

# High Grade Energy Weekly

## Week ended January 12, 2024

### Industry Overview

### Energy spreads finish ~10 bps tighter w-o-w

Spreads in the HG Energy sector finished ~10 bps tighter w-o-w on the back of a broad IG market rally and continued escalations in the Middle East (though oil prices were largely unch'd w-o-w). In the E&P subsector, spreads were anywhere between 5 to 15 bps tighter with Apache (APA, NR) outperforming and closing 16 bps tighter w-o-w. In Midstream, spreads were also mostly 5 to 15 bps tighter. Plains All American (long-end) (PAA, OW) and TC Energy (long-end) (TRPCN, MW) were clear outperformers in Midstream while tightening 24 and 23 bps w-o-w, respectively. Separately, Oilfield Services, Integrated Producers and Refiners all performed relatively in-line with the broad energy market and closed anywhere between 5 to 15 bps tighter.

### HG Energy underperforms the HG Corporate Index

The ICE BofA HG Energy Index earned 36 bps of excess returns, underperforming the ICE BofA HG Corporate Index (+50 bps of excess returns). All subsectors underperformed, except Pipelines which earned 58 bps of excess returns.

### BofA lowers FY24 oil price deck; ratings actions on CHK

On Sunday evening, our BofA Commodity Research Team lowered its outlook for Brent and WTI oil prices in 2024 from \$90/ and \$86/bbl to \$80/ and \$75/bbl, respectively. While Francisco Blanch and team see continued risks from geopolitics, they expect prices to be weaker due to stronger than expected US shale growth, uncertain OPEC+ cohesion, and a softening macro backdrop. For Brent prices to fall below \$70/bbl, however, Francisco Blanch notes that we'd need to see inventories build meaningfully in 2024 which is unlikely given (i) OPEC's plans to reduce production; (ii) the rising chance of an economic soft landing; and (iii) ongoing geopolitical risks. We share an excerpt from [this report](#) later in our piece. Separately, we highlight S&P's report which placed Chesapeake Energy (CHK, covered by Gregg Brody) on CreditWatch positive following its announced deal to acquire natural-gas focused peer Southwestern Energy (SWN, covered by Gregg Brody) in an all-stock transaction valued at \$11.5b (includes ~\$4.1b of SWN debt). The positive CreditWatch reflects the likelihood that S&P will raise CHK's rating two notches to BBB- around the close of the transaction in 2Q24 (under announced terms). Away from S&P, we also note Fitch's report that placed CHK on ratings watch positive following its announced acquisition of SWN. Fitch expects to resolve the positive watch once the transaction is complete (under announced terms). CHK's current long-term issuer rating at Fitch is BB+.

### Oil prices unch'd while nat gas rises w-o-w

Oil prices were roughly unch'd w-o-w at \$74.25/bbl despite continued escalations in the Middle East. The DOE reported a weekly increase in oil inventories of ~1.4 mmbbl, a bearish result vs estimates of roughly unch'd. Natural gas prices were up 16% w-o-w to \$3.35/mmbtu due to colder weather in Europe and the expectation for a US cold spell next week. The EIA reported a weekly decrease in inventories of 140 bcf, a bullish result vs estimates of -121 bcf.

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Timestamp: 12 January 2024 12:14PM EST

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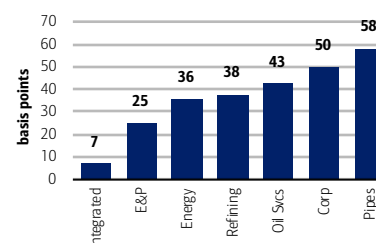
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### Exhibit 1: Weekly Excess Return (bps)

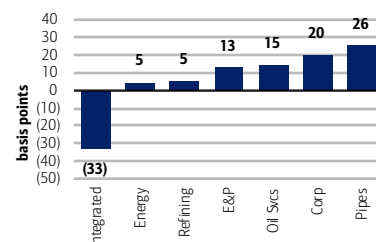
Energy underperformed this week



Source: ICE Data Indices, LLC, BofA Global  
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### Exhibit 2: YTD Excess Return (bps)

Energy has underperformed YTD



Source: ICE Data Indices, LLC, BofA Global  
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### Glossary

bbl: barrel  
bcf: billion cubic feet  
boe: barrels of oil equivalent  
DOE: Department of Energy  
EIA: Energy Information Administration  
E&P: Exploration and Production  
HG: high grade  
LTM: last 12 months  
mmbbl: million barrels  
mmbtu: million British thermal units  
WTI: West Texas Intermediate

## News & Views

### Can (geo)politics Trump fundamentals?

#### Fundamentals are soft due to rising non-OPEC supply...

Having peaked at \$95/bbl in September and rebounded again to almost \$91/bbl in the second half of October, WTI crude oil prices have pulled back considerably since the Hamas-linked spike on a softening fundamental backdrop driven in part by rising US, Guyana, Brazil, and Canadian supplies and slower economic growth. However, even if prices are lower than what they were three months ago, the geopolitical backdrop has not improved and risks from (1) Russia to (2) the Middle East to (3) Venezuela and others could keep the oil market on edge over the course of 2024. Will OPEC+ cohesion increase in 2024 as other countries join Saudi to manage production? This is one of the vexing questions for oil. So far, internal disagreements and an abrupt Angolan exit have dominated the headlines, and the oil market is now waiting for actions, not words.

#### ...but don't count OPEC+ production cuts out just yet

Should OPEC+ loadings start to decline on the back of commitments made in November, Brent will likely gain support and rally above \$80/bbl, further boosted by geopolitics. But if loadings increase on a fracturing OPEC+, prices could be on a downward path below \$70/bbl. With this backdrop, we opt to lower our 2024 Brent crude oil price forecast from \$90 to \$80/bbl, and reset our WTI forecast to \$75/bbl. Still, China's energy imports may increase sharply if Brent drops below \$65/bbl, likely setting a range for the year. Geopolitics may also alter oil prices on three fronts: (1) over 60 countries representing half the world's population, from India to the US, will go to the polls this year and energy prices matter; (2) risks keep rising at key energy choke points from the Persian Gulf to the Red Sea to the Panama Canal; and (3) conflict deaths have spiked sharply in 2022 and 2023 due to Ukraine and Gaza, and more turmoil could be on the horizon.

#### (Geo)political risks, low stocks are a dangerous cocktail

Even then, crude inventories are declining again and product stocks remain low, lending support to oil prices. Plus, speculative length in oil is light. OECD strategic stocks also have yet to rebuild, leaving oil vulnerable to upside price swings. Importantly, long dated Brent crude oil prices remain well anchored in the middle of our \$60-80/bbl band, suggesting that for prices to drop below the \$70/bbl mid-cycle point, inventories would have to build meaningfully throughout this year. This is unlikely given (1) OPEC's plans to reduce production, (2) the rising chance of an economic soft landing, and (3) the (geo)political risks involved.

The above is an excerpt from our Commodity Team's report [Can \(geo\)politics Trump fundamentals?](#) published on January 7, 2023.

## Rating Agency Actions

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### **S&P places CHK on CreditWatch positive**

On Thursday, S&P placed Chesapeake Energy (CHK, covered by Gregg Brody) on CreditWatch positive following its announced deal to acquire natural-gas focused peer Southwestern Energy (SWN, covered by Gregg Brody) in an all-stock transaction valued at \$11.5b (includes ~\$4.1b of SWN debt). The positive CreditWatch reflects the likelihood that S&P will raise its issuer-level (BB) and senior unsecured (BB) debt ratings on CHK two notches to BBB- upon close of the acquisition. The outlook assumes that there will be no material changes to S&P's financial or operating assumptions. The agency expects to resolve the CreditWatch around close of the transaction in 2Q24.

### **Fitch places CHK on positive watch**

On Thursday, Fitch placed CHK on rating watch positive following its announced acquisition of SWN. The rating watch positive reflects the fair valuation of the all equity transaction, conservative pro-forma capital structure and the increased scale of the combined business. Fitch expects to resolve the positive watch once the transaction is complete (under announced terms) which could take longer than six months. CHK's current long-term issuer rating at Fitch is BB+.

## New Issue Commentary

### ET priced \$3.8b debt offering across three parts

On Tuesday, Energy Transfer (ET, MW) priced \$3b of senior unsecured notes across two tranches, including notes due May 15, 2034 (\$1.25b) and May 15, 2054 (\$1.75b). The notes priced at a spread over the relevant treasury benchmark of +155 bps (2034s) and +175 bps (2054s).

The partnership also priced \$800mm of junior subordinated notes that are due May 15, 2054. These notes include a 5-year no call provision. The notes priced at par with a yield of 8%.

Proceeds across all three issuances will be used to refinance existing indebtedness including borrowings under its revolving credit facility, redeem all of its outstanding Series C, D and E preferred units (in case of the Series E preferred units, when redeemable on May 15, 2024) at an aggregate liquidation preference of \$1.69b, and for general partnership purposes.

## BofA Global Research Recommendations

### Exhibit 3: BofA Global Research Recommendations

HG Energy recommendations include 6 Overweights and 5 Underweights

Exploration & Production	Rating	MLPs / Pipelines	Rating
Canadian Natural Resources	OW	Boardwalk Pipeline Partners	MW
Cenovus Energy	OW	Enbridge Inc	OW, MW 2049s+
ConocoPhillips	MW	Energy Transfer	MW, OW long-end
Continental Resources	OW	Enterprise Products Partners	MW
Coterra Energy	UW	Kinder Morgan Inc.	MW
Devon Energy	MW	MPLX LP	MW
Diamondback Energy	UW	ONEOK Inc.	UW
EOG Resources	UW	Plains All American Pipeline	MW, OW 4.9% 45s
EQT Corp	MW	Targa Resources Corp	UW
Hess Corp	MW	TransCanada	MW, UW long-end
Marathon Oil	MW	Western Midstream Operating	MW, OW long-end
National Fuel Gas	MW	Williams Companies	OW
Ovintiv Inc.	OW		
Occidental Petroleum Corp	MW		
Pioneer Natural Resources	RSTR		

