



**2021 Capitalization Rate Study  
Pipelines - Incorporated**

*FINAL*

*Completed: April 16, 2021*

**MONTANA DEPARTMENT OF REVENUE**

**Yield Capitalization Rate Conclusion**

**Industry: Pipelines - Incorporated**

**2021 Assessment Year**

**Capital Structure <sup>[1]</sup>**

Equity	<b>52.00%</b>
Debt	<b>48.00%</b>

**Equity Cost of Capital**

		<b>Weighting</b>
Capital Asset Pricing Model - Ex Post <sup>[2]</sup>	11.60%	35%
Capital Asset Pricing Model - Ex Ante <sup>[2]</sup>	9.36%	35%
3 Stage Dividend Discount Model - Dividends <sup>[3]</sup>	14.00%	15%
3 Stage Dividend Discount Model - Earnings <sup>[3]</sup>	20.00%	15%
Weighted Average	<u>12.44%</u>	100%
Selected Cost of Equity	<b><u>12.44%</u></b>	

**Debt Cost of Capital**

		<b>Weighting</b>
A - Mergent's - Avg. YTM of A Rated Corporate Bonds <sup>[4]</sup>	2.72%	0%
Baa - Mergent's - Avg. YTM of Baa Rated Corporate Bonds <sup>[4]</sup>	3.16%	40%
Ba - MTDOR - Avg. YTM of Ba Rated Corporate Bonds <sup>[5]</sup>	6.54%	60%
Weighted Average	<u>5.19%</u>	100%
Selected Cost of Debt	<b><u>5.19%</u></b>	

**Weighted Average Cost of Capital (WACC)**

<b>Source of Capital</b>	<b>Capital Structure</b>	<b>Cost of Capital</b>	<b>Marginal Tax Rate</b>	<b>After-tax Cost of Capital</b>	<b>Weighted Cost</b>
Equity	52.00%	12.44%		12.44%	6.47%
Debt	48.00%	5.19%	24.00%	3.94%	1.89%
<b>WACC</b>	<b>100.00%</b>				<b>8.36%</b>
<b>WACC (Rounded)</b>					<b>8.40%</b>

Notes

- [1] From worksheet: Capital Structure
- [2] From worksheet: Capital Asset Pricing Model Summary
- [3] From worksheet: Yield Equity Summary
- [4] January 2021, Mergent Bond Record
- [5] Montana Department of Revenue High Yield Debt Study

**MONTANA DEPARTMENT OF REVENUE**

**Direct Capitalization Rate Conclusion**

**Industry: Pipelines - Incorporated**

**2021 Assessment Year**

**Capital Structure <sup>[1]</sup>**

Equity	<b>52.00%</b>
Debt	<b>48.00%</b>

**Equity Capitalization Rate <sup>[2]</sup>**

NOI After-tax	<b>6.95%</b>
GCF	<b>14.15%</b>

**Debt Capitalization Rate <sup>[3]</sup>**

Calculated Current Yield	<b>4.60%</b>
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**NOI After-tax Direct Capitalization Rate**

Source of Capital	Capital Structure	Capitalization Rate	Marginal Tax Rate	After-tax Capitalization Rate	Weighted Capitalization Rate
Equity	52.00%	6.95%		6.95%	3.61%
Debt	48.00%	4.60%	24.00%	3.50%	1.68%
<b>Total</b>	<b>100.00%</b>				<b>5.29%</b>
<b>Total (Rounded)</b>					<b>5.30%</b>

**GCF Direct Capitalization Rate**

Source of Capital	Capital Structure	Capitalization Rate	Marginal Tax Rate	After-tax Capitalization Rate	Weighted Capitalization Rate
Equity	52.00%	14.15%		14.15%	7.36%
Debt	48.00%	4.60%	24.00%	3.50%	1.68%
<b>WACC</b>	<b>100.00%</b>				<b>9.04%</b>
<b>Total (Rounded)</b>					<b>9.05%</b>

## MONTANA DEPARTMENT OF REVENUE

### Selection of Guideline Companies

Industry: Pipelines - Incorporated

2021 Assessment Year

#### Screening Requirements:

The universe of companies is all companies listed in Value Line under the Oil-Gas Distribution industry.

Companies were then selected using the following screening criteria:

1. Engaged primarily in providing midstream transportation services.
2. Incorporated as a corporation (not a partnership).
3. Actively traded on an American exchange.
4. Headquartered / incorporated in the United States
5. No significant merger & acquisition activity during the year.

