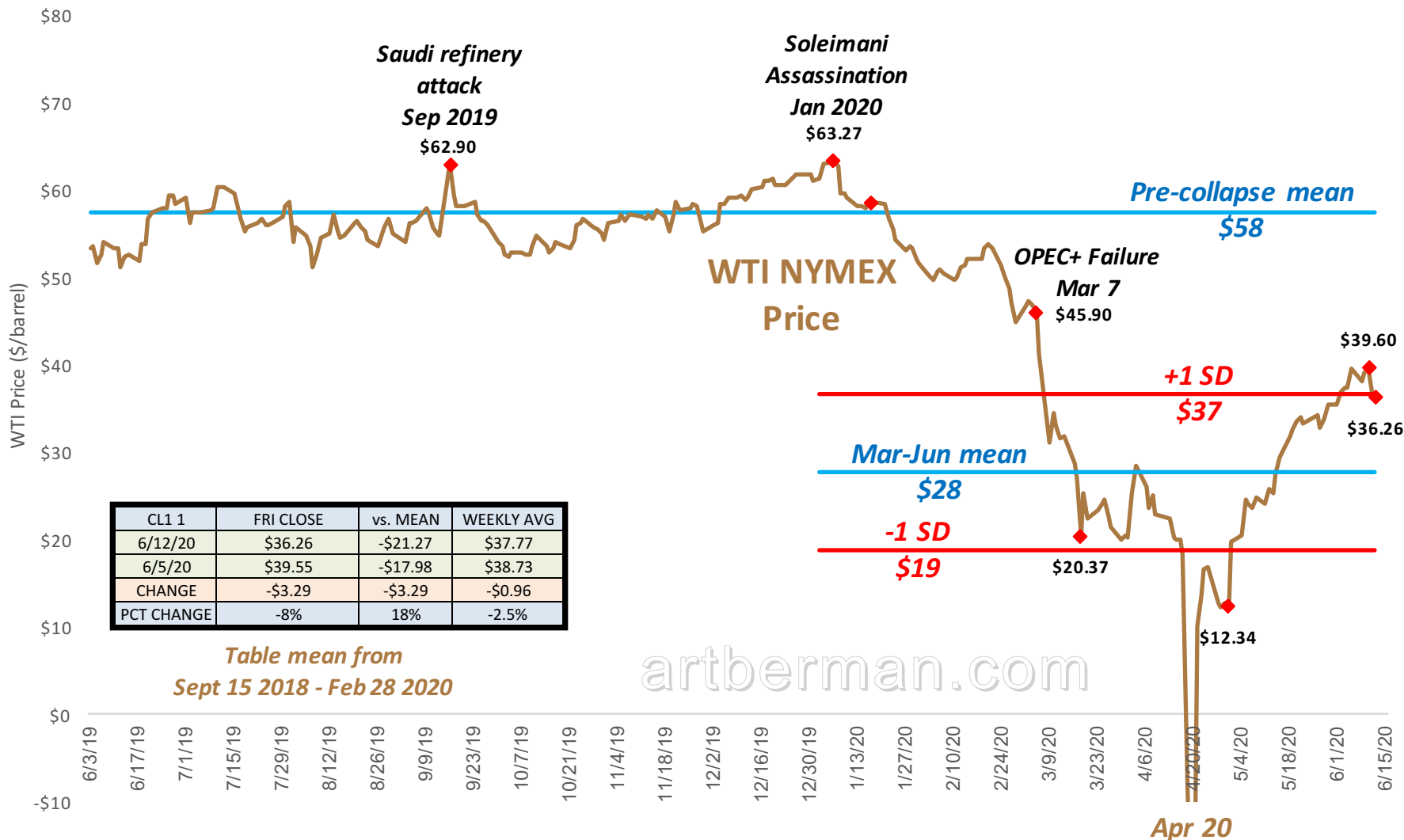
Source: Aperio Energy Research & Labyrinth Consulting Services, Inc.