**Source:** BofA Global Research

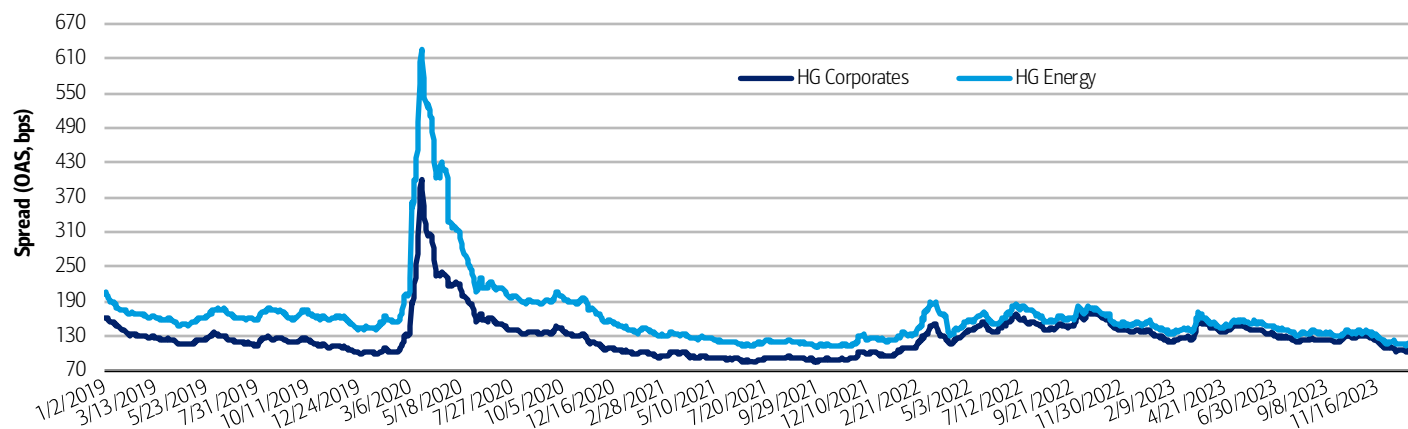
Note: UW = Underweight, MW = Marketweight, OW = Overweight, RSTR = Restricted. Please see credit opinion key at the end of this report

RSTR-solicitation of commission orders prohibited

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**Exhibit 4: Spread-to-Worst: HG Corporate Index and HG Energy Index (January 2019 – Present)**

The Option Adjusted Spread for HG Energy Index historically trades wide of the HG Corporate Index (Ice Data)

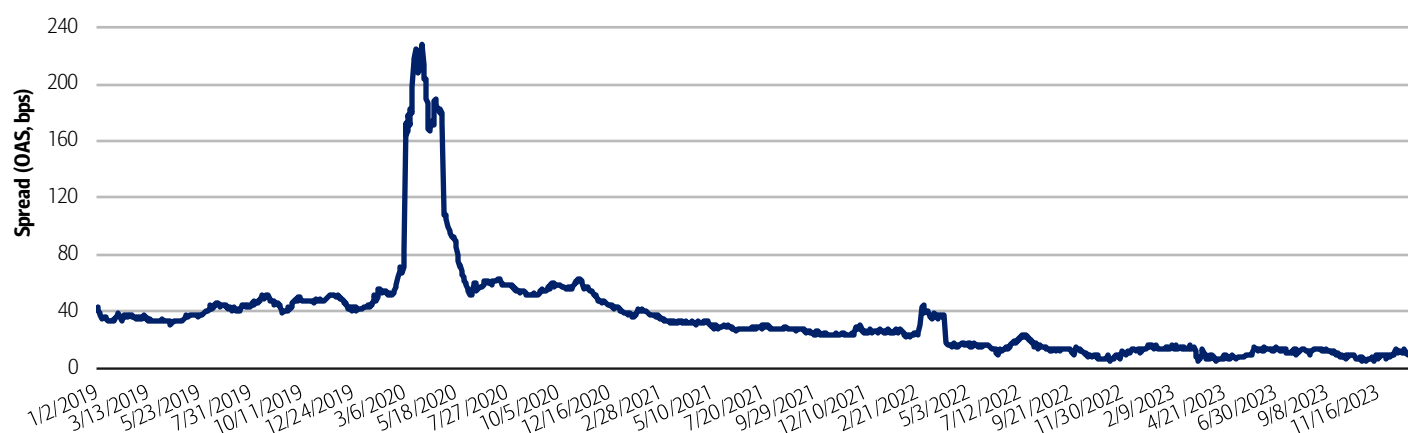


Source: ICE Data Indices, LLC, BofA Global Research

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**Exhibit 5: Spread-to-Worst: HG Energy Index less HG Corporate Index (January 2019 – Present)**

Spread Differential (OAS) for High Grade Energy relative to High Grade Corporate Index still tighter than historical norms

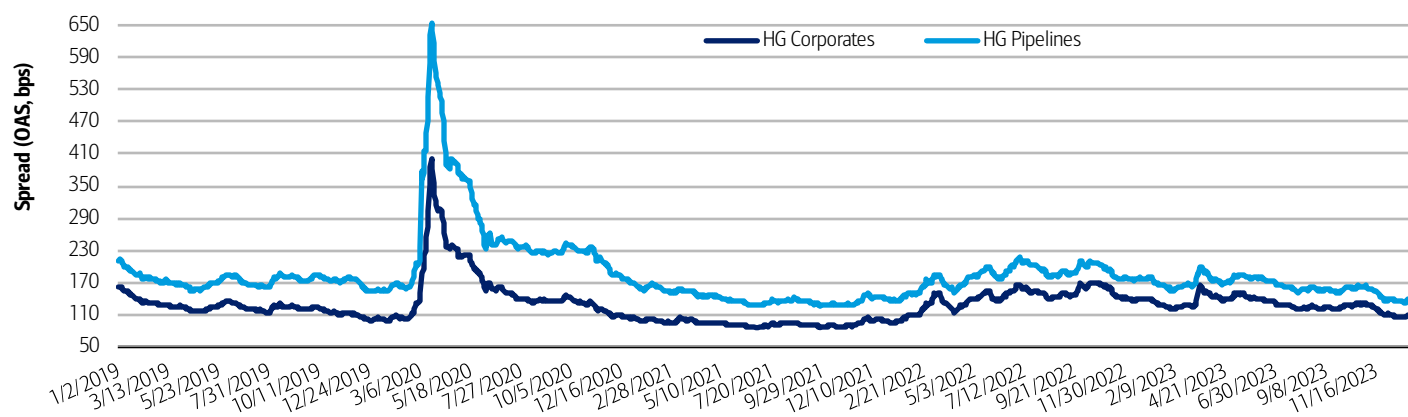


Source: ICE Data Indices, LLC, BofA Global Research

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**Exhibit 6: Spread-to-Worst: HG Corporate Index and HG Pipeline Index (January 2019 – Present)**

The Option Adjusted Spread for HG Pipeline Index historically trades wide of the HG Corporate Index (Ice Data)

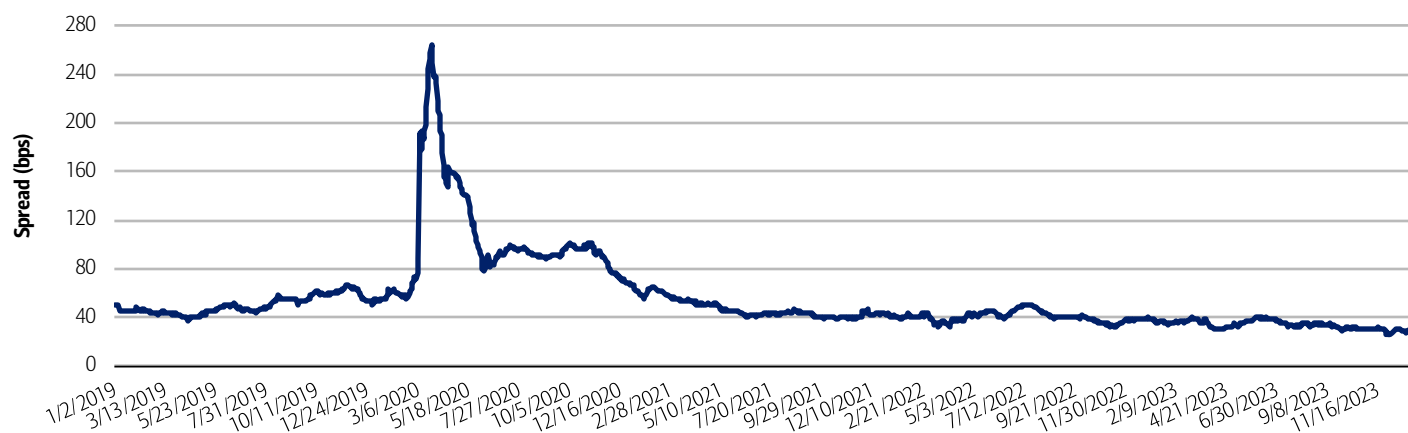


Source: ICE Data Indices, LLC, BofA Global Research

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**Exhibit 7: Spread-to-Worst: HG Pipeline Index less HG Corporate Index (January 2019 – Present)**

Spread Differential (OAS) for High Grade Pipeline relative to High Grade Corporate Index near historical norms



Source: ICE Data Indices, LLC, BofA Global Research

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**Exhibit 8: Oil and Gas and Refiner Cash Spreads (bid)**