Company Ticker	Midstream transportation	Not a partnership	Actively traded on an American exchange	Incorporated in U.S.	Consider as Potential Guideline Company	Not Engaged in Material M&A Activity	Use as Guideline Company	Note
ALTM	Yes	Yes	Yes	Yes	Yes	No	Yes	
AM	Yes	Yes	Yes	Yes	Yes	No	Yes	
CLNE	No							
ENB.TO			No					
ENLC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
INT	No							
KMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
LNG	No							
OKE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
PPL.TO			No					
TRP				No				
WMB	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

**MONTANA DEPARTMENT OF REVENUE**

Support for Capital Structure  
Industry: Pipelines - Incorporated  
2021 Assessment Year

(\$ and Shares Outstanding In Millions, Except Per Share Amounts)

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Ticker Symbol	Company	Industry Group	Financial Strength	Shares Outstanding	End of Year Closing Stock Price	MV Common Stock	MV Preferred Stock	MV Long Term Debt	PV of Operating Leases	Total Common, Preferred, LT Debt, & Op Leases	% Common	% Preferred	% Debt & Op Leases
		<i>Value Line</i>	<i>Value Line</i>	<i>10-K</i>	<i>Yahoo</i>	<i>ExF</i>	<i>10-K</i>	<i>10-K</i>	<i>10-K</i>	<i>G+H+I+J</i>	<i>G/K</i>	<i>H/K</i>	<i>(I+J)/K</i>
							<i>Note [1]</i>	<i>Note [2]</i>					
ALTM	Altus Midstream	OILGAS	C++	16	46.22	751	0	624	0	1,375	55%	0%	45%
AM	Antero Midstream Corp.	OILGAS	C++	484	7.41	3,588	0	3,078	0	6,665	54%	0%	46%
ENLC	EnLink Midstream LLC	OILGAS	C+	489	3.62	1,774	0	4,318	88	6,179	29%	0%	71%
KMI	Kinder Morgan Inc.	OILGAS	B	2,264	13.43	30,398	0	39,622	303	70,323	43%	0%	57%
OKE	ONEOK Inc.	OILGAS	B+	445	37.53	16,695	0	16,300	101	33,096	50%	0%	50%
WMB	Williams Cos.	OILGAS	B	1,214	19.69	23,902	35	27,043	189	51,169	47%	0%	53%
<b>All Companies</b>						<b>77,108</b>	<b>35</b>	<b>90,985</b>	<b>681</b>	<b>168,808</b>	<b>46%</b>	<b>0%</b>	<b>54%</b>
<b>Average</b>											<b>46%</b>	<b>0%</b>	<b>54%</b>
<b>Median</b>											<b>49%</b>	<b>0%</b>	<b>51%</b>
<b>Trimmed Average</b>											<b>49%</b>	<b>0%</b>	<b>51%</b>
High											55%	0%	71%
Low											29%	0%	45%
<b>Say</b>											<b>52%</b>		<b>48%</b>

Notes:

[1] Market value of preferred stock assumed to equal book value

[2] Market value of debt is fair value of long term debt from 10-K notes

**MCA 15-1-210, rationale for changes to guideline companies:**

2021 - Added ALTM, AM

		<u>Median</u>	
Current Year	49%	0%	51%
Prior Year	54%	0%	46%
2 Years Prior	51%	0%	48%
3 Year Average	51%	0%	48%

**MONTANA DEPARTMENT OF REVENUE**

Capital Asset Pricing Model (CAPM)

Industry: Pipelines - Incorporated

2021 Assessment Year

$$k_e = R_f + \beta \times ERP$$

		<i>Ex Post</i>	<i>Ex Ante</i>
$k_e =$	Cost of Equity	<b>11.60%</b>	<b>9.36%</b>
$R_f =$	Risk Free Rate	1.45%	1.45%
$\beta =$	Beta	1.40	1.40
$ERP =$	Equity Risk Premium ( $R_m - R_f$ )	7.25%	5.65%
$R_m =$	Market Rate of Return	8.70%	7.10%

**Risk Free Rate Measures ( $R_f$ ):**

The Value Line Investment Survey: Selection & Opinion <sup>[1]</sup>

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Selected Yields on Taxable U.S. Treasury Securities as of 12/21/20

10-year	0.95%
30-year	1.68%

Federal Reserve Statistical Release <sup>[2]</sup> and U.S. Department of the Treasury, Daily Treasury Yield Curve Rates <sup>[3]</sup>

U.S. government securities, Treasury constant maturities, Nominal, December 31, 2020

10-year	0.93%
20-year	1.45%
30-year	1.65%
<b>Risk Free Rate Selected</b>	<b><u>1.45%</u></b>

Notes

[1] "Value Line Selection & Opinion", Value Line (January 3, 2020)

[2] <https://www.federalreserve.gov/datadownload/Choose.aspx?rel=H.15>

[3] <https://www.treasury.gov/resource-center/data-chart-center/interest-rates/>

**Ex Post - Equity Risk Premium Measures ( $ERP = R_m - R_f$ )**

Duff & Phelps, 2021 Cost of Capital Navigator

		$R_m$ <sup>[4]</sup>	$R_m$	$R_f$	ERP
ERP "Historical" - <i>Ex Post</i>	Arithmetic Avg.	8.70%	8.70%	1.45%	7.25%
ERP "Supply-side" - <i>Ex Post</i>	Arithmetic Avg.	7.45%	7.45%	1.45%	6.00%
<b>Ex Post Equity Risk Premium Selected</b>		<b><u>8.70%</u></b>		<b><u>1.45%</u></b>	<b><u>7.25%</u></b>

**MONTANA DEPARTMENT OF REVENUE**

Capital Asset Pricing Model (CAPM)

