



HOULIHAN LOKEY

Oil and Gas

INDUSTRY UPDATE | Q1 2021



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Houlihan Lokey Oil and Gas Update

Dear Clients and Friends,

Houlihan Lokey is pleased to present its Oil and Gas Industry Update for Q1 2021.

We have included an overview of trends in the oil and gas industry, commodity pricing, public capital markets, M&A, A&D, and financing activity along with key data to help you stay ahead in our dynamic and constantly evolving industry. We hope you find this quarterly update to be informative and that it serves as a valuable resource to you in staying abreast of the market. If there is additional content you would find useful for future updates, please don't hesitate to call or email us with your suggestions. We look forward to staying in touch with you.

Regards,



J.P. Hanson
Managing Director
Head of the Oil & Gas Group
1001 Fannin Street,
Suite 4650
Houston, TX 77002
JHanson@HL.com
832.319.5115



Robert Teigman
Director
Oil & Gas Valuation and
Board Advisory
1001 Fannin Street, Suite 4650
Houston, TX 77002
RTeigman@HL.com
832.319.5138

Additional Oil & Gas Group Contacts

Michael Roberts
Managing Director
MRoberts@HL.com
832.319.5141

Brett Lowrey
Managing Director
BLowrey@HL.com
214.220.8480

Mike Giffin
Managing Director
MGiffin@HL.com
214.220.8485

Shane Sealy
Managing Director
SSealy@HL.com
832.319.5133

Daniel Crowley
Managing Director
DCrowley@HL.com
212.497.7845

Josh Eaves
Managing Director
JEaves@HL.com
212.497.4273

Russell Mason
Managing Director
RMason@HL.com
214.665.8622

Chris Sweet
Managing Director
CSweet@HL.com
832.319.5140

Javier Artola
Managing Director
JArtola@HL.com
832.319.5110

Jeremy Low
Managing Director
JLow@HL.com
+44 (0) 20 7907 4241

Manuel Amaro
Director
MAmaro@HL.com
832.319.5159

Mukul Hariharan
Director
MHariharan@HL.com
832.319.5145

Jerry Eumont
Director, Geologist
JEumont@HL.com
832.319.5119

Tom Hughes
Director
THHughes@HL.com
+44 (0) 20 7747 7593

Anton Pismenyuk
Senior Vice President
APismenyuk@HL.com
832.319.5167

Manny Vedi
Senior Vice President
MVedi@HL.com
832.319.5135

Braxton Knopp
Vice President
BKnopp@HL.com
832.319.5170

Brad Bucher
Vice President
BBucher@HL.com
832.319.5161

Key Quarterly Trends

- **Commodity Price Lookback**

- Throughout Q1 '21, oil demand continued rebounding from the price devastation in 2020 due to COVID-19
- OPEC+ oil supply cuts have been maintained through Q1 '21 and appear to have stabilized WTI >\$60/bbl
- Gas prices were robust for much of 2020 due to declines in associated gas, but were volatile in Q1 '21 as they tried to find footing amid improving oil prices and uncertain weather
- Through Q2 '21 to date, the commodity environment has remained robust as global reopening has spurred demand.

- **M&A&D Markets**

- Beginning in Q4 '20, corporate M&A activity picked up dramatically as the dominant structure for upstream dealmaking
- That trend has continued through YTD 2021 as favorable market conditions have led to the first truly constructive and robust environment for cash A&D (in addition to M&A) transactions in several years
- Further consolidation is both required and anticipated as companies attempt to achieve the scale and consistent cash flow returns necessary to attract institutional capital

- **Debt Capital Markets**

- The RBL market is in a state of transition; recent (and material) impairments have resulted in (i) a number of RBL lenders exiting the industry entirely and (ii) remaining lenders tightening standards and high-grading borrowers (and sponsors)
- Public HY activity has rapidly increased since late Q3 '20, in response to E&P performance, capital discipline, and as investors search for yield (HY issuances in Q1 '21 were up 260% and 184% YoY, in terms of deal count and total issuance volume, respectively)
- The transformed RBL universe with multiple lenders going “risk-off” or HY (selective) “risk-on” creates a number of interesting opportunities, particularly for companies lacking size/scale/leverage profile to access the latter
 - Private debt and structured solution providers continue to offer a broad array of nimble, creative capital; bespoke solutions are available in terms of standard refinancing capital, development financing, and acquisition capital at a modest spread above RBL pricing
 - Greenshoots in the RBL market are also evident in several recently syndicated new and refinanced RBLs YTD 2021, including Wells Fargo RBL supporting the Grayson Mill acquisition and in certain regional banks seeking to originate new RBLs in an effort to capitalize market share

Key Quarterly Trends (cont.)

- **Equity Capital Markets**

- Public equity investor appetites have continued to focus on cash flow performance and capital returns
 - Other than the Vine Energy Inc. IPO in Q1 '21, the IPO market remains quiet, limiting exit alternatives for PE-backed E&Ps
 - Accordingly, private equity is increasingly focused on scale, sustainably low leverage, cash flow generation, and creative exit alternatives (including “SmashCos” to create scale, and significant takeback consideration)
- In this environment, and given recent improving commodity prices, public equity values have appreciated materially; the S&P Exploration and Production Index is the best performing sector, up >40% in YTD 2021
 - This dynamic has facilitated secondary market offerings for a number of opportunistic issuers with proceeds dedicated to deleveraging (e.g., Antero and Talos) and/or acquisition financing (e.g., Enerplus/Bruin)
 - This capital inflow has increased M&A&D activity, as public acquirers have enhanced optionality to raise cash from equity markets to fund acquisitions

- **Other Trends and Tidbits**

- Scale to maximize cash flow efficiency and productivity remains critical to attracting institutional capital
- Traditional long-term mutual funds, and other public securities investors that benchmark against S&P index weightings, are generally selective in SMID E&P exposure (particularly those without sustainable cash flow generation)
- Public equity investors have been generally supportive of M&A transactions (especially at little or no premium), particularly corporate-level transactions that enable producers to (i) increase and/or achieve positive cash flow by increasing scale, (ii) reduce costs (at both the corporate and field level), and (iii) improve capital and operating efficiencies.
- ESG remains a key factor, with environmental KPIs beginning to impact RBL pricing grids
- Companies remain highly focused on return of capital, as reflected by the increasing popularity of “fixed plus variable” dividend policies and restrained reinvestment rates

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Houlihan Lokey is the trusted advisor to more top decision-makers than any other independent global investment bank.

Corporate Finance

2020 M&A Advisory Rankings All U.S. Transactions

Advisor	Deals
1 Houlihan Lokey	210
2 Goldman Sachs & Co	172
3 JP Morgan	132
4 Evercore Partners	126
5 Morgan Stanley	123

Source: Refinitiv (formerly known as Thomson Reuters)

No. 1 U.S. M&A Advisor

Top 5 Global M&A Advisor

Leading Capital Markets Advisor

Financial Restructuring

2020 Global Distressed Debt & Bankruptcy Restructuring Rankings

Advisor	Deals
1 Houlihan Lokey	106
2 PJT Partners Inc	63
3 Lazard	50
4 Rothschild & Co	46
5 Moelis & Co	39

Source: Refinitiv (formerly known as Thomson Reuters)

No. 1 Global Investment
Banking Restructuring Advisor

1,400+ Transactions Completed
Valued at More Than
\$3.0 Trillion Collectively

Financial and Valuation Advisory

2001 to 2020 Global M&A Fairness Advisory Rankings

Advisor	Deals
1 Houlihan Lokey	956
2 JP Morgan	876
3 Duff & Phelps	802
4 Morgan Stanley	599
5 BofA Securities Inc	542

Refinitiv (formerly known as Thomson Reuters). Announced or completed transactions.

No. 1 Global M&A Fairness
Opinion Advisor Over the Past
20 Years

1,000+ Annual Valuation
Engagements

Energy and Power M&A

2020 M&A Advisory Rankings All U.S. Energy & Power Transactions

Advisor	Deals
1 Houlihan Lokey	28
1 Evercore Partners	28
3 Goldman Sachs & Co	19
4 Lazard	17
5 Moelis & Co	14
5 AlixPartners	14

Source: Refinitiv (formerly known as Thomson Reuters)

No. 1 M&A Advisor for U.S.
Energy & Power Transactions

Global Oil and Gas Footprint: Fully Integrated Team

Houlihan Lokey's Oil & Gas Group provides global coverage via more than 60+ dedicated financial professionals, including specialized bankers, A&D/technical advisory, valuation, and capital markets teams.

J.P. Hanson Global Head, Oil & Gas Group

New York

Thomas Dippel <i>Managing Director</i> Financial Sponsors	Joshua Eaves <i>Managing Director</i> Banking/Coverage	Michael Haney <i>Director</i> Banking/Coverage	Andrew Sandberg <i>Vice President</i> Valuation/Diligence	Ahmed Moussa <i>Associate</i> Banking/Coverage
Drew McGeary <i>Financial Analyst</i> Banking/Coverage	Thomas Schnepf <i>Financial Analyst</i> Banking/Coverage			

Houston

Michael Roberts <i>Managing Director,</i> <i>Capital Markets</i> Banking/Coverage	Shane Sealy <i>Managing Director</i> Banking/Coverage	Chris Sweet <i>Managing Director,</i> <i>Capital Markets</i> Banking/Coverage	Dan Crowley <i>Managing Director</i> Banking/Coverage	Javier Artola <i>Managing Director</i> <i>Midstream</i> Banking/Coverage	Robert Teigman <i>Director</i> Banking/Coverage
Mukul Hariharan <i>Director</i> <i>Capital Markets</i> Banking/Coverage	Jerry Eumont <i>Director, Geologist</i> Technical/A&D	Manuel Amaro <i>Director</i> Technical/A&D	Anton Pismenyuk <i>Senior Vice President</i> Banking/Coverage	Brian Zimmerman <i>Senior Vice President</i> Valuation/TAS	Manny Vedi <i>Senior Vice President</i> Banking/Coverage
Paul Coraci <i>Vice President</i> Banking/Coverage	Braxton Knopp <i>Vice President</i> Banking/Coverage	Brad Bucher <i>Vice President</i> Banking/Coverage	Austin Brooks <i>Associate</i> Banking/Coverage	Bryan Csikos <i>Associate</i> Banking/Coverage	Jeff Rhea <i>Associate</i> Banking/Coverage
Chirag Makanji <i>Associate</i> Valuation/Diligence	Nick Self <i>Financial Analyst</i> Banking/Coverage	Chris Domingue <i>Financial Analyst</i> Banking/Coverage	Shogo Dunn <i>Financial Analyst</i> Banking/Coverage	Bronson Dicks <i>Financial Analyst</i> Banking/Coverage	Tyler Cox <i>Financial Analyst</i> Banking/Coverage
John Kinsella <i>Financial Analyst</i> Banking/Coverage	Nick Linton <i>Financial Analyst</i> Banking/Coverage	Thomas Andreen <i>Petroleum Engineer</i> Technical/A&D	Richard Villanueva <i>Petroleum Engineer</i> Technical/A&D	Eric Kebodeaux <i>Engineering Associate</i> Technical/A&D	Avinash Mohapatra <i>Geoscientist</i> Technical/A&D
Andrea Vasquez <i>Geological Technician</i> Technical/A&D	Eduardo Trevino <i>Engineering Associate</i> Technical/A&D				

Dallas

Brett Lowrey <i>Managing Director</i> Banking/Coverage	Mike Giffin <i>Managing Director</i> Valuation/TAS	Russell Mason <i>Managing Director</i> Banking/Coverage	Daniel Beaulne <i>Director</i> Valuation/TAS	Jim Georgeadis <i>Senior Vice President</i> Banking/Coverage
Heather Bolner <i>Vice President</i> Valuation/TAS	Blake Donovan <i>Associate</i> Banking/Coverage	Ariel Berkowitz <i>Associate</i> Banking/Coverage	Paul Civello <i>Financial Analyst</i> Banking/Coverage	Andrew McClain <i>Financial Analyst</i> Banking/Coverage
Micah Poag <i>Financial Analyst</i> Banking/Coverage	Jonathan Coppens <i>Financial Analyst</i> Banking/Coverage			

Europe

Jeremy Low <i>Managing Director</i>	Thomas Hughes <i>Director</i>
Thomas Wheeler <i>Vice President</i>	Raffaello Avakov <i>Associate</i>

Asia-Pacific

Tom Seward <i>Managing Director</i>	David Ho <i>Director</i>	Patrick Yang <i>Associate</i>
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MENA

Kurt Davis <i>Senior Vice President</i>	Walid Chamma <i>Associate</i>	Ramzi Flayhan <i>Financial Analyst</i>
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Cross-Product Industry Team

Technical / A&D

- More than \$50 billion in combined transactions
- Specialists in:
 - Technical advisory
 - Asset dispositions/swaps
 - Equity/working interest sales
 - JV structuring/partner identification

Mergers & Acquisitions

- No. 1 U.S. M&A Advisor
- Corporate M&A/spin-off advisory, structuring, negotiation and execution
- Extensive reach in market trends and relationships
- Specialize in tailored processes to maximize value for our clients

Recapitalization/Restructuring

- We have been engaged in the most notable E&P recapitalizations/restructurings of the recent and prior commodity downturn cycles



Capital Markets

- ~\$9 billion of capital raised in 2020
- Market leader in custom/bespoke structure

Financial Advisory

- No. 1 Global M&A Fairness Opinion Advisor Over the Past 20 Years
- 1,000+ annual valuation engagements
- Transaction advisory services, including ability to bundle due diligence and QoF services

Trusted Advisor

- During the past several years, Houlihan Lokey's fully integrated, cross-product Oil & Gas Group has advised on numerous capital raise, M&A, corporate finance, and recapitalization assignments in the E&P industry

Veteran Leadership Team

- O&G investment banking team is a cross-product, global, industry dedicated team of 60+ highly experienced professionals
- Diverse set of backgrounds, including E&P companies, midstream companies, other investment banks, investment funds, and research/brokerage shops
- A&D/technical group is led by a team of technically focused professionals from the industry, with an average of 25+ years of industry experience

Selected Transactions⁽¹⁾

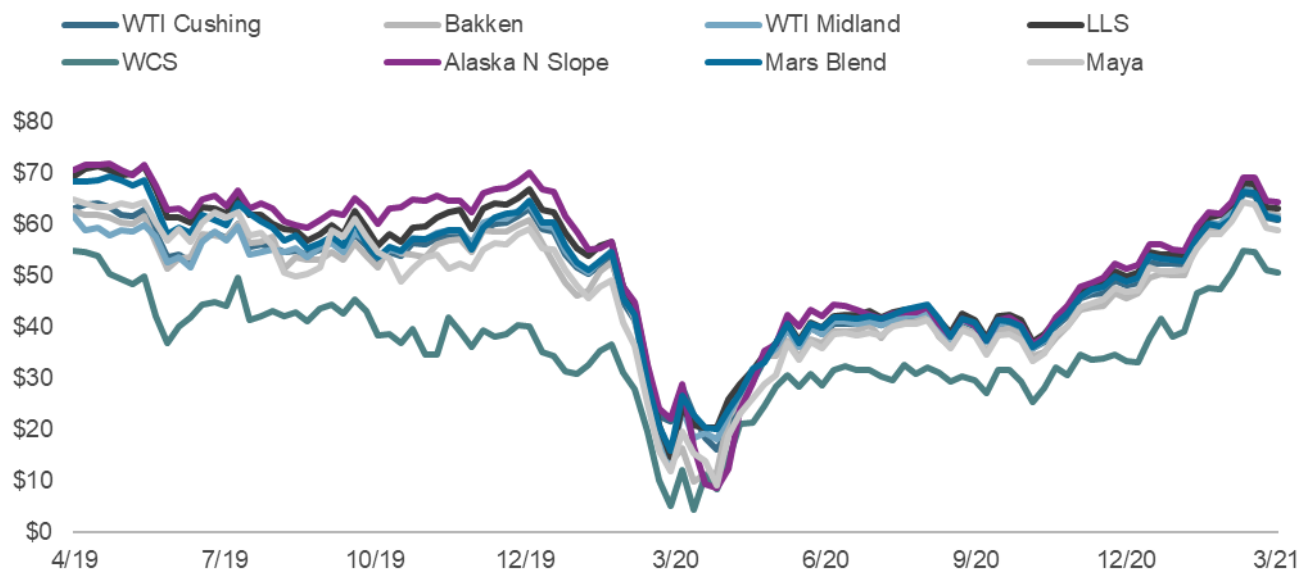
<p>Transaction Pending</p> <p>has agreed to acquire the assets of</p> <p>Buy-side Advisor</p>	<p>Transaction Pending</p> <p>has agreed to sell a 37.5% wellbore interest in certain Legacy PDP assets to</p> <p>Sell-side Advisor</p>	<p>has confirmed a "prepackaged" Chapter 11 Plan of Reorganization</p> <p>Secured Lender Advisor</p>	<p>has acquired</p> <p>Company Advisor</p>	<p>has completed the sale of its East Texas and North Louisiana properties</p> <p>Sell-side Advisor</p>	<p>has completed the divestiture of its Hugoton assets</p> <p>Sell-side Advisor</p>
<p>has confirmed a "prearranged" Chapter 11 Plan of Reorganization</p> <p>RBL Lender Advisor</p>	<p>has completed a "merger-of-equals" with</p> <p>Sell-side Advisor and Fairness Opinion</p>	<p>has completed the refinancing of Senior Secured Notes through a combined issuance of Term Loan B and new Senior Secured Notes</p> <p>\$1,870,000,000</p> <p>Joint Lead Arranger & Joint Lead Manager</p>	<p>a portfolio company of</p> <p>Reserve-Based Lending Facility Refinancing</p> <p>\$500,000,000</p> <p>Exclusive Placement Agent</p>	<p>has eliminated its incentive distribution rights through the issuance of common units to</p> <p>Financial Advisor & Fairness Opinion</p>	<p>has acquired ~44,500 net acres in Potter and Tioga Counties, PA from</p> <p>Financial Advisor & Fairness Opinion</p>

(1) Please reach out to Manny VEDI at 832.319.5135 or MVEDI@HL.com for additional Oil & Gas Group qualifications. Tombstones included herein represent select transactions closed from 2017 forward.

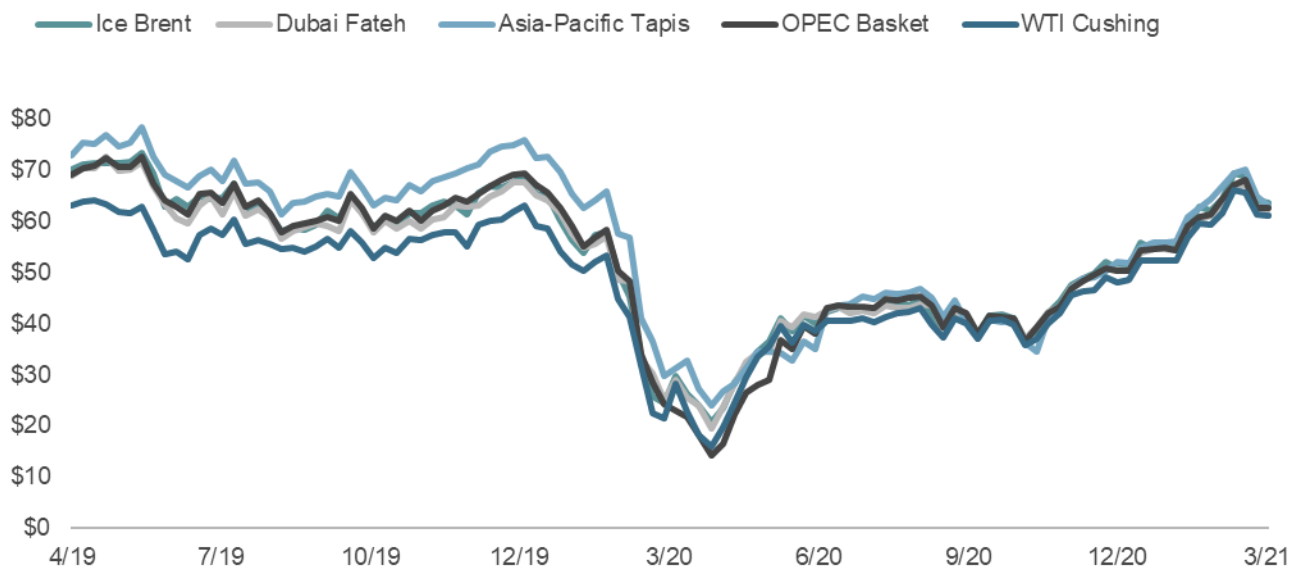
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Spot Pricing

North American Spot Prices (\$/bbl)

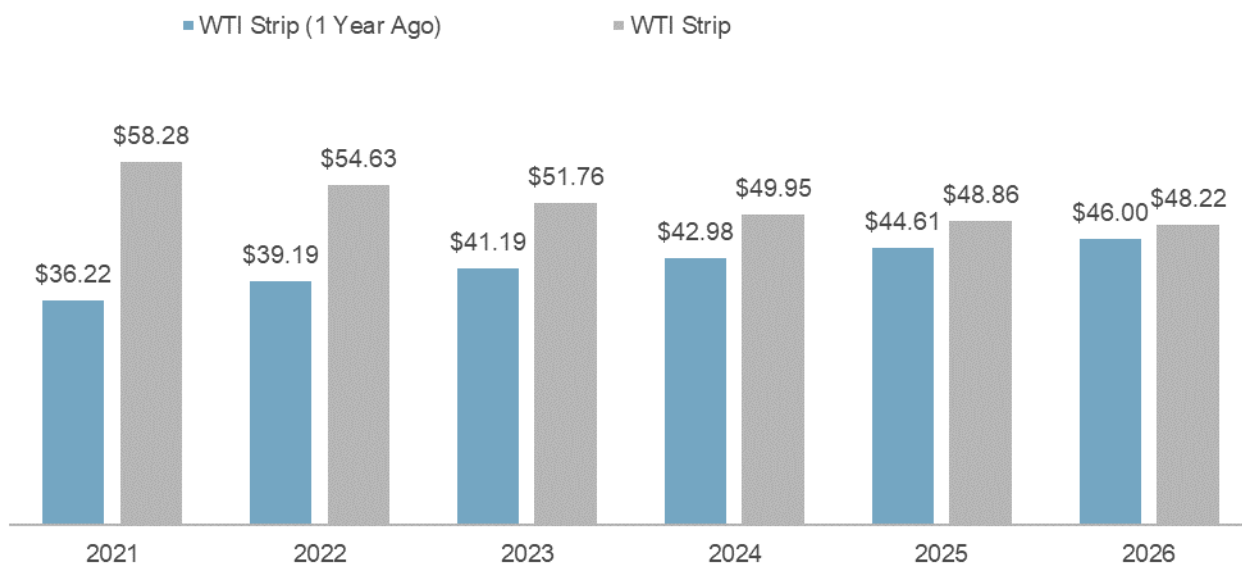


International Spot Prices (\$/bbl)

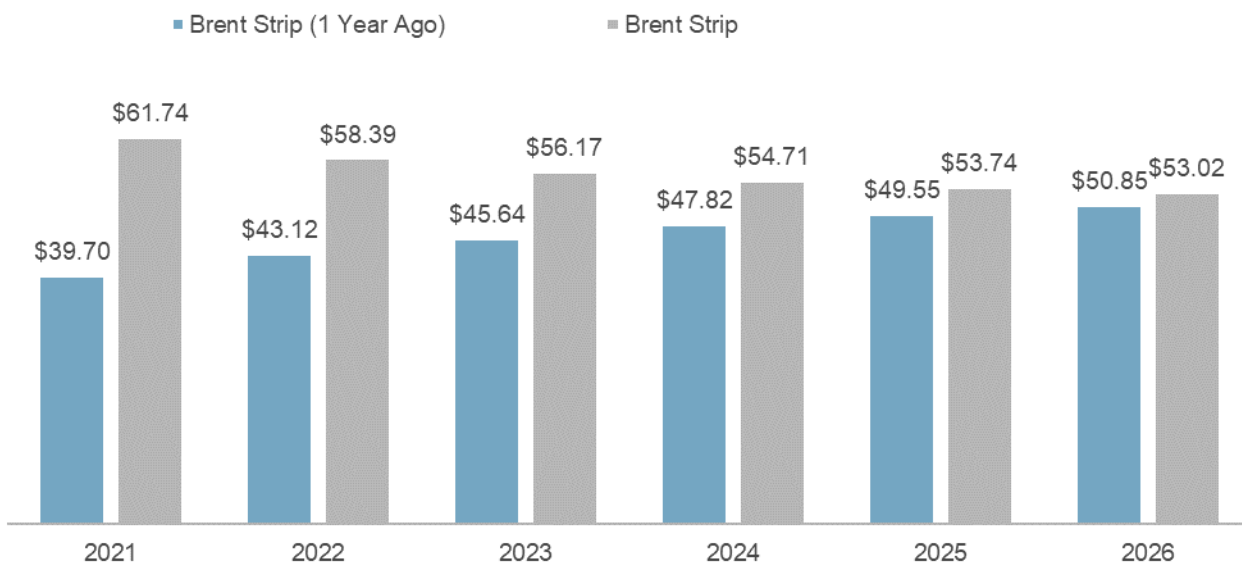


Strip Pricing

WTI Cushing Strip Pricing Comparison (\$/bbl)

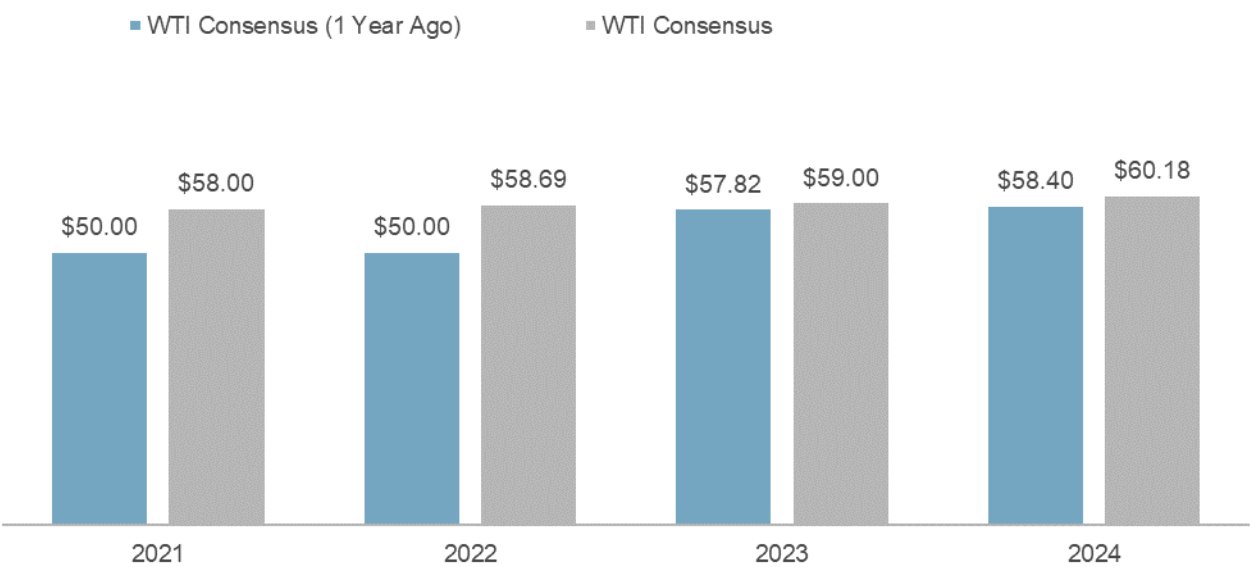


Brent Strip Pricing Comparison (\$/bbl)



Consensus Pricing

WTI Cushing Consensus Pricing Comparison (\$/bbl)



Brent Consensus Pricing Comparison (\$/bbl)



Differentials

Regional Crude Oil Spot Pricing

Region	3/31/2021	3/31/2020	12/31/2020	YoY % Change	QoQ % Change
Brent	\$62.4	\$21.5	\$51.2	190.7%	22.0%
<i>Brent – WTI Cushing</i>	\$3.3	\$1.0	\$2.7		
WTI Cushing	\$59.2	\$20.5	\$48.5	188.9%	21.9%
<i>WTI Cushing – Brent</i>	(\$3.3)	(\$1.0)	(\$2.7)		
WTI Midland	\$59.7	\$14.0	\$49.6	327.1%	20.3%
<i>WTI Cushing – WTI Midland</i>	(\$0.6)	\$6.5	(\$1.1)		
Bakken	\$60.3	\$9.0	\$46.5	571.0%	29.5%
<i>WTI Cushing – Bakken</i>	(\$1.1)	\$11.5	\$2.0		
Eagle Ford Light	\$55.6	\$16.8	\$45.0	232.2%	23.6%
<i>WTI Cushing – Eagle Ford Light</i>	\$3.5	\$3.7	\$3.5		
WTS	\$59.6	\$11.2	\$49.7	430.4%	19.8%
<i>WTI Cushing – WTS</i>	(\$0.4)	\$9.3	(\$1.2)		
WCS	\$48.9	\$5.1	\$33.2	862.6%	47.4%
<i>WTI Cushing – WCS</i>	\$10.3	\$15.4	\$15.4		
Maya	\$57.6	\$10.3	\$47.2	458.8%	22.0%
<i>Maya – WCS</i>	\$8.7	\$5.2	\$14.0		
Mars	\$59.5	\$14.7	\$49.6	303.7%	20.0%
<i>WTI Cushing – Mars</i>	(\$0.3)	\$5.8	(\$1.1)		
LLS	\$61.4	\$14.5	\$50.7	324.1%	21.1%
<i>LLS – Maya</i>	\$3.8	\$4.2	\$3.5		
ANS	\$62.3	\$21.7	\$52.2	186.7%	19.4%
<i>Brent – ANS</i>	\$0.1	(\$0.3)	(\$1.0)		

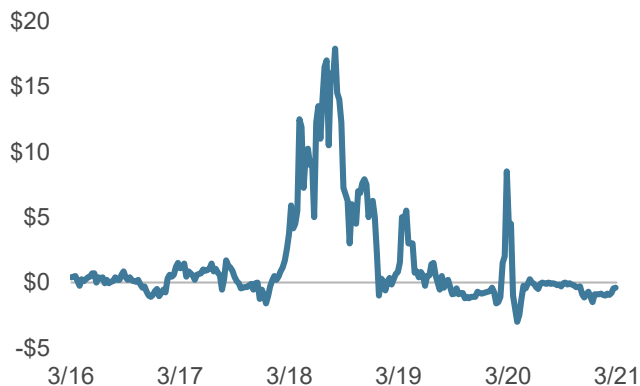
Note: All data as of March 31, 2021. Data collected on a daily basis.
Source: Bloomberg.