In the E&amp;P subsector, spreads were mostly 5 to 15 bps tighter w-o-w

Issuer	Entity	Coupon	Maturity	Outstanding (\$mm)	MDY/S&P	Bid (bps)	Z-Spread	G-Spread	Price	1 wk. change	1 mo. change	1yr. change	6-mo Tights	6-mo Wides	8-wk avg. spread (bps)
<b>Exploration &amp; Production</b>															
APA	Apache Corp	5.350	7/1/2049	387	Baa3 / BB+	262	323	259	82.59	(16)	(9)	N.A.	262	300	272
CLR	Continental Resources	2.875	4/1/2032	800	Baa3 / BBB-	192	231	195	80.84	(8)	(5)	(74)	192	251	198
CLR	Continental Resources	4.900	6/1/2044	700	Baa3 / BBB-	235	301	236	80.85	(9)	(9)	(80)	235	284	243
CNQC	Canadian Natural Resources	6.250	3/15/2038	1,100	Baa1 / BBB-	185	216	170	104.53	(8)	N.A.	N.A.	185	193	189
CNQC	Canadian Natural Resources	4.950	6/1/2047	750	Baa1 / BBB-	145	214	149	90.07	(9)	(19)	(46)	145	198	162
COP	ConocoPhillips	5.050	9/15/2033	1,000	A2 / A-	85	122	86	102.05	(5)	2	N.A.	83	114	89
COP	ConocoPhillips	5.550	3/15/2054	1,000	A2 / A-	107	174	109	104.53	(9)	0	N.A.	107	137	112
CTRA	Coterra Energy	4.375	3/15/2029	433	Baa2 / BBB	115	141	114	97.33	(5)	(5)	(30)	115	158	124
CVECN	Cenovus Energy	2.650	1/15/2032	500	Baa2 / BBB-	136	175	139	82.99	(13)	(12)	(25)	136	168	148
CVECN	Cenovus Energy	3.750	2/15/2052	750	Baa2 / BBB-	153	219	153	72.77	(11)	(6)	(27)	153	198	159
DVN	Devon Energy	5.000	6/15/2045	750	Baa2 / BBB	170	237	172	88.30	(11)	(3)	(25)	170	201	176
EOG	EOG Resources	3.900	4/1/2035	500	A3 / A-	92	127	87	91.88	(13)	N.A.	N.A.	92	105	99
EOG	EOG Resources	4.950	4/15/2050	750	A3 / A-	93	156	91	97.74	(11)	(1)	(27)	93	126	100
EQT	EQT Corp	3.625	5/15/2031	435	Baa3 / BBB-	151	190	156	89.16	(5)	(13)	(43)	151	200	161
FANG	Diamondback Energy	6.250	3/15/2033	1,100	Baa2 / BBB-	140	177	142	106.48	(9)	(10)	(65)	140	187	147
FANG	Diamondback Energy	6.250	3/15/2053	650	Baa2 / BBB-	168	233	168	105.42	(12)	(11)	(66)	168	222	176
HES	Hess	5.800	4/1/2047	500	Baa3 *+ / BBB- *+	97	166	100	107.30	(7)	(12)	(118)	97	209	108
MRO	Marathon Oil	5.200	6/1/2045	500	Baa3 / BBB-	192	259	194	88.29	(9)	(9)	(28)	192	238	200
OW	Ovintiv Inc.	6.250	7/15/2033	600	Baa3 / BBB-	186	223	187	103.29	(8)	(12)	N.A.	186	251	196
OW	Ovintiv Inc.	7.100	7/15/2053	400	Baa3 / BBB-	218	282	219	109.79	(13)	(13)	N.A.	218	293	231
OXY	Occidental Petroleum	6.125	1/1/2031	1,143	Baa3 / BB+	156	194	163	103.43	(9)	(18)	N.A.	156	196	164
OXY	Occidental Petroleum	6.600	3/15/2046	1,116	Baa3 / BB+	174	241	176	107.02	(11)	(12)	N.A.	168	215	179
PXD	Pioneer Natural Resources	2.150	1/15/2031	1,000	Baa1 *+ / BBB *+	79	119	84	84.86	(7)	(2)	(66)	79	131	83
SU	Suncor Energy	3.750	3/4/2051	750	Baa1 / BBB	142	207	141	74.38	(13)	(8)	(23)	142	187	151
<b>Refiners</b>															
MPC	Marathon Petroleum Corp	4.750	9/15/2044	800	Baa2 / BBB	137	203	138	89.15	(13)	(13)	(44)	137	212	151
PSX	Phillips 66	5.300	6/30/2033	500	A3 / BBB+	106	143	107	102.29	(11)	(11)	N.A.	106	152	115
PSX	Phillips 66	3.300	3/15/2052	1,500	A3 / BBB+	113	180	113	70.83	(12)	(8)	(29)	107	158	119
VLO	Valero Energy	2.800	12/1/2031	462	Baa2 / BBB	115	154	119	85.37	(8)	(18)	(35)	115	158	131
VLO	Valero Energy	4.000	6/1/2052	508	Baa2 / BBB	150	216	150	76.49	(13)	(2)	(13)	150	190	158
<b>International Oil Companies</b>															
BP	BP	4.989	4/10/2034	1,000	A2 / A-	93	129	92	101.02	(3)	N.A.	N.A.	93	96	95
BP	BP	3.001	3/17/2052	1,250	A2 / A-	92	159	92	68.84	(11)	1	(22)	91	130	96
CVX	Chevron	2.343	8/12/2050	750	Aa2 / AA-	67	132	65	62.81	(4)	4	(10)	63	95	67
EQNR	Equinor	3.700	4/6/2050	1,250	Aa2 / AA-	78	142	76	81.66	(12)	(9)	(28)	78	122	88
RDSALN	Royal Dutch Shell	4.125	5/11/2035	1,500	Aa2 / A+	75	110	70	95.19	(11)	N.A.	N.A.	75	86	81
RDSALN	Royal Dutch Shell	3.000	11/26/2051	1,000	Aa2 / A+	84	151	83	69.91	(8)	1	(23)	83	116	87
TTEFP	Totalenergies Capital	3.127	5/29/2050	2,500	A1 / A	84	148	82	72.53	(9)	0	(20)	84	121	88
XOM	Exxon Mobil Corporation	3.452	4/15/2051	2,750	Aa2 / AA-	82	147	81	77.14	(7)	3	(19)	76	114	83

Source: Company data, Bloomberg, Moody's, S&amp;P, BofA Global Research

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**Exhibit 9: Drillers/Service Companies and MLP/Pipeline Cash Spreads (Bid)**

In the Midstream subsector, spreads were mostly 5 to 15 bps tighter w-o-w

Issuer Entity		Coupon	Maturity	Outstanding (\$mm)	MDY/S&P	Bid (bps)	Z-Spread	G-Spread	Price	1 wk. change	1 mo. change	1yr. change	6-mo Tights	6-mo Wides	8-wk avg. spread (bps)
<b>Drillers/Service Companies</b>															
BHI	Baker Hughes LLC	4.080	12/15/2047	1,350	A3 / A-	103	173	108	83.50	(9)	(9)	(67)	103	162	115
HAL	Halliburton	4.850	11/15/2035	1,000	A3 / BBB+	109	143	102	98.52	(10)	N.A.	N.A.	109	119	114
HAL	Halliburton	5.000	11/15/2045	2,000	A3 / BBB+	105	173	107	95.82	(7)	2	(60)	103	168	108
SLB	Schlumberger Investment	4.850	5/15/2033	500	A2 / A	79	116	80	100.97	(4)	1	N.A.	77	120	83
<b>Pipelines/Master Limited Partnerships</b>															
BWP	Boardwalk Pipelines LP	3.600	9/1/2032	500	Baa2 / BBB-	141	179	143	88.12	(6)	(4)	(61)	141	194	150
CQP	Cheniere Energy Partners LP	5.950	6/30/2033	1,400	Ba1 / BBB	171	208	173	102.18	(6)	0	N.A.	171	204	175
DCP	DCP Midstream	3.250	2/15/2032	400	Baa3 / BBB-	142	181	145	86.39	(6)	(5)	(35)	142	182	150
DCP	DCP Midstream	5.600	4/1/2044	400	Baa3 / BBB-	150	216	150	97.91	(13)	(8)	(47)	150	199	160
ENBCN	Enbridge Inc	5.700	3/8/2033	2,300	Baa1 / BBB+	132	169	134	103.19	(5)	1	N.A.	131	182	136
ENBCN	Enbridge Inc	6.700	11/15/2053	1,250	Baa1 / BBB+	143	208	144	115.64	(16)	(7)	N.A.	143	178	155
EPD	Enterprise Products	4.850	1/31/2034	1,000	A3 / A-	88	125	88	100.33	(7)	N.A.	N.A.	88	95	92
EPD	Enterprise Products	3.300	2/15/2053	1,000	A3 / A-	89	157	90	73.27	(10)	2	(59)	87	142	95
ET	Energy Transfer LP	5.550	5/15/2034	1,250	Baa3 / BBB	148	185	147	101.11	N.A.	N.A.	N.A.	148	148	148
ET	Energy Transfer LP	5.950	5/15/2054	1,750	Baa3 / BBB	165	231	167	101.75	N.A.	N.A.	N.A.	165	165	165
KMI	Kinder Morgan, Inc.	5.200	6/1/2033	1,500	Baa2 / BBB	142	179	143	98.92	(10)	(4)	N.A.	142	180	150
KMI	Kinder Morgan, Inc.	5.450	8/1/2052	750	Baa2 / BBB	165	230	165	94.79	(12)	(7)	(43)	165	222	175
MPLX	MPLX LP	5.000	3/1/2033	1,100	Baa2 / BBB	137	174	138	97.87	(13)	(6)	N.A.	137	183	147
MPLX	MPLX LP	5.650	3/1/2053	500	Baa2 / BBB	160	226	161	98.22	(16)	(10)	N.A.	160	229	173
OKE	Oneok Inc	6.050	9/1/2033	1,500	Baa2 / BBB	140	177	141	105.28	(7)	(2)	N.A.	140	203	146
OKE	Oneok Inc	6.625	9/1/2053	1,750	Baa2 / BBB	166	231	167	110.97	(11)	(7)	N.A.	166	249	177
PAA	Plains All American	4.900	2/15/2045	649	Baa3 / BBB-	173	240	174	86.88	(24)	(17)	(87)	173	252	192
TRGP	Targa Resources	6.500	3/30/2034	1,000	Baa3 / BBB-	152	188	152	108.01	(5)	(4)	(68)	152	201	160
TRGP	Targa Resources	6.500	2/15/2053	850	Baa3 / BBB-	179	243	179	107.27	(14)	(9)	(89)	179	244	191
TRPCN	TransCanada	2.500	10/12/2031	1,000	Baa2 / BBB+	117	156	121	83.56	(13)	(14)	(40)	117	171	131
TRPCN	TransCanada	5.100	3/15/2049	1,000	Baa2 / BBB+	125	186	121	95.54	(23)	(20)	(45)	125	198	147
WES	Western Midstream Operating	6.150	4/1/2033	750	Baa3 / BBB-	172	209	174	103.50	(13)	(4)	N.A.	172	219	179
WES	Western Midstream Operating	5.250	2/1/2050	1,000	Baa3 / BBB-	194	256	191	88.78	(17)	(14)	N.A.	194	271	212
WMB	The Williams Companies Inc	5.150	3/15/2034	1,000	Baa2 / BBB	119	155	119	100.24	(4)	N.A.	N.A.	119	123	121
WMB	The Williams Companies Inc	5.300	8/15/2052	750	Baa2 / BBB	135	200	135	96.76	(17)	(3)	(59)	135	197	147