Industry: Pipelines - Incorporated

2021 Assessment Year

$$k_e = R_f + \beta \times ERP$$

**Ex Ante - Equity Risk Premium Measures (ERP = Rm - Rf)**

DOR 3 Stage Dividend Growth Model, S & P 500, See Exhibit

	<u>R<sub>m</sub><sup>[4]</sup></u>	<u>R<sub>m</sub></u>	<u>R<sub>f</sub></u>	<u>ERP</u>
ERP - <i>Ex Ante</i>	7.44%	7.44%	1.45%	5.99%

Duff & Phelps, 2021 Cost of Capital Navigator

	<u>R<sub>m</sub><sup>[4]</sup></u>	<u>R<sub>m</sub></u>	<u>R<sub>f</sub></u>	<u>ERP</u>
ERP "Conditional" - <i>Ex Ante</i>		8.00%	2.50%	5.50%

Damodaran Implied ERP (Jan 5, 2021)

	<u>R<sub>m</sub><sup>[4]</sup></u>	<u>R<sub>m</sub></u>	<u>R<sub>f</sub></u>	<u>ERP</u>
Implied Premium (FCFE) - <i>Ex Ante</i>	6.17%	5.65%	0.93%	4.72%
Implied Premium (FCFE with sustainable payout) - <i>Ex Ante</i>	6.39%	5.87%	0.93%	4.94%

	<u>R<sub>m</sub><sup>[4]</sup></u>	<u>R<sub>m</sub></u>	<u>R<sub>f</sub></u>	<u>ERP</u>
<u>Average</u>	6.67%	6.74%		5.29%
<u>Median</u>	6.39%	6.66%		5.22%
<u>High</u>	7.44%	8.00%		5.99%
<u>Low</u>	6.17%	5.65%		4.72%

**Equity Risk Premium Selected**

<b>7.10%</b>		<b>1.45%</b>	<b>5.65%</b>
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Notes

[4] R<sub>m</sub> estimated using selected Risk Free Rate (R<sub>f</sub>)

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**MONTANA DEPARTMENT OF REVENUE**

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Support for Beta Selection in CAPM

Industry: Pipelines - Incorporated

2021 Assessment Year

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<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
<b>Ticker Symbol</b>	<b>Company</b>	<b>Industry Group</b>	<b>Financial Strength</b>	<b>Beta</b>
		<i>Value Line</i>	<i>Value Line</i>	<i>Value Line</i>
ALTM	Altus Midstream	OILGAS	C++	1.50
AM	Antero Midstream Corp.	OILGAS	C++	1.10
ENLC	EnLink Midstream LLC	OILGAS	C+	1.65
KMI	Kinder Morgan Inc.	OILGAS	B	1.20
OKE	ONEOK Inc.	OILGAS	B+	1.50
WMB	Williams Cos.	OILGAS	B	1.30
<b>Average</b>				<b>1.38</b>
<b>Median</b>				<b>1.40</b>
<b>Trimmed Average</b>				<b>1.38</b>
High				1.65
Low				1.10
<b>Say</b>				<b>1.40</b>



**MONTANA DEPARTMENT OF REVENUE**

Inflation & Real Growth  
Industry: Pipelines - Incorporated  
2021 Assessment Year

A	B	C	D	Nominal Growth	
				E	F
Source Description	Inflation (CPI)	Real Growth (GDP)	Nominal Growth	Low	High
Livingston Survey <sup>[1]</sup>	2.19%	2.21%	4.40%		
Survey of Professional Forecasters <sup>[2]</sup>	2.24%	2.27%	4.51%		
Congressional Budget Office <sup>[3]</sup>	1.90%	3.70%	5.60%		
<b>Average</b>	<b>2.11%</b>	<b>2.73%</b>	<b>4.84%</b>		
<b>Median</b>	<b>2.19%</b>	<b>2.27%</b>	<b>4.46%</b>		
High	2.24%	3.70%	5.94%		
Low	1.90%	2.21%	4.11%		
<b>Selected</b>	<b>2.00%</b>	<b>2.50%</b>	<b>4.50%</b>	<b>4.11%</b>	<b>5.94%</b>

Inflationary Trend Factors						
Year	Dec. CPI-U Index	Percent Change From Previous	Dec. to Dec. Conversion Factor	Annual Avg. CPI-U Index	Percent Change From Previous	Annual Conversion Factor
	<i>Note [5]</i>	<i>Note [6]</i>	<i>Note [7]</i>	<i>Note [5]</i>	<i>Note [6]</i>	<i>Note [7]</i>
2008	210.228		1.2390	215.303		1.2021
2009	215.949	2.6%	1.2062	214.537	-0.4%	1.2064
2010	219.179	1.5%	1.1884	218.056	1.6%	1.1869
2011	225.672	2.9%	1.1542	224.939	3.1%	1.1506
2012	229.601	1.7%	1.1345	229.594	2.0%	1.1273
2013	233.049	1.5%	1.1177	232.957	1.4%	1.1110
2014	234.812	0.8%	1.1093	236.736	1.6%	1.0932
2015	236.525	0.7%	1.1013	237.017	0.1%	1.0920
2016	241.432	2.0%	1.0789	240.007	1.2%	1.0783
2017	246.524	2.1%	1.0566	245.120	2.1%	1.0559
2018	251.233	1.9%	1.0368	251.107	2.4%	1.0307
2019	256.974	2.2%	1.0136	255.657	1.8%	1.0123
2020	260.474	1.3%	1.0000	258.811	1.2%	1.0000