Differentials (\$/bbl)

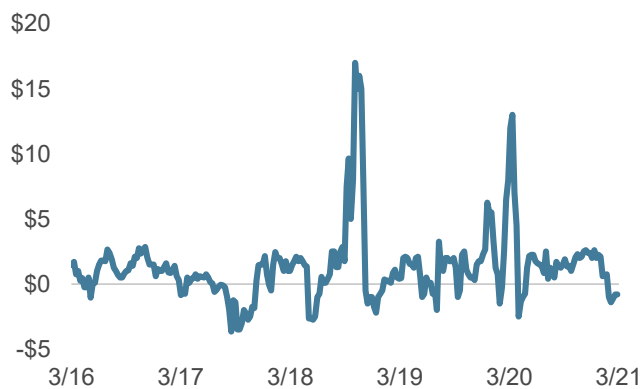
Brent – WTI Cushing



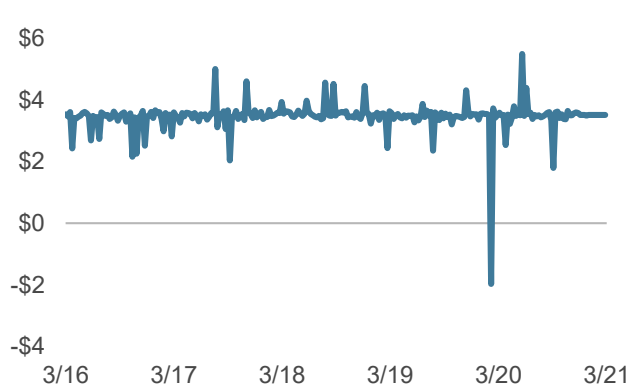
WTI Cushing – WTI Midland



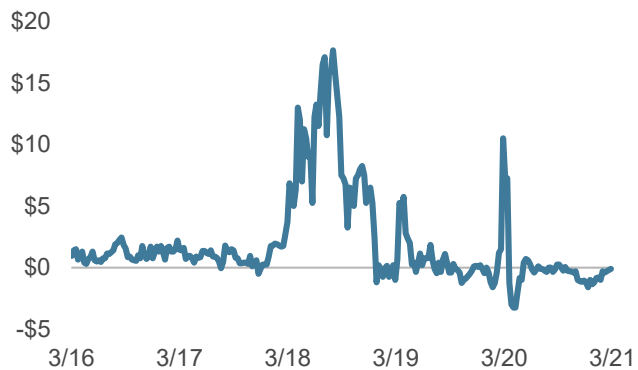
WTI Cushing – WTI Bakken Clearbrook



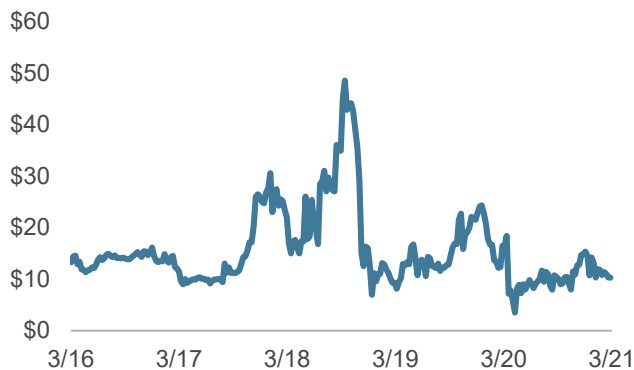
WTI Cushing – Eagle Ford Light



WTI Cushing – WTS



WTI Cushing – WCS

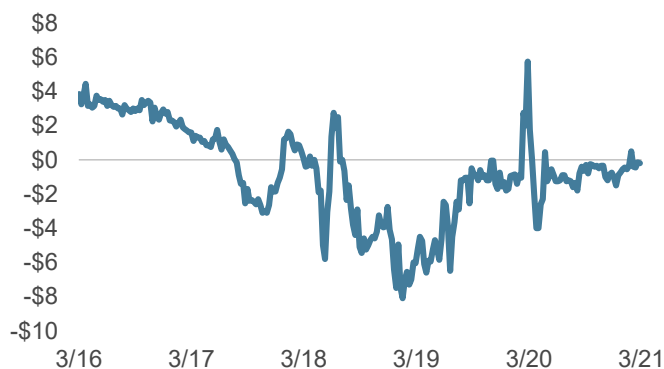


Differentials (\$/bbl) (cont.)

WTI Cushing – Maya



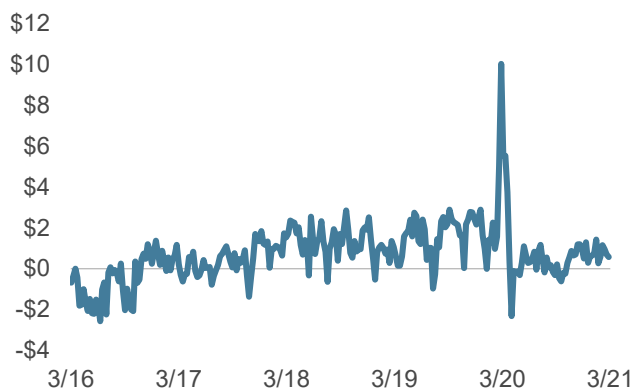
WTI Cushing – Mars



LLS – WTI Cushing



Brent – LLS



LLS – Mars

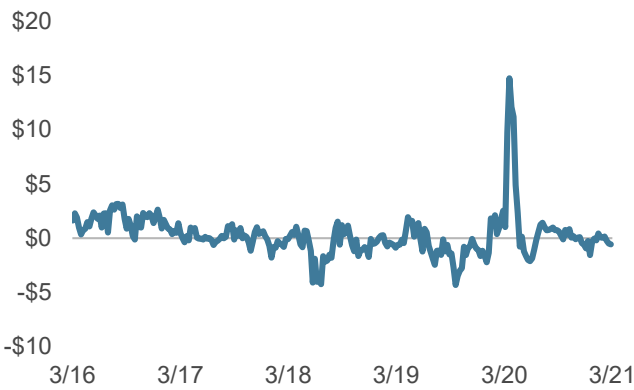


Bakken – ANS



Differentials (\$/bbl) (cont.)

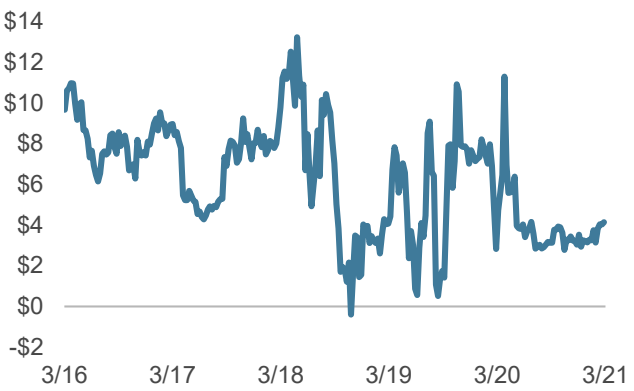
Brent – ANS



Maya – WCS



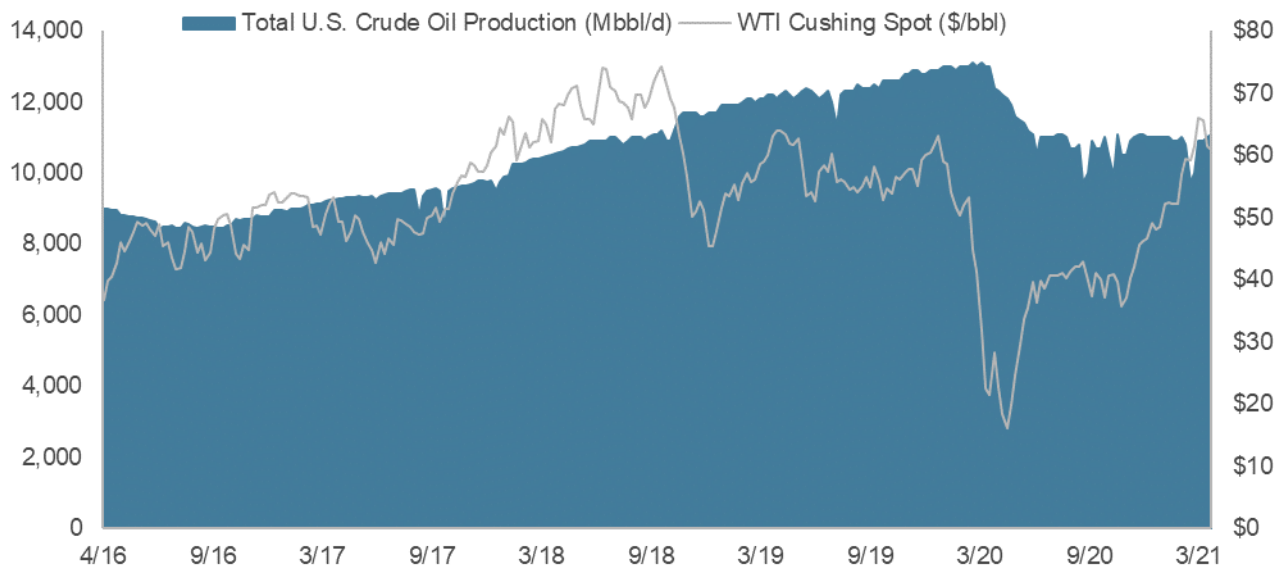
LLS – Maya



Note: All data as of March 31, 2021. Data collected on a weekly basis.
Source: Bloomberg.

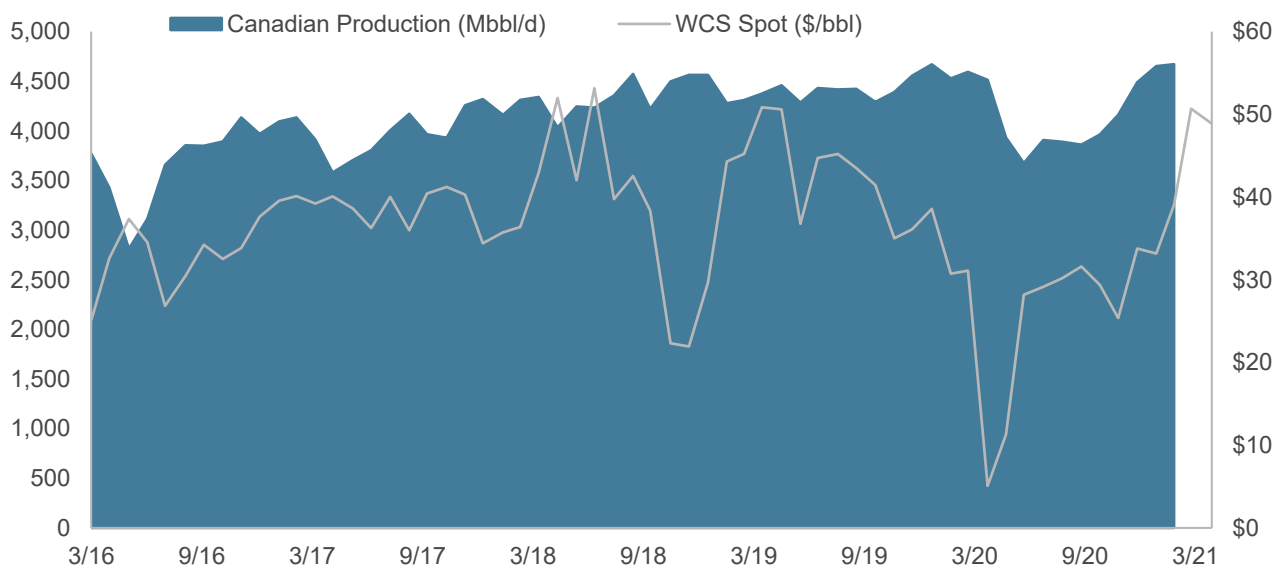
Production

U.S. Production (Mbbbl/d) vs. WTI (\$/bbl)



Note: Data collected on a weekly basis and is subject to a one-week lag for production.

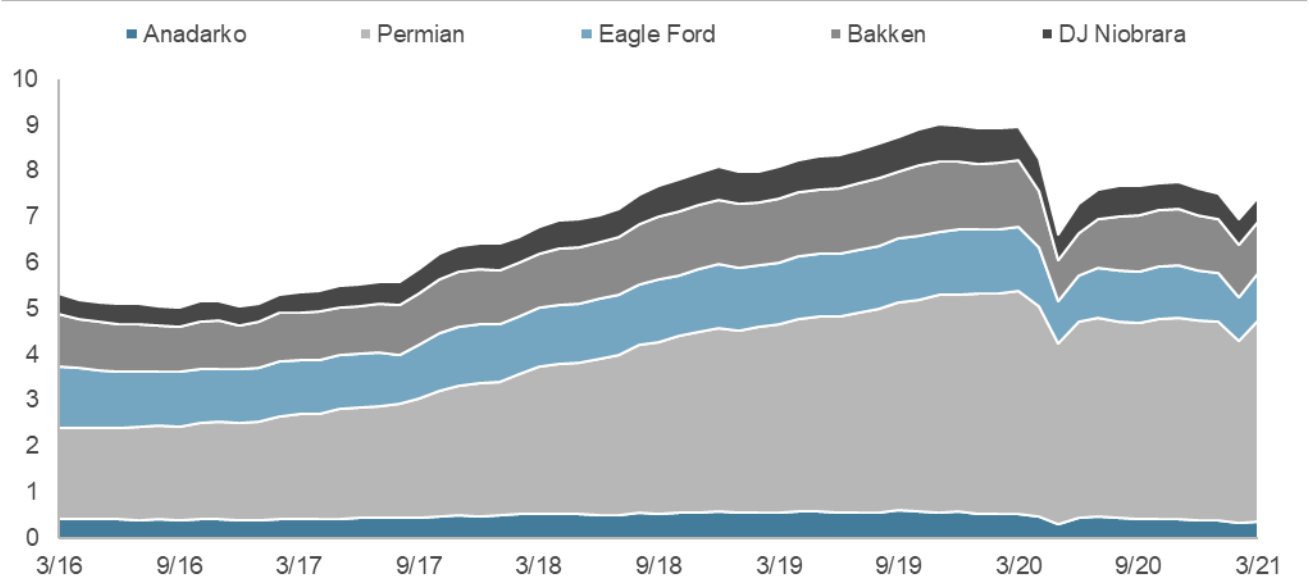
Canadian Production (Mbbbl/d) vs. WCS (\$/bbl)



Note: Data collected on a monthly basis and is subject to a one-month lag for production.

Production (cont.)

Production in Select Regions (MMbbl/d)⁽¹⁾



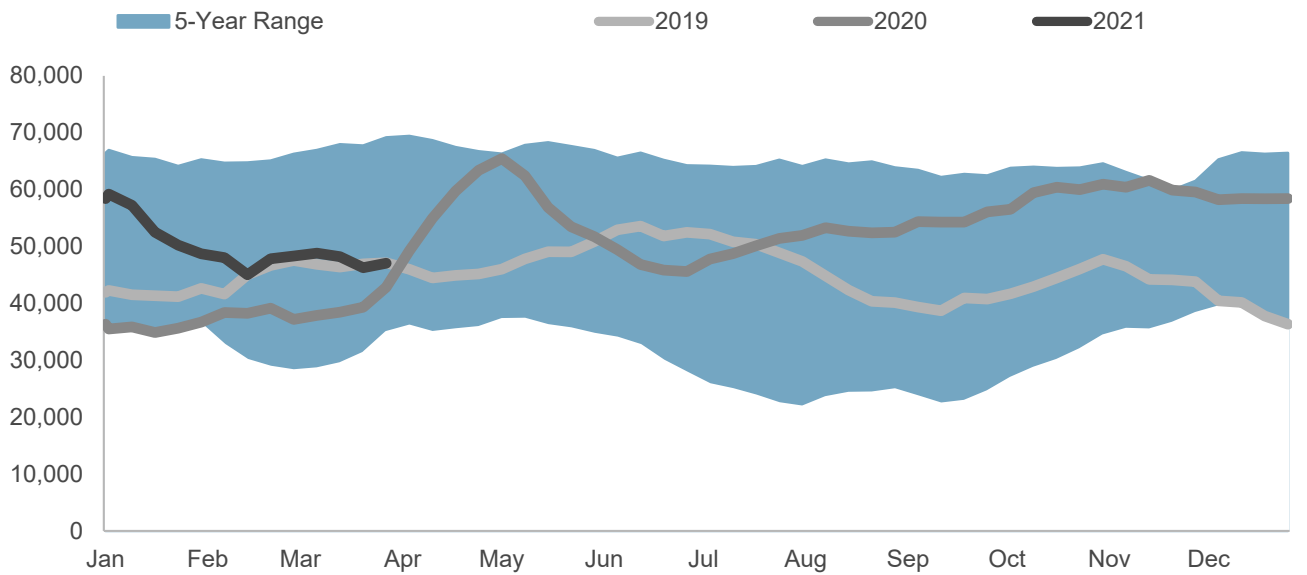
Note: All data as of March 31, 2021. Data collected on a monthly basis.

Sources: Bloomberg, EIA.

(1) EIA's drilling productivity report uses recent data on the total number of drilling rigs in operation, along with estimates of drilling productivity and estimated changes in production from existing wells, to provide estimated changes in production for key regions.

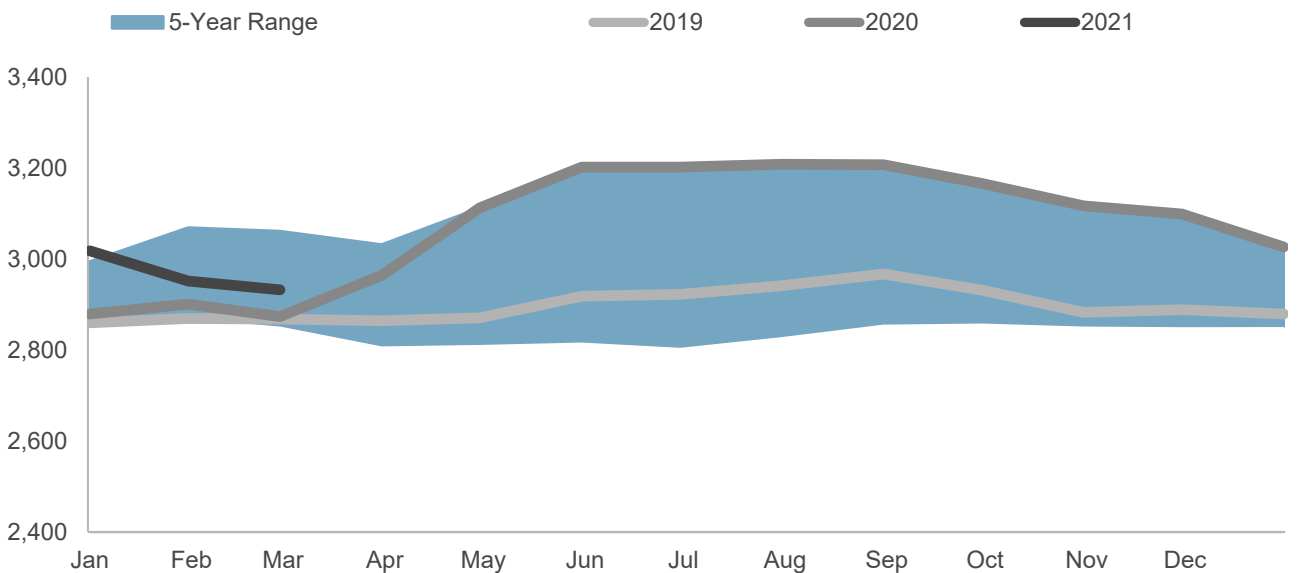
Inventory

U.S. Cushing Crude Inventory (Mbbl)



Note: Data collected on a weekly basis.

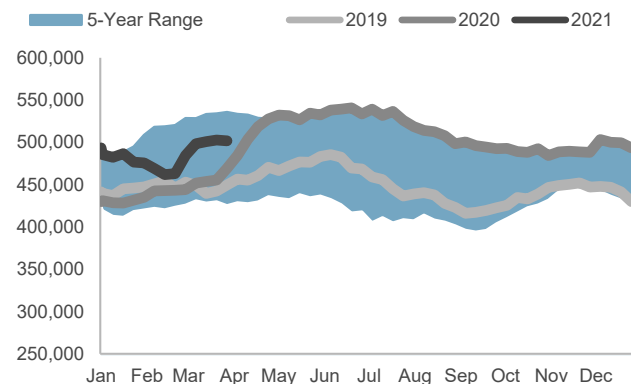
OECD Commercial Inventories (MMbbl)



Note: Data collected on a monthly basis.

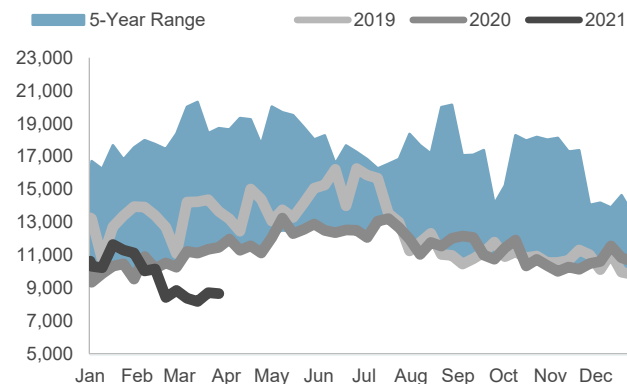
Inventory (Mbbbl)

Overall U.S. Crude Inventory

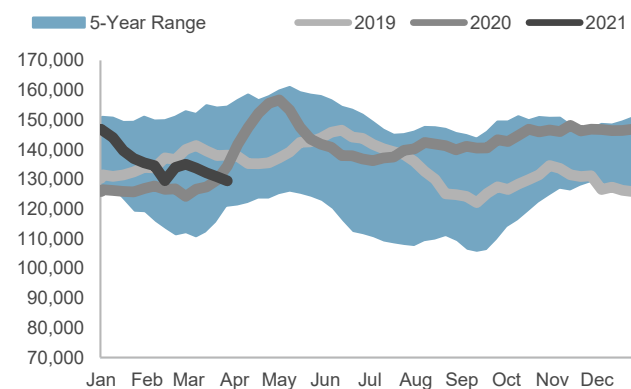


Note: Excludes strategic petroleum reserve (SPR).