Source: Company data, Bloomberg, Moody's, S&amp;P, BofA Global Research

BofA GLOBAL RESEARCH





Exhibit 10: Commodity Price Forecast

Commodity Deck Forecast is below consensus for oil and natural gas in FY24

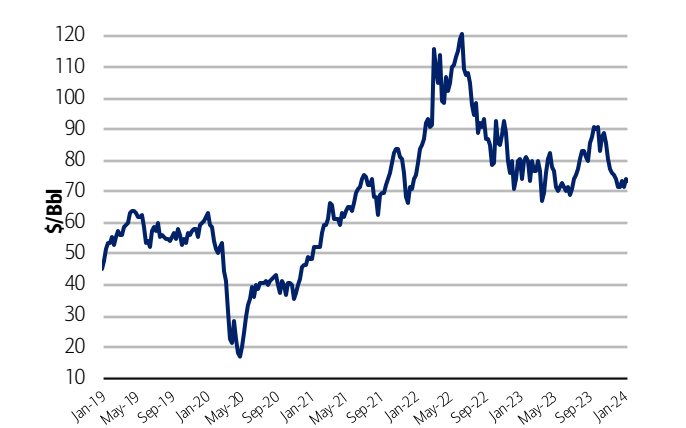
Period	BofA		Street Consensus	
	WTI Oil \$/Bbl	Natural Gas \$/MMbtu	WTI Oil \$/Bbl	Natural Gas \$/MMbtu
1Q24E	73.00	2.90	79.00	2.90
2Q24E	75.00	2.50	79.50	2.60
3Q24E	77.00	3.00	80.50	3.00
4Q24E	75.00	3.60	81.00	3.52
2024E	75.00	3.00	80.00	3.20

Source: BofA Global Research, Bloomberg

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Exhibit 11: Weekly Front Month NYMEX WTI (\$/bbl)

WTI front month price of \$73.25/bbl is below the price of \$74.00/bbl at the beginning of 2024

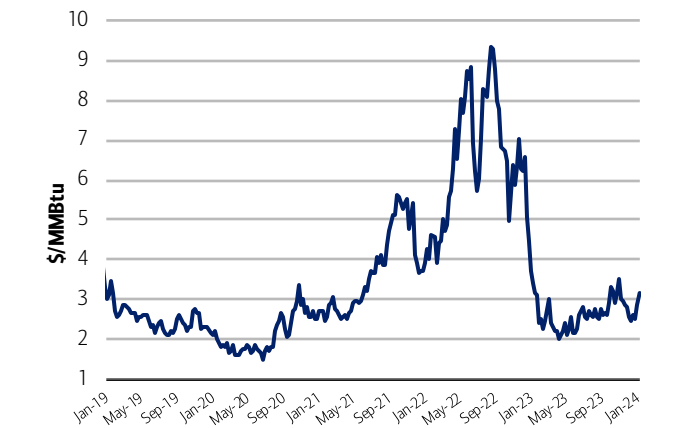


Source: BofA Global Research, Bloomberg

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Exhibit 12: Weekly Front Month NYMEX Henry Hub (\$/MMbtu)

Natural gas front month prices are at \$3.16/MMbtu, below \$3.70/MMbtu, the level at the beginning of 2023



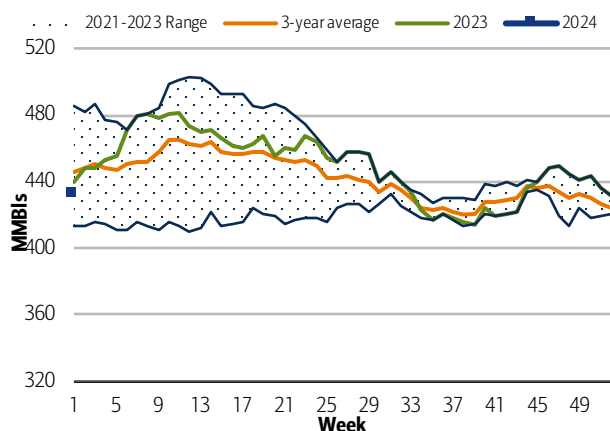
Source: BofA Global Research, Bloomberg

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**Exhibit 13: US Crude Oil Inventory (MMBbls)**

U.S. Crude Inventories are below their weekly 2021-2023 average of 446 mmbbls at 432 mmbbls

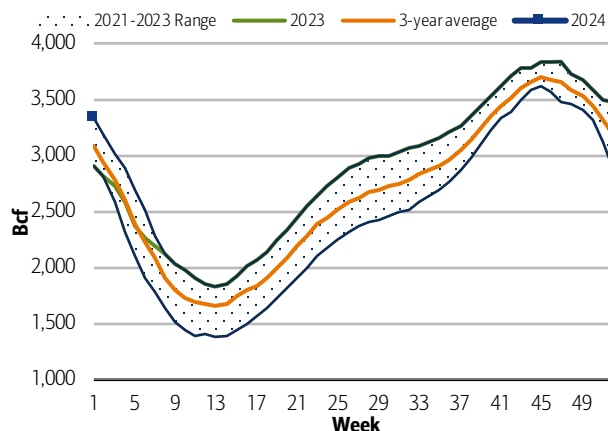


Source: BofA Global Research, Bloomberg

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**Exhibit 14: US Natural Gas Inventory (bcf)**

U.S. Natural Gas Inventories are above their weekly 2021-2023 average of 3,083 bcf at 3,336 bcf

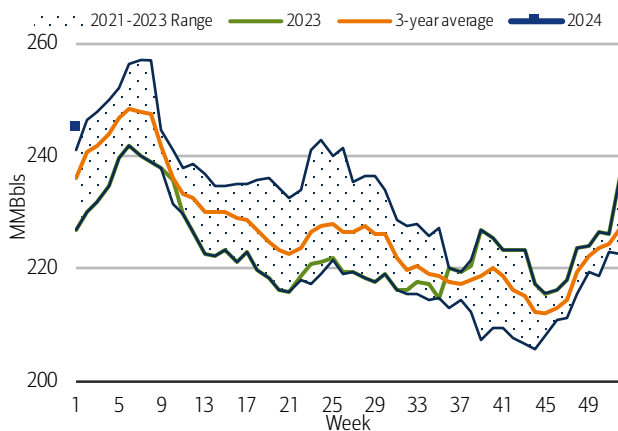


Source: BofA Global Research, Bloomberg

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**Exhibit 15: US Gasoline Inventory (MMBbls)**

U.S. Gasoline Inventories are above their weekly 2021-2023 average of 236 mmbbls at 245 mmbbls

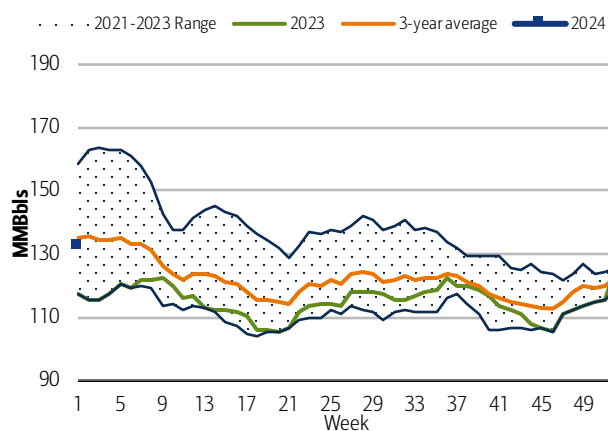


Source: BofA Global Research, Bloomberg

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**Exhibit 16: US Distillate Inventory (MMBbls)**

U.S. Distillate Inventories are below their weekly 2021-2023 average of 135 mmbbls at 132 mmbbls

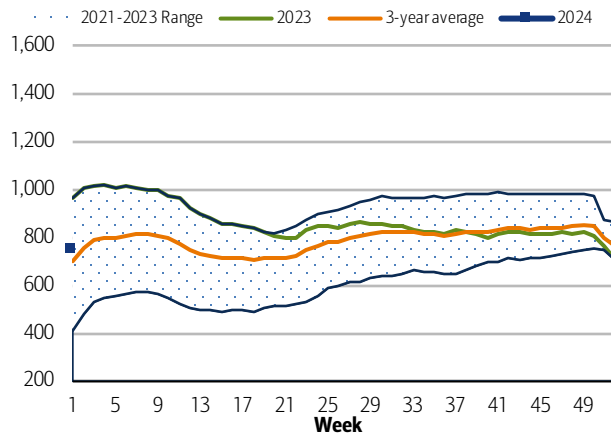


Source: BofA Global Research, Bloomberg

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**Exhibit 17: BHI North American Oil & Natural Gas Rig Count**

BHI Rig Count has decreased from 961 rigs at the beginning of 2023 to 746 rigs

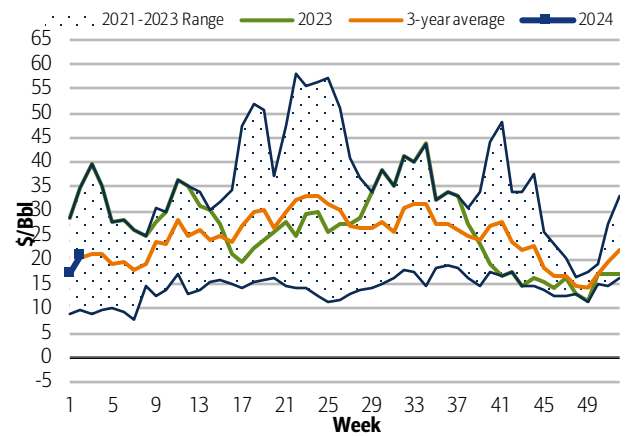


Source: BofA Global Research, Bloomberg

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**Exhibit 18: Weekly Average Cushing 3:2:1 Crack Spreads**

Cushing Crack Spreads are above their weekly 2021-2023 average of \$20.37/bbl at \$20.85/bbl

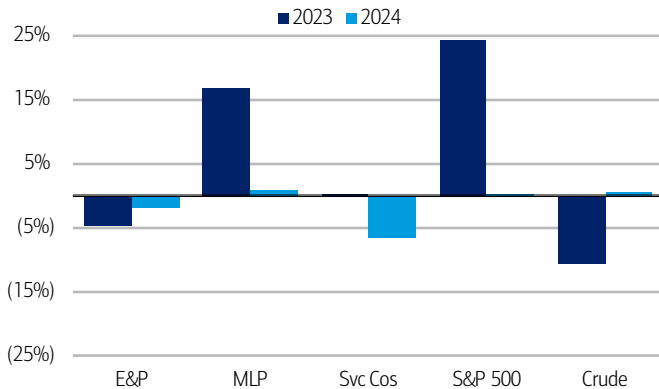


Source: BofA Global Research, Bloomberg

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**Exhibit 19: YTD Equity Performance in Energy Sector**

MPLs are the best performing equities within the energy sector in 2024 while Oilfield Services and E&Ps have lagged