Notes

[1] Federal Reserve Bank of Philadelphia The Livingston Survey December 18, 2020 Table 3 Inflation Rate and Real GDP mean

<https://www.philadelphiafed.org/research-and-data/real-time-center/livingston-survey>

[2] Federal Reserve Bank of Philadelphia Survey of Professional Forecasters February 12, 2021 Table 8 and Table 9 Average over next 10-Year mean

<https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/survey-of-professional-forecasters>

[3] Congressional Budget Office, The Budget and Economic Outlook: 2021 to 2031, Table 2-1

<https://www.cbo.gov/about/products/budget-economic-data#4>

[5] Historical Consumer Price Index for All Urban Consumers (CPI-U): U.S. city average, all items, index averages (1982-84=100, unless otherwise noted)

<https://www.bls.gov/cpi/tables/supplemental-files/historical-cpi-u-202001.pdf>

[6] (Row year - Previous Year) / Row Year

[7] Most current year / Row year

**MONTANA DEPARTMENT OF REVENUE**

**3 Stage Dividend Discount Model (DDM)**

**Industry: Pipelines - Incorporated**

**2021 Assessment Year**

$$k_e = (D_1 / P_0) + g$$

$k_e$  = Cost of Equity

$D_1$  = Expected Dividend

$P_0$  = Current Price Per Share

$g$  = Sustainable Long-Term Growth

A	B	C	D	E	F	G	H	I
Ticker	Company	2020 Year End Stock Price	2021 Est Div'ds Decl'd per sh	Expected Equity Payout Yield	Sustainable Long-Term Growth Rate <sup>[1]</sup>	Sustainable Long-Term Growth Rate <sup>[1]</sup>	Cost of Equity Dividend Growth	Cost of Equity Earnings Growth
		<i>Yahoo</i>	<i>Value Line</i>	<i>D/C</i>	<i>Dividends</i>	<i>Earnings</i>	<i>E+F</i>	<i>E+G</i>
		$P_0$	$D_1$	$D_1/P_0$	$g$	$g$	$k_e$	$k_e$
ALTM	Altus Midstream	46.22	0.00	0.00%	0.73%	21.59%	0.73%	21.59%
AM	Antero Midstream Corp.	7.41	1.23	16.59%	0.82%	11.16%	17.41%	27.76%
ENLC	EnLink Midstream LLC	3.62	0.38	10.48%	1.03%	10.65%	11.52%	11.52%
KMI	Kinder Morgan Inc.	13.43	1.07	7.97%	7.74%	10.65%	15.71%	18.62%
OKE	ONEOK Inc.	37.53	3.85	10.26%	4.54%	11.26%	14.80%	21.52%
WMB	Williams Cos.	19.69	1.64	8.33%	4.93%	8.65%	13.26%	16.98%
<b>Average</b>							<b>12.24%</b>	<b>19.66%</b>
<b>Median</b>							<b>14.03%</b>	<b>20.07%</b>
<b>Timmed Average</b>							<b>13.82%</b>	<b>19.68%</b>
High							17.41%	27.76%
Low							0.73%	11.52%
<b>Selected</b>							<b>14.00%</b>	<b>20.00%</b>

Notes:

[1] From worksheet: DDM Sustainable Long-Term Growth

**MONTANA DEPARTMENT OF REVENUE**

**Support for DDM - Short Term Growth Rate Calculations**

**Industry: Pipelines - Incorporated**

**2021 Assessment Year**

A	B	C	D	E	F	G
Ticker	Company	End of Year Closing Stock Price	Div'ds Decl'd per sh 2021 Est	Expected Dividend Yield	Div'ds Decl'd per sh 2024-2026 Est	Short-Term Growth Rate
		<i>Yahoo</i>	<i>Value Line</i>	<i>D / C</i>	<i>Value Line</i>	<i>Note [1]</i>
ALTM	Altus Midstream	46.22	6.00	12.98%	6.00	0.00%
AM	Antero Midstream Corp.	7.41	1.23	16.59%	1.25	0.40%
ENLC	EnLink Midstream LLC	3.62	0.38	10.48%	0.38	0.00%
KMI	Kinder Morgan Inc.	13.43	1.07	7.97%	1.50	8.81%
OKE	ONEOK Inc.	37.53	3.85	10.26%	4.60	4.55%
WMB	Williams Cos.	19.69	1.64	8.33%	2.00	5.09%

A	B	C	D	E
Ticker	Company	Earnings per share 2021 Est	Earnings per share 3-5 years Est	Short-Term Growth Rate
		<i>Value Line</i>	<i>Value Line</i>	<i>Note [1]</i>
ALTM	Altus Midstream	2.15	5.05	23.80%
AM	Antero Midstream Corp.	0.80	1.25	11.80%
ENLC	EnLink Midstream LLC	(0.10)	0.40	
KMI	Kinder Morgan Inc.	1.00	1.60	12.47%
OKE	ONEOK Inc.	2.95	4.75	12.65%
WMB	Williams Cos.	1.20	1.75	9.89%