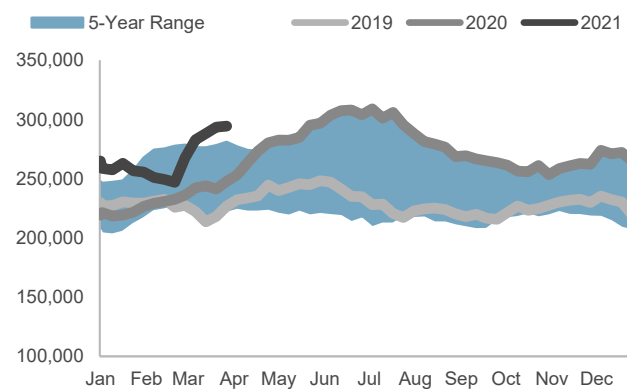
PADD I



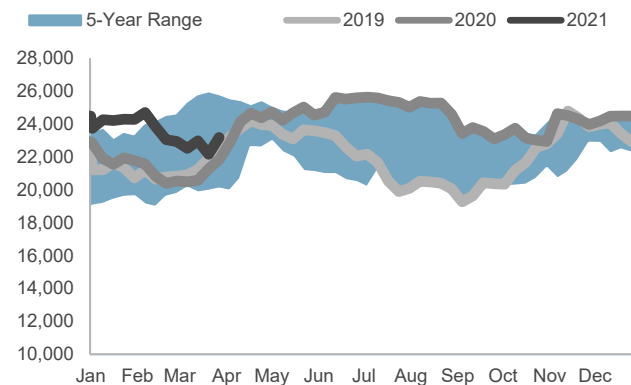
PADD II



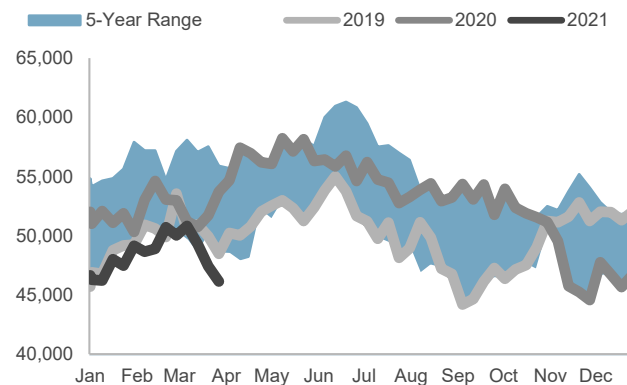
PADD III



PADD IV

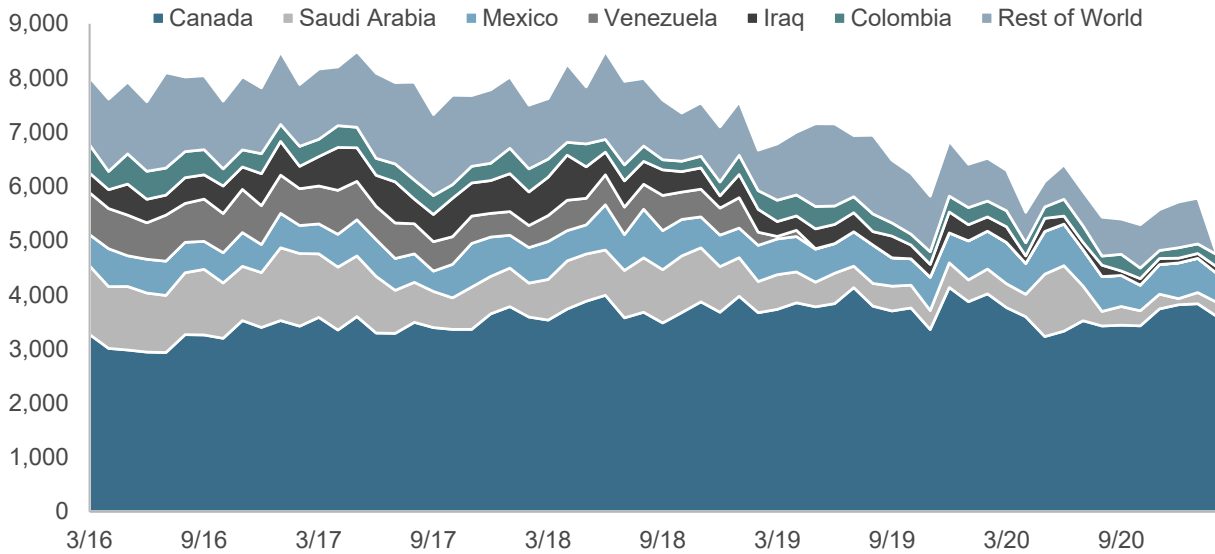


PADD V



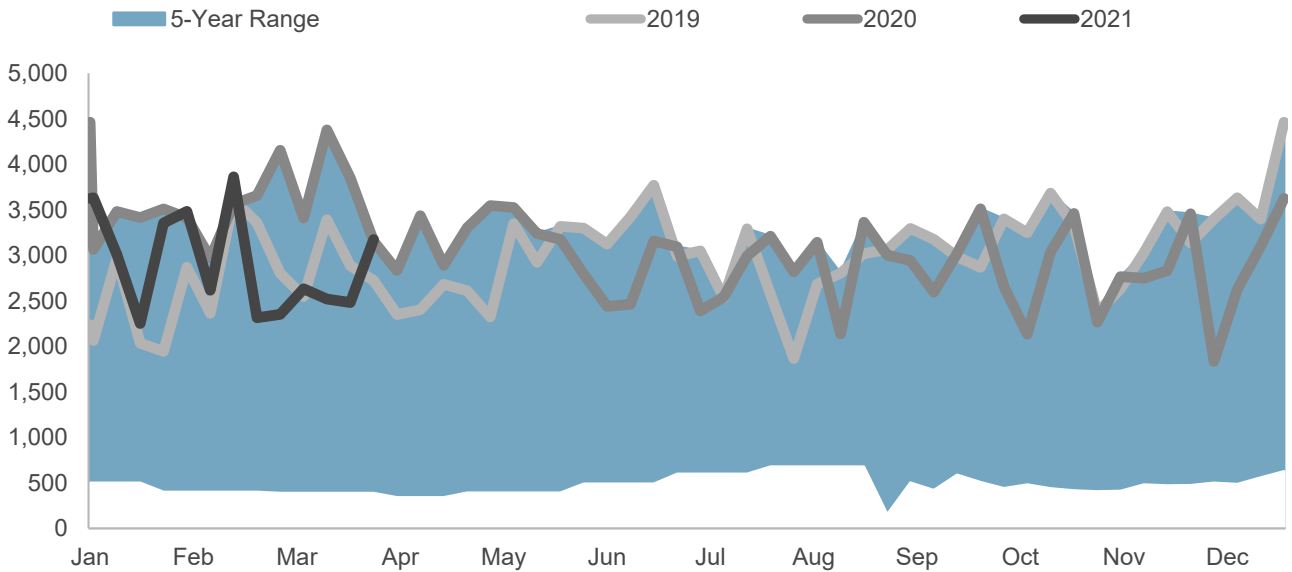
Trade

U.S. Crude Imports by Country (Mbbl/d)



Note: Data collected on a monthly basis and is subject to a two- to four-month lag.

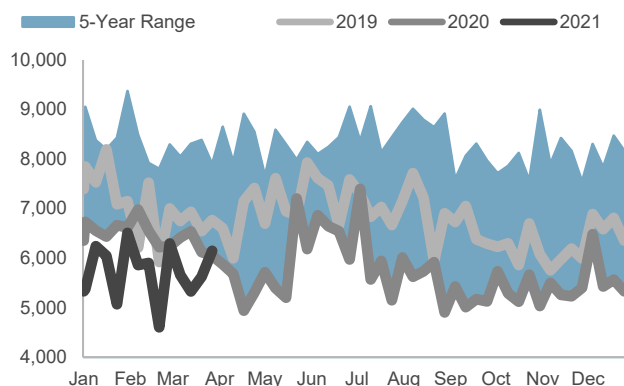
Total U.S. Crude Exports (Mbbl/d)



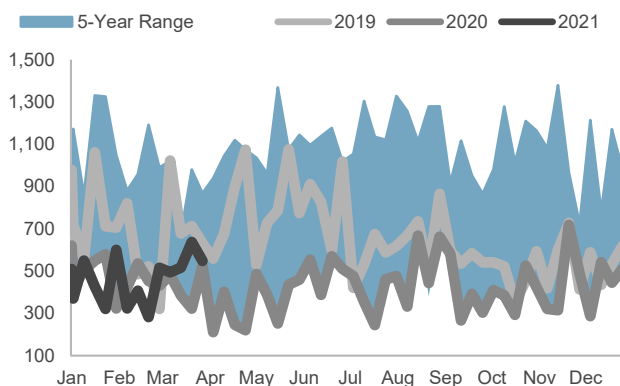
Note: Data collected on a weekly basis.

U.S. Commercial Crude Imports by Destination (Mbbbl/d)

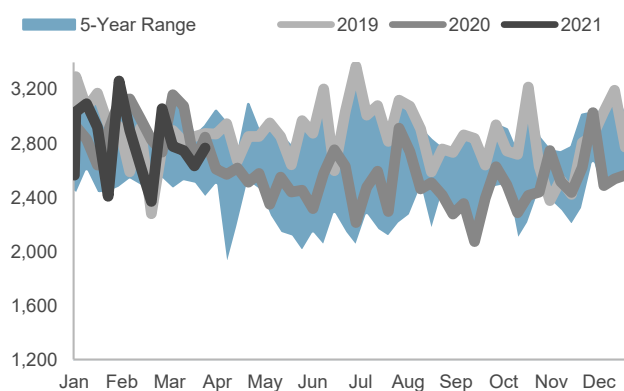
Overall U.S. Commercial Crude Imports



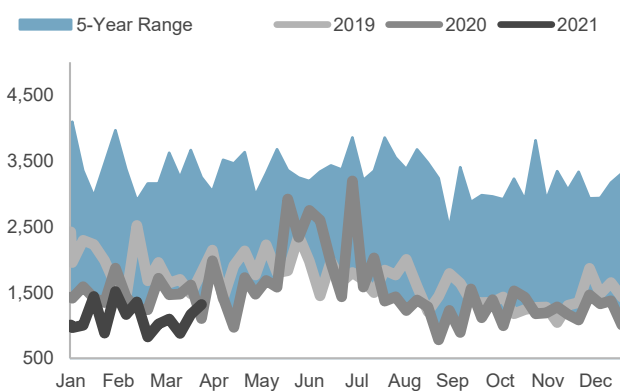
Destination – PADD I



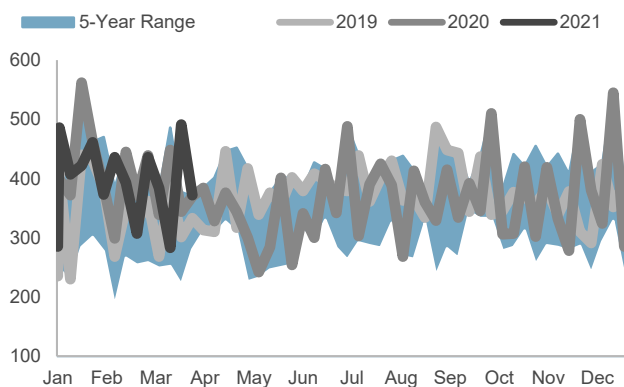
Destination – PADD II



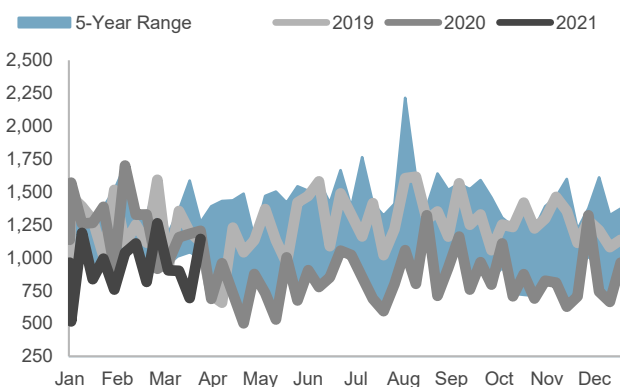
Destination – PADD III



Destination – PADD IV

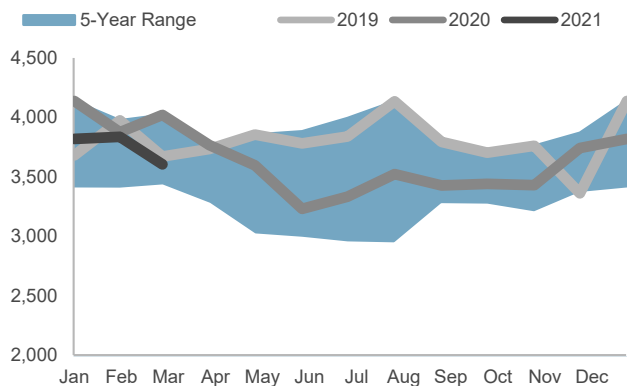


Destination – PADD V

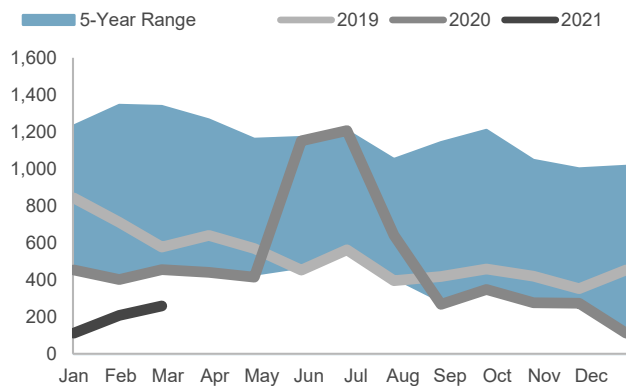


U.S. Imports by Country (Mbbbl/d)

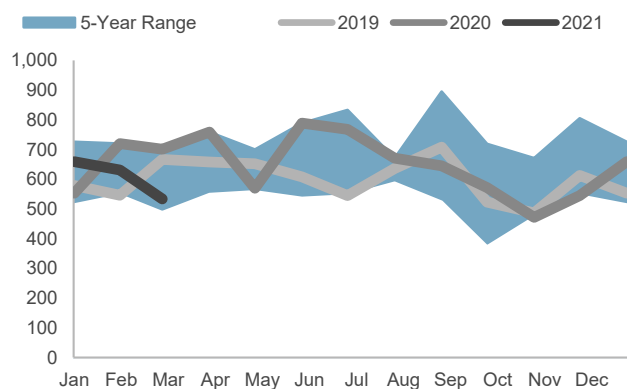
Canada



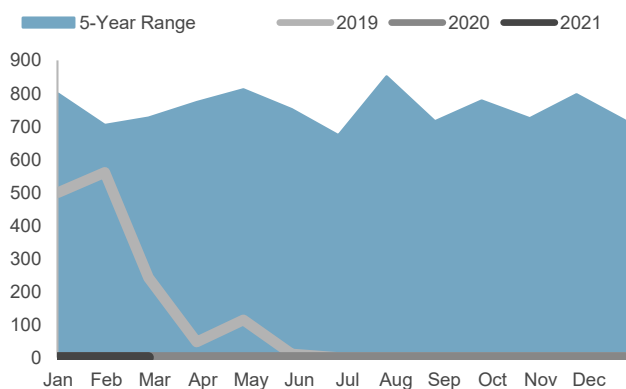
Saudi Arabia



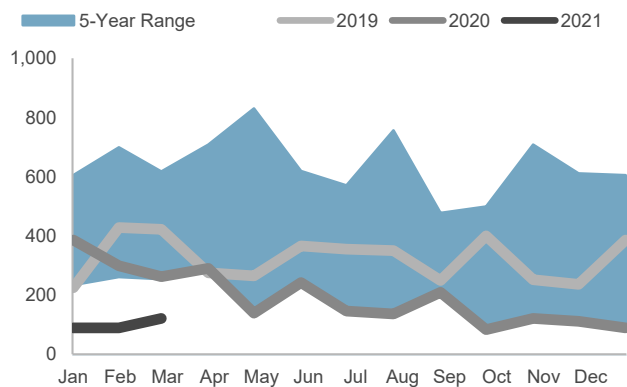
Mexico



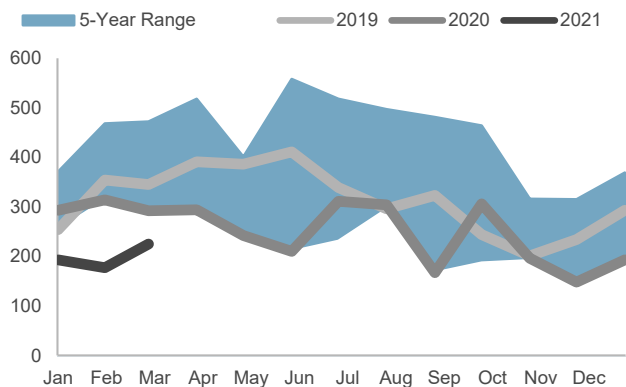
Venezuela



Iraq



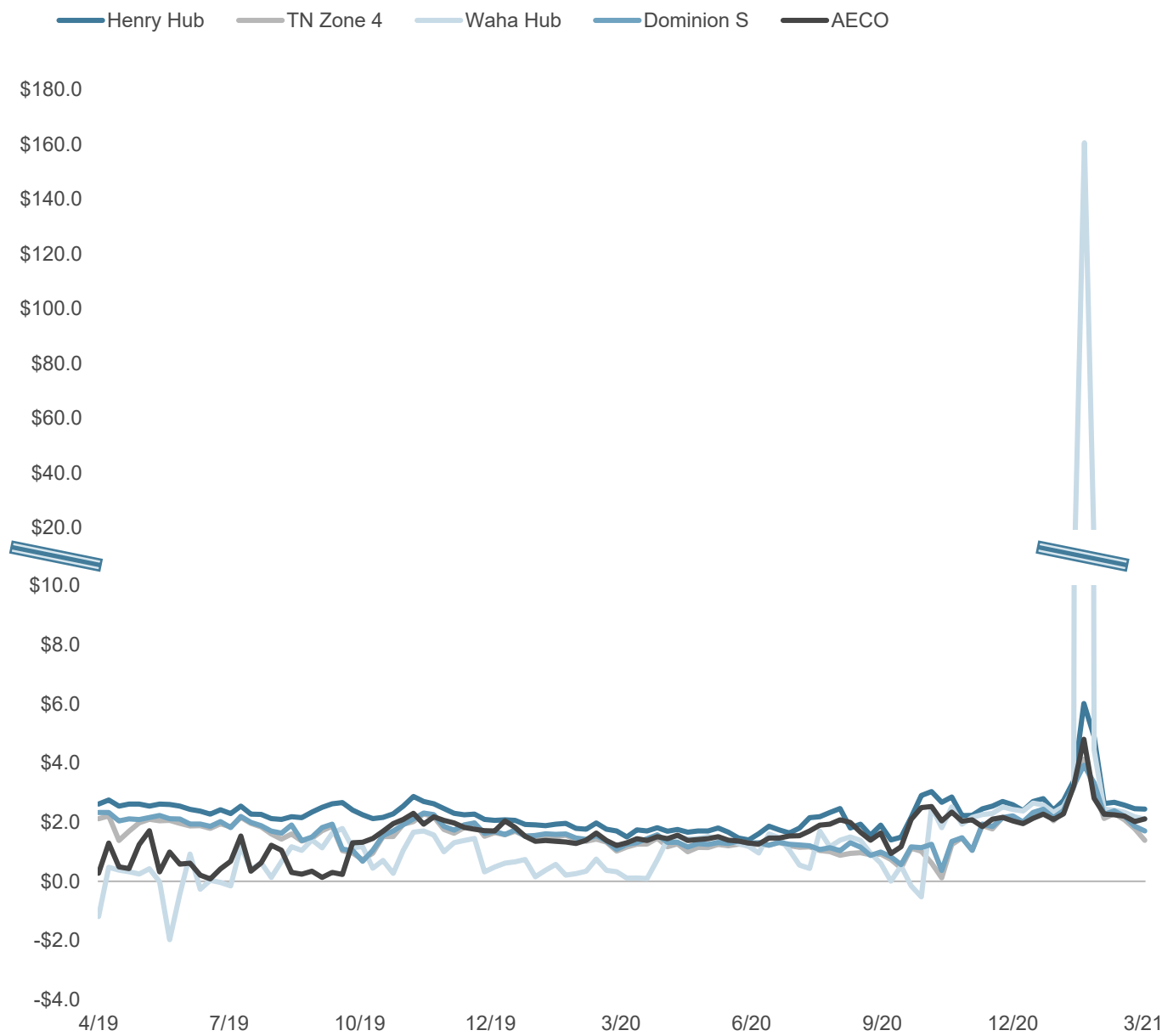
Colombia



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Natural Gas Spot Pricing

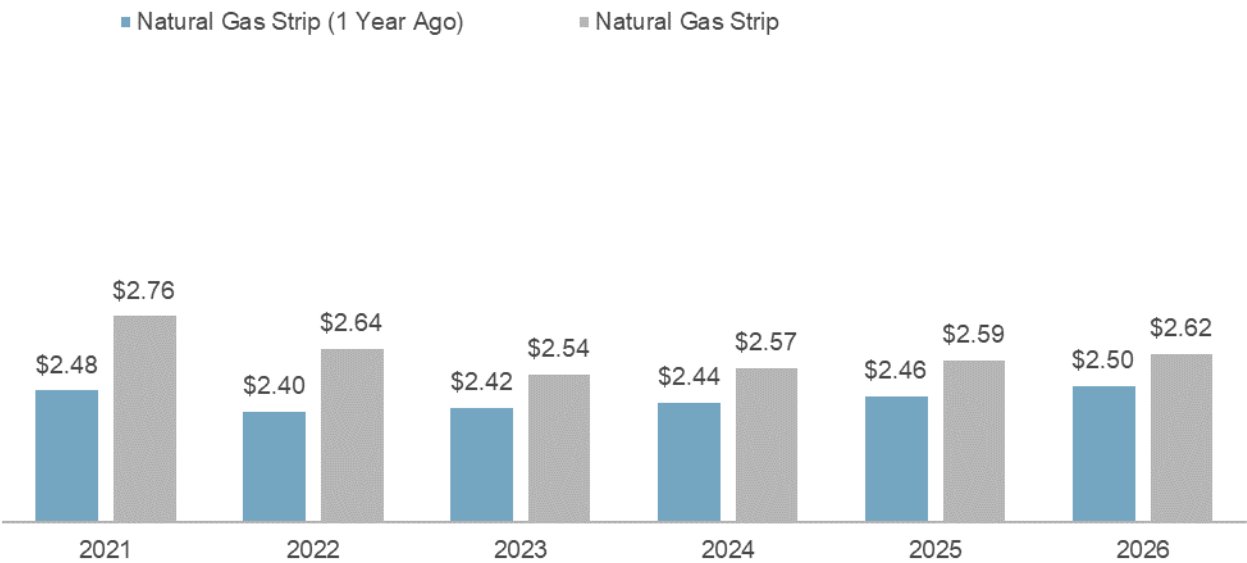
Pricing (\$/MMbtu)



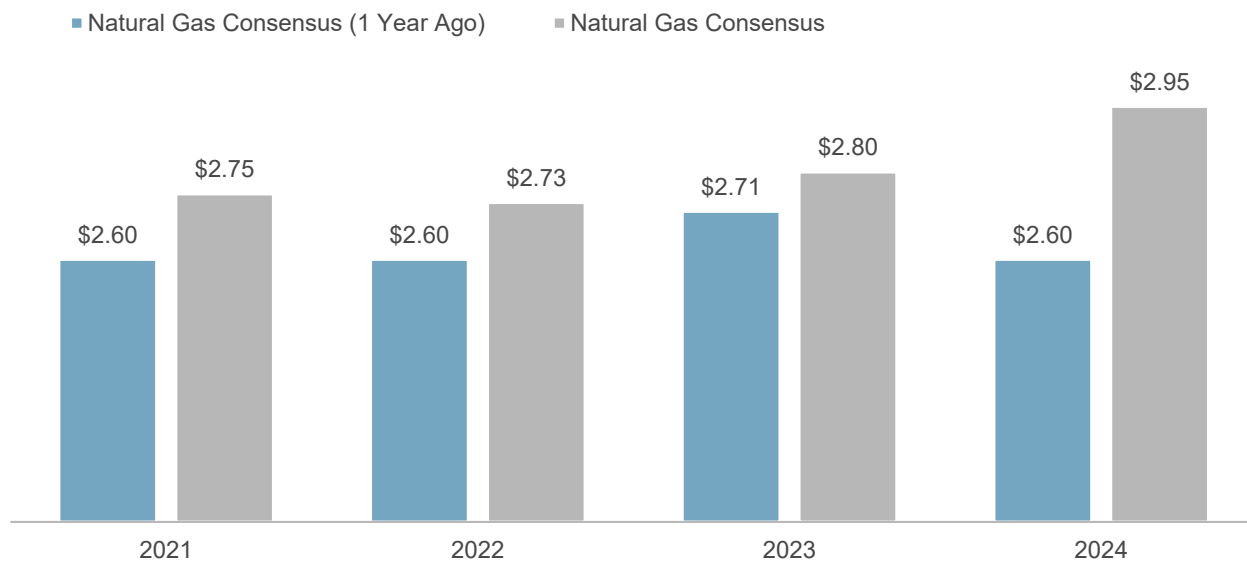
Note: All data as of March 31, 2021. Data collected on a weekly basis.
Source: Bloomberg.

Natural Gas Pricing

Strip Pricing Comparison (\$/MMbtu)

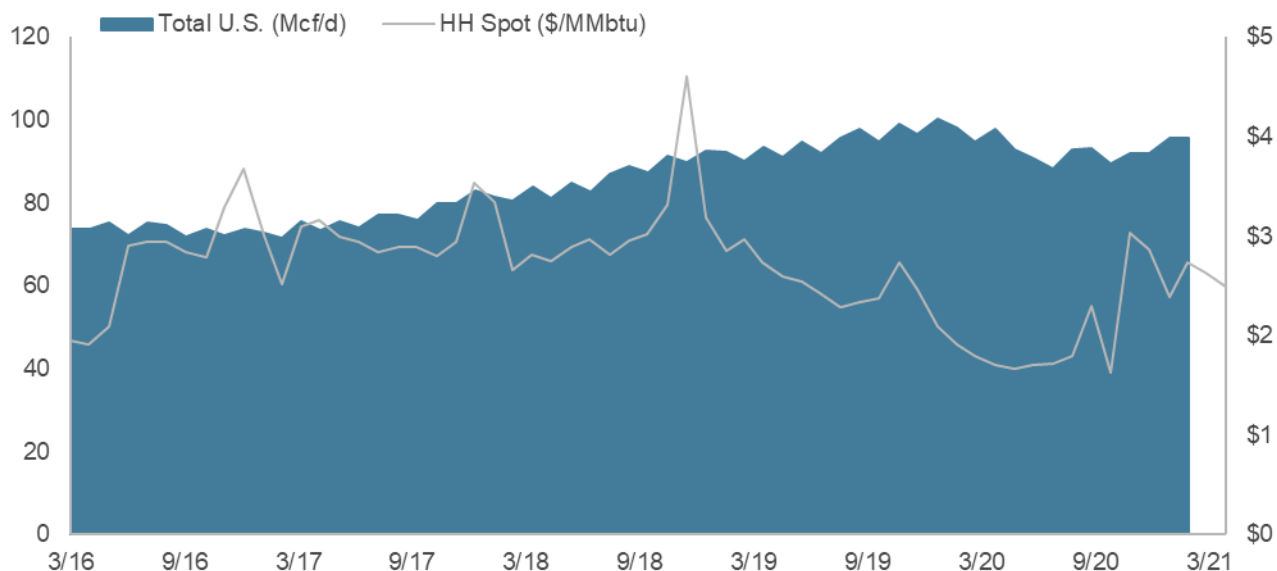


Consensus Pricing Comparison (\$/MMbtu)



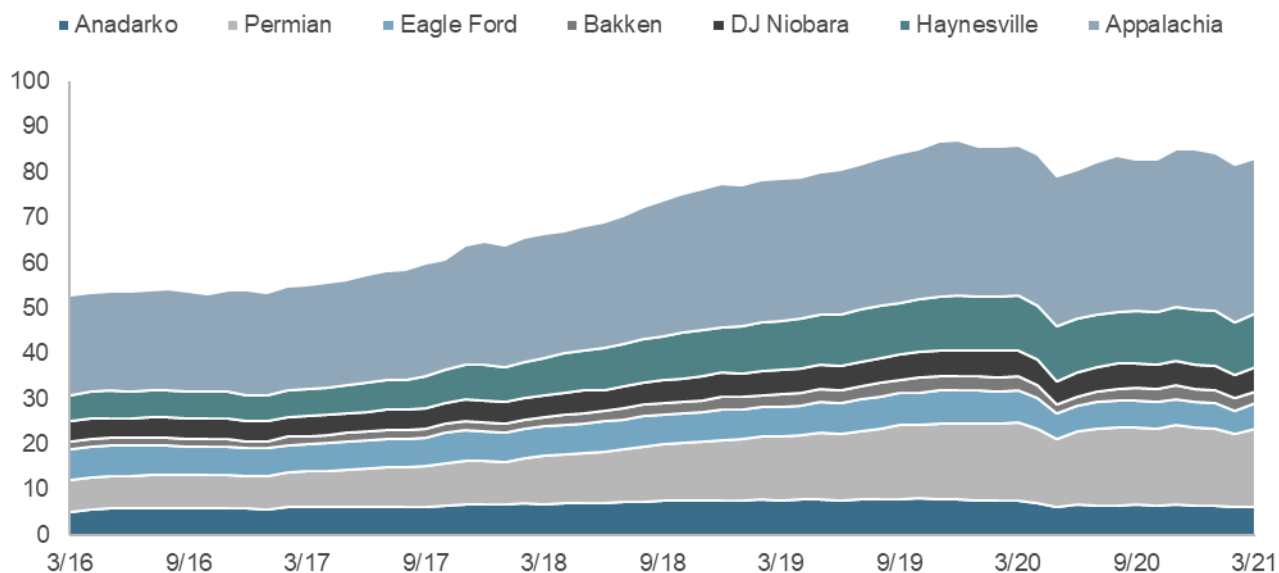
Natural Gas Production

Total U.S. Dry Natural Gas Production (Bcf/d)



Note: Data is collected on a monthly basis and subject to a two-month lag for production.