**Comparative inventory increased +7.75 mmb week ending June 5
and is now +128 mmb more than the 5-year average**
WTI is approximately \$5 under-priced based on the green C.I. yield curve



Source: EIA, HSNO & Labyrinth Consulting Services, Inc. - Aperio Energy Research
EIA Current/Weekly Updates/Crude Oil & Refined Products Inventories & CI

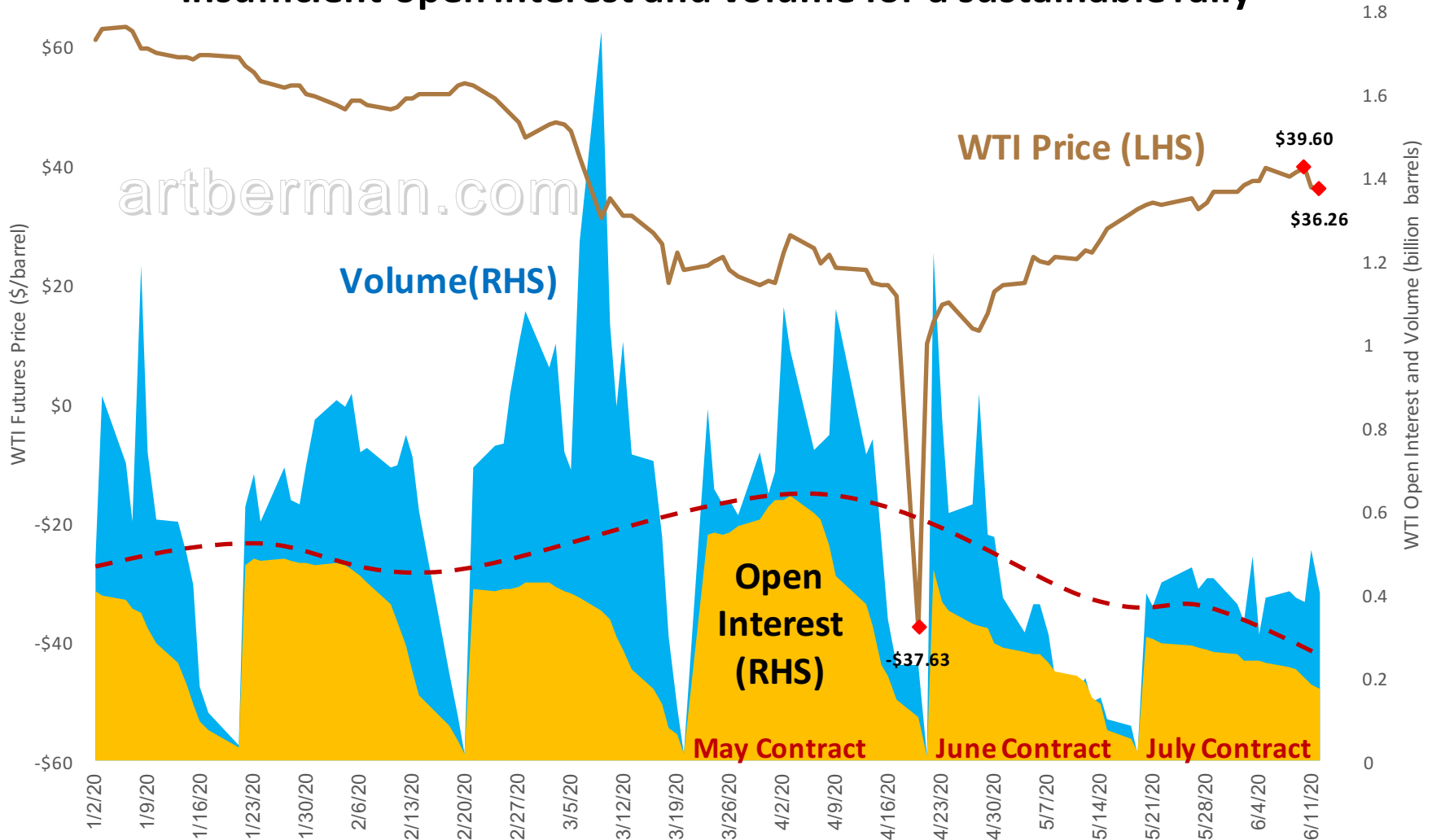
WTI price rally may have ended and price will probably stabilize in low-to-mid \$30 range
Price-discovery excursions between \$25 and below \$40
are likely in coming weeks based on news-cycle sentiment