Notes

[1] 5 year compound annual growth rate (CAGR) - 4 periods

**MONTANA DEPARTMENT OF REVENUE**

**Support for DDM - Sustainable Long Term Growth**

**Industry: Pipelines - Incorporated**

**2021 Assessment Year**

Dividend Growth Rate									Stage 1				
Ticker	Company	Year End Stock Price	Expected Short-Term Dividend Growth Rate	Expected Long-Term Growth Rate	Expected Dividend Yield	Internal Rate of Return	Implied Sustainable Long-Term Growth Rate (g)	Initial Investment	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	D <sub>5</sub>
		<i>Yahoo</i>	<i>Note [1]</i>	<i>Note [2]</i>	$D_1/P_0$	$K_e = IRR \text{ of } D_1 : D_{500}$	$g = IRR - Div. \text{ Yield}$						
ALTM	Altus Midstream	46.22	0.00%	4.50%	12.98%	13.71%	0.73%	(46.22)	6.00	6.00	6.00	6.00	6.00
AM	Antero Midstream Corp.	7.41	0.40%	4.50%	16.59%	17.41%	0.82%	(7.41)	1.23	1.23	1.24	1.24	1.25
ENLC	EnLink Midstream LLC	3.62	0.00%	4.50%	10.48%	11.52%	1.03%	(3.62)	0.38	0.38	0.38	0.38	0.38
KMI	Kinder Morgan Inc.	13.43	8.81%	4.50%	7.97%	15.71%	7.74%	(13.43)	1.07	1.16	1.27	1.38	1.50
OKE	ONEOK Inc.	37.53	4.55%	4.50%	10.26%	14.80%	4.54%	(37.53)	3.85	4.03	4.21	4.40	4.60
WMB	Williams Cos.	19.69	5.09%	4.50%	8.33%	13.26%	4.93%	(19.69)	1.64	1.72	1.81	1.90	2.00

Earnings Growth Rate									Stage 1				
Ticker	Company	Year End Stock Price	Expected Short-Term Earnings Growth Rate	Expected Long-Term Growth Rate	Expected Dividend Yield	Internal Rate of Return	Implied Sustainable Long-Term Growth Rate (g)	Initial Investment	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>	D <sub>4</sub>	D <sub>5</sub>
		<i>Yahoo</i>	<i>Note [1]</i>	<i>Note [2]</i>	$D_1/P_0$	$K_e = IRR \text{ of } D_1 : D_{500}$	$g = IRR - Div. \text{ Yield}$						
ALTM	Altus Midstream	46.22	23.80%	4.50%	12.98%	34.57%	21.59%	(46.22)	6.00	7.43	9.20	11.38	14.09
AM	Antero Midstream Corp.	7.41	11.80%	4.50%	16.59%	27.76%	11.16%	(7.41)	1.23	1.38	1.54	1.72	1.92
ENLC	EnLink Midstream LLC	3.62	0.00%	4.50%	10.48%	11.52%	1.03%	(3.62)	0.38	0.38	0.38	0.38	0.38
KMI	Kinder Morgan Inc.	13.43	12.47%	4.50%	7.97%	18.62%	10.65%	(13.43)	1.07	1.20	1.35	1.52	1.71
OKE	ONEOK Inc.	37.53	12.65%	4.50%	10.26%	21.52%	11.26%	(37.53)	3.85	4.34	4.89	5.50	6.20
WMB	Williams Cos.	19.69	9.89%	4.50%	8.33%	16.98%	8.65%	(19.69)	1.64	1.80	1.98	2.18	2.39

Notes:

[1] From worksheet: DDM Short Term Growth Rate Calculations

[2] From worksheet: Inflation & Real Growth

**MONTANA DEPARTMENT OF REVENUE**

Support for DDM - Sustainable Long Term Growth

Industry: Pipelines - Incorporated

2021 Assessment Year

Dividend	Stage 2															Stage 3		
	D <sub>6</sub>	D <sub>7</sub>	D <sub>8</sub>	D <sub>9</sub>	D <sub>10</sub>	D <sub>11</sub>	D <sub>12</sub>	D <sub>13</sub>	D <sub>14</sub>	D <sub>15</sub>	D <sub>16</sub>	D <sub>17</sub>	D <sub>18</sub>	D <sub>19</sub>	D <sub>20</sub>	D <sub>21</sub>	D <sub>22</sub>	D <sub>500</sub>
ALTM	6.02	6.04	6.05	6.07	6.09	6.11	6.13	6.15	6.16	6.18	6.20	6.22	6.24	6.26	6.28	6.56	6.85	9,407,726,005
AM	1.26	1.27	1.28	1.28	1.29	1.30	1.31	1.32	1.33	1.34	1.35	1.36	1.36	1.37	1.38	1.45	1.51	2,073,436,150
ENLC	0.38	0.38	0.38	0.38	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.40	0.40	0.40	0.42	0.43	595,822,647
KMI	1.63	1.77	1.92	2.08	2.26	2.45	2.66	2.89	3.13	3.40	3.69	4.00	4.34	4.72	5.12	5.35	5.59	7,670,623,498
OKE	4.81	5.03	5.26	5.50	5.75	6.01	6.28	6.57	6.86	7.18	7.50	7.84	8.20	8.57	8.96	9.37	9.79	13,434,869,146
WMB	2.10	2.21	2.32	2.44	2.56	2.69	2.82	2.97	3.12	3.27	3.44	3.61	3.79	3.98	4.19	4.37	4.57	6,275,141,936