Select Dry Natural Gas Production by Regions (Bcf/d)⁽¹⁾



Note: All data as of March 31, 2021. Data collected on a monthly basis.

Source: Bloomberg, EIA.

(1) EIA's drilling productivity report uses recent data on the total number of drilling rigs in operation along with estimates of drilling productivity and estimated changes in production from existing wells, to provide estimated changes in production for key regions.

Differentials

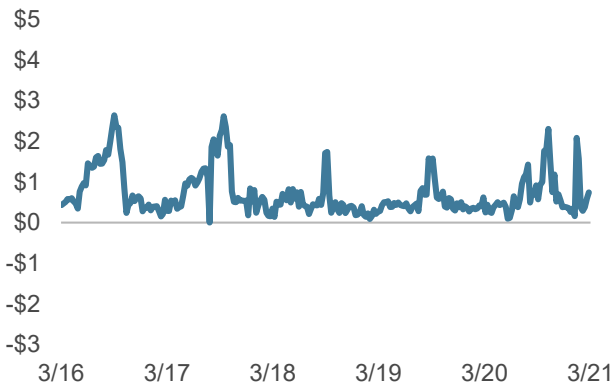
Regional Natural Gas Spot Pricing

Region	3/31/2021	3/31/2020	12/31/2020	YoY % Change	QoQ % Change
Henry Hub	\$2.49	\$1.71	\$2.39	45.6%	(4.2%)
<i>Benchmark</i>					
Dominion South	\$2.10	\$1.40	\$2.01	49.7%	4.6%
<i>Henry Hub – Dominion South</i>	\$0.39	\$0.31	\$0.39		
TN Zone 4	\$2.00	\$1.39	\$1.99	44.2%	0.8%
<i>Henry Hub – TN Zone 4</i>	\$0.49	\$0.32	\$0.40		
AECO	\$2.12	\$1.31	\$1.95	61.8%	8.7%
<i>Henry Hub – AECO</i>	\$0.37	\$0.40	\$0.44		
Waha Hub	\$2.28	\$0.30	\$2.38	656.8%	(4.1%)
<i>Henry Hub – Waha</i>	\$0.21	\$1.41	\$0.02		

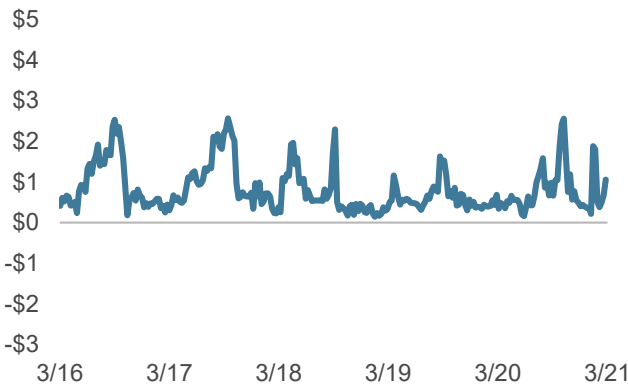
Note: All data as of March 31, 2021. Represents the average price for the remainder of 2019 and each year thereafter.
Source: Bloomberg.

Natural Gas – Differentials (\$/MMbtu)

HH – Dominion South



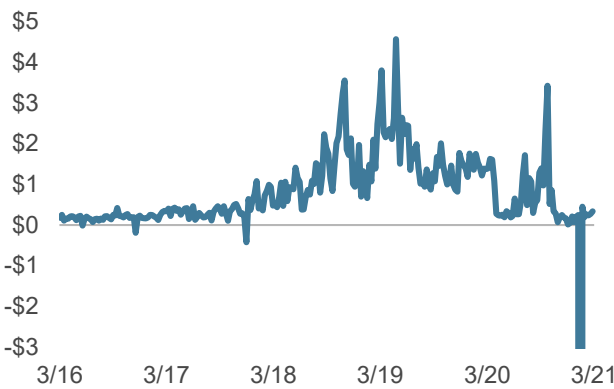
HH – TN Zone 4



HH – AECO



HH – Waha Hub

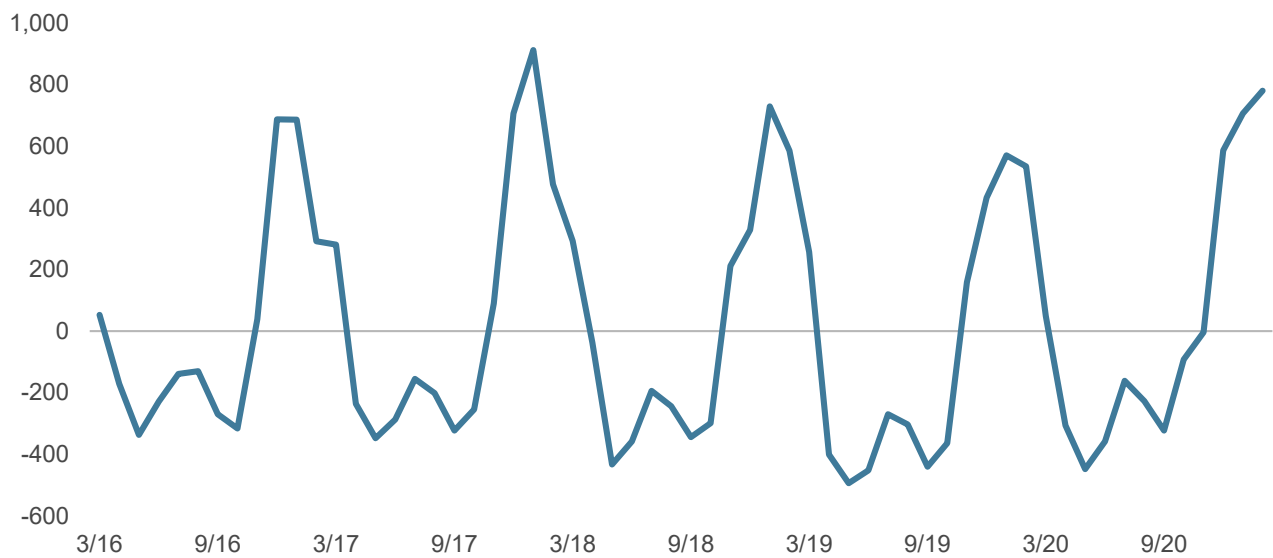


Note: Low of -\$154.6 on February 12, 2021, associated with winter storms.

Note: All data as of March 31, 2021. Data collected on a weekly basis.
Source: Bloomberg.

Natural Gas

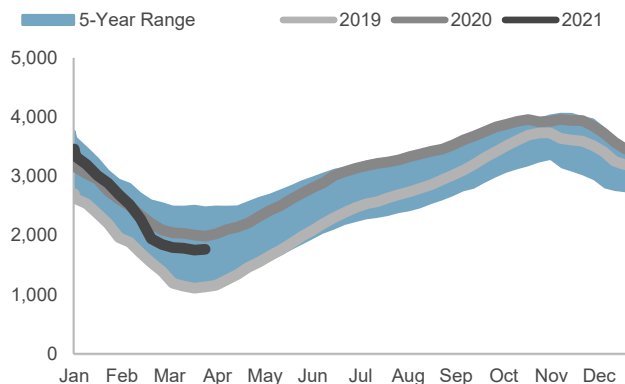
U.S. Natural Gas Withdrawal (Bcf)



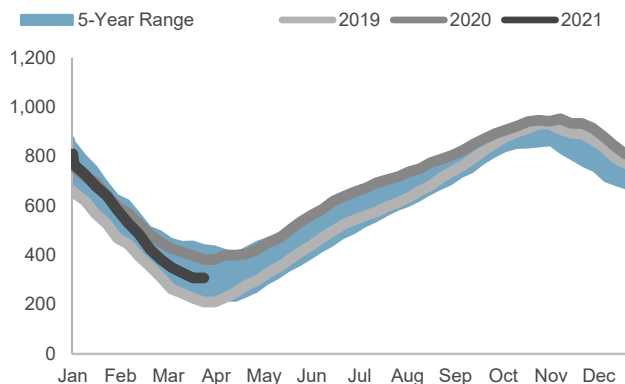
Note: Data is collected on a monthly basis and subject to irregular updates.

Natural Gas Storage (Bcf)

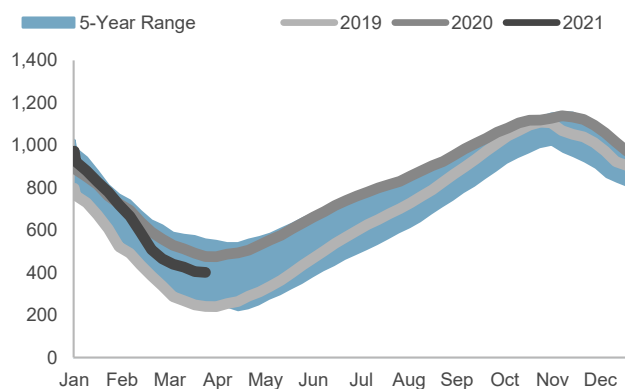
Total U.S.



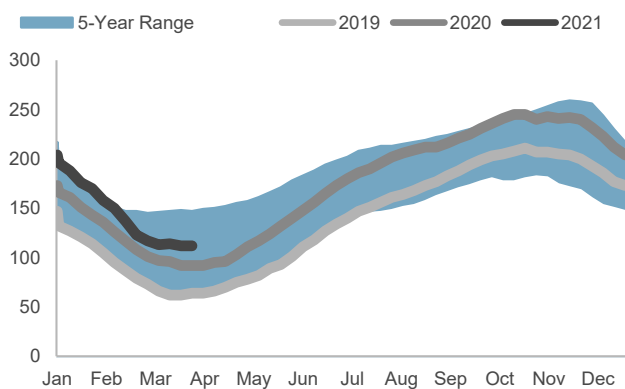
East



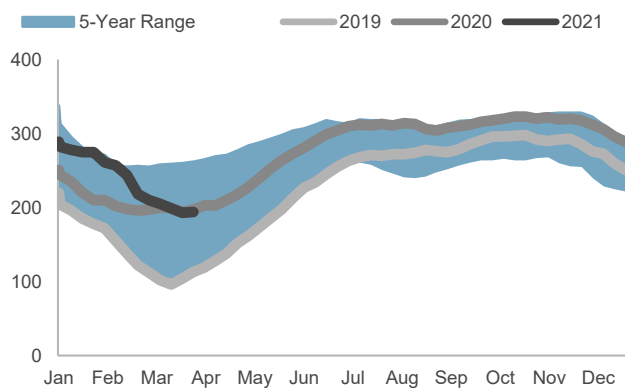
Midwest



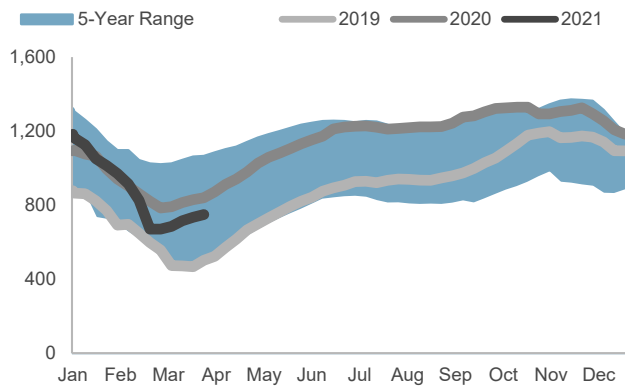
Mountain



Pacific

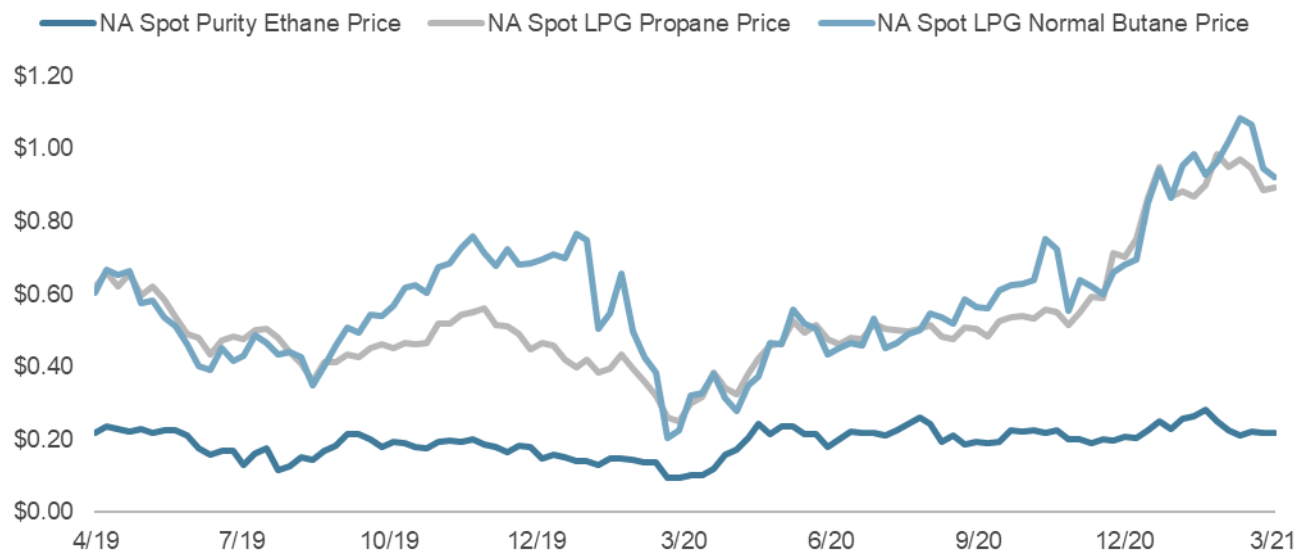


South Central



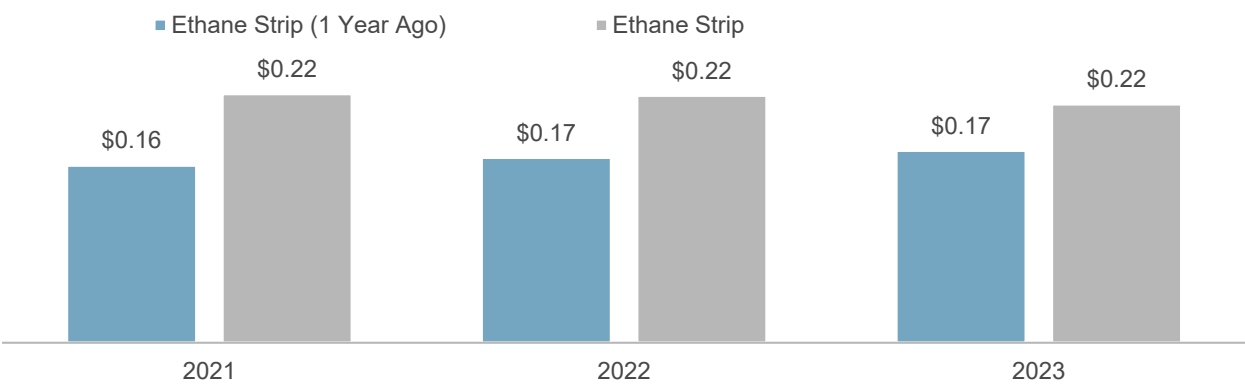
NGLs Spot Pricing

Pricing (\$/gal)

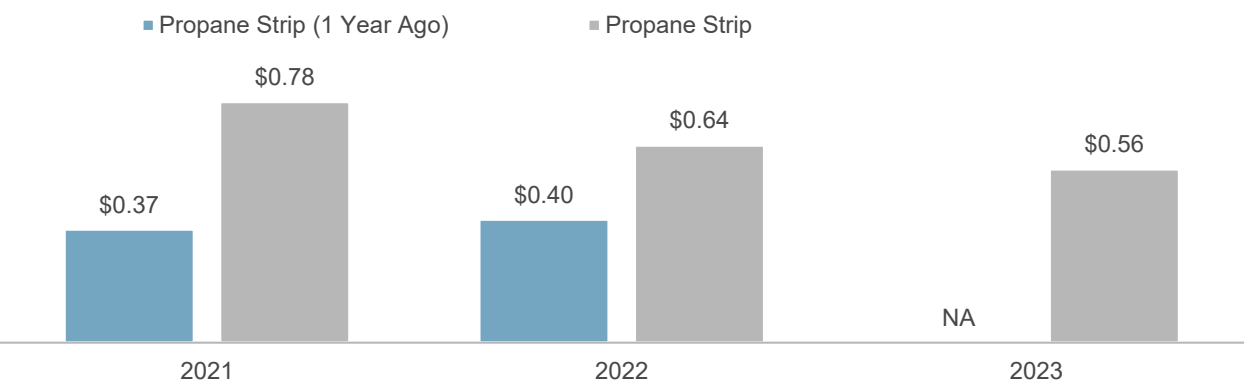


NGLs Strip Pricing

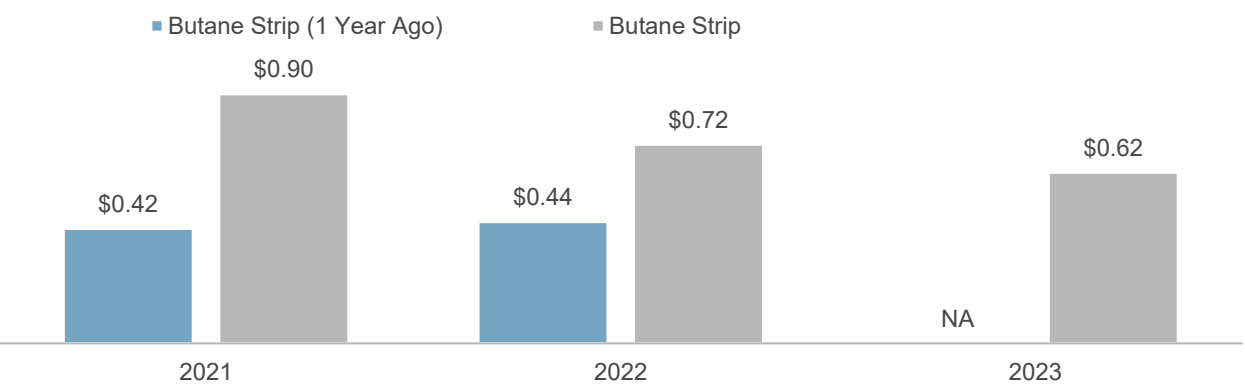
Ethane Strip Pricing Comparison (\$/gal)



Propane Strip Pricing Comparison (\$/gal)

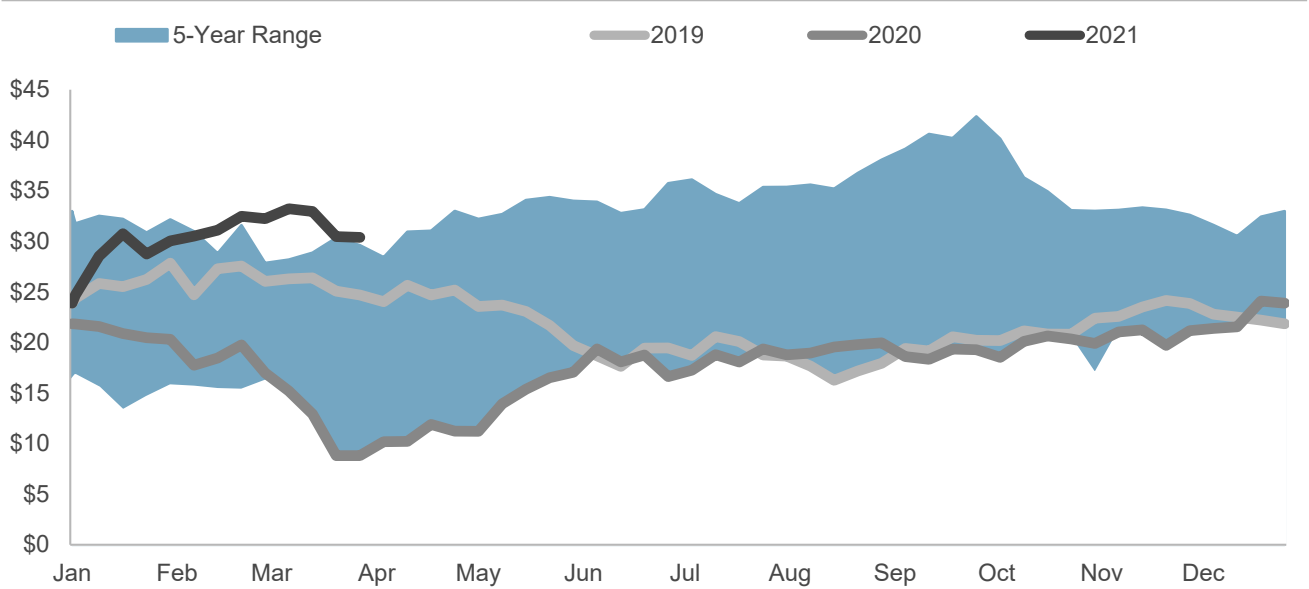


Butane Strip Pricing Comparison (\$/gal)



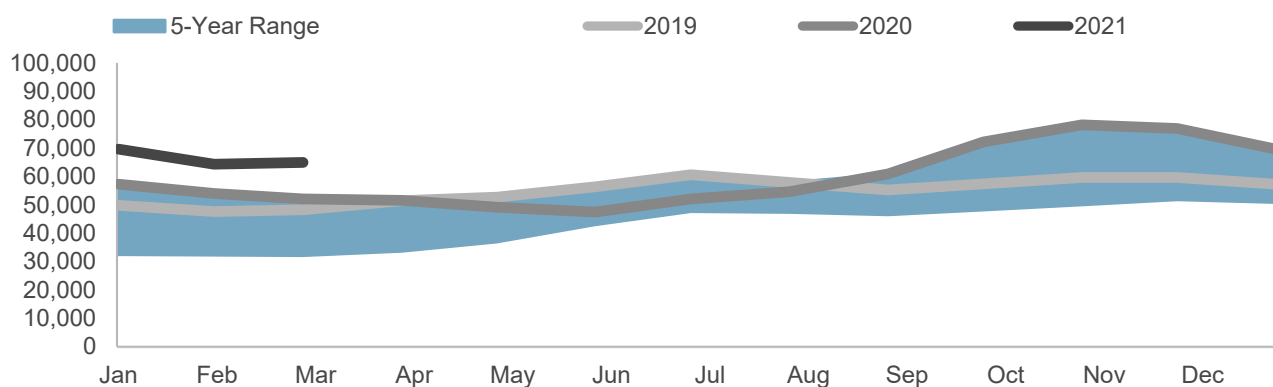
NGLs Frac Spreads

Mont Belvieu Frac Spread (\$/bbl)

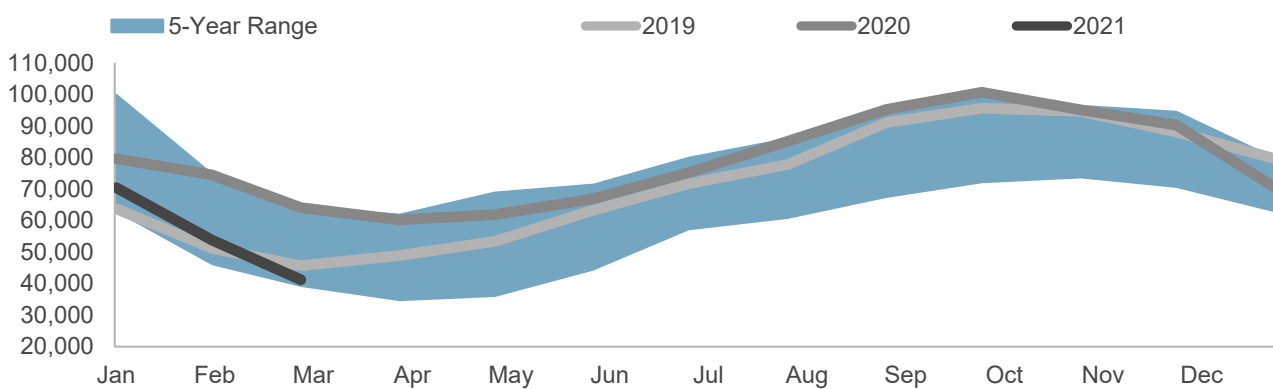


NGLs Inventory

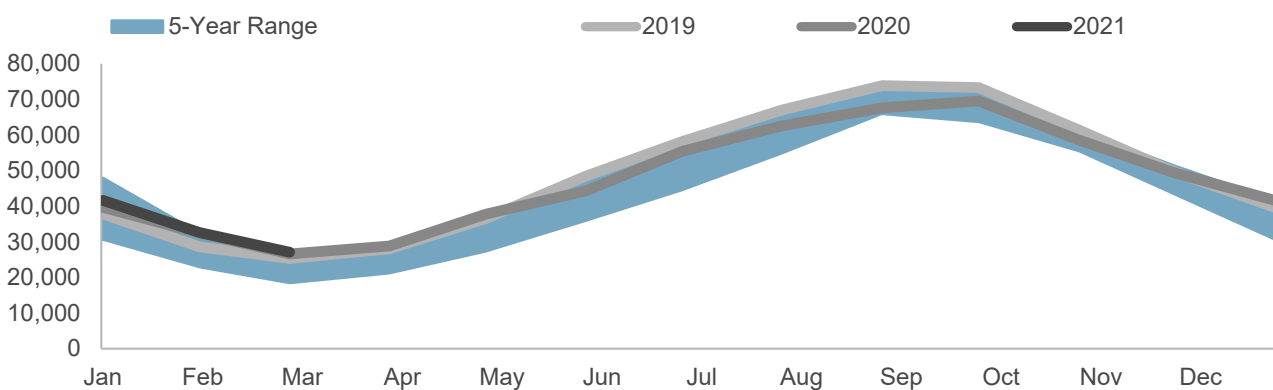
U.S. Ending Stocks Ethane (Mbbbls)



U.S. Ending Stocks Propane (Mbbbls)

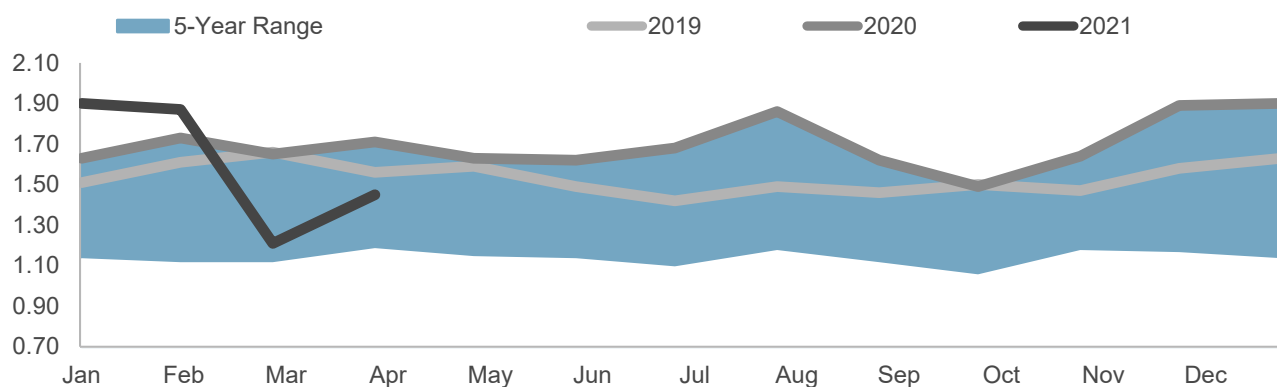


Normal Butane/Butylene (Mbbbls)