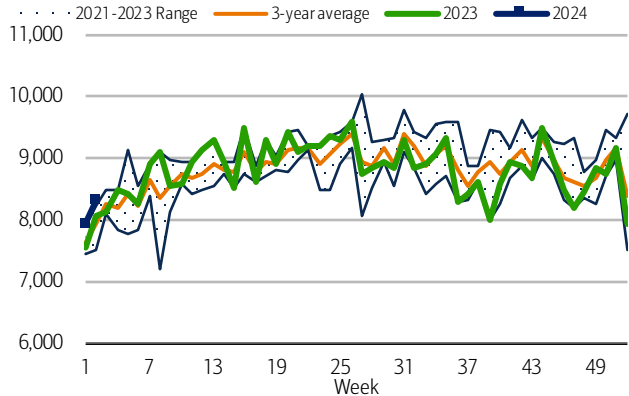


Source: BofA Global Research, Bloomberg

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**Exhibit 20: Weekly Average Gasoline Demand**

Average gasoline demand is above their weekly 2021-2023 average of 7,937 mbb/d at 8,325 mbb/d



Source: EIA, BofA Global Research

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**Exhibit 21: HG Energy New Issuance**

There was ~\$11b of HG New Issuance to date in 2024

Announce Date	Ticker	Issuer	Moody's	S&P	Amount Issued (\$MM)	Coupon (%)	Maturity Date	Term (yrs)	Spread At Issue
1/2/2024	EPD	Enterprise Products Oper	A3	A-	1000	4.85	1/31/2034	10	95
1/2/2024	EPD	Enterprise Products Oper	A3	A-	1000	4.6	1/11/2027	3	55
1/2/2024	WMB	Williams Companies Inc	Baa2	BBB	1100	4.9	3/15/2029	5	102
1/2/2024	WMB	Williams Companies Inc	Baa2	BBB	1000	5.15	3/15/2034	10	122
1/4/2024	CPGX	Columbia Pipeline Holdco	Baa1	BBB+	500	5.681	1/15/2034	10	168
1/4/2024	BPLN	Bp Cap Markets America	A2	A-	1250	4.699	4/10/2029	5	73
1/4/2024	BPLN	Bp Cap Markets America	A2	A-	1000	4.989	4/10/2034	10	100
1/10/2024	ET	Energy Transfer Lp	Baa3	BBB	1250	5.55	5/15/2034	10	155
1/10/2024	ET	Energy Transfer Lp	Baa3	BBB	1750	5.95	5/15/2054	30	175
1/10/2024	ET	Energy Transfer Lp	Baa3	BBB	800	8	5/15/2054	30	n.a.

**Source:** Bloomberg, Company & Partnership Reports

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**Exhibit 22: HG Energy Earnings Calendar**

HG Energy earnings over the next few weeks

Company	Sector	Ticker	EPS Date	Time	Status	Call Date	Call Time	Call Number	Call PIN
Kinder Morgan Inc	Pipelines	KMI US	1/17/2024	Aft-mkt	Confirmed	1/17/2024	4:30:00 PM	#N/A N/A	#N/A N/A
Schlumberger NV	Oil&Gas Services	SLB US	1/19/2024	07:00	Confirmed	1/19/2024	9:30:00 AM	+1 (844) 721-7241	8858313
Halliburton Co	Oil&Gas Services	HAL US	1/23/2024	Bef-mkt	Confirmed	1/23/2024	9:00:00 AM	+1 844-543-0451	505685
Baker Hughes Co	Oil&Gas Services	BKR US	1/23/2024	17:00	Confirmed	1/24/2024	9:30:00 AM	#N/A N/A	#N/A N/A
Valero Energy Corp	Oil&Gas	VLO US	1/25/2024	Bef-mkt	Confirmed	1/25/2024	10:00:00 AM	#N/A N/A	#N/A N/A
Helmerich & Payne Inc	Oil&Gas	HP US	1/29/2024	Aft-mkt	Tentative	1/30/2024	11:00:00 AM	800-895-3367	Helmerich
MPLX LP	Pipelines	MPLX US	1/30/2024	Bef-mkt	Confirmed	1/30/2024	9:30:00 AM	#N/A N/A	#N/A N/A
Marathon Petroleum Corp	Oil&Gas	MPC US	1/30/2024	Bef-mkt	Confirmed	1/30/2024	11:00:00 AM	#N/A N/A	#N/A N/A
Phillips 66	Oil&Gas	PSX US	1/31/2024	Bef-mkt	Confirmed	1/31/2024	12:00:00 PM	#N/A N/A	#N/A N/A
Hess Corp	Oil&Gas	HES US	1/31/2024	Bef-mkt	Confirmed	NA	NA	#N/A N/A	#N/A N/A
Enterprise Products Partners LP	Pipelines	EPD US	2/1/2024	Bef-mkt	Confirmed	2/1/2024	10:00:00 AM	#N/A N/A	#N/A N/A
Shell PLC	Oil&Gas	RDSA LN	2/1/2024	Bef-mkt	Confirmed	NA	NA	#N/A N/A	#N/A N/A
NOV Inc	Oil&Gas Services	NOV US	2/1/2024	Aft-mkt	Confirmed	2/2/2024	11:00:00 AM	#N/A N/A	#N/A N/A
Exxon Mobil Corp	Oil&Gas	XOM US	2/2/2024	Bef-mkt	Tentative	2/2/2024	8:30:00 AM	+1 (888)-516-2433	6192047
Chevron Corp	Oil&Gas	CVX US	2/2/2024	Bef-mkt	Tentative	2/2/2024	11:00:00 AM	800-401-3551	1036277
National Fuel Gas Co	Gas	NFG US	2/2/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
BP PLC	Oil&Gas	BP US	2/6/2024	Bef-mkt	Confirmed	NA	NA	#N/A N/A	#N/A N/A
Equinor ASA	Oil&Gas	STL NO	2/7/2024	01:00	Confirmed	2/7/2024	11:30:00 AM	#N/A N/A	#N/A N/A
TotalEnergies SE	Oil&Gas	FP FP	2/7/2024	Bef-mkt	Confirmed	2/7/2024	5:00:00 AM	#N/A N/A	#N/A N/A
ConocoPhillips	Oil&Gas	COP US	2/8/2024	Bef-mkt	Confirmed	2/8/2024	12:00:00 PM	#N/A N/A	#N/A N/A
Patterson-UTI Energy Inc	Oil&Gas	PTEN US	2/8/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Enbridge Inc	Pipelines	ENB CN	2/9/2024	Bef-mkt	Confirmed	2/9/2024	9:00:00 AM	1-800-606-3040	9581867
Plains All American Pipeline Ltd	Pipelines	PAA US	2/9/2024	Bef-mkt	Confirmed	2/9/2024	10:00:00 AM	#N/A N/A	#N/A N/A
Energy Transfer LP	Pipelines	ET US	2/14/2024	Aft-mkt	Confirmed	2/14/2024	4:30:00 PM	#N/A N/A	#N/A N/A
Occidental Petroleum Corp	Oil&Gas	OXY US	2/14/2024	Aft-mkt	Confirmed	2/15/2024	1:00:00 PM	1 866 897 6163	68162
TC Energy Corp	Pipelines	TRP CN	2/14/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Devon Energy Corp	Oil&Gas	DVN US	2/14/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Cenovus Energy Inc	Oil&Gas	CVE CN	2/15/2024	11:00	Confirmed	NA	NA	#N/A N/A	#N/A N/A
EQT Corp	Oil&Gas	EQT US	2/15/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Marathon Oil Corp	Oil&Gas	MRO US	2/15/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Eni SpA	Oil&Gas	ENI IM	2/16/2024	NA	Confirmed	2/16/2024	#N/A Unclassified	#N/A N/A	#N/A N/A
DiamondBack Energy Inc	Oil&Gas	FANG US	2/20/2024	Aft-mkt	Confirmed	2/21/2024	9:00:00 AM	#N/A N/A	#N/A N/A
Williams Cos Inc/The	Pipelines	WMB US	2/20/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
HF Sinclair Corp	Oil&Gas	DINO US	2/21/2024	Bef-mkt	Confirmed	2/21/2024	8:30:00 AM	#N/A N/A	#N/A N/A
Suncor Energy Inc	Oil&Gas	SU CN	2/21/2024	Aft-mkt	Confirmed	NA	NA	#N/A N/A	#N/A N/A
EOG Resources Inc	Oil&Gas	EOG US	2/22/2024	Bef-mkt	Tentative	2/23/2024	9:00:00 AM	#N/A N/A	#N/A N/A
Pioneer Natural Resources Co	Oil&Gas	PXD US	2/22/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
APA Corp	Oil&Gas	APA US	2/22/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Western Midstream Partners LP	Pipelines	WES US	2/22/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Targa Resources Corp	Pipelines	TRGP US	2/22/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Coterra Energy Inc	Oil&Gas	CTRA US	2/22/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Cheniere Energy Inc	Pipelines	LNG US	2/23/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Ovintiv Inc	Oil&Gas	OVV US	2/27/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
ONEOK Inc	Pipelines	OKE US	2/27/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Canadian Natural Resources Ltd	Oil&Gas	CNQ CN	3/1/2024	NA	Estimated	NA	NA	#N/A N/A	#N/A N/A
Continental Resources Inc/OK	Oil&Gas	CLR US	NA	NA	NA	NA	NA	#N/A N/A	#N/A N/A
Magellan Midstream Partners LP	Pipelines	MMP US	NA	NA	NA	NA	NA	#N/A N/A	#N/A N/A

Source: BofA Global Research, Bloomberg

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**Exhibit 23: Next Twelve Months Debt Maturities**