Earnings	Stage 2															Stage 3		
	D <sub>6</sub>	D <sub>7</sub>	D <sub>8</sub>	D <sub>9</sub>	D <sub>10</sub>	D <sub>11</sub>	D <sub>12</sub>	D <sub>13</sub>	D <sub>14</sub>	D <sub>15</sub>	D <sub>16</sub>	D <sub>17</sub>	D <sub>18</sub>	D <sub>19</sub>	D <sub>20</sub>	D <sub>21</sub>	D <sub>22</sub>	D <sub>500</sub>
ALTM	17.27	21.15	25.91	31.75	38.89	47.65	58.38	71.52	87.62	107.34	131.51	161.11	197.38	241.81	296.24	309.58	323.51	444,087,986,989
AM	2.14	2.38	2.65	2.95	3.28	3.66	4.07	4.53	5.04	5.61	6.25	6.96	7.74	8.62	9.60	10.03	10.48	14,385,932,671
ENLC	0.38	0.38	0.38	0.38	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.40	0.40	0.40	0.42	0.43	595,822,647
KMI	1.92	2.15	2.40	2.69	3.01	3.37	3.77	4.22	4.72	5.29	5.92	6.63	7.42	8.30	9.29	9.71	10.15	13,929,350,965
OKE	6.95	7.79	8.73	9.79	10.98	12.30	13.79	15.46	17.33	19.43	21.78	24.42	27.38	30.69	34.40	35.95	37.57	51,574,646,867
WMB	2.62	2.87	3.14	3.44	3.77	4.13	4.52	4.95	5.43	5.94	6.51	7.13	7.81	8.56	9.37	9.79	10.23	14,048,847,221

**MONTANA DEPARTMENT OF REVENUE**

Support for Yield Capitalization Rate - Debt Rating

Industry: Pipelines - Incorporated

2021 Assessment Year

A	B	C	D	E	F
Ticker Symbol	Company	Industry Group	Financial Strength	Moody's Long Term Rating	Numeric Rating
		<i>Value Line</i>	<i>Value Line</i>	<i>Moodys.com</i>	
ALTM	Altus Midstream	OILGAS	C++		
AM	Antero Midstream Corp.	OILGAS	C++	B1	14
ENLC	EnLink Midstream LLC	OILGAS	C+	Ba2	12
KMI	Kinder Morgan Inc.	OILGAS	B	Baa2	9
OKE	ONEOK Inc.	OILGAS	B+	Baa3	10
WMB	Williams Cos.	OILGAS	B	Baa3	10
<b>All Companies</b>					
<b>Average</b>					<b>11</b>
<b>Median</b>					<b>10</b>
<b>Trimmed Average</b>					<b>11</b>
High					14
Low					9
<b>Say</b>				<b>Baa3 to Ba1</b>	<b>10-11</b>

**MONTANA DEPARTMENT OF REVENUE**

Support for Direct Capitalization - Equity Capitalization Rates

Industry: Pipelines - Incorporated

2021 Assessment Year

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Ticker Symbol	Company	End of Year Closing Stock Price	VL Historic EPS	VL Est EPS	VL Historic P/E Ratio	VL Est P/E Ratio	Ke Estimate - Earnings (Hist. P/E)	Ke Estimate - Earnings (Est. P/E)	VL Historic Cash Flow Per Share	VL Est Cash Flow Per Share	VL Historic P/CF Ratio	VL Est P/CF Ratio	Ke Estimate - Cash Flow (Hist. P/CF)	Ke Estimate - Cash Flow (Est. P/CF)	Market Value of Equity	Book Value of Equity	MTBR
		Yahoo	Value Line	Value Line	C/D	C/E	1/F	1/G	Value Line	Value Line	C/J	C/K	1/L	1/M	Price x Shrs	Value Line	P/Q
ALTM	Altus Midstream	46.22	(1.80)	2.15	(25.68)	21.50		4.65%	2.18	0.20	21.20	231.08	4.72%		751	(353)	
AM	Antero Midstream Corp.	7.41	(0.25)	0.80	(29.65)	9.27		10.79%	1.04	1.35	7.13	5.49	14.03%	18.21%	3,588	3,143	1.14
ENLC	EnLink Midstream LLC	3.62	(0.91)	(0.10)	(3.98)	(36.24)			(1.03)	0.85	(3.52)	4.26		23.45%	1,774	2,125	0.83
KMI	Kinder Morgan Inc.	13.43	0.05	1.00	268.51	13.43		7.45%	1.01	2.15	13.29	6.24	7.52%	16.01%	30,398	31,436	0.97
OKE	ONEOK Inc.	37.53	2.54	2.95	14.77	12.72	6.77%	7.86%	4.25	3.75	8.83	10.01	11.32%	9.99%	16,695	6,226	2.68
WMB	Williams Cos.	19.69	1.09	1.20	18.07	16.41	5.54%	6.09%	2.41	2.55	8.17	7.72	12.24%	12.95%	23,902	13,363	1.79
<b>Average</b>					<b>40.34</b>	<b>6.18</b>	<b>6.15%</b>	<b>7.37%</b>			<b>9.18</b>	<b>44.14</b>	<b>9.97%</b>	<b>16.12%</b>			<b>1.48</b>
<b>Median</b>					<b>5.40</b>	<b>13.07</b>	<b>6.15%</b>	<b>7.45%</b>			<b>8.50</b>	<b>6.98</b>	<b>11.32%</b>	<b>16.01%</b>			<b>1.14</b>
<b>Trimmed Average</b>					<b>0.80</b>	<b>12.96</b>		<b>7.13%</b>			<b>9.36</b>	<b>7.37</b>	<b>10.36%</b>	<b>15.72%</b>			<b>1.30</b>
High					268.51	21.50	6.77%	10.79%			21.20	231.08	14.03%	23.45%			2.68
Low					(29.65)	(36.24)	5.54%	4.65%			(3.52)	4.26	4.72%	9.99%			0.83
<b>Say</b>							<b>6.95%</b>						<b>14.15%</b>				<b>1.15</b>