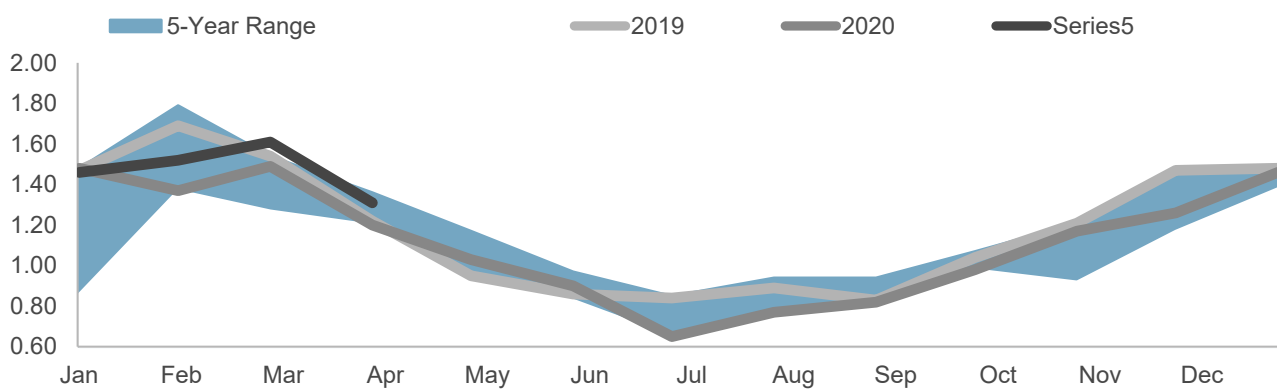


NGLs Consumption

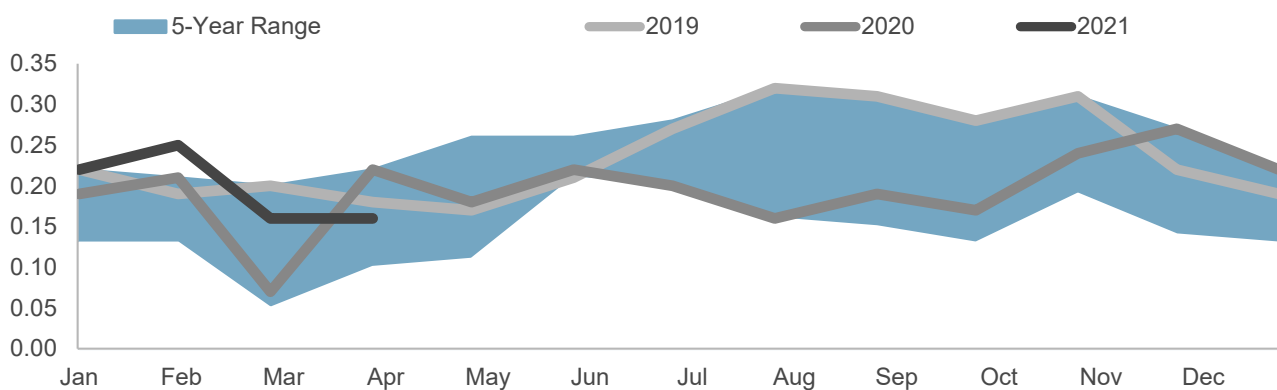
U.S. Ethane/Ethylene Consumption (MMboe/d)



U.S. Propane/Propylene Consumption (MMboe/d)



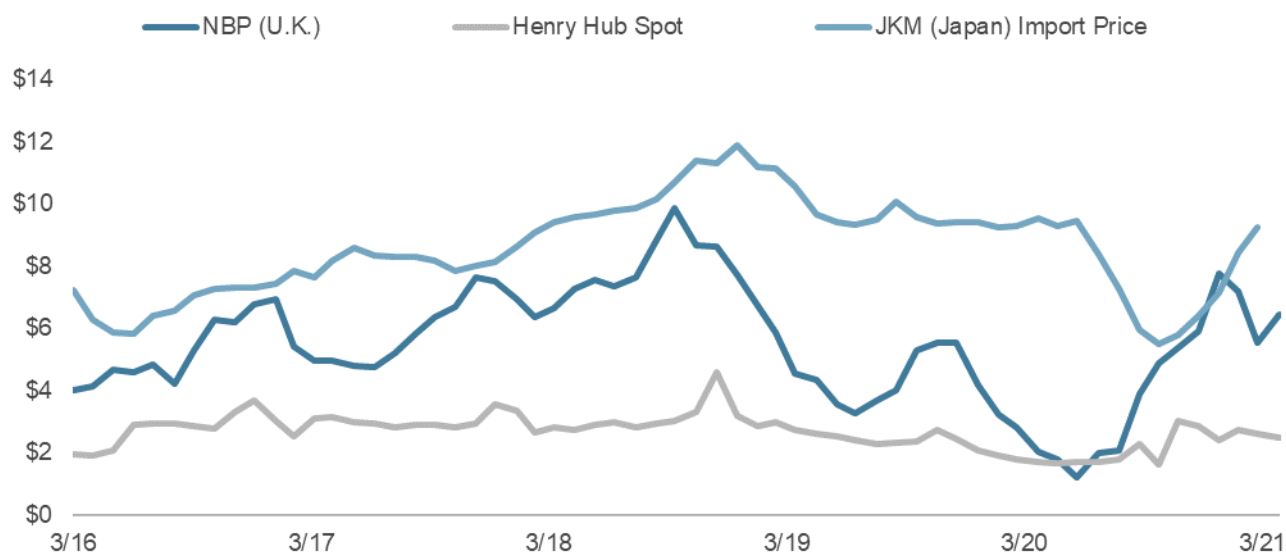
U.S. Butane/Butylene Consumption (MMboe/d)



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Spot Pricing

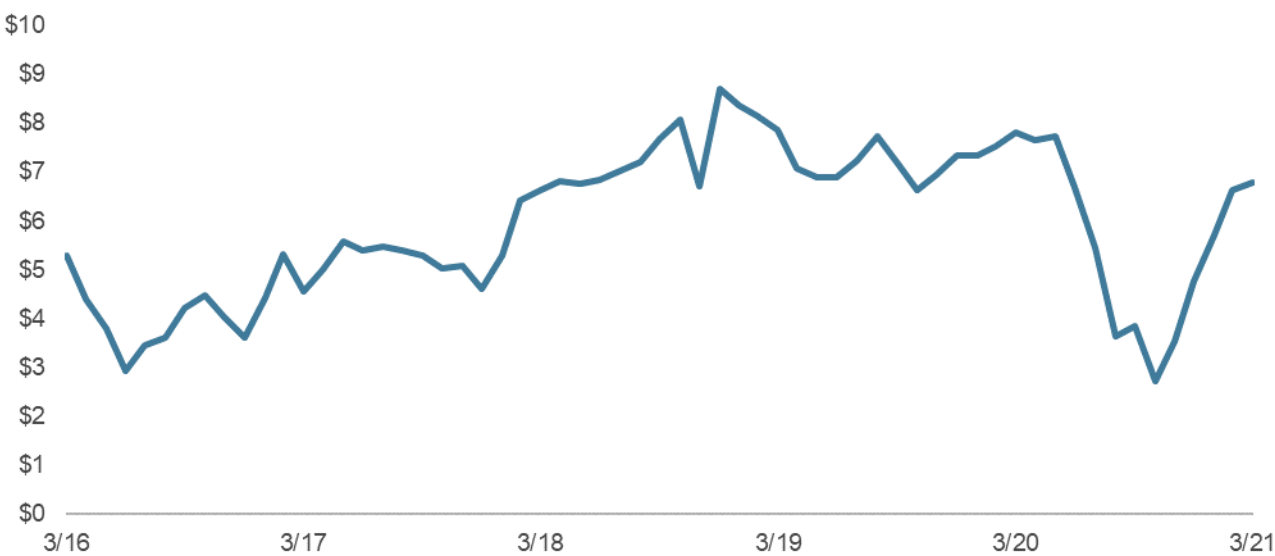
Spot Pricing (\$/MMbtu)



*Note: All data as of March 31, 2021. Data collected on a monthly basis.
NBP (U.K.) refers to the ICE U.K. Natural Gas NBP Month 1 Futures.
Source: Bloomberg.*

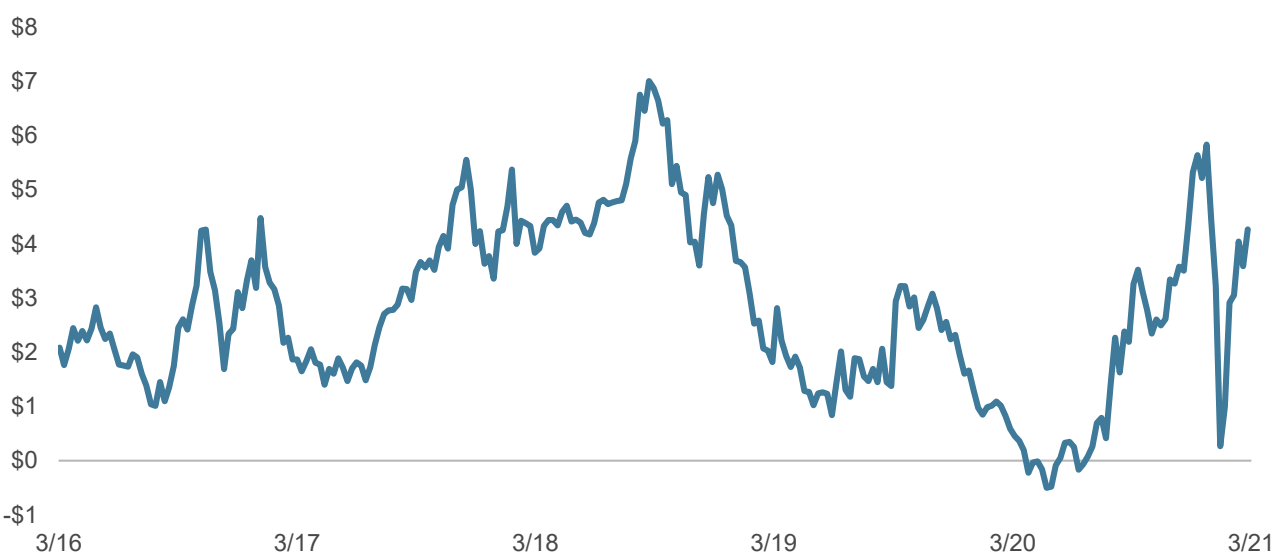
Differentials

JKM – Henry Hub (\$/MMbtu)



Note: Data collected on a monthly basis.

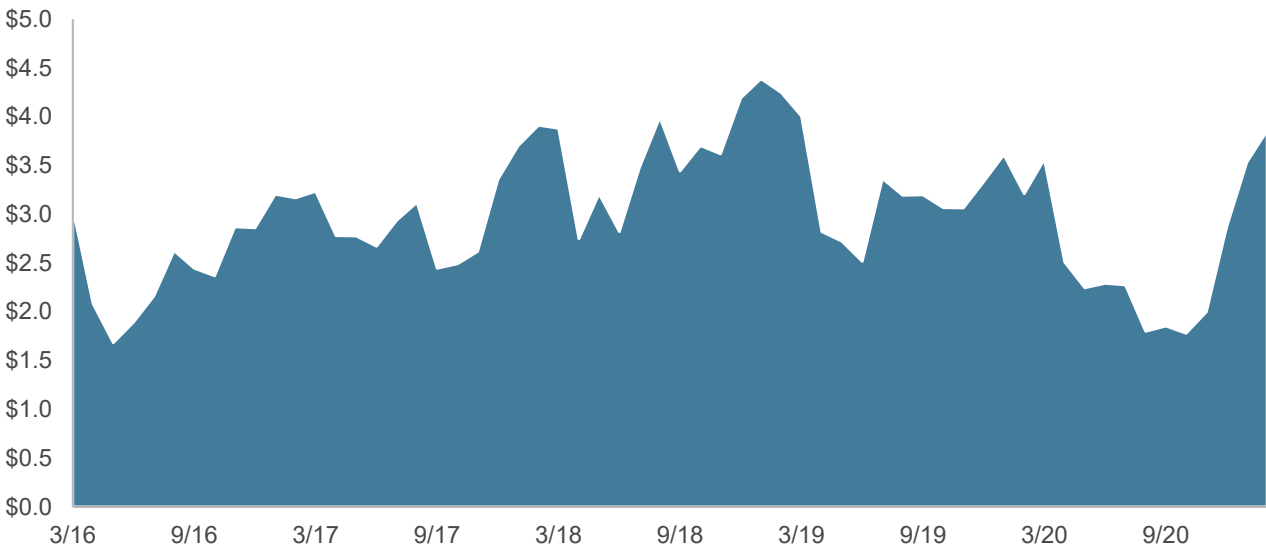
NBP – Henry Hub (\$/MMbtu)



Note: Data collected on a weekly basis.

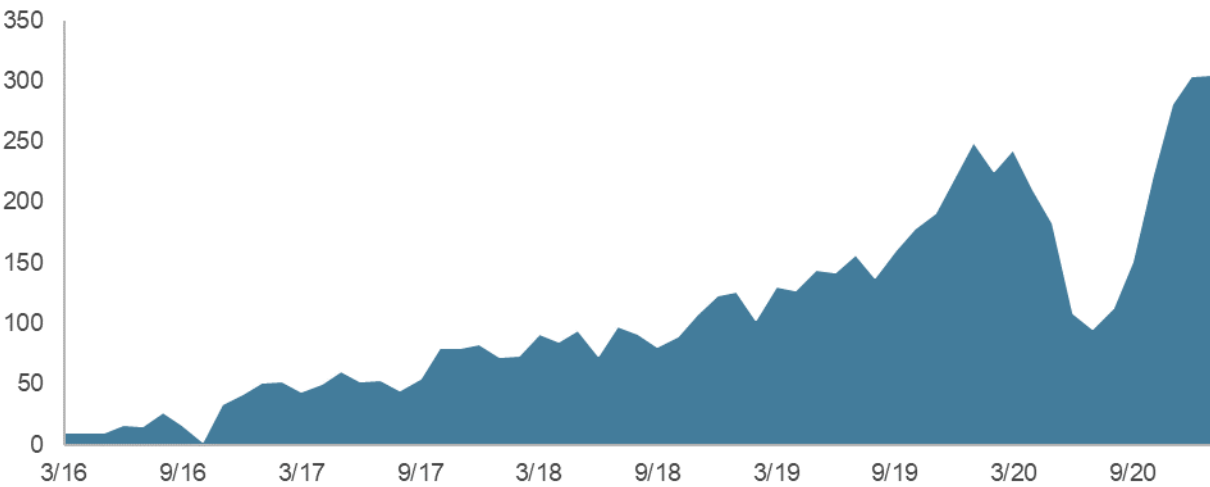
Exports

LNG Japan Import Value (US\$ in billions)



Note: Data is collected on a monthly basis and subject to a one-month lag.

U.S. LNG Exports (Bcf)

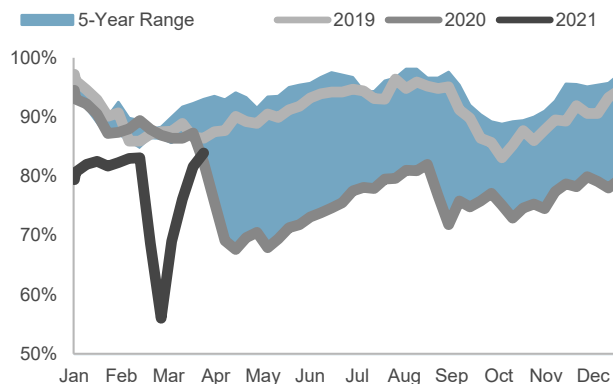


Note: Data is collected on a monthly basis and subject to a two-month lag.

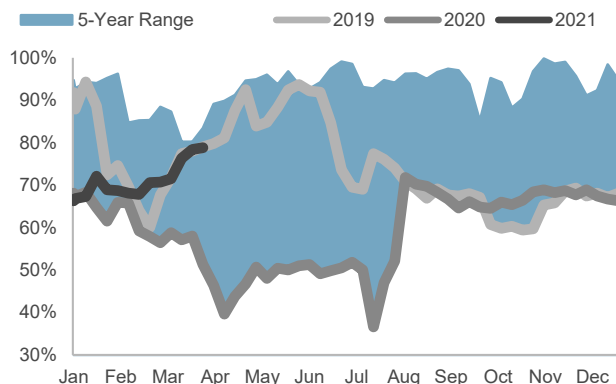
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Refining – Utilization (%)

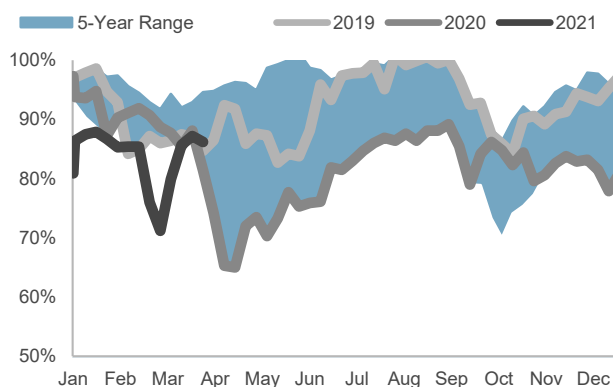
Total U.S.



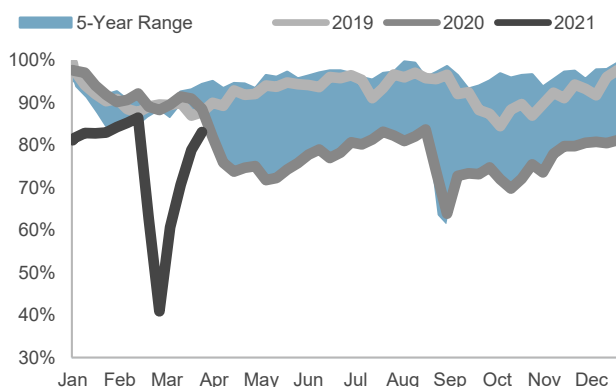
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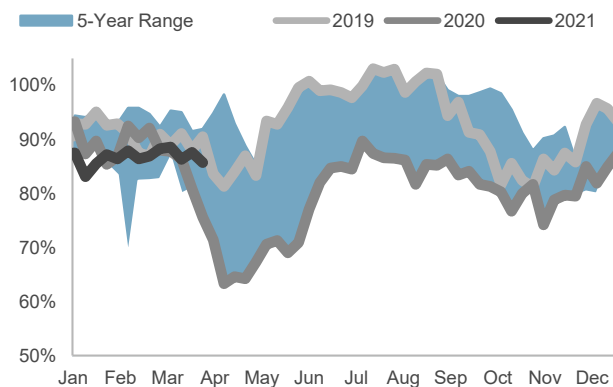
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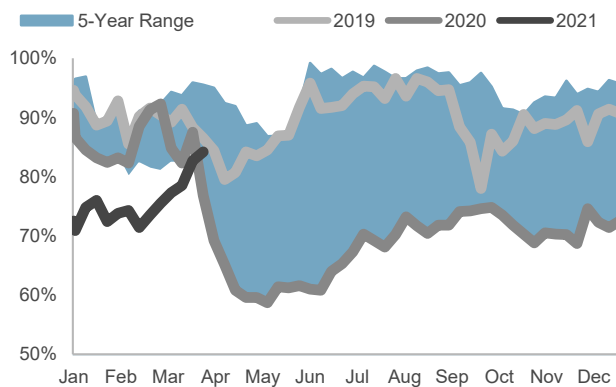
PADD III



PADD IV

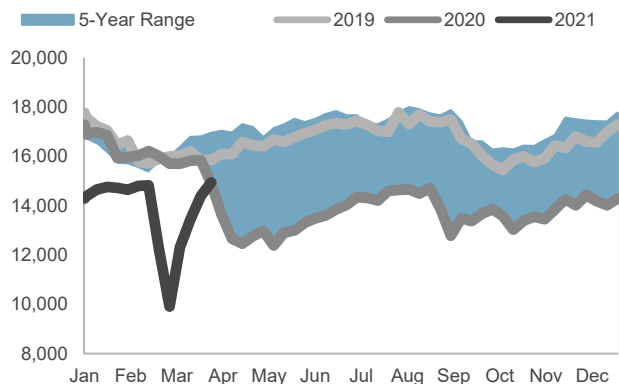


PADD V

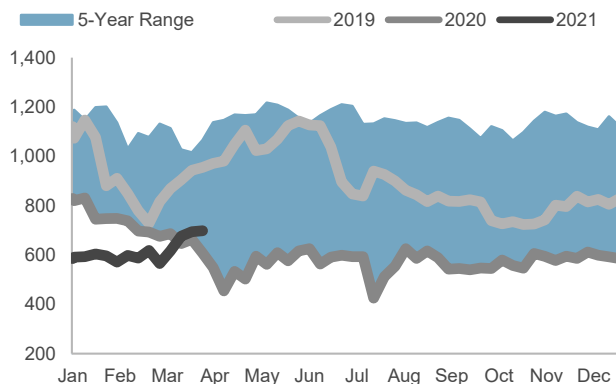


Refining – U.S. Crude Runs (Mbbbl/d)

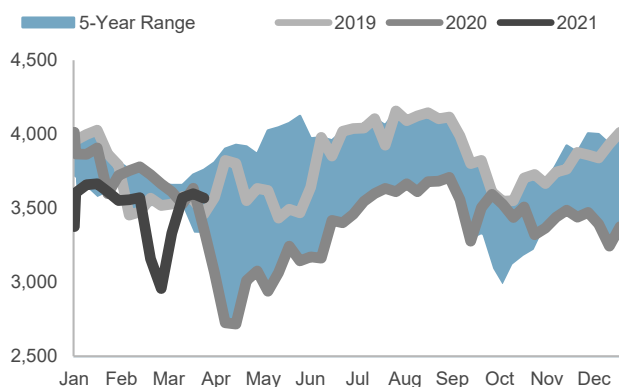
Total U.S.



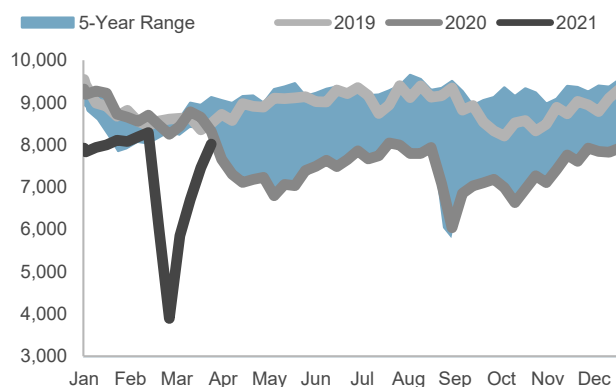
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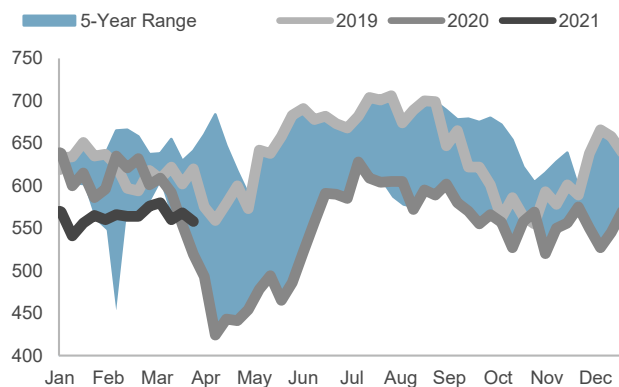
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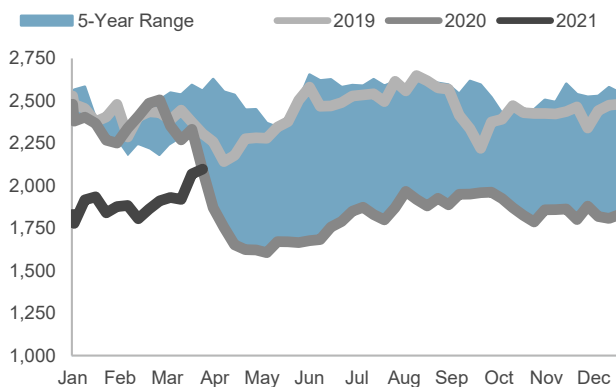
PADD III



PADD IV

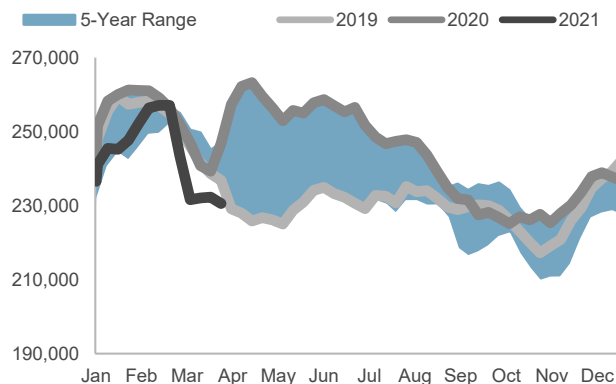


PADD V

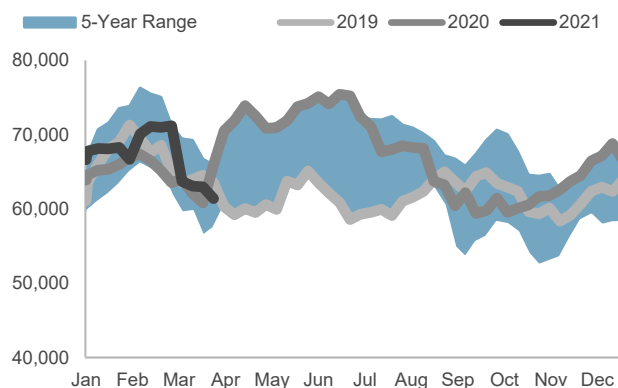


Refining – Motor Gasoline Inventory (Mbbl)

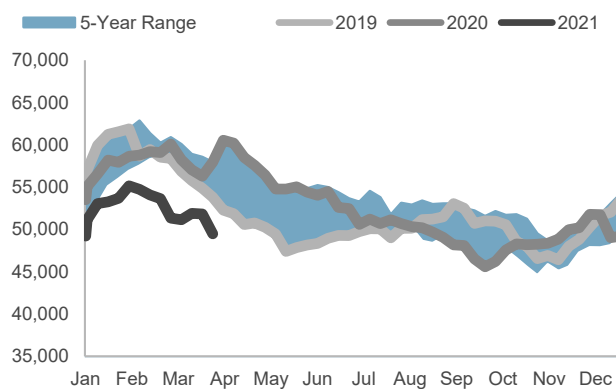
Total U.S.