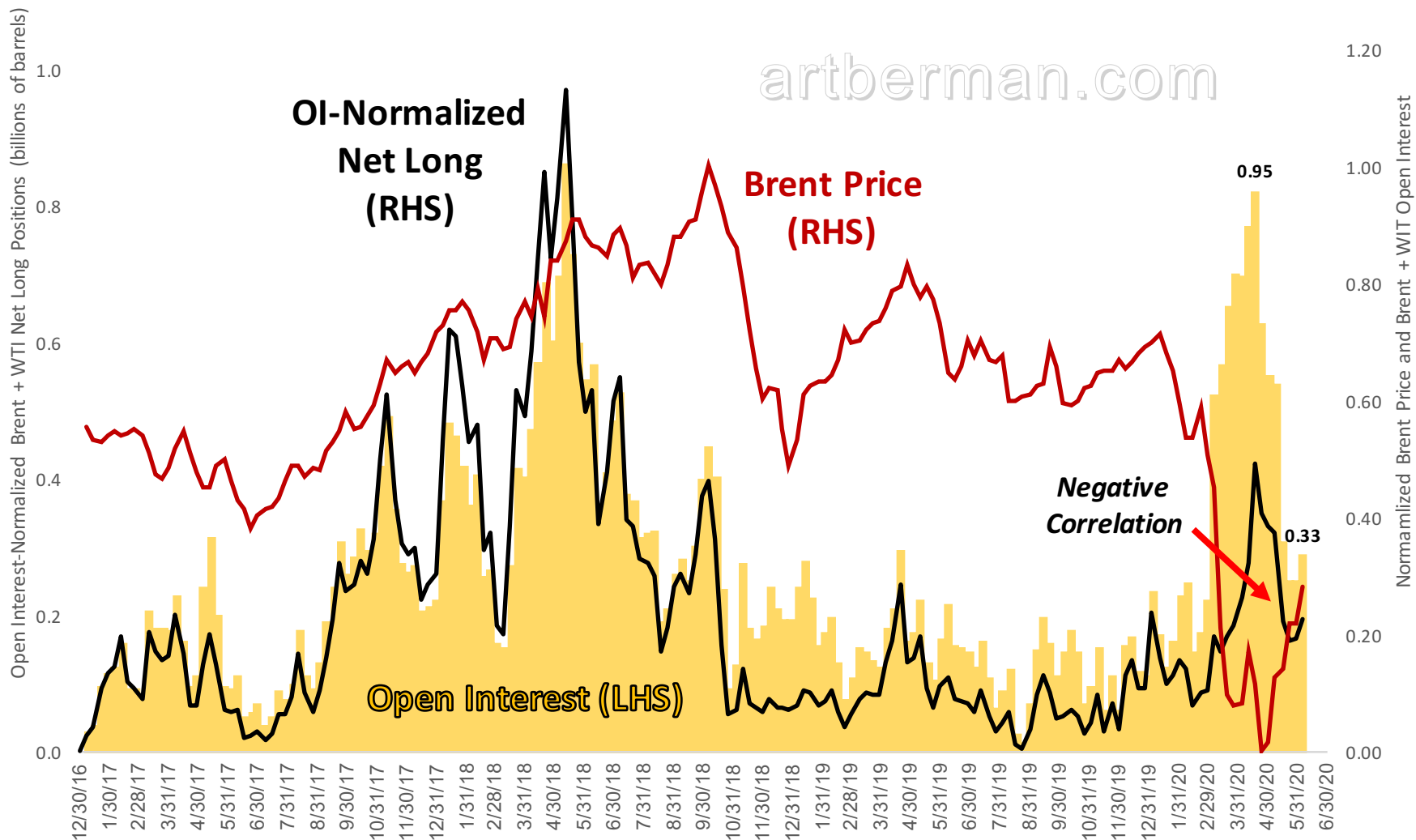
WTI oil-price rally is weakening

Boost from July contract roll was underwhelming

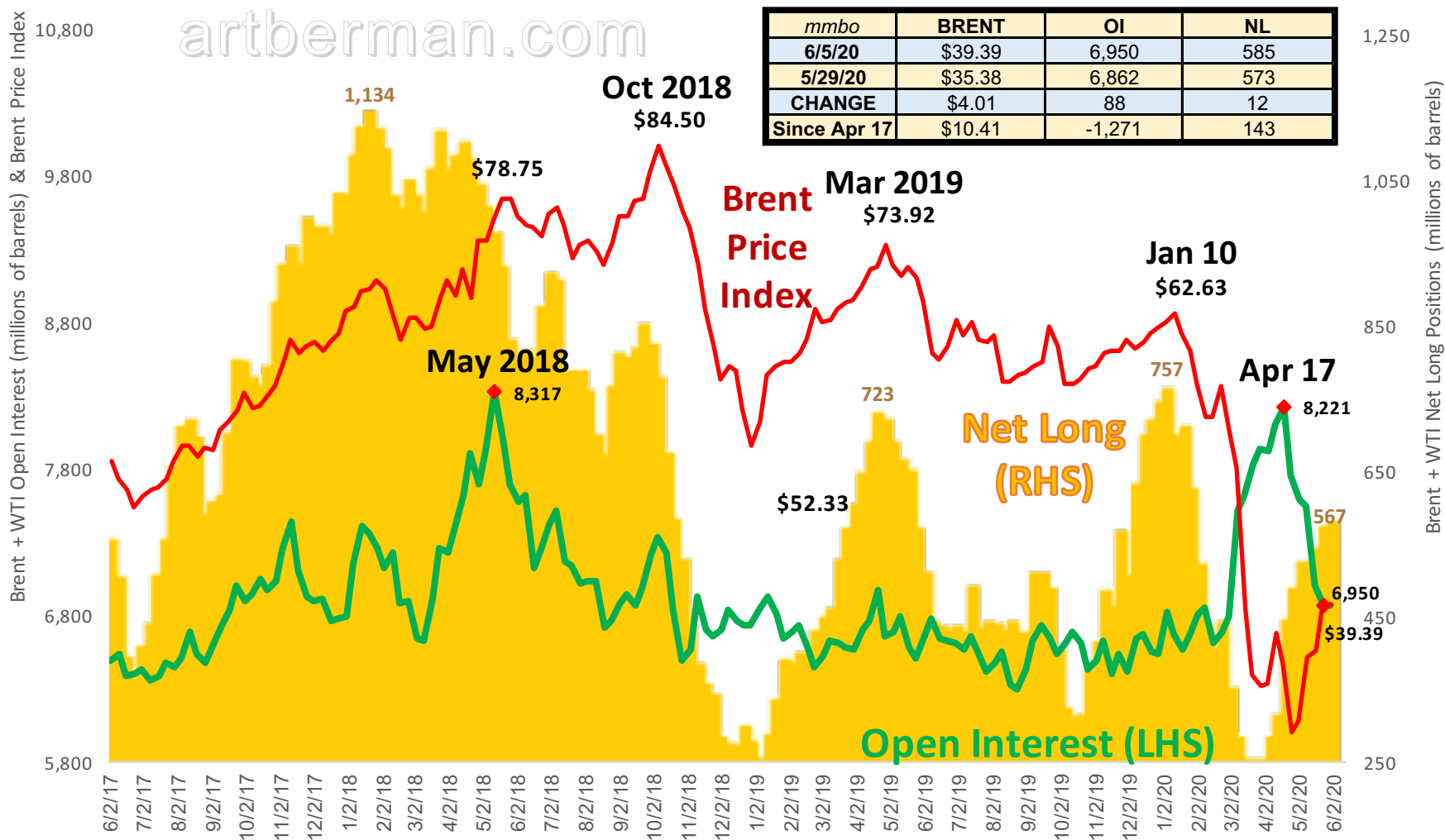
Insufficient open interest and volume for a sustainable rally



Oil futures markets are short on price in 2020
Net length and open interest correlate *negatively* with price in 2020
Before 2020, net length and open interest correlated *positively* with price