**MONTANA DEPARTMENT OF REVENUE**

Support for Direct Capitalization - Debt Capitalization Rate

Industry: Pipelines - Incorporated

2021 Assessment Year

(\$ in Millions)

A	B	C	D	E	F	G	H	I	J
Ticker	Company	Current Year Interest Exp.	Previous Year MV LT Debt	Previous Year BV LT Debt	Current Year MV LT Debt	Current Year BV LT Debt	Average MV LT Debt	Current Yield	MTBR
	<i>Source</i>	<i>10-K</i>	<i>10-K</i>	<i>10-K</i>	<i>10-K</i>	<i>10-K</i>	<i>(D+F)/2</i>	<i>(C/H)</i>	<i>(F/G)</i>
ALTM	Altus Midstream	10	406	406	624	624	515	1.90%	1.00
AM	Antero Midstream Corp.	147	2,702	2,892	3,078	3,092	2,890	5.09%	1.00
ENLC	EnLink Midstream LLC	223	4,444	4,764	4,318	4,594	4,381	5.10%	0.94
KMI	Kinder Morgan Inc.	1,595	38,016	34,392	39,622	34,689	38,819	4.11%	1.14
OKE	ONEOK Inc.	713	13,800	12,487	16,300	14,236	15,050	4.74%	1.14
WMB	Williams Cos.	1,192	25,319	22,288	27,043	22,344	26,181	4.55%	1.21
	<b>All Companies</b>	3,880			90,985	79,578	87,836	<b>4.42%</b>	<b>1.14</b>
	<b>Average</b>							<b>4.25%</b>	<b>1.07</b>
	<b>Median</b>							<b>4.64%</b>	<b>1.07</b>
	<b>Trimmed Average</b>							<b>4.62%</b>	<b>1.07</b>
	High							5.10%	1.21
	Low							1.90%	0.94
	<b>Say</b>							<b>4.60%</b>	<b>1.07</b>