NTM USD Debt Maturities in the Energy Sector

	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	NTM Maturities
<b>E&amp;P</b>													
APA	-	-	-	-	-	893	-	-	-	-	-	-	893
CLR	-	-	-	-	-	893	-	-	-	-	-	-	893
CNQCEN	-	-	-	-	-	-	-	-	500	-	-	-	500
COP	-	-	461	-	15	-	-	-	-	-	281	-	757
CTRA	-	-	-	-	-	-	-	-	575	-	-	-	575
CVECN	-	-	-	-	-	-	-	-	-	-	-	-	-
DVN	-	-	-	-	-	-	-	-	472	-	-	-	472
EOG	-	-	-	-	-	-	-	-	-	-	-	-	-
FANG	-	-	-	-	-	-	-	-	-	-	-	-	-
HES	-	-	-	-	-	-	300	-	-	-	-	-	300
MRO	-	-	-	-	-	-	400	-	-	-	-	-	400
NFG	-	-	-	-	-	-	-	-	-	-	-	-	-
OW	-	-	-	-	-	-	-	-	-	-	-	-	-
OXY	-	-	-	-	-	-	402	654	-	-	-	-	1,056
PXD	-	-	-	-	-	-	-	-	-	-	-	-	-
SUCN	-	-	-	-	-	-	-	-	-	-	-	-	-
	\$0	\$0	\$461	\$0	\$15	\$893	\$1,102	\$654	\$1,547	\$0	\$281	\$0	\$4,953
<b>MLP / Pipelines</b>													
BWP	-	-	-	-	550	-	-	-	-	-	-	600	1,150
DCP	-	800	-	-	-	-	-	-	-	-	-	300	1,100
ENBCN	-	-	1,300	-	-	-	1,000	1,000	-	-	500	-	3,800
EPD	-	850	-	-	-	-	-	-	-	-	-	-	850
ET	1,150	432	-	2,250	600	-	-	-	-	-	65	175	4,672
KMI	-	650	40	24	600	-	-	-	650	-	-	-	1,964
MPLX	-	-	-	-	-	-	-	-	750	-	-	1,150	1,900
OKE	-	-	-	-	-	-	-	-	500	-	-	-	500
PAA	-	-	-	-	-	-	-	-	-	-	750	-	750
TRGP	-	-	-	-	-	-	-	-	-	-	-	-	-
TRPCN	-	125	-	-	-	562	-	-	-	1,250	-	75	2,012
WES	-	-	-	-	-	-	-	-	-	-	-	-	-
WMB	-	-	1,000	-	-	1,250	-	-	-	-	-	-	2,250
	\$1,150	\$2,857	\$2,340	\$2,274	\$1,750	\$1,812	\$1,000	\$1,000	\$1,900	\$1,250	\$1,315	\$2,300	\$20,948
<b>Refiners</b>													
DINO	-	-	-	-	-	-	-	-	-	-	-	-	308
MPC	-	-	-	-	-	-	-	-	750	-	-	1,150	-
PSX	-	800	-	-	-	-	-	-	-	-	-	300	800
VLO	-	-	167	-	-	-	-	-	-	-	-	-	167
	\$0	\$800	\$167	\$0	\$0	\$0	\$0	\$0	\$750	\$0	\$0	\$1,450	\$3,167
<b>Service Companies</b>													
BHI	-	-	-	-	-	107	-	-	-	-	-	-	650
HAL	-	-	-	-	-	-	-	-	-	-	-	-	-
NOV	-	-	-	-	-	-	-	-	-	-	-	-	-
SLB	-	-	-	-	355	54	-	-	-	547	-	-	1,855
	\$0	\$0	\$0	\$0	\$355	\$161	\$0	\$0	\$0	\$547	\$0	\$0	\$1,063
<b>Majors</b>													
BPLN	-	-	-	-	-	-	-	-	-	-	-	-	-
CVX	-	9	1,000	-	27	-	-	-	-	37	650	18	2,090
TTEFP	-	-	-	-	-	1,000	-	-	1,250	-	-	-	3,250
SHELLN	-	1,000	-	1,500	-	-	-	-	-	-	-	-	2,500
EQNR	-	-	-	-	80	900	-	1,000	-	-	-	-	1,980
XOM	-	-	1,053	-	-	1,642	-	1,000	-	69	-	-	1,053
	\$0	\$1,009	\$2,053	\$1,500	\$107	\$3,542	\$0	\$2,000	\$1,250	\$106	\$650	\$18	\$12,235

Source: Bloomberg, Company Reports, BofA Global Research

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**Exhibit 24: Credit facilities**

Revolving credit facility size across energy space

Credit Facility #1			Credit Facility #2	
E&P				
Company	Size (\$mm)	Maturity	Size (\$mm)	Maturity
Apache Corp	1,800	April-27	€ 1,500	April-27
Canadian Natl Resources	C\$2,425	June-27	C\$2,425	June-25
Cenovus Energy	C\$3,700	November-26	C\$1,800	November-25
ConocoPhillips	5,500	February-27		
Continental Resources	2,255	October-26		
Coterra Energy	1,500	March-28		
Diamondback Energy	1,600	June-28	750	June-25
Devon Energy	3,000	March-28		
EOG Resources	1,900	June-28		
EQT Corp	2,500	June-27		
Hess	3,250	July-27		
Marathon Oil	2,500	July-27		
National Fuel Gas	1,000	February-27		
Occidental Petroleum	4,000	June-25		
Ovintiv Inc.	2,200	July-26	1,300	July-26
Pioneer Natural Resources	2,000	January-26		
Suncor Energy	2,800	June-26	2,707	June-24
MLP/Pipelines				
Company	Size (\$mm)	Maturity	Size (\$mm)	Maturity
Boardwalk Pipeline Partners	1,000	May-28		
Enbridge Inc.	C\$8,860	2024-2027	C\$8,403	2024-2027
Energy Transfer	5,000	April-27	1,500	April-27
Enterprise Products Partners	2,700	March-28	1,500	March-24
Kinder Morgan Inc.	3,500	August-27	500	November-23
MPLX LP	2,000	July-27		
ONEOK Inc	2,500	June-27		
Plains All American Pipeline	1,350	August-27	1,350	August-25
Targa Resources	2,750	February-27		
TransCanada	3,000	December-23	C\$3,000	December-27
Western Midstream Operating	2,000	April-28		
Williams Companies	3,750	October-29		
Service Companies				
Company	Size (\$mm)	Maturity	Size (\$mm)	Maturity
Baker Hughes,	3,000	December-24		
Halliburton	3,500	April-27		
Schlumberger	2,000	February-25	2,000	February-27
Refiners				
Company	Size (\$mm)	Maturity	Size (\$mm)	Maturity
HollyFrontier	1,650	April-26		
Marathon Petroleum	5,000	July-27	2,000	July-27
Phillips 66	5,000	July-27	1,400	March-27
Valero Energy	4,000	November-27	1,300	July-24

Source: Company filings, BofA Global Research

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**Exhibit 25: Summary Hedge positions 2023 and 2024**

E&amp;P company hedge positions for 2023 and 2024

Natural Gas Hedging Summary										Crude Oil Hedging Summary													
2023										2023										Total 2023			
Gas Swaps			Gas Collars				Gas Puts			Oil Swaps			Oil Collars				Oil Puts			Gas	Oil	BOE	
Company	mmcf/d	% of Gas	Price	mmcf/d	% of Gas	Floor	Ceiling	mmcf/d	% of Gas	Floor	mb/d	% of Oil	Price	mb/d	% of Oil	Floor	Ceiling	mb/d	% of Oil	Floor	Hedged	Hedged	Hedged
Apache Corp	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0%	0%	0%
Continental Resources	478	36%	\$3.56	195	15%	\$3.12	\$4.09	0	0%	N/A	76	31%	\$78.81	0	0%	N/A	N/A	0	0%	N/A	51%	31%	41%
Canadian Nat Resources	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0%	0%	0%
ConocoPhillips	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0%	0%	0%
Coterra Energy	0	0%	N/A	407	14%	\$3.81	\$6.34	0	0%	N/A	0	0%	N/A	30	16%	\$70.00	\$91.02	0	0%	N/A	14%	16%	15%
Cenovus Energy	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0%	0%	0%
Devon Energy	110	11%	\$3.31	143	14%	\$3.67	\$7.62	0	0%	N/A	19	4%	\$72.09	81	17%	\$69.63	\$94.29	0	0%	N/A	25%	21%	22%
EOG Resources	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0%	0%	0%
EQT Corp	152	3%	\$4.77	0	0%	N/A	N/A	3,196	57%	\$3.67	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	60%	0%	56%
Diamondback Energy	0	0%	N/A	302	56%	\$3.18	\$9.22	0	0%	N/A	0	0%	N/A	0	0%	N/A	N/A	150	41%	\$55.00	56%	41%	44%
Marathon Oil	0	0%	N/A	49	7%	\$4.00	\$11.14	0	0%	N/A	0	0%	N/A	10	4%	\$60.00	\$97.59	0	0%	N/A	7%	4%	5%
Ovintiv	0	0%	N/A	600	38%	\$3.67	\$7.93	0	0%	N/A	35	11%	\$76.94	75	24%	\$65.00	\$96.45	0	0%	N/A	38%	36%	37%
Occidental Petroleum	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0%	0%	0%
Suncor		N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	0	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	n.a.	n.a.	n.a.

2024										2024										Total 2024			
Gas Swaps			Gas Collars				Gas Puts			Oil Swaps			Oil Collars				Oil Puts			Gas	Oil	BOE	
Company	mmcf/d	% of Gas	Price	mmcf/d	% of Gas	Floor	Ceiling	mmcf/d	% of Gas	Floor	mb/d	% of Oil	Price	mb/d	% of Oil	Floor	Ceiling	mb/d	% of Oil	Floor	Hedged	Hedged	Hedged
Apache Corp	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0%	0%	0%
Continental Resources	644	48%	\$3.42	49	4%	\$3.12	\$4.09	0	0%	N/A	76	31%	\$76.84	0	0%	N/A	N/A	0	0%	N/A	52%	31%	41%
Canadian Nat Resources	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0%	0%	0%
ConocoPhillips	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0%	0%	0%
Coterra Energy	0	0%	N/A	325	11%	\$2.82	\$4.50	0	0%	N/A	0	0%	N/A	25	13%	\$66.79	\$90.83	0	0%	N/A	11%	13%	12%
Cenovus Energy	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0%	0%	0%
Devon Energy	97	9%	\$3.31	40	4%	\$3.78	\$7.05	0	0%	N/A	5	1%	\$72.09	32	7%	\$60.15	\$84.71	0	0%	N/A	13%	8%	9%
EOG Resources	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0%	0%	0%
EQT Corp	0	0%	N/A	0	0%	N/A	N/A	765	13%	\$4.07	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	13%	0%	12%
Diamondback Energy	0	0%	N/A	195	35%	\$3.00	\$8.42	0	0%	N/A	0	0%	N/A	0	0%	N/A	N/A	37	10%	\$55.00	35%	10%	15%
Marathon Oil	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0	0%	N/A	30	10%	\$65.83	\$101.33	0	0%	N/A	0%	10%	7%
Ovintiv	200	13%	\$3.62	550	34%	\$3.00	\$4.42	0	0%	N/A	12	4%	\$73.69	52	18%	\$64.52	\$83.88	0	0%	N/A	47%	23%	34%
Occidental Petroleum	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0	0%	N/A	0	0%	N/A	N/A	0	0%	N/A	0%	0%	0%
Suncor	0	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	0	N/A	N/A	0	N/A	N/A	N/A	0	N/A	N/A	n.a.	n.a.	n.a.