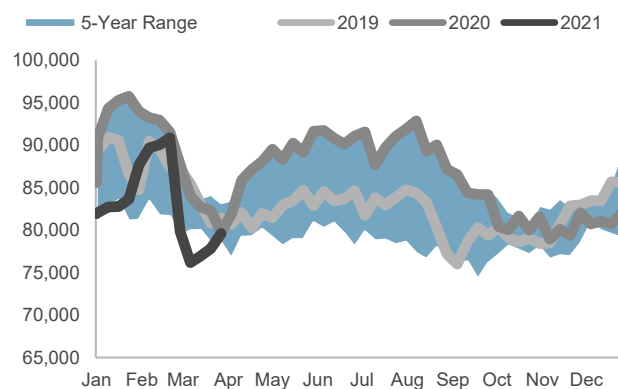
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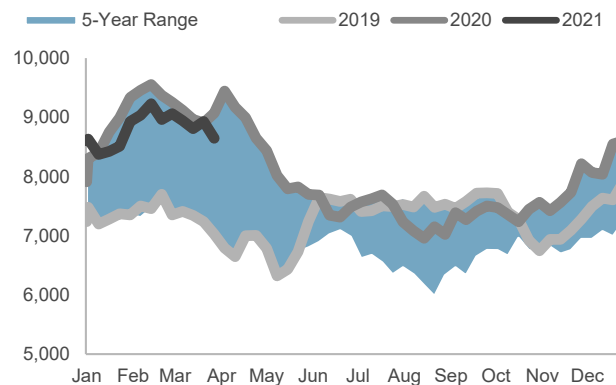
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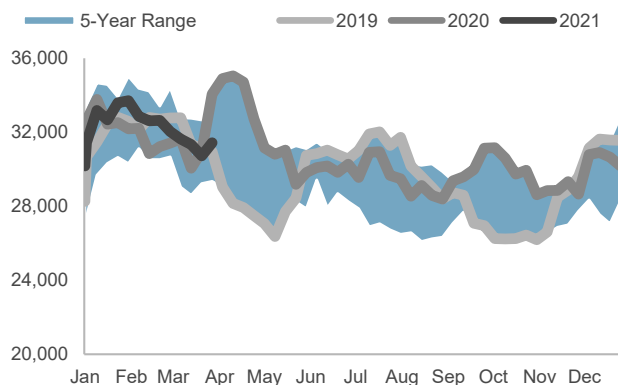
PADD III



PADD IV

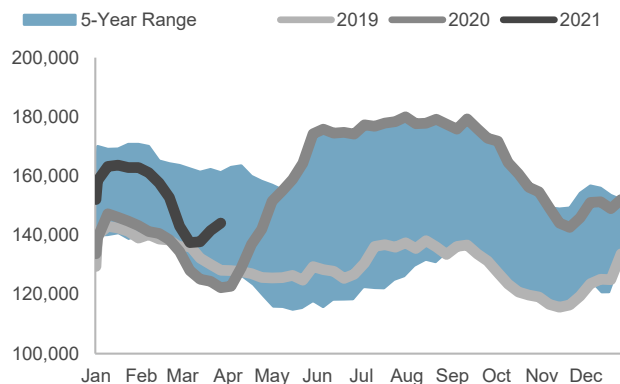


PADD V

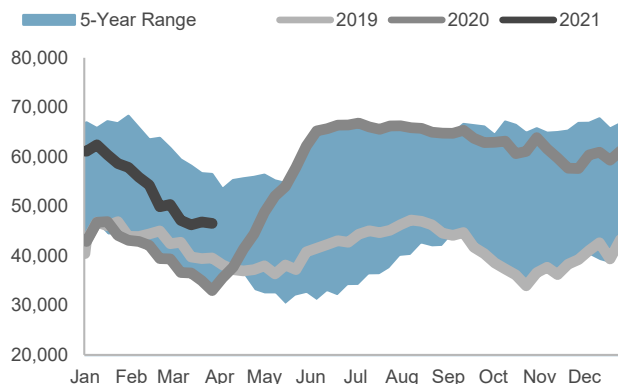


Refining – Distillate Fuel Oil Inventory (Mbbl)

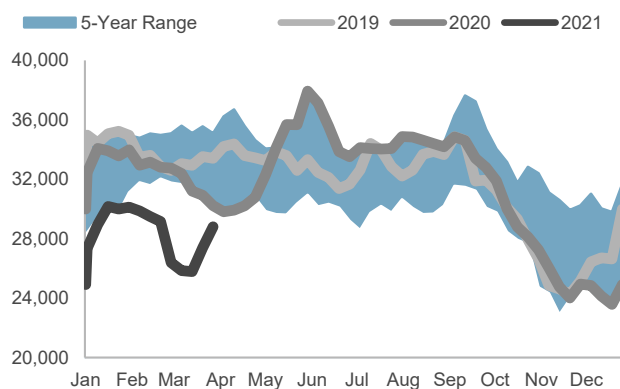
Total U.S.



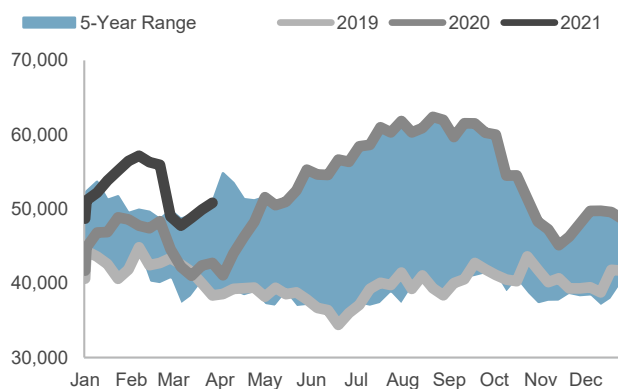
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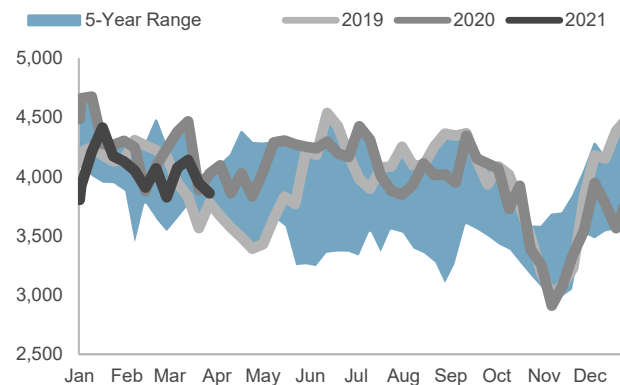
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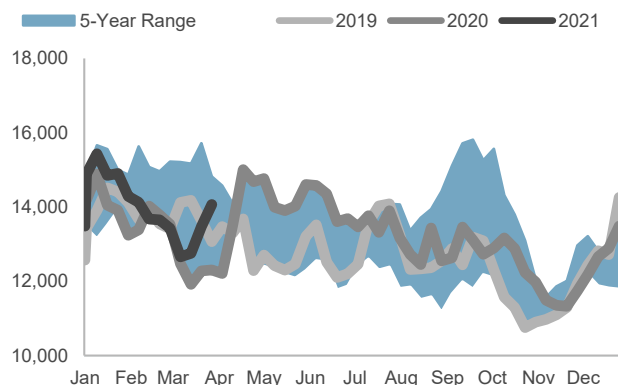
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PADD IV

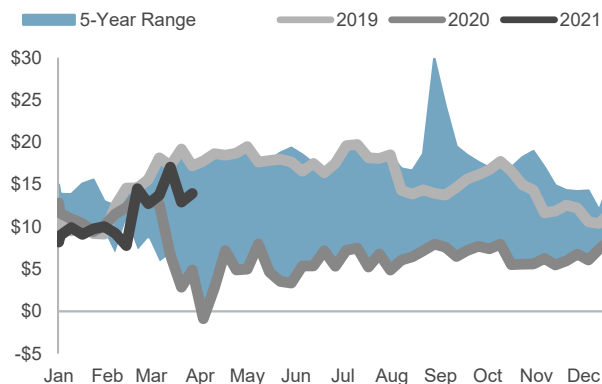


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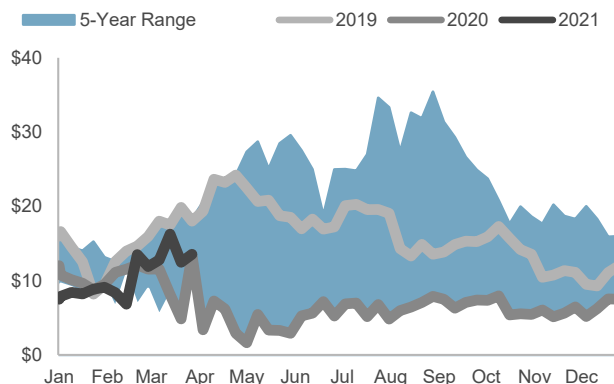


Refining – 3:2:1 Crack Spreads (\$/bbl)

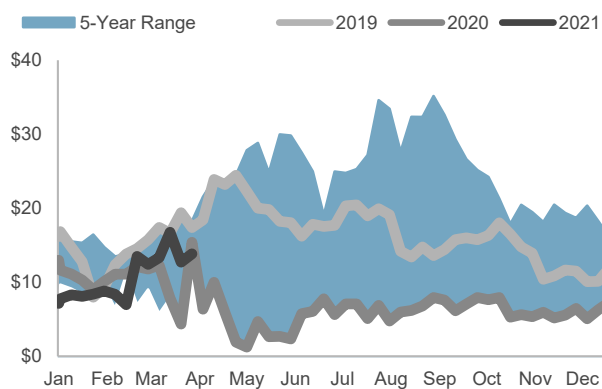
WTI Cushing (U.S. Gulf Coast)



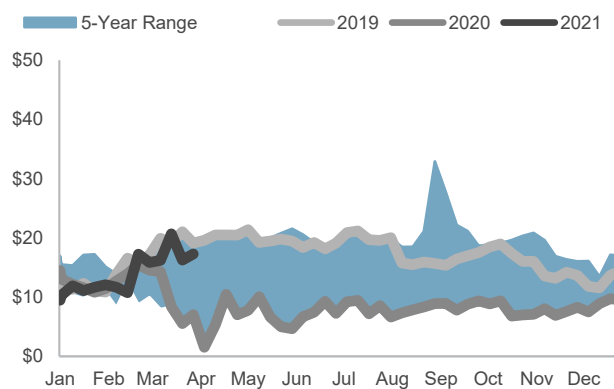
WTI Midland (U.S. Gulf Coast)



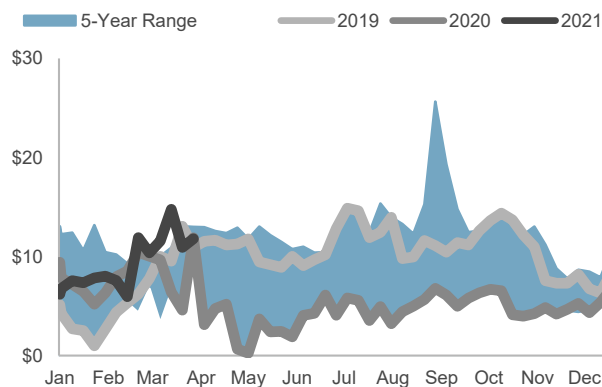
WTS Midland (U.S. Gulf Coast)



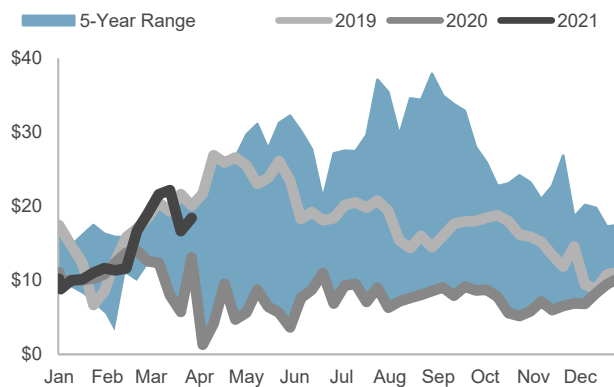
WTI Cushing ULSD (U.S. Gulf Coast)



LLS (U.S. Gulf Coast)

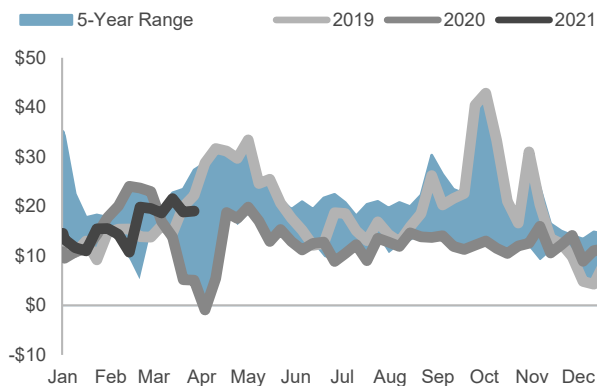


WTI Midland ULSD (U.S. Mid-Continent)

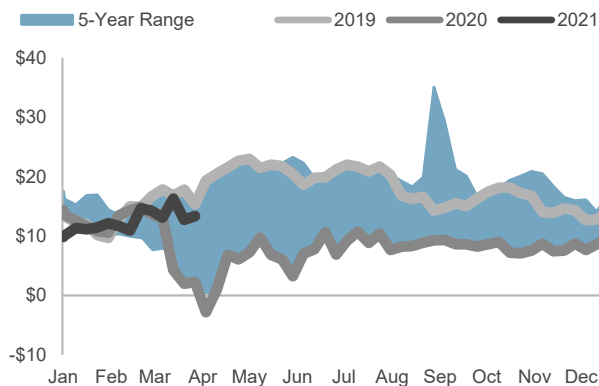


Refining – 3:2:1 Crack Spreads (\$/bbl) (cont.)

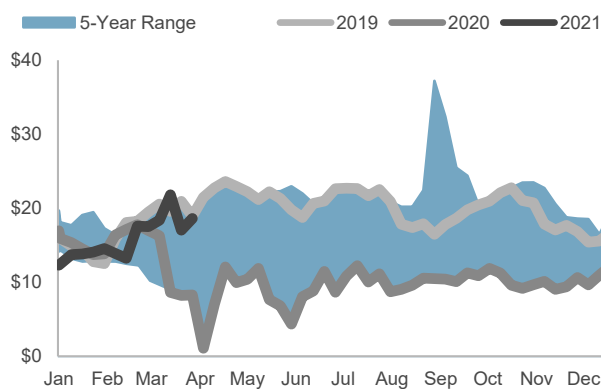
ANS (U.S. West Coast)



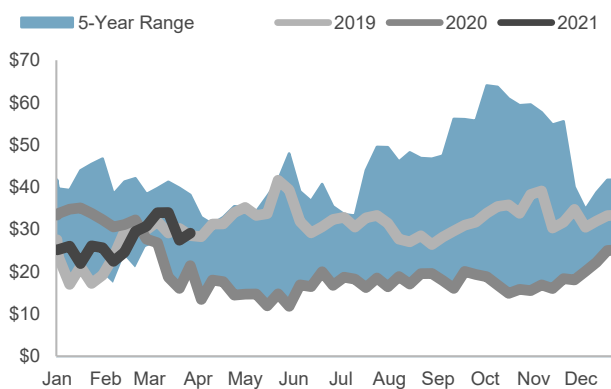
WTI Cushing (NYH RBOB Gasoline)



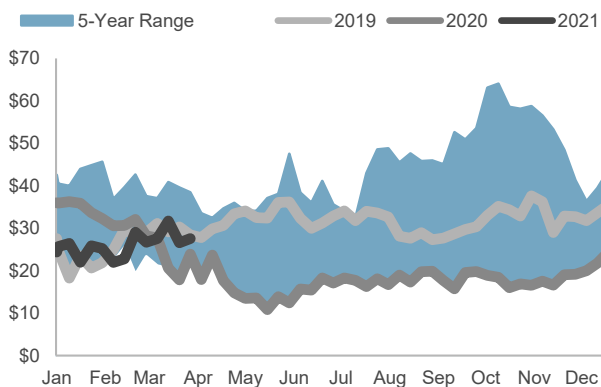
WTI Cushing ULSD (NY Harbor)



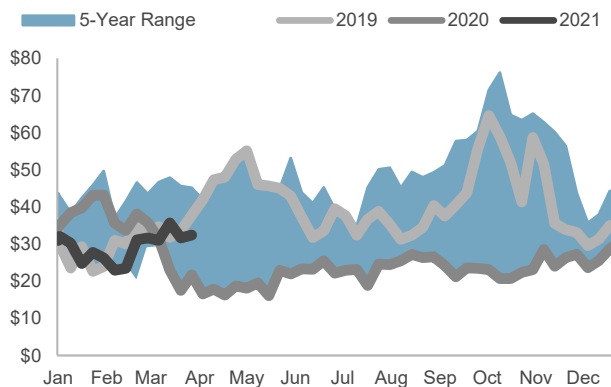
WCS (U.S. Mid-Continent)



WCS (U.S. Gulf Coast)

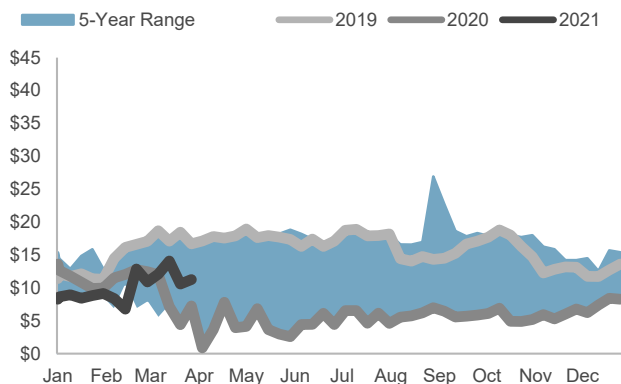


WCS (San Francisco)

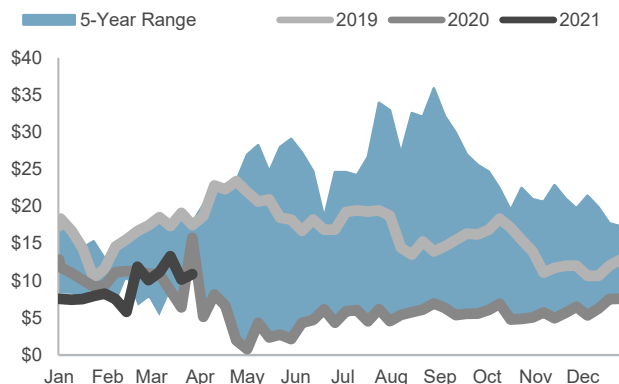


Refining – 2:1:1 Crack Spreads (\$/bbl)

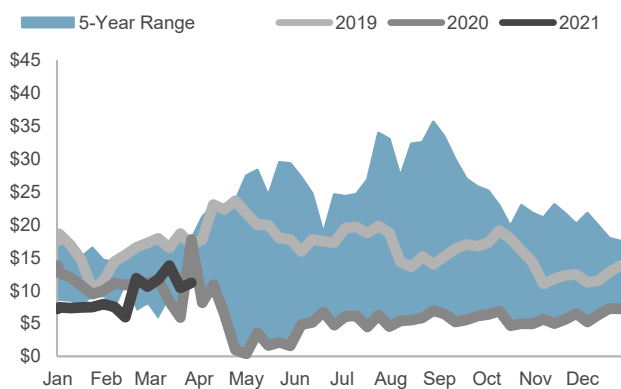
WTI Cushing (U.S. Gulf Coast)



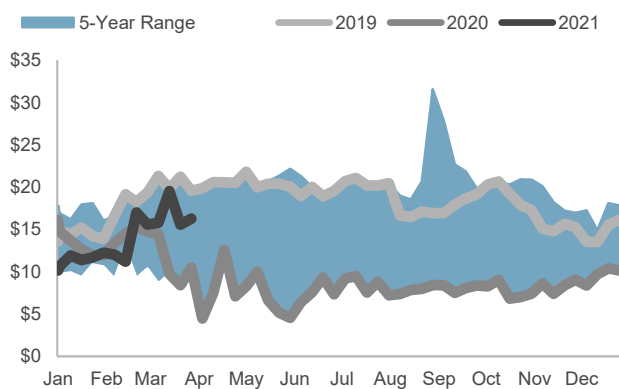
WTI Midland (U.S. Mid-Continent)



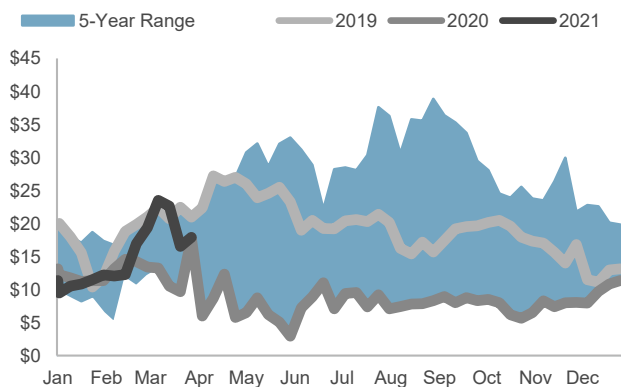
WTS Midland Crude (U.S. Gulf Coast)



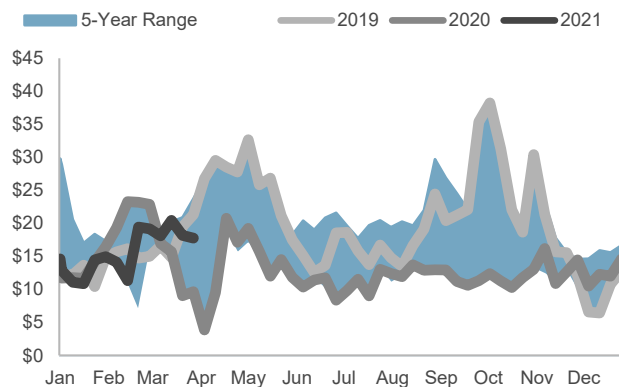
WTI Cushing ULSD (U.S. Gulf Coast)



WTI Midland ULSD (U.S. Mid-Continent)

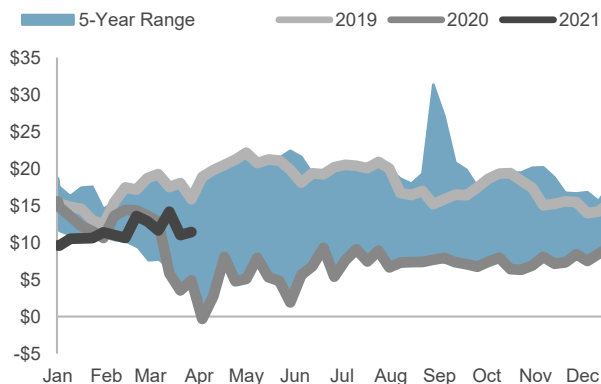


ANS (U.S. West Coast)

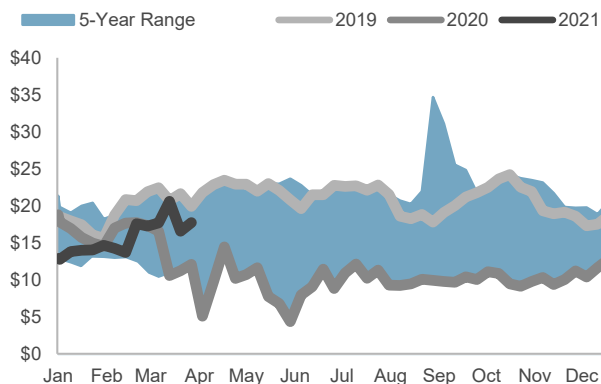


Refining – 2:1:1 Crack Spreads (\$/bbl) (cont.)

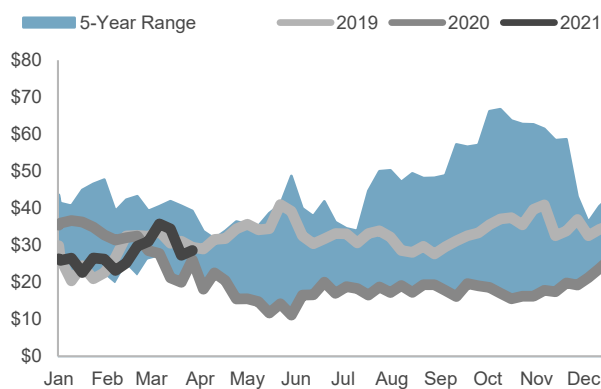
WTI Cushing (NYH RBOB Gasoline)



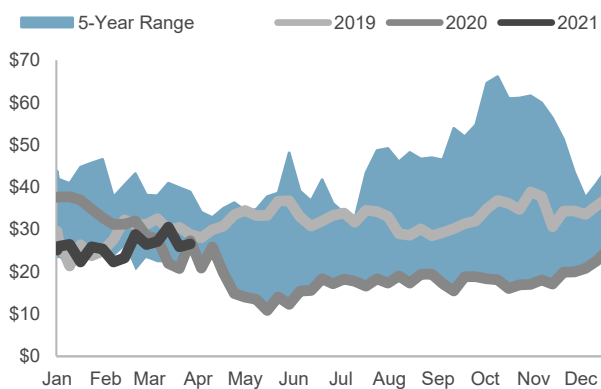
WTI Cushing ULSD (NY Harbor)



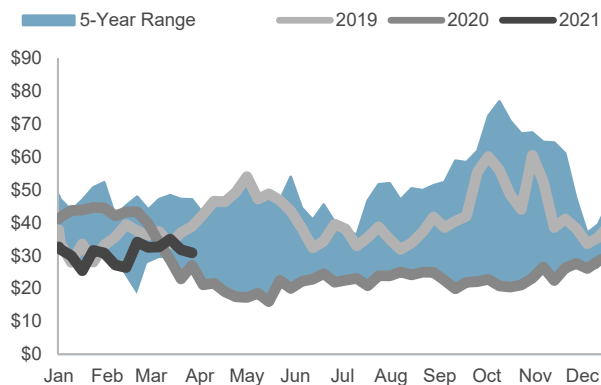
WCS (U.S. Mid-Continent)



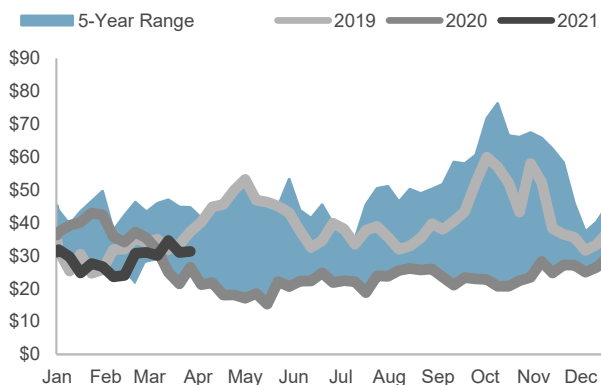
WCS (U.S. Gulf Coast)



WCS (U.S. West Coast)

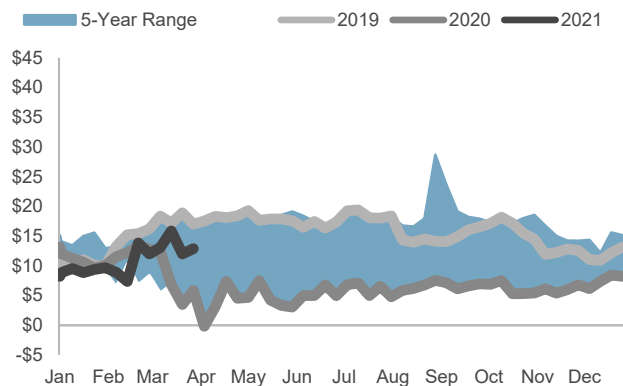


WCS (San Francisco)