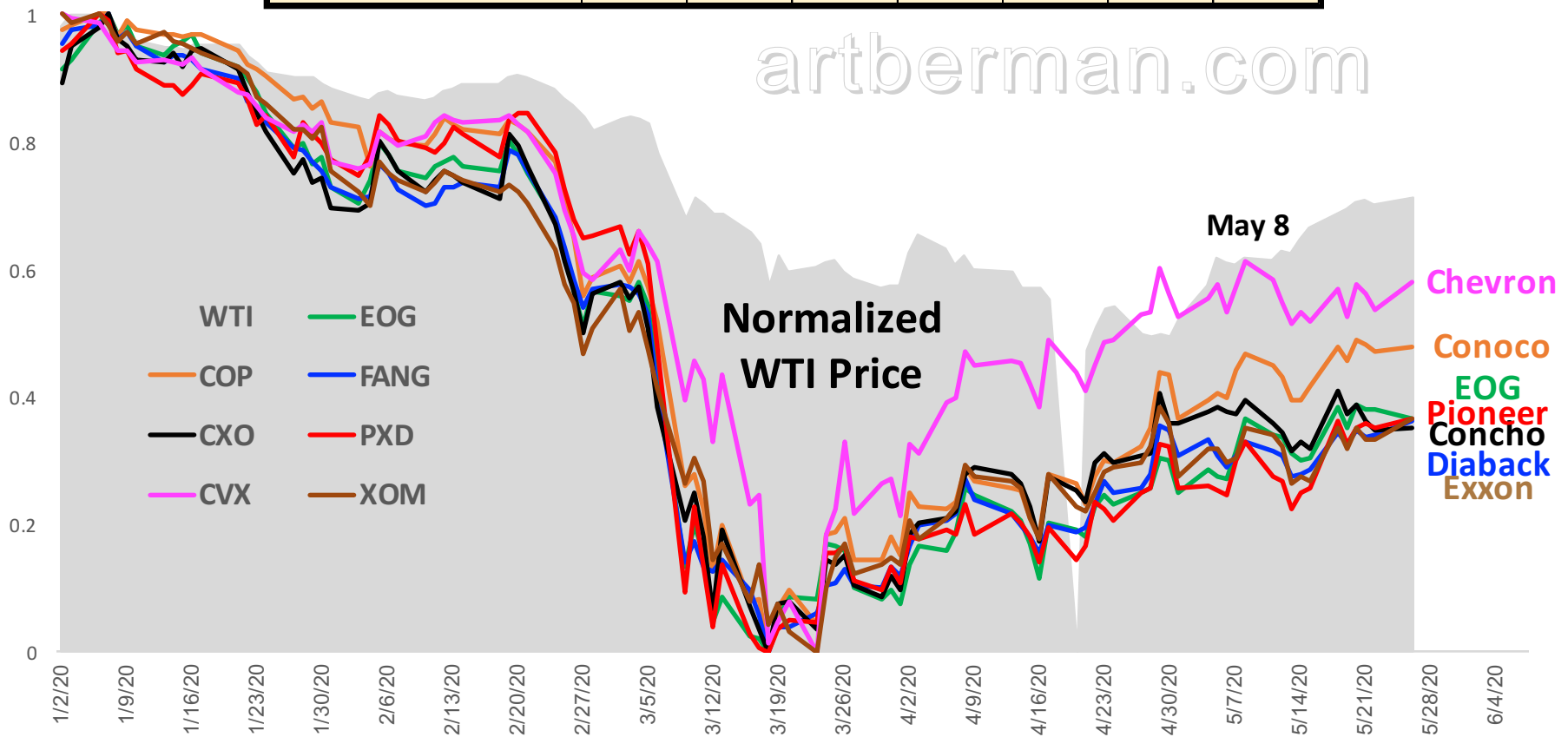


Brent + WTI price & net long positions are higher but open interest is lower
Brent + WTI open interest has fallen -1.3 bb (-15%) since April 17
but price is +\$10.41 (+36%) higher & net long positions have increased +143 mmb (+32%)