Source: Company Reports, BoFA Global Research

\* All hedging data excludes basis hedges

1&amp;2) EQT 2023 hedges exclude roughly 1.05 bcf/d of short nat gas swaps at a weighted average price of \$3.01/mcf. EQT 2024 hedges exclude roughly 1.52 bcf/d of short nat gas swaps at a weighted average price of \$3.34/mcf.

3&amp;4) EQT 2023 hedges exclude roughly 0.63 bcf/d and 2.64 bcf/d of long and short nat gas calls at a weighted average price of \$3.28/mcf and \$4.78/mcf, respectively. EQT 2024 hedges exclude roughly 0.14 bcf/d and 0.90 bcf/d of long and short nat gas calls at a weighted average price of \$3.20/mcf and \$5.18/mcf, respectively.

5) MRO 2023 collars exclude 50 mmbtu/d of nat gas put options sold at \$2.50/mmbtu

6) MRO 2023 collars exclude 10 mbbl/d of oil sold put options sold at \$45/bbl

7&amp;8) OW 2023 hedges exclude 400 mmcf/d of nat gas put options sold at a weighted average price of \$3.00/mcf. OW 2024 hedges exclude 150 mmcf/d of nat gas put options sold at a weighted average price of \$2.25/mcf

9&amp;10) OW 2023 hedges exclude 40 mbbl/d of oil put options sold at a weighted average price of \$50/bbl. OW 2024 hedges exclude 13 mbbl/d of oil put options sold at a weighted average price of \$50/bbl.

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**Exhibit 26: Oil & Gas – Summary Financial Statistics – Third Quarter 2023**

Financial Statistics for U.S. E&amp;P companies as of 3Q23

	APA	CLR	CNQC	COP	CTRA	CVECN	DVN	EOG	EQT	FANG	HES	MRO	NFG	OVV	OXY	PXD	SUCN*
<b>Credit Ratings</b>																	
Moody's	Baa3 S	Baa3 S	Baa1 S	A2 S	Baa2 S	Baa2 S	Baa2 S	A3 S	Baa3 S	Baa2 S	Baa3 **	Baa3 S	Baa3 S	Baa3 S	Baa3 P	Baa1 **	Baa1 S
S&P	BB+ P	BBB- S	BBB- S	A- S	BBB S	BBB- P	BBB S	A- S	BBB- S	BBB- P	BBB- **	BBB- S	BBB- S	BBB- S	BB+ S	BBB **	BBB N
Fitch	BBB- S	BBB S	N.R.	A S	BBB S	BBB S	BBB+ S	N.R.	BBB- S	BBB S	BBB **	BBB- P	BBB S	BBB- S	BBB- S	BBB+ **	BBB+ S
<b>Credit Metrics</b>																	
Debt / BOE	\$6.28	\$3.94	\$0.79	\$3.47	\$0.90	\$0.82	\$3.39	\$0.84	\$1.42	\$2.90	\$5.62	\$4.28	\$1.22	\$2.71	\$5.87	\$2.07	\$2.29
Debt / PD BOE	\$6.70	\$7.10	\$1.17	\$5.01	\$1.19	\$3.30	\$4.36	\$1.63	\$2.03	\$4.20	\$9.85	\$6.65	\$1.54	\$4.78	\$8.30	\$2.33	\$3.63
Net Debt / PD BOE	\$6.58	\$7.05	\$1.16	\$2.53	\$0.73	\$2.72	\$3.82	(\$0.65)	\$2.00	\$3.64	\$7.52	\$6.44	\$1.50	\$4.78	\$8.11	\$2.28	\$3.05
Debt / EBITDAX (LTM)	1.1x	1.2x	0.7x	0.7x	0.5x	0.7x	0.8x	0.3x	2.1x	1.0x	1.5x	1.2x	2.3x	1.5x	1.7x	0.5x	0.9x
Net Debt / EBITDAX (LTM)	1.0x	1.2x	0.7x	0.3x	0.3x	0.6x	0.7x	-0.1x	2.1x	0.9x	1.2x	1.2x	2.2x	1.5x	1.6x	0.5x	0.7x
Debt / CFFO (LTM)	1.6x	1.4x	0.8x	0.9x	0.5x	0.8x	0.9x	0.3x	2.2x	1.1x	1.9x	1.3x	2.5x	1.7x	1.5x	0.5x	1.3x
LTM EBITDAX / Interest	14.5x	15.7x	27.1x	32.1x	73.2x	19.6x	20.5x	66.5x	11.9x	21.0x	10.7x	15.6x	8.8x	12.9x	14.8x	67.7x	18.1x
<b>Operating Results</b>																	
Total debt at 3Q23	\$5,584	\$7,349	\$8,576	\$19,063	\$2,167	\$5,331	\$6,162	\$3,806	\$5,916	\$6,230	\$8,548	\$5,726	\$2,672	\$6,163	\$25,892	\$4,924	\$11,156
Total debt at YE22	5,453	8,210	8,444	16,643	2,181	6,497	6,440	5,078	5,679	6,248	8,281	5,923	2,692	3,570	26,664	4,904	11,524
Change in total debt	131	(861)	132	2,420	(14)	(1,166)	(278)	(1,272)	237	(18)	267	(197)	(20)	2,593	(773)	20	(368)
Cash at 3Q23	95	49	92	9,446	847	930	761	5,326	65	830	2,018	174	55	3	611	98	1,759
Cash at YE22	245	138	679	9,243	673	3,338	1,454	5,972	1,459	164	2,486	334	46	5	984	1,032	1,461
Change in cash	(150)	(89)	(587)	203	174	(2,408)	(693)	(646)	(1,394)	666	(468)	(160)	9	(2)	(373)	(934)	298
EBITDAX (LTM)	5,280	6,125	11,890	27,519	4,464	7,773	7,683	12,560	2,840	6,182	5,562	4,715	1,165	4,038	15,456	9,539	12,889
Interest (LTM)	365	391	439	857	61	397	375	189	238	294	521	302	132	312	1,046	141	711
<b>Expenses / Boe</b>																	
3-year average RRC	\$13.44	\$12.44	\$3.09	\$19.43	\$20.83	\$7.12	\$11.52	\$6.33	\$3.50	\$10.73	\$9.93	\$16.96	\$4.69	\$6.14	\$7.46	\$13.10	NI 51-101
Production expenses	14.44	11.38	15.54	17.47	6.12	52.55	12.58	13.40	7.48	10.80	20.58	14.18	5.61	16.13	19.34	12.74	
E&P G&A	3.21	1.81	0.80	1.09	1.71	2.20	1.78	1.71	0.78	0.97	1.75	2.46	1.35	2.26	4.54	1.39	
E&P interest	2.21	2.05	1.06	1.41	0.30	1.62	1.66	0.50	0.77	1.07	3.18	1.50	0.91	1.67	2.11	0.53	
Total cost	\$33.29	\$27.68	20.49	\$39.39	\$28.96	\$63.49	\$27.54	\$21.94	\$12.53	\$23.56	\$35.44	\$35.10	\$12.55	\$26.20	\$33.45	\$27.76	
<b>Breakeven Price</b>																	
Breakeven price	\$42.42	\$39.21	\$30.41	\$47.83	\$66.86	\$95.22	\$41.14	\$30.19	\$31.53	\$32.73	\$49.57	\$56.17	\$36.43	\$45.37	\$48.75	\$38.32	N/A
Price realization factor	78%	71%	67%	82%	43%	67%	67%	73%	40%	72%	71%	62%	34%	58%	69%	72%	
<b>Reserves and LTM Production</b>																	
Total reserves (MMBoe)	854	1,864	10,741	5,497	2,399	4,400	1,815	4,238	4,167	2,033	1,256	1,338	695	2,273	3,817	2,377	4,181
Crude & NGL (MMBls)	582	890	8,700	4,036	537	4,144	1,286	2,806	196	1,555	1,011	955	0	1,142	2,759	1,710	4,181
Gas (Bcf)	1,632	5,845	12,247	8,767	11,173	1,538	3,175	8,591	23,825	2,869	1,470	2,295	4,171	6,786	6,350	3,997	2
% Crude & NGL	68%	48%	81%	73%	22%	94%	71%	66%	5%	76%	80%	71%	0%	50%	72%	72%	100%
% Gas	32%	52%	19%	27%	78%	6%	29%	34%	95%	24%	20%	29%	100%	50%	28%	28%	0%
Reserve life	6.2	10.4	26.2	8.4	11.6	15.5	7.6	12.2	13.1	13.0	8.9	9.5	11.2	11.4	8.3	9.4	15.6
% Proved developed	94%	56%	67%	69%	76%	25%	78%	52%	70%	69%	57%	64%	79%	57%	71%	89%	63%
Proved developed (MMBoe)	801	1,035	7,198	3,806	1,817	1,100	1,413	2,185	2,919	1,404	717	862	552	1,289	2,698	2,118	2,639
Crude & NGL (MMBls)	529	454	6,369	2,744	393	899	987	1,509	162	1,050	552	585	0	617	1,972	1,522	2,639
Gas (Bcf)	1,632	3,487	4,975	6,370	8,543	1,208	2,553	4,057	16,541	2,123	989	1,659	3,313	4,031	4,358	3,574	2
% Crude & NGL	66%	44%	88%	72%	22%	82%	70%	69%	6%	75%	77%	68%	0%	48%	73%	72%	100%
% Gas	34%	56%	12%	28%	78%	18%	30%	31%	94%	25%	23%	32%	100%	52%	27%	28%	0%
Reserve life	5.9	5.8	17.6	5.8	8.8	3.9	5.9	6.3	9.2	8.9	5.1	6.1	8.9	6.5	5.9	8.4	9.8
Total production (mboe/d)	375	492	1,123	1,793	567	778	651	955	873	430	386	388	170	545	1,259	694	734
Crude & NGL (mbbl/d)	242	285	787	1,275	95	641	477	683	46	342	287	271	0	275	946	539	734
Gas (mmcf/d)	796	1,247	2,012	3,106	2,828	826	1,047	1,634	4,959	528	594	702	1,020	1,621	1,875	929	0
% Crude & NGL	65%	58%	70%	71%	17%	82%	73%	71%	5%	80%	74%	70%	0%	50%	75%	78%	100%
% Gas	35%	42%	30%	29%	83%	18%	27%	29%	95%	20%	26%	30%	100%	50%	25%	22%	0%

Source: Company/Partnership Filings, Credit Rating Agencies, BofA Global Research

\*BofA does not have coverage on this name

Note: 3-year average RRC adjusted for negative reserve revisions due to lower commodity prices