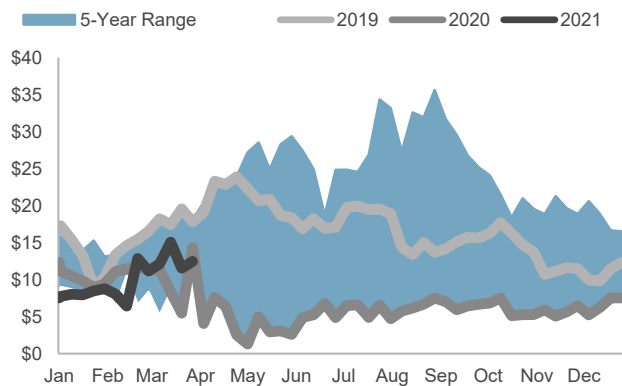


Refining – 5:3:2 Crack Spreads (\$/bbl)

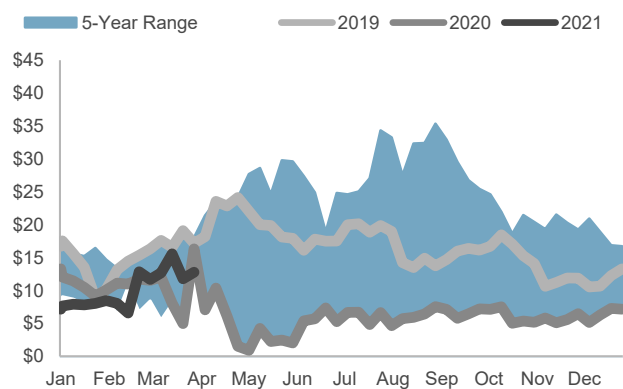
WTI Cushing (U.S. Gulf Coast)



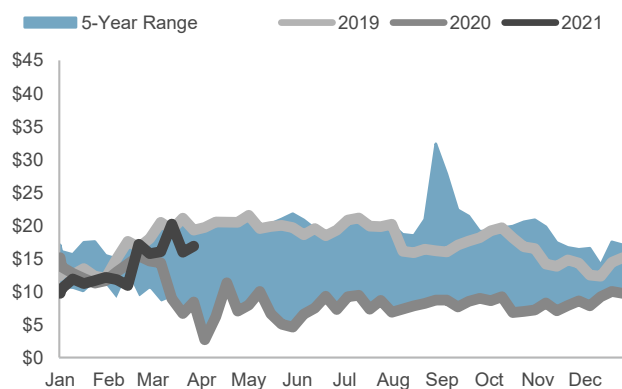
WTI Midland (U.S. Gulf Coast)



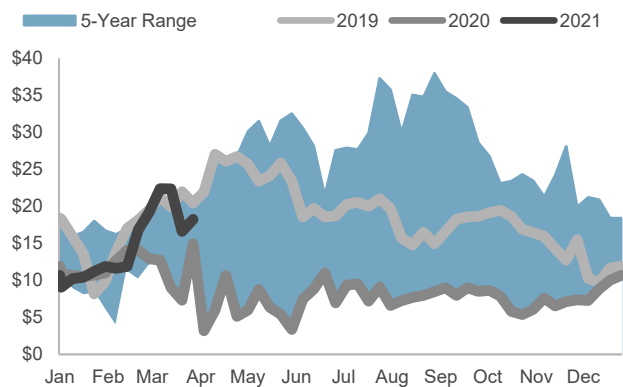
WTS (U.S. Gulf Coast)



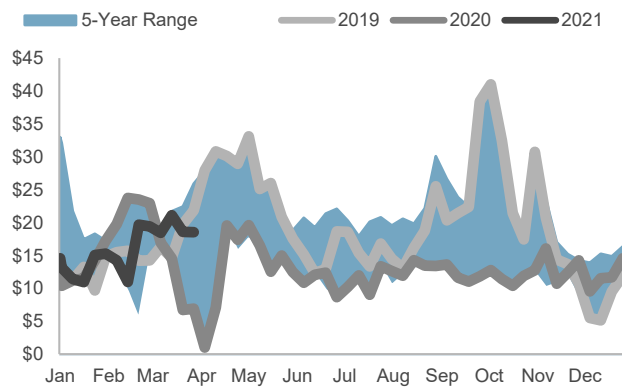
WTI Cushing ULSD (U.S. Gulf Coast)



WTI Midland ULSD (U.S. Mid-Continent)

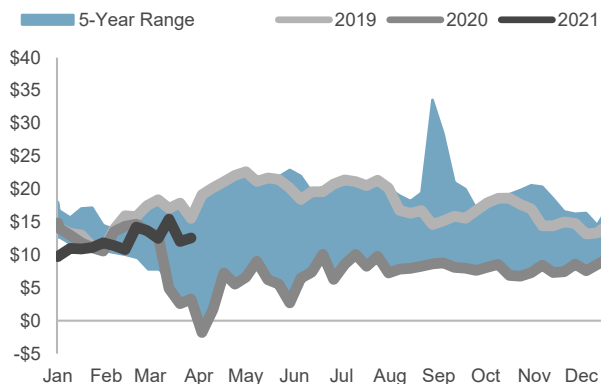


ANS (U.S. West Coast)

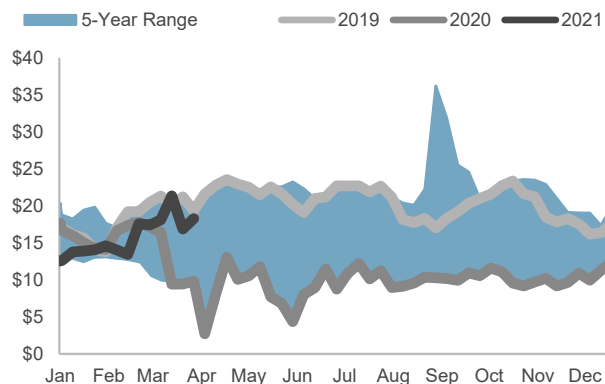


Refining – 5:3:2 Crack Spreads (\$/bbl) (cont.)

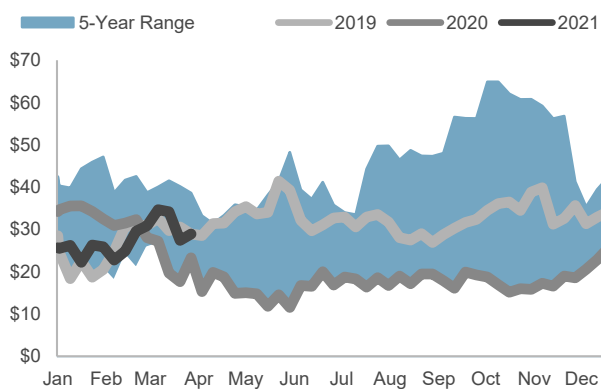
WTI Cushing (NYH RBOB Gasoline)



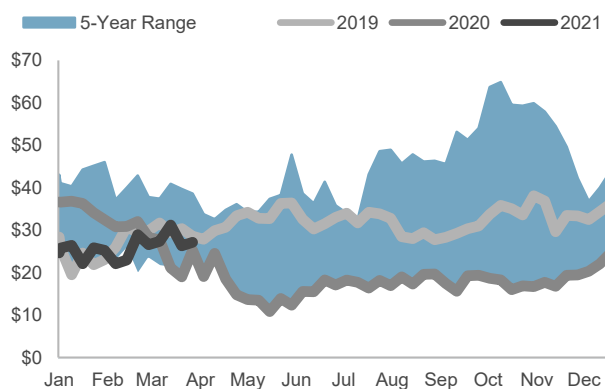
WTI Cushing ULSD (NY Harbor)



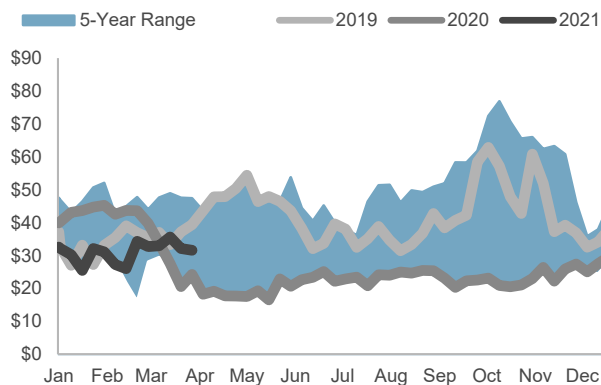
WCS (U.S. Mid-Continent)



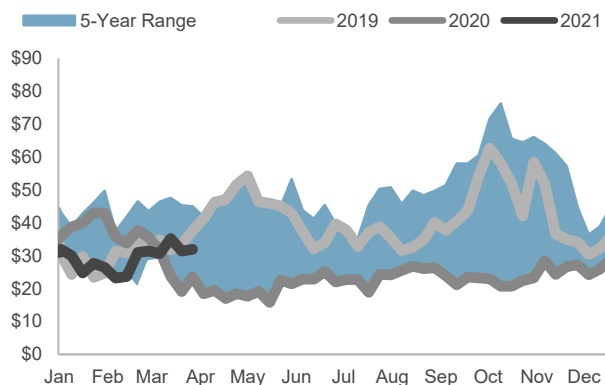
WCS (U.S. Gulf Coast)



WCS (U.S. West Coast)

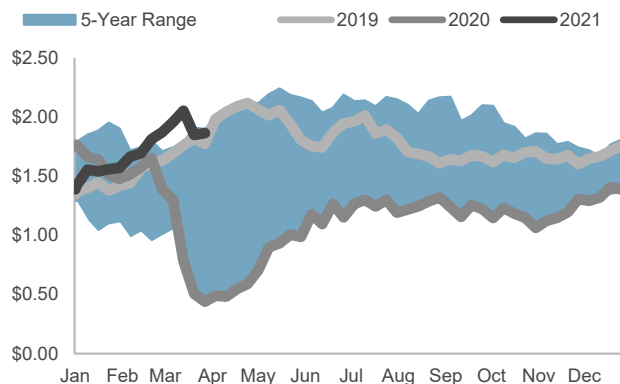


WCS (San Francisco)

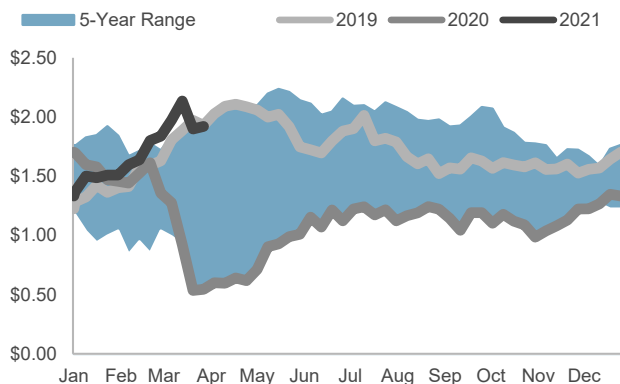


Refining – Product Prices (\$/gal)

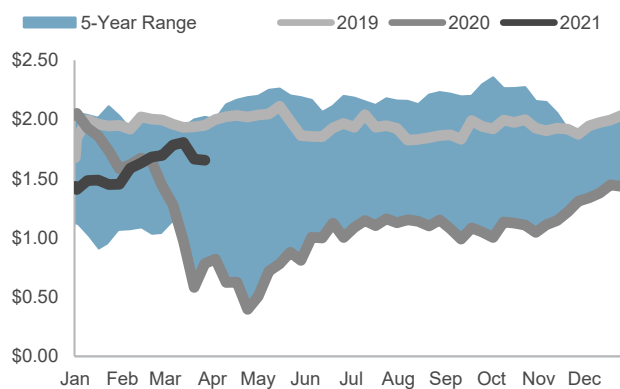
84 RBOB Gasoline (NY Harbor)



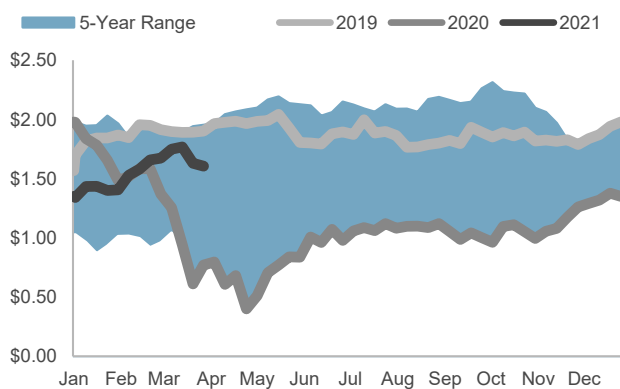
84 RBOB Gasoline (U.S. Gulf Coast)



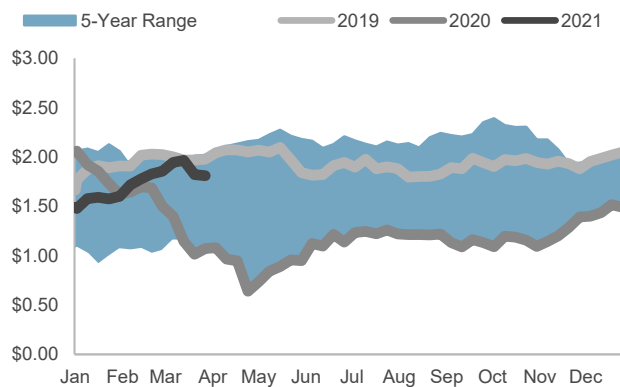
54-Grade Jet Fuel (NY Harbor)



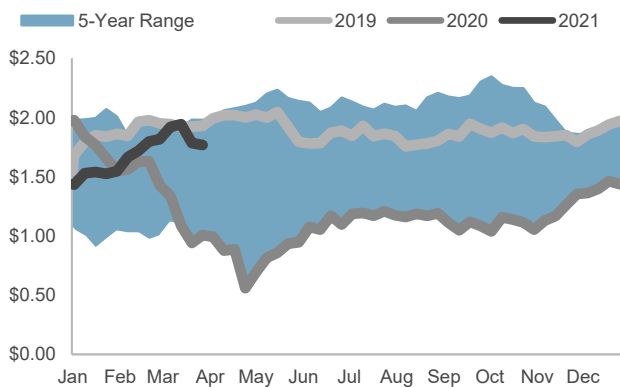
54-Grade Jet Fuel (U.S. Gulf Coast)



ULSD (NY Harbor)



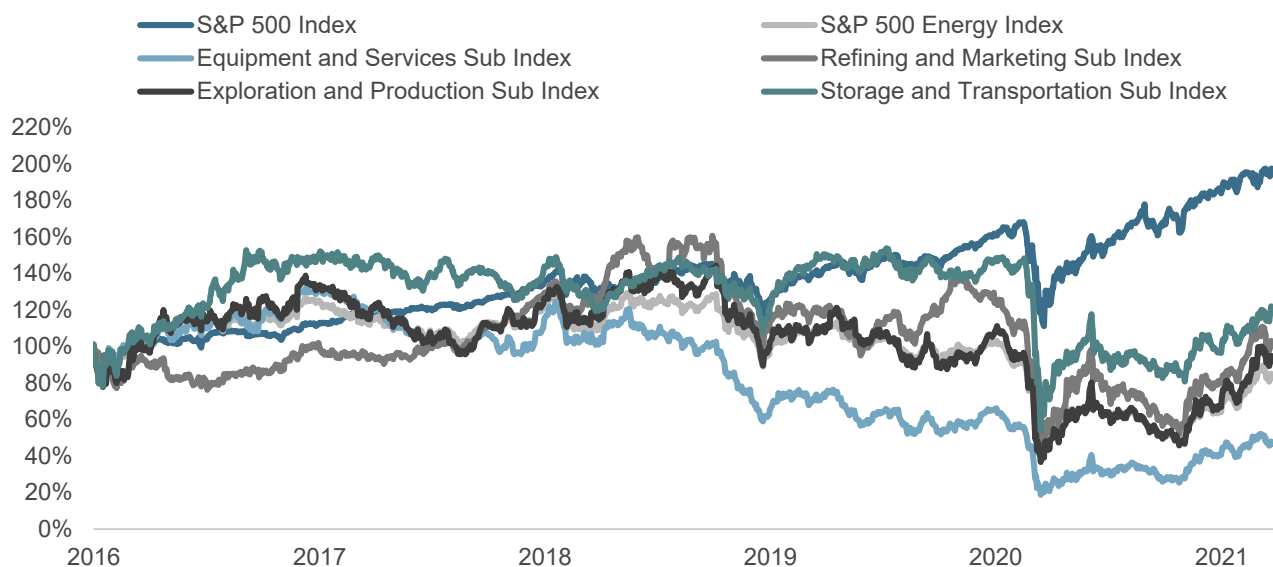
ULSD (U.S. Gulf Coast)



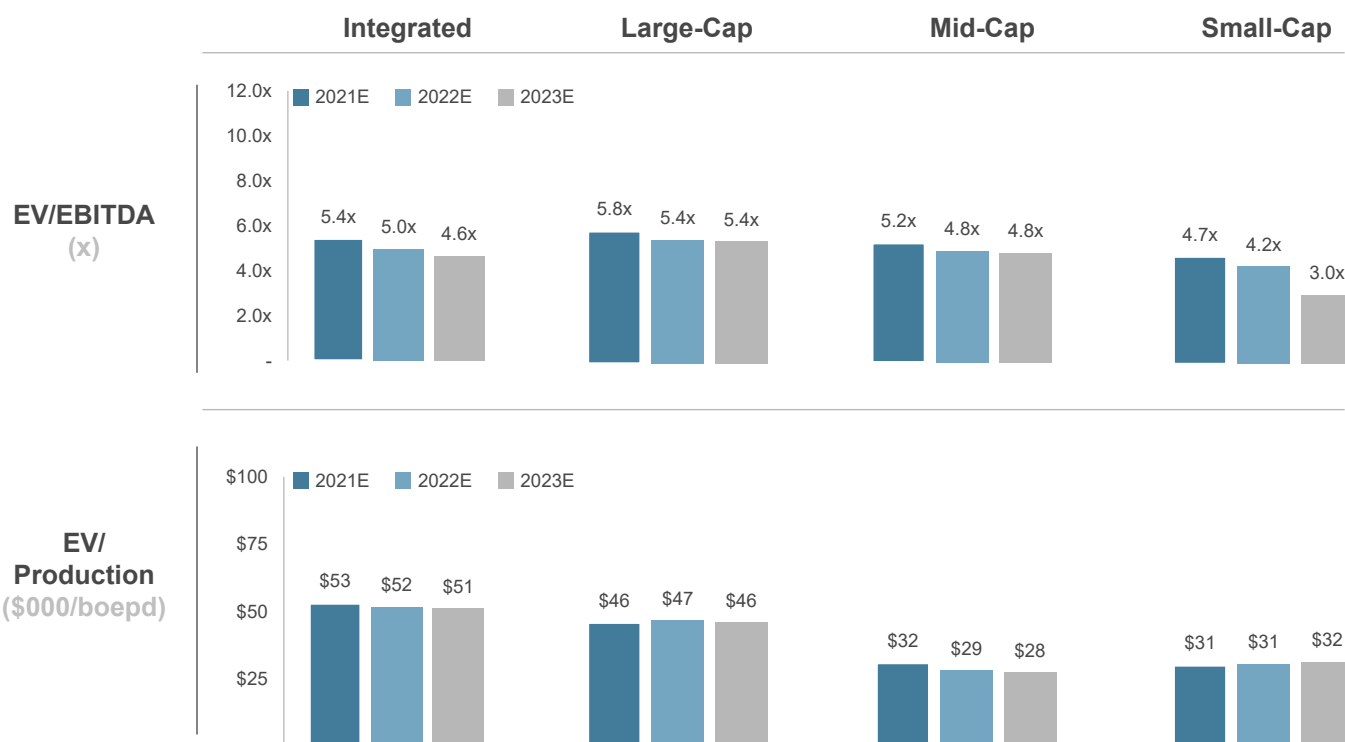
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Public Markets Overview

12 Months Indexed Stock Price Performance (January 1, 2016 = 100%)



Public E&P Company Trading Metrics



Note: Trading multiples are based on share price and market data listed as of March 31, 2021, and broker consensus future earnings estimates from S&P Capital IQ as of March 31, 2021.
Source: S&P Capital IQ.

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E&P

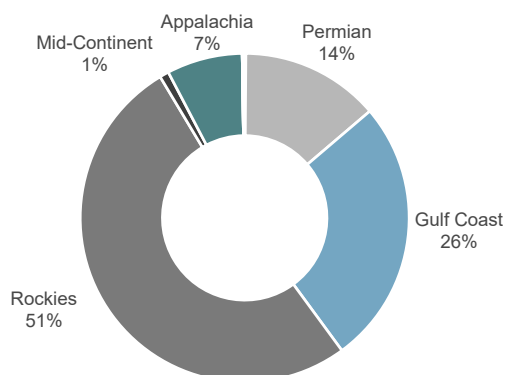
M&A (\$ in billions)

US Region	2019	2020	YTD March		%Δ
			2020	2021	
Multi Region	\$62.3	\$21.5	\$0.2	\$0.0	-98%
Permian	10.7	24.2	0.1	0.5	257%
Gulf Coast	1.3	0.4	0.1	0.9	NMF
Rockies	3.6	0.8	0.0	1.7	NMF
Mid-Continent	3.9	0.6	0.0	0.0	375%
Appalachia	1.4	3.3	0.1	0.3	128%
Ark-La-Tex	3.0	0.4	0.0	0.0	NMF
Gulf of Mexico	3.2	1.0	0.0	0.0	NMF
West Coast	0.7	0.0	0.0	0.0	NMF
Alaska	6.2	0.0	0.0	0.0	NMF
Total	\$96.2	\$52.4	\$0.6	\$3.4	NMF

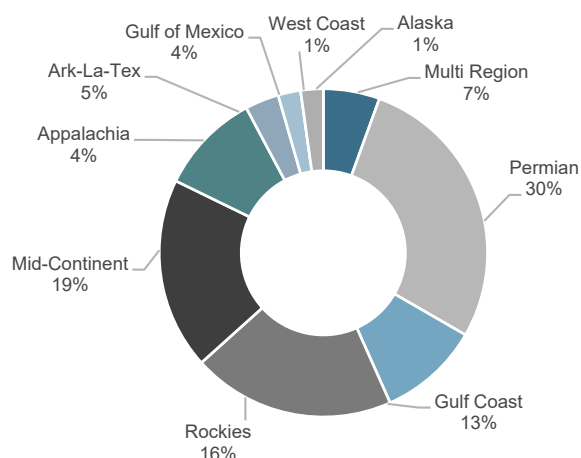
M&A (Deal Count)

US Region	2019	2020	YTD March		%Δ
			2020	2021	
Multi Region	54	45	7	5	-29%
Permian	290	120	22	25	14%
Gulf Coast	92	53	9	9	0%
Rockies	115	46	12	18	50%
Mid-Continent	159	67	14	17	21%
Appalachia	28	39	8	9	13%
Ark-La-Tex	41	20	0	3	NMF
Gulf of Mexico	27	8	2	2	0%
West Coast	7	9	2	0	-100%
Alaska	8	6	1	2	100%
Total	821	413	77	90	17%

M&A – Q1 2021 (\$ in billions)



M&A – Q1 2021 (Deal Count)

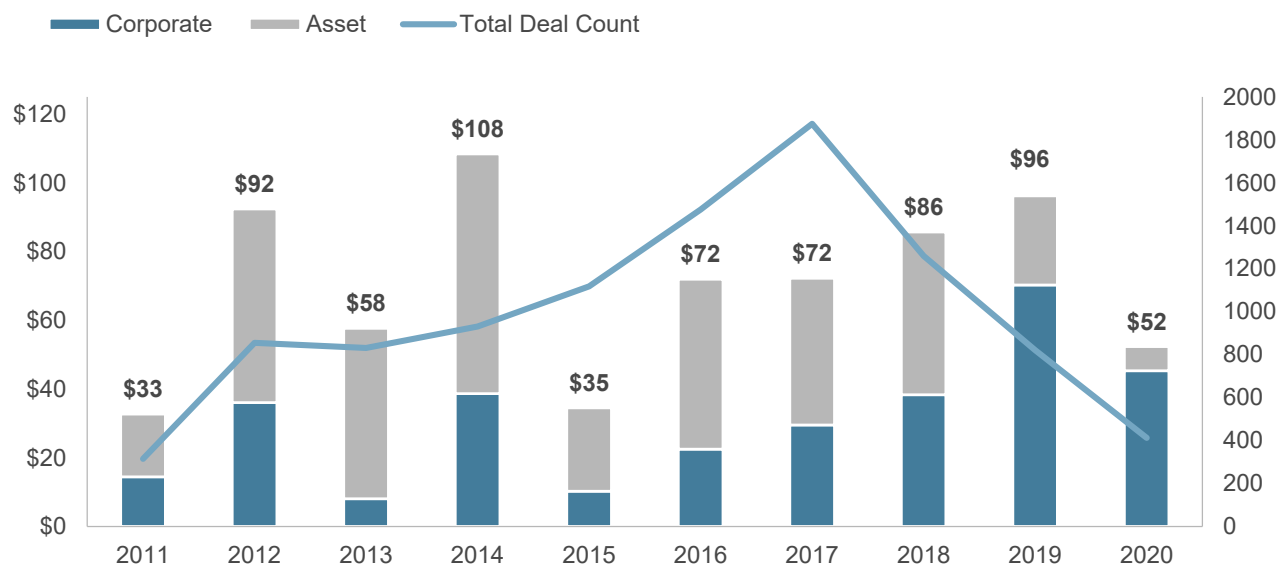


Note: All data as of March 31, 2021.

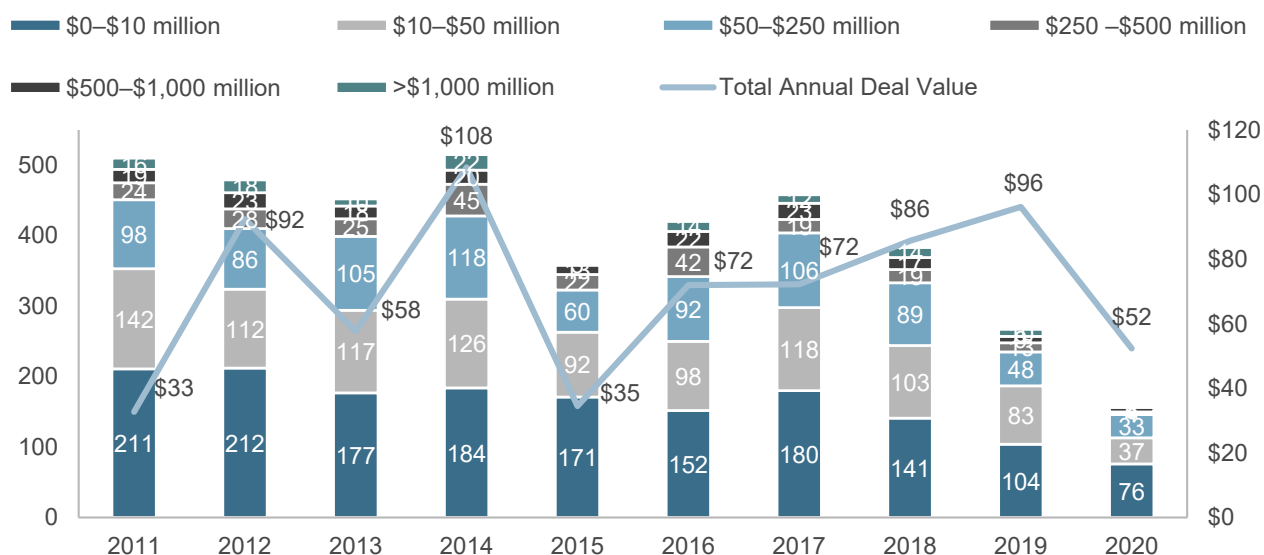
Source: Enverus based on selection criteria of seller assets being located in the U.S. Current year may not include values for all announced transactions or findings. Historical amounts may be adjusted as additional information is available.