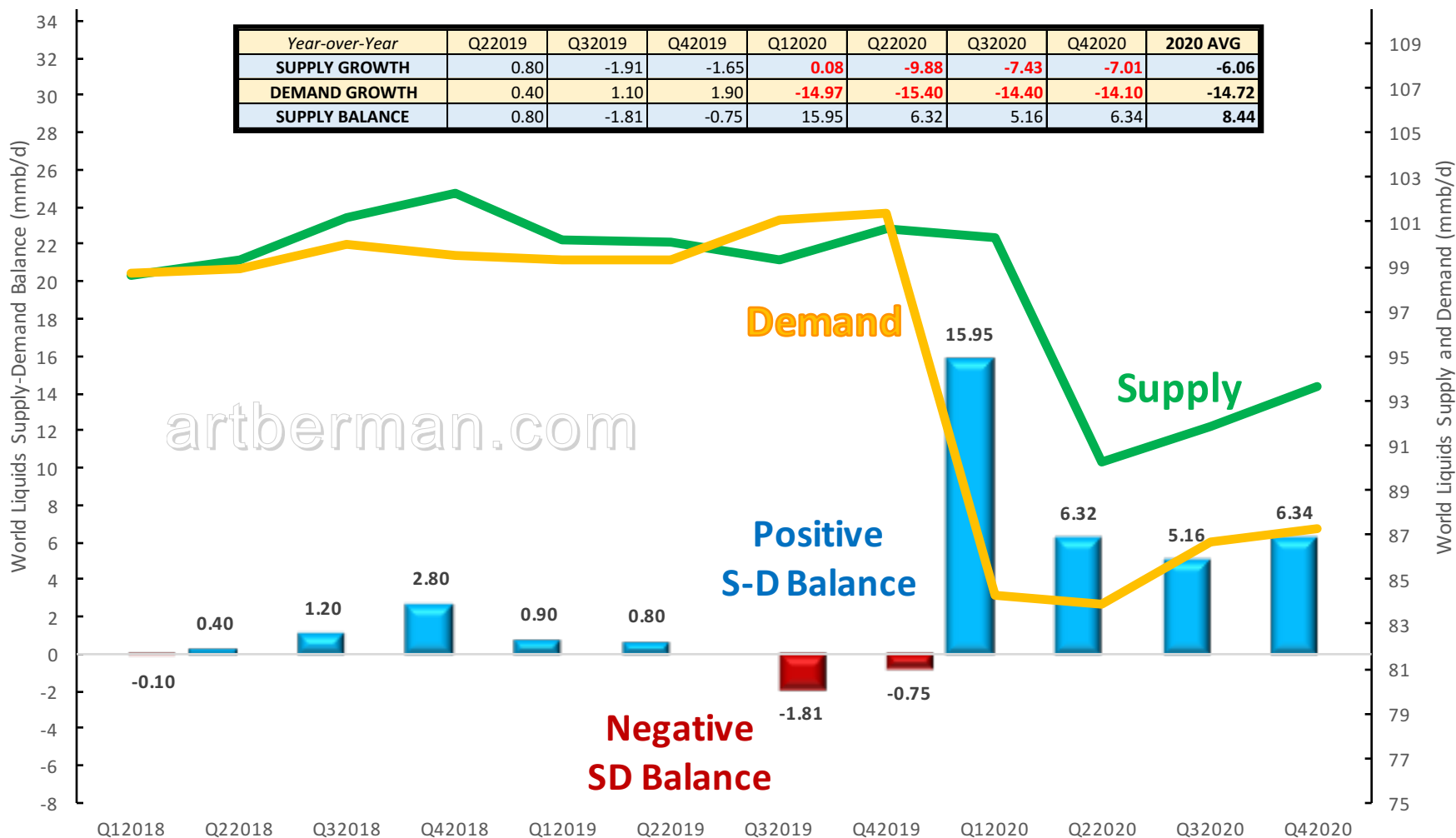
Average share price of sampled E&Ps increased 88% March-May
Price growth peaked in early May & has been relatively flat since then
Chevron & Conoco out-perform peers but all under-perform WTI

	CVX	XOM	EOG	COP	FANG	CXO	PXD
MID MAR-MAY 2020 MIN	\$54.22	\$31.45	\$29.76	\$22.67	\$15.56	\$36.00	\$56.77
MID MAR-MAY 2020 MAX	\$95.47	\$46.56	\$52.73	\$44.67	\$44.90	\$59.27	\$94.19
PCT CHANGE	76%	48%	77%	97%	189%	65%	66%