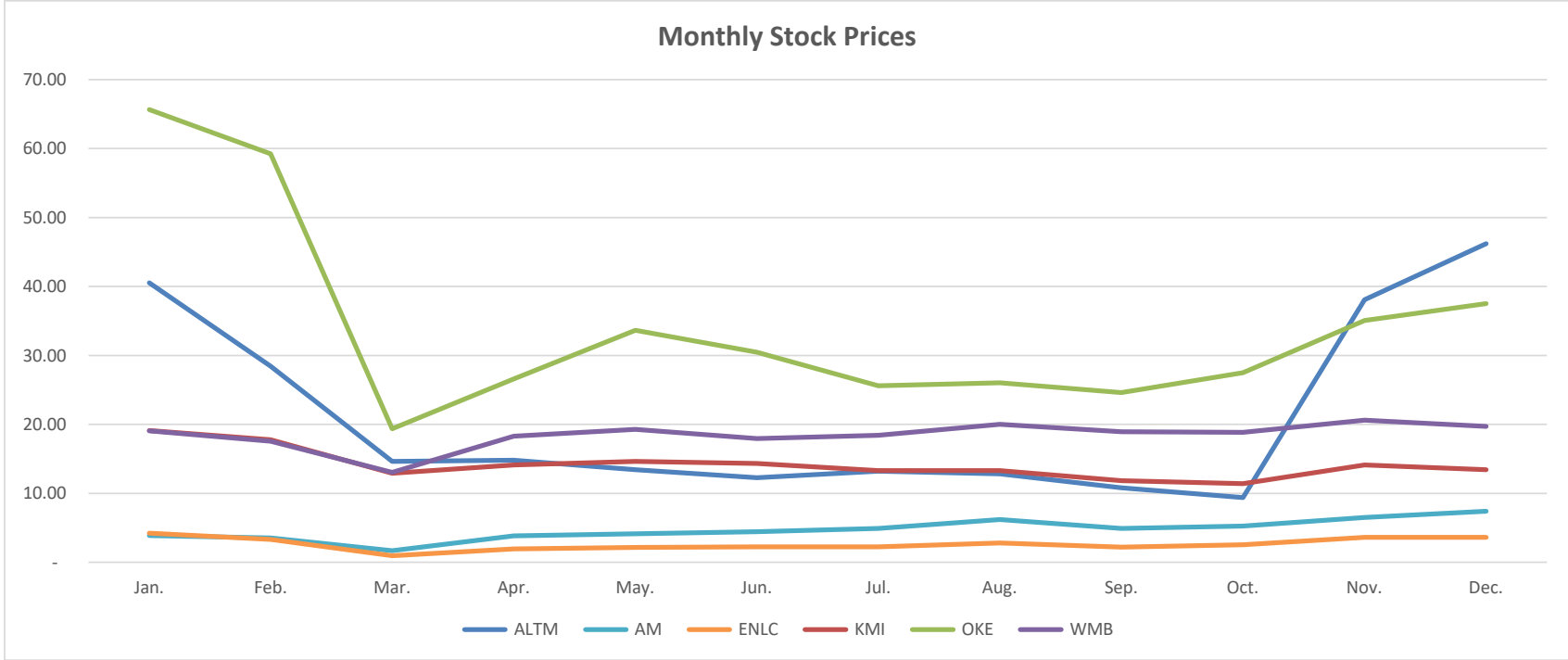
**MONTANA DEPARTMENT OF REVENUE**

Support of Stock Price - From YAHOO Finance

Industry: Pipelines - Incorporated

2021 Assessment Year

		End of Period Closing Stock Price											
1	2	3	4	5	6	7	8	9	10	11	12	13	14
A	B	C	D	E	F	G	H	I	J	K	L	M	N
Ticker	Company	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
ALTM	Altus Midstream	40.51	28.43	14.61	14.80	13.44	12.27	13.20	12.82	10.82	9.40	38.10	46.22
AM	Antero Midstream Corp.	3.86	3.53	1.70	3.84	4.14	4.42	4.91	6.19	4.91	5.24	6.48	7.41
ENLC	EnLink Midstream LLC	4.22	3.31	0.96	1.93	2.14	2.22	2.23	2.82	2.21	2.55	3.61	3.62
KMI	Kinder Morgan Inc.	19.12	17.77	12.90	14.11	14.64	14.31	13.30	13.28	11.85	11.43	14.12	13.43
OKE	ONEOK Inc.	65.66	59.24	19.36	26.57	33.65	30.47	25.60	26.04	24.62	27.48	35.07	37.53
WMB	Williams Cos.	19.05	17.54	13.03	18.29	19.29	17.96	18.43	20.00	18.93	18.85	20.61	19.69



**MONTANA DEPARTMENT OF REVENUE**

**Maintenance Capital Expenditures Estimate Based on Guideline Companies**

**Industry: Pipelines - Incorporated**

**2021 Assessment Year**

(\$ In Millions)

1	2	3	4	5	6	7	8	9	10	11	
A	B	C	D	E	F	G	H	I	J	K	L
Ticker	Company	Inflation	PP&E, Gross Current Year	PP&E, Gross Previous Year	Average PP&E (D+E)/2	Depreciation Expense 10-K (CF)	Average Life of Assets F/G	Note [1] C*H	Note [1] 1/(1+C)^H	Replacement Cost (RC) Note [1] G*/(1-J)	RC as % of Depreciation K/G
		MTDOR (CPI)	10-K, Notes	10-K, Notes	(D+E)/2	10-K (CF)	F/G	C*H	1/(1+C)^H	G*/(1-J)	K/G
ALTM	Altus Midstream	2.00%	209	207	208	16	13	0.26	0.77	18	114.61%
AM	Antero Midstream Corp.	2.00%	3,412	3,361	3,386	109	31	0.62	0.54	147	135.30%
ENLC	EnLink Midstream LLC	2.00%	10,515	10,500	10,508	639	16	0.33	0.72	756	118.34%
KMI	Kinder Morgan Inc.	2.00%	53,654	53,369	53,512	2,164	25	0.49	0.61	2,764	127.73%
OKE	ONEOK Inc.	2.00%	23,073	22,051	22,562	579	39	0.78	0.46	839	144.96%
WMB	Williams Cos.	2.00%	42,489	41,510	42,000	1,721	24	0.49	0.62	2,192	127.36%
<b>Average</b>											128.05%
<b>Median</b>											127.55%
<b>Trimmed Average</b>											127.18%
<b>High</b>											144.96%
<b>Low</b>											114.61%
<b>Selected</b>											<b>127.50%</b>

Notes

[1] Cornell, B. & Gerger, R. (2017). Estimating Terminal Values with Inflation: The Inputs Matter-It Is Not a Formulaic Exercise. *Business Valuation Review*, Volume 36, Number 4, 117-123.