Historical E&P Transaction Activity

U.S. Transactions Since 2011 (\$ in billions)



U.S. Transactions by Deal Size Since 2011⁽¹⁾ (\$ in billions)



Note: All data as of March 31, 2021.

Source: Enverus based on selection criteria of seller assets being located in the U.S.

(1) Deal count excludes transactions without a publicly disclosed deal value.

OFS

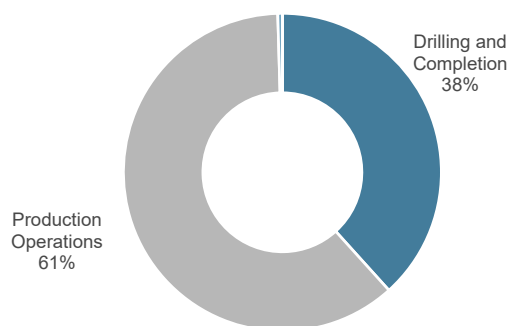
M&A (\$ in billions)

Segment	2019	2020	YTD March		%Δ
			2020	2021	
Drilling and Completion	1.8	0.2	0.0	0.1	62%
Production Operations	2.8	0.7	0.1	0.1	-19%
Information Services	0.1	0.0	0.0	0.0	-93%
Integrated	7.9	0.0	0.0	0.0	NMF
Other	0.0	0.0	0.0	0.0	NMF
Total	\$12.6	\$0.8	\$0.2	\$0.2	-6%

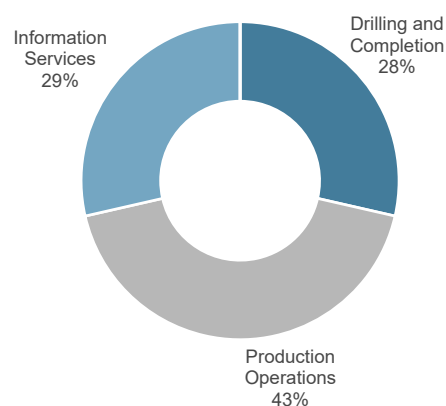
M&A (Deal Count)

Segment	2019	2020	YTD March		%Δ
			2020	2021	
Drilling and Completion	20	16	3	4	33%
Production Operations	63	33	10	6	-40%
Information Services	22	6	2	4	100%
Integrated	15	4	0	0	NMF
Other	0	0	0	0	NMF
Total	120	59	15	14	-7%

M&A – Q1 2021 (\$ in billions)



M&A – Q1 2021 (Deal Count)



Note: All data as of March 31, 2021.

Source: Enverus based on selection criteria of seller headquarters being located in the U.S.

Downstream

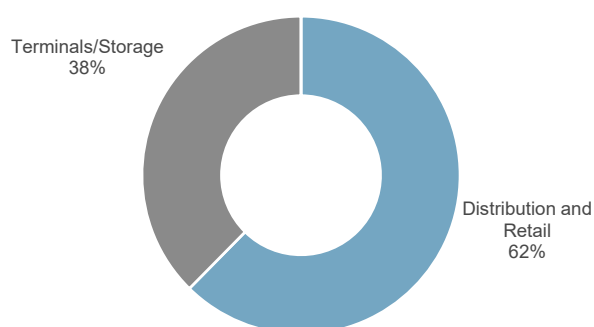
M&A (\$ in billions)

Segment	2019	2020	YTD March		%Δ
			2020	2021	
Refining	0.0	0.3	0.0	0.0	NMF
Multiple	11.2	0.7	0.1	0.0	-100%
Distribution and Retail	6.4	22.9	0.0	0.1	158%
Terminals/Storage	0.4	4.2	0.4	0.1	-83%
Shipping	0.4	0.5	0.3	0.0	-100%
Total	\$18.3	\$28.7	\$0.9	\$0.2	-79%

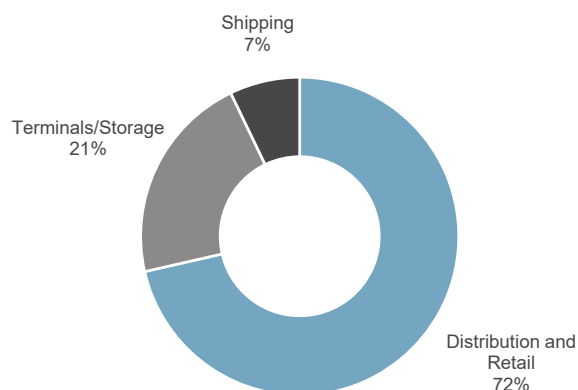
M&A (Deal Count)

Segment	2019	2020	YTD March		%Δ
			2020	2021	
Refining	2	2	0	0	NMF
Multiple	8	4	1	0	-100%
Distribution and Retail	50	49	10	10	0%
Terminals/Storage	2	12	5	3	-40%
Shipping	5	4	1	1	0%
Total	67	71	17	14	-18%

M&A – Q1 2021 (\$ in billions)



M&A – Q1 2021 (Deal Count)



Note: All data as of March 31, 2021.

Source: Enverus based on selection criteria of seller headquarters being located in the U.S.

Midstream

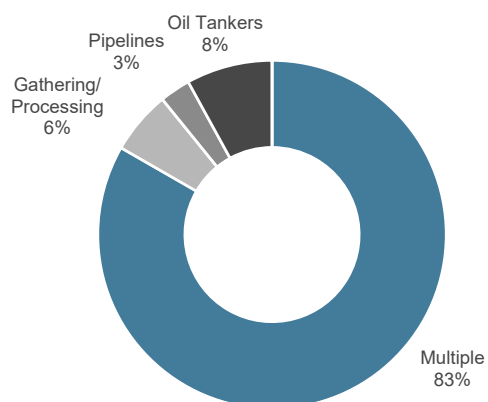
M&A (\$ in billions)

Segment	2019	2020	YTD March		%Δ
			2020	2021	
Multiple	43.0	15.2	5.5	10.2	88%
Gathering/ Processing	8.6	1.6	0.7	0.7	-4%
Gas Processing	0.0	0.0	0.0	0.0	NMF
Pipelines	4.5	3.5	0.2	0.4	NMF
Oil Tankers	0.2	0.1	0.0	1.0	NMF
Storage	0.7	0.4	0.2	0.0	NMF
Total	\$57.0	\$20.8	\$6.6	\$12.3	87%

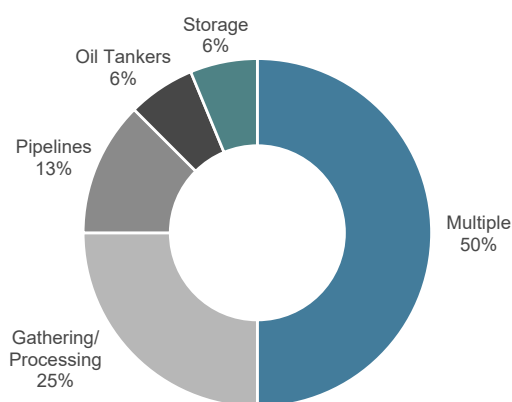
M&A (Deal Count)

Segment	2019	2020	YTD March		%Δ
			2020	2021	
Multiple	16	9	4	8	100%
Gathering/ Processing	31	16	3	4	33%
Gas Processing	0	0	0	0	NMF
Pipelines	17	11	4	2	-50%
Oil Tankers	4	3	0	1	NMF
Storage	5	4	1	1	0%
Total	73	43	12	16	33%

M&A – Q1 2021 (\$ in billions)



M&A – Q1 2021 (Deal Count)



Note: All data as of March 31, 2021.

Source: Enverus based on selection criteria of seller headquarters being located in the U.S.

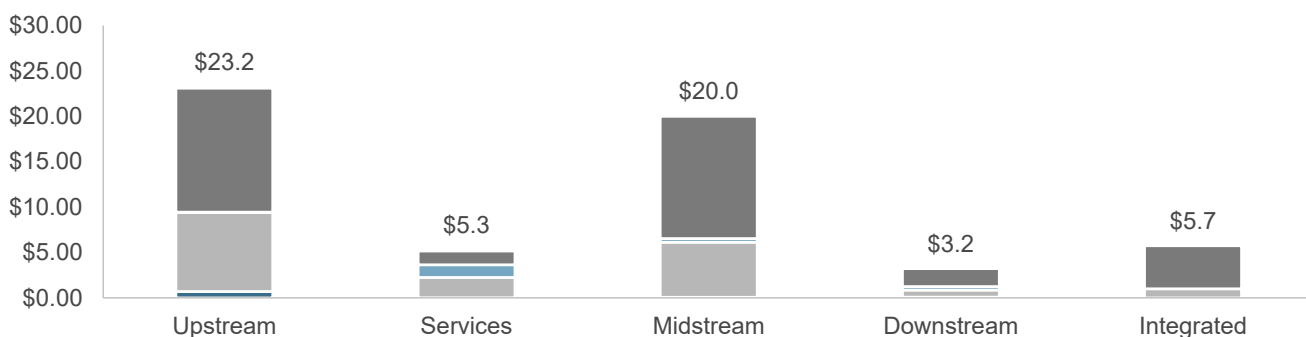
Financing by Instrument (\$ in billions)

Financing by Instrument (\$ in billions)

Capital	2019	2020	YTD March		%Δ
			2020	2021	
Upstream					
Equity	\$1.7	\$1.1	\$0.1	\$0.7	NMF
Credit Facility	25.2	46.1	8.4	8.7	4%
Loan	4.4	12.7	9.1	0.1	-99%
Bond	27.5	32.9	4.6	13.7	197%
Other	0.0	0.1	0.0	0.1	NMF
Total	\$58.9	\$92.9	\$22.2	\$23.2	5%
Services					
Equity	\$0.4	\$0.0	\$0.0	\$0.0	NMF
Credit Facility	19.4	18.6	3.6	2.2	-38%
Loan	7.7	5.8	2.3	1.4	-39%
Bond	8.3	6.6	2.8	1.5	-44%
Other	0.0	0.2	0.0	0.1	NMF
Total	\$35.8	\$31.1	\$8.6	\$5.3	-39%
Midstream					
Equity	\$2.2	\$2.9	\$1.6	\$0.1	-95%
Credit Facility	28.5	28.4	6.6	6.1	-8%
Loan	14.1	6.1	1.9	0.4	-78%
Bond	34.8	43.9	16.8	13.5	-20%
Other	0.7	2.6	1.6	0.0	-100%
Total	\$80.2	\$84.0	\$28.5	\$20.0	-30%
Downstream					
Equity	\$0.0	\$0.0	\$0.0	\$0.1	NMF
Credit Facility	11.4	8.7	1.1	0.8	-30%
Loan	1.0	1.3	0.0	0.4	NMF
Bond	3.4	15.6	2.0	2.0	-1%
Other	0.1	0.0	0.0	0.0	NMF
Total	\$16.0	\$25.6	\$3.1	\$3.2	3%
Integrated					
Equity	\$2.3	\$1.1	\$0.0	\$0.0	NMF
Credit Facility	10.0	0.9	0.7	1.0	43%
Loan	0.0	0.7	0.7	0.0	-100%
Bond	24.3	73.1	13.2	4.7	-64%
Other	0.0	1.5	0.5	0.0	-100%
Total	\$36.6	\$77.3	\$15.0	\$5.7	-62%
Grand Total	\$227.6	\$310.9	\$77.4	\$57.4	-26%

Financing by Instrument – Q1 2021 (\$ in billions)

■ Equity ■ Credit Facility ■ Loan ■ Bond ■ Other



Note: All data as of March 31, 2021. Current year may not include values for all announced transactions or findings.

Historical amounts may be adjusted as additional information is available.

Source: Enverus.

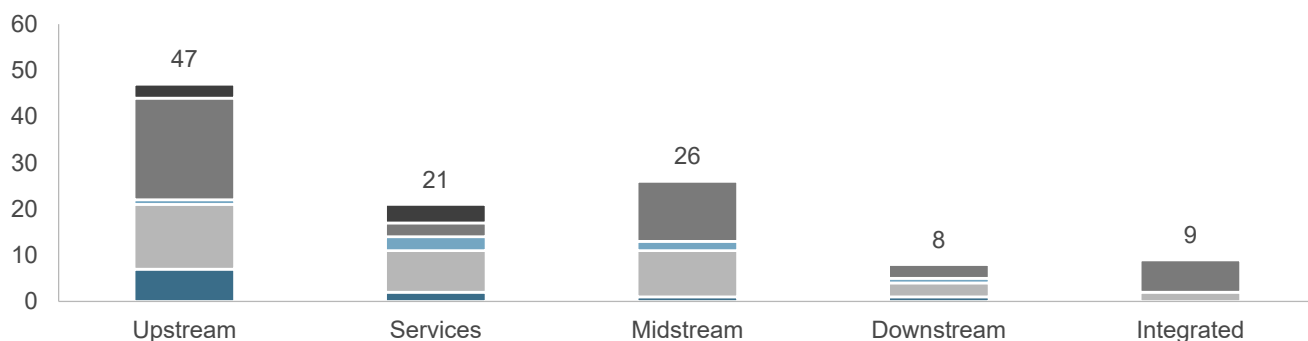
Financing by Instrument (cont.)

Financing by Instrument (Count)

Capital	2019	2020	YTD March		%Δ
			2020	2021	
Upstream					
Equity	12	12	2	7	250%
Credit Facility	22	69	5	14	180%
Loan	18	28	7	1	-86%
Bond	31	47	7	22	214%
Other	1	2	0	3	NMF
Total	84	158	21	47	124%
Services					
Equity	2	2	0	2	NMF
Credit Facility	26	62	11	9	-18%
Loan	22	33	5	3	-40%
Bond	19	16	4	3	-25%
Other	1	6	1	4	300%
Total	70	119	21	21	0%
Midstream					
Equity	6	6	3	1	-67%
Credit Facility	26	25	5	10	100%
Loan	20	12	2	2	0%
Bond	50	59	20	13	-35%
Other	2	6	4	0	-100%
Total	104	108	34	26	-24%
Downstream					
Equity	0	0	0	1	NMF
Credit Facility	8	9	2	3	50%
Loan	6	4	1	1	0%
Bond	5	25	3	3	0%
Other	2	1	0	0	NMF
Total	21	39	6	8	33%
Integrated					
Equity	3	2	0	0	NMF
Credit Facility	2	2	1	2	100%
Loan	1	2	2	0	-100%
Bond	27	65	11	7	-36%
Other	0	2	1	0	-100%
Total	33	73	15	9	-40%
Grand Total	312	497	97	111	14%

Financing by Instrument – Q1 2021 (Deal Count)

■ Equity ■ Credit Facility ■ Loan ■ Bond ■ Other



Note: All data as of March 31, 2021. Current year may not include values for all announced transactions or findings.

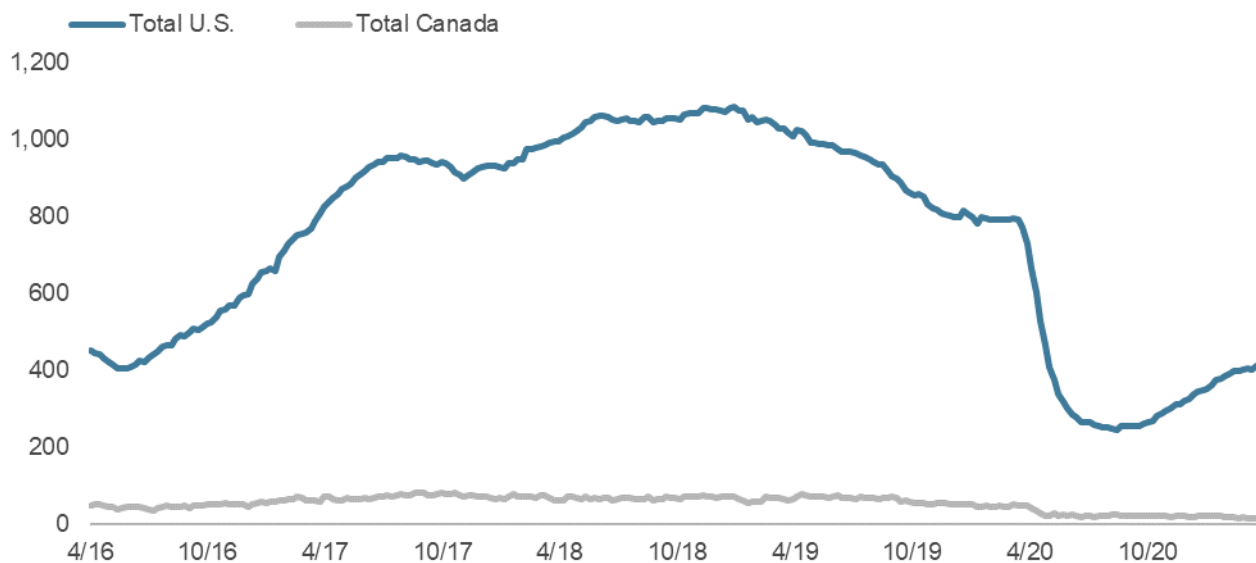
Historical amounts may be adjusted as additional information is available.

Source: Enverus.

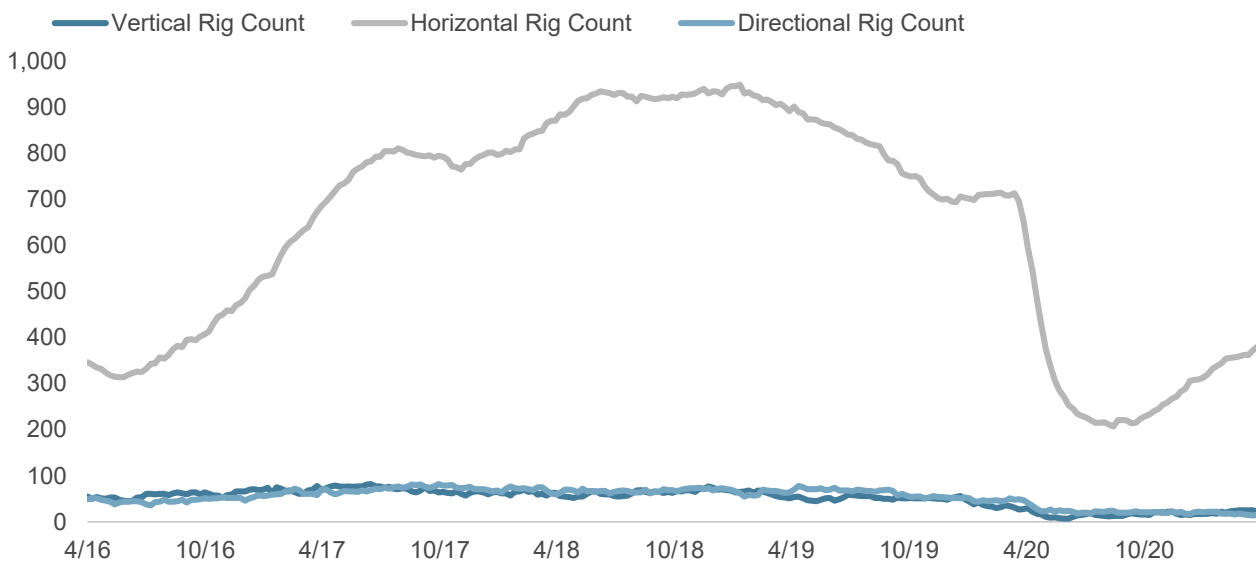
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Rigs

Total U.S. vs. Canada Rigs

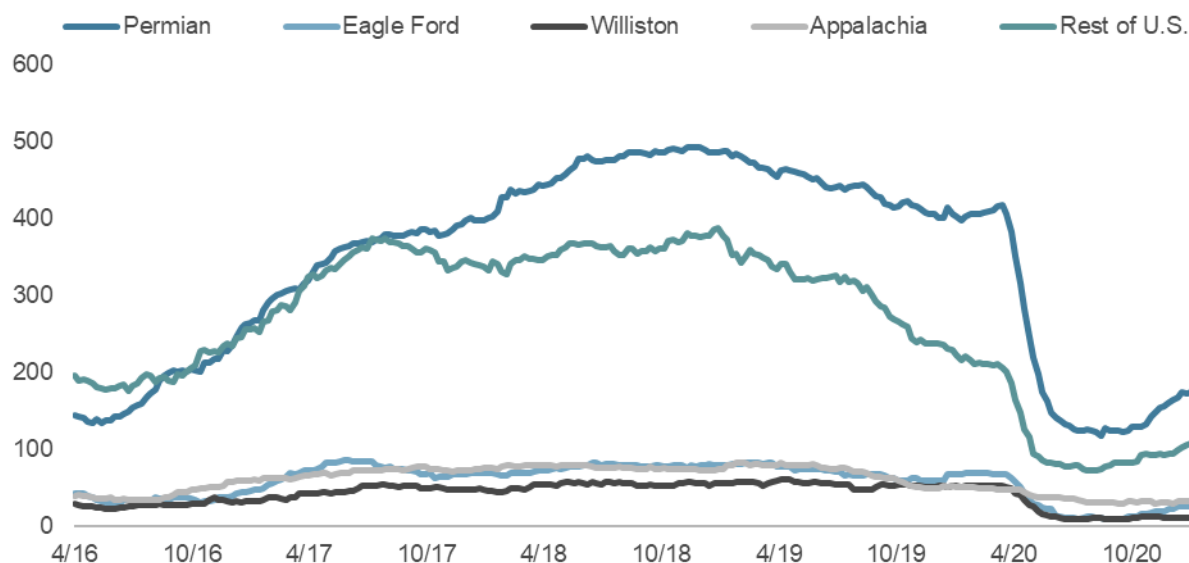


U.S. Rig Counts by Vertical, Horizontal, and Directional



Rigs (cont.)

U.S. Rigs by Regions

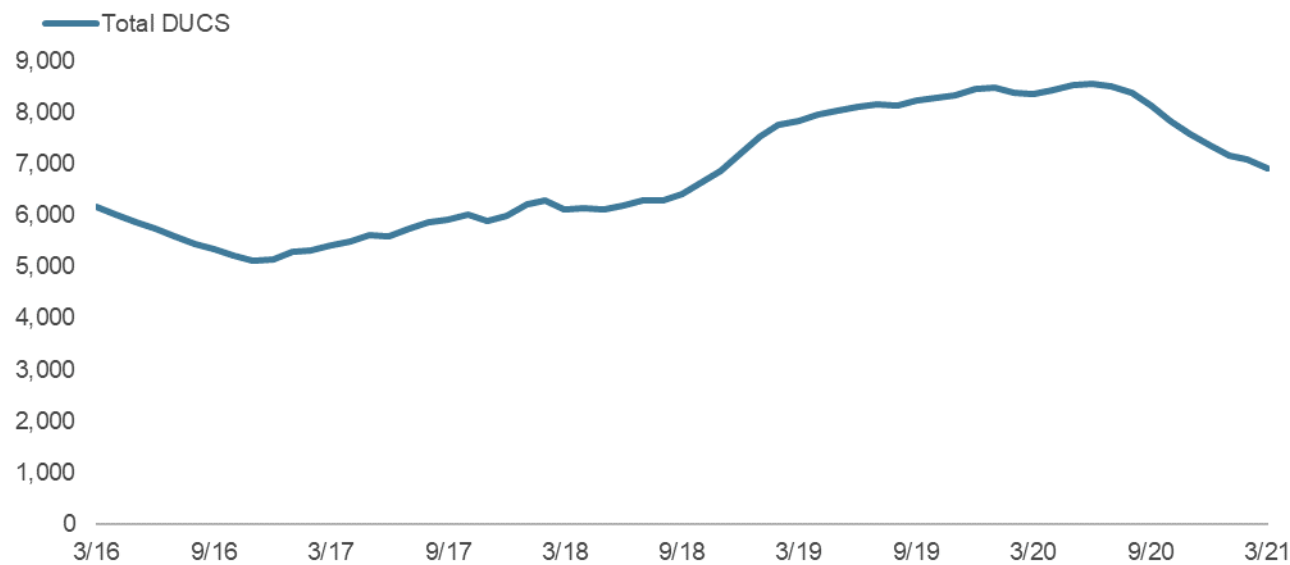


Change in Rig Counts

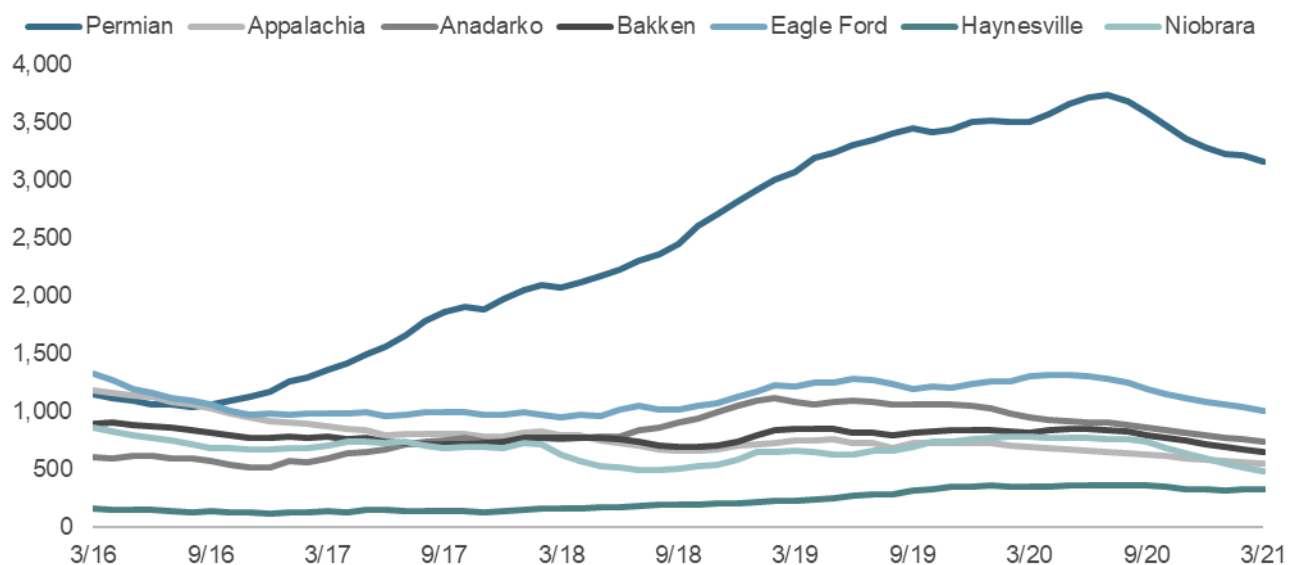
Region	3/31/2021	3/31/2020	12/31/2020	YoY % Change	QoQ % Change
Permian	221	382	173	-42.1%	27.7%
Eagle Ford	31	63	26	-50.8%	19.2%
Williston	14	49	11	-71.4%	27.3%
Marcellus	30	39	26	-23.1%	15.4%
Cana Woodford	12	13	8	-7.7%	50.0%
DJ Niobrara	7	19	5	-63.2%	40.0%
Granite Walsh	0	3	1	-100.0%	-100.0%
Haynesville	45	40	43	12.5%	4.7%
Utica	9	9	6	0.0%	50.0%
Rest of U.S.	48	111	49	-56.8%	-2.0%
Total	417	728	348	-42.7%	19.8%

Rigs (cont.)

Total U.S. DUCs



Total DUCs by Basin



Note: All data as of March 31, 2021. Data is collected on a monthly basis and subject to a one-month lag.
Source: Bloomberg.

About Houlihan Lokey

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