Note: NFG results for fiscal 4Q23 and YE23, CNQC, CVECN, and SUCN converted to USD

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**Exhibit 27: MLPs & Pipelines – Summary Financial Statistics – Third Quarter 2023**

Financial Statistics for U.S. Midstream companies as of 3Q23

	BWP	ENBCN	EPD	ET	KMI	MPLX	OKE	PAA	TRGP	TRPCN	WES	WMB	Median
<b>Credit Ratings</b>													
Moody's	Baa2	Baa1	A3	Baa3	Baa2	Baa2	Baa2	Baa3	Baa3	Baa2	Baa3	Baa2	
S&P	BBB-	BBB+	A-	BBB	BBB	BBB	BBB	BBB	BBB-	BBB+	BBB-	BBB	
Fitch	BBB	BBB+	A-	BBB-	BBB	BBB	BBB	BBB-	BBB-	BBB+	BBB-	BBB	
<b>Credit Outlook</b>													
Moody's	Stable	Neg	Stable	Pos	Stable	Stable	Stable	Pos	Pos	Stable	Stable	Stable	
S&P	Stable	Neg	Stable	Stable	Stable	Stable	Stable	Stable	Pos	Neg	Stable	Stable	
Fitch	Stable	Stable	Stable	Pos	Stable	Stable	Stable	Pos	Pos	Stable	Stable	Stable	
<b>Credit Metrics</b>													Median
Debt / LTM EBITDA	3.5x	4.6x	3.1x	4.0x	4.2x	3.6x	4.6x	3.3x	3.8x	5.6x	3.6x	4.0x	3.9x
Net Debt / LTM EBITDA	3.2x	4.5x	3.0x	4.0x	4.2x	3.4x	4.6x	3.2x	3.8x	5.4x	3.3x	3.6x	3.7x
LTM EBITDA / Interest	5.8x	4.3x	6.6x	5.0x	4.1x	6.2x	6.1x	6.7x	4.9x	3.3x	5.9x	5.2x	5.5x
Total Debt / Capitalization	35%	51%	49%	58%	50%	62%	57%	42%	75%	65%	71%	64%	58%
<b>Operating Results</b>													Total
Total debt at 3Q23	\$3,236	\$54,743	\$27,768	\$51,123	\$30,993	\$21,290	\$21,950	\$9,153	\$12,920	\$44,535	\$7,262	\$25,669	\$310,642
Total debt at YE22	3,233	58,450	27,147	51,288	31,673	20,929	13,621	9,592	11,536	40,063	6,785	22,904	297,221
Change in total debt	3	(3,707)	621	(165)	(680)	362	8,329	(439)	1,384	4,471	477	2,765	13,420
Shareholders' equity at 3Q23	5,971	52,784	29,370	37,520	31,581	12,831	16,299	12,403	4,378	23,656	2,978	14,308	244,078
Shareholders' equity at YE22	5,702	48,071	28,850	37,634	32,114	13,030	6,494	12,179	4,982	24,249	3,120	14,010	230,434
Change in shareholders' equity	269	4,713	520	(114)	(533)	(199)	9,805	224	(604)	(593)	(142)	298	13,644
Cash at 3Q23	265	1,921	314	514	80	960	284	260	140	1,425	484	2,074	8,720
Cash at YE22	216	635	76	257	745	238	220	401	219	457	286	152	3,903
Change in cash	49	1,286	238	257	(665)	722	64	(141)	(80)	967	198	1,922	4,818
EBITDA (LTM)	917	11,806	9,088	12,727	7,342	5,971	4,761	2,752	3,406	7,979	2,035	6,484	75,268
Interest (LTM)	159	2,716	1,367	2,565	1,771	966	775	408	693	2,437	346	1,249	15,451
<b>Distribution</b>													Median
LTM Distribution Coverage	N.A.	N.A.	1.8x	1.7x	N.A.	1.5x	N.A.	2.6x	N.A.	N.A.	N.A.	N.A.	1.7x
Market cap	N.A.	70,994	56,990	44,925	37,609	35,543	38,518	10,823	19,236	36,580	10,718	43,040	
Enterprise value	N.A.	123,816	84,444	95,533	68,522	55,873	60,184	19,716	32,017	79,690	17,495	66,635	
Enterprise value / EBITDA	N.A.	10.5x	9.3x	7.5x	9.3x	9.4x	12.6x	7.2x	9.4x	10.0x	8.6x	10.3x	9.4x
Quarterly dividend/distribution per share/unit	N.A.	\$0.89	\$0.50	\$0.31	\$0.28	\$0.85	\$0.96	\$0.27	\$0.50	\$0.93	\$0.58	\$0.45	
Share/unit price	N.A.	\$33.40	\$26.24	\$13.36	\$16.92	\$35.50	\$66.12	\$15.44	\$86.27	\$36.58	\$28.24	\$35.38	
Dividend/distribution yield	N.A.	8.0%	7.6%	9.4%	6.7%	9.6%	5.8%	6.9%	2.3%	7.7%	8.1%	5.1%	7.6%
<b>Business Mix</b>													
Pipelines	100%	80%	59%	67%	78%	68%	11%	N.A.	43%	89%	N.A.	N.A.	
Terminals & Storage					13%			N.A.					
Gathering & Processing			15%	19%		32%	25%	N.A.	57%		N.A.	N.A.	
Fractionation			9%				64%				N.A.	N.A.	
Oil & Gas					8%							N.A.	
Marketing								N.A.				N.A.	
Propane													
Utility		12%											
Other		8%	17%	14%						11%	N.A.	N.A.	

**Source:** Company/Partnership Filings, Credit Rating Agencies, BofA Global Research

Note: Market cap, enterprise value, EV/EBITDA, unit price, and distribution yield are as of 11/16/23

Note: ENBCN, EPD, ET, MPLX, PAA, and TRPCN total debt and shareholders equity is adjusted for equity content of hybrids and/or 50% rating agencies' treatment of the equity credit for the Preferred Units; ENBCN and TRPCN converted to USD

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**Exhibit 28: Summary Financial Statistics – Third Quarter 2023**

Financial Statistics for Refining companies as of 3Q23

**High Grade Refining Companies**

Credit Ratings	DINO*	MPC*	PSX*	VLO*	
Moody's	Baa3	Baa2	A3	Baa2	
S&P	BBB-	BBB	BBB+	BBB	
Fitch	BBB-	BBB	N.R.	BBB	
Credit Outlook					
Moody's	Stable	Stable	Stable	Stable	
S&P	Stable	Stable	Stable	Stable	
Fitch	Stable	Stable	N.R.	Stable	
Credit Metrics					Median
Debt / LTM EBITDA	0.8x	1.4x	1.7x	0.7x	1.1x
Net Debt / LTM EBITDA	0.2x	0.7x	1.4x	0.3x	0.5x
LTM EBITDA / Interest	19.2x	29.0x	13.3x	28.5x	23.9x
Total Debt / Capitalization	23%	46%	38%	29%	33%
Operating Results					Total
Total debt at 3Q23	\$3,169	\$27,282	\$19,444	\$11,441	\$61,336
Total debt at YE22	3,255	26,700	17,190	11,635	58,780
Change in total debt	(86)	582	2,254	(194)	2,556
Shareholders' equity at 3Q23	10,615	31,828	31,989	28,057	102,489
Shareholders' equity at YE22	10,018	34,119	34,106	25,468	103,711
Change in shareholders' equity	598	(2,291)	(2,117)	2,589	(1,221)
Cash at 3Q23	2,215	13,056	3,539	5,831	24,641
Cash at YE22	1,665	11,770	6,133	4,862	24,430
Change in cash	550	1,286	(2,594)	969	211
EBITDA (LTM)	3,897	19,408	11,623	17,358	52,286
Interest (LTM)	203	670	872	608	2,353
Throughput Capacity by Region**					
PADD I	-	-	258	-	-
PADD II	269	960	380	285	-
PADD III	376	1,322	604	2,055	-
PADD IV	-	66	66	-	-
PADD V	-	550	364	305	-
International	-	-	279	505	-
Total	645	2,898	1,961	3,150	-
Business Mix					
Refining	72%	72%	52%	98%	-
Retail	20%	-	26%	-	-
Pipelines	8%	29%	8%	-	-
Chemicals	-	-	18%	-	-
Ethanol	-	-	(3%)	2%	-

Source: Company/Partnership Filings, Credit Rating Agencies, BofA Global Research

\*BofA does not have coverage on this name

\*\*DINO's PADD III throughput consists of Puget Sound (PADD V), Navajo (PADD III) and Wood Cross (PADD IV) refineries

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**Exhibit 29: Oil Field Service Companies – Summary Financials – Third Quarter 2023**

Financial Statistics for Service companies as of 3Q23

**High Grade Oil Field Service Companies**

Credit Ratings	BKR*	HAL*	HP*	NOV*	SLB*	
Moody's	A3	A3	Baa1	Baa2	A2	
S&P	A-	BBB+	BBB+	BBB	A	
Credit Outlook						
Moody's	Stable	Stable	Stable	Stable	Pos	
S&P	Stable	Stable	Stable	Stable	Stable	
Credit Metrics						Median
Debt / EBITDA (LTM)	1.8x	1.6x	0.6x	1.7x	1.7x	1.7x
Net Debt / EBITDA (LTM)	1.0x	1.2x	0.3x	1.2x	1.3x	1.2x
EBITDA / Interest (LTM)	15.5x	14.7x	53.0x	15.4x	15.2x	15.4x
Debt / Capitalization	30%	46%	16%	24%	40%	30%
Operating Results						Total
Total debt at 3Q23	\$6,659	\$7,783	\$545	\$1,729	\$13,145	\$29,861
Total debt at YE22	6,657	7,928	543	1,730	12,226	29,084
Change in total debt	2	(145)	3	(1)	919	778
Cash at 3Q23	3,201	2,036	257	513	3,735	9,742
Cash at YE22	2,488	2,346	232	1,069	2,894	9,029
Change in cash	713	(310)	25	(556)	841	713
EBITDA (LTM)	3,618	4,979	916	1,002	7,521	18,036
Interest (LTM)	234	338	17	65	494	1,148
Revenue by Region						
North America	N/A	47%	92%	40%	20%	
Europe / Africa / Russia	N/A	12%	0%	8%	25%	
Middle East / Asia	N/A	24%	2%	16%	34%	
Latin America / Other	N/A	17%	7%	37%	20%	

Source: Company/Partnership Filings, Credit Rating Agencies, BofA Global Research

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Note: HP results for 4Q23 and YE23

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