2020 global demand may average 15 mmb/d lower than in 2019

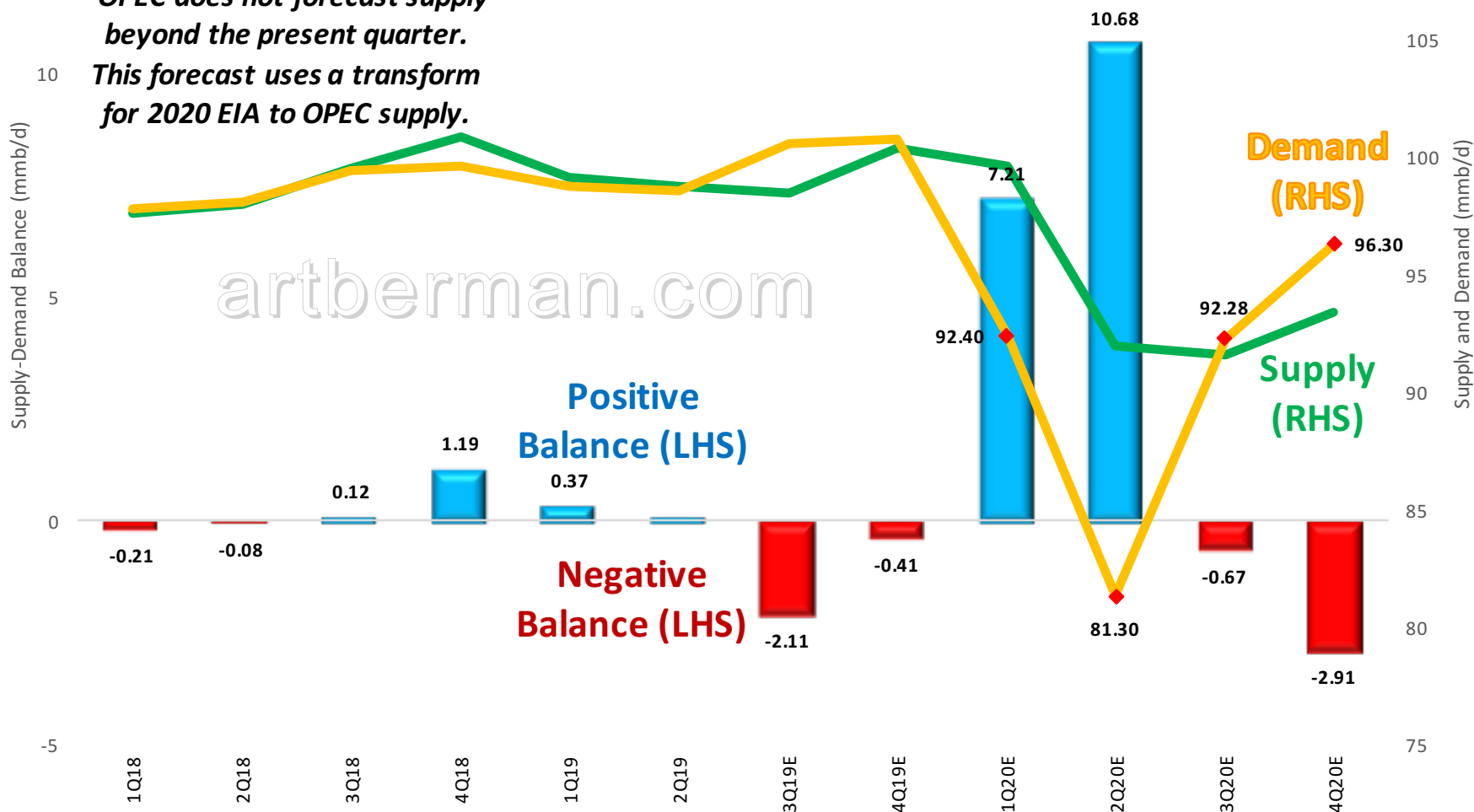
Supply-demand balance will follow L-shaped trajectory as markets remain over-supplied and global economy remains depressed through 2020



OPEC expects -9.1 mmb/d demand growth in 2020

OPEC-EIA* forecast anticipates +3.6 supply-demand surplus in 2020

**OPEC does not forecast supply beyond the present quarter.
This forecast uses a transform for 2020 EIA to OPEC supply.*



Source: OPEC, EIA & Labyrinth Consulting Services, Inc.

OPEC/Market Indicators/ OPEC Supply Demand Master

EIA expects implausible +14.2 mmb/d (+17%) recovery in world oil consumption
from 81.5 mmb/d in Q2 to 95.7 mmb/d in Q3

Consumption fell -12.7 (-13%) mmb/d in Q2 and -19.8 (-20%) mmb/d in IH 2020

