

**2015**

# **CAPITALIZATION RATE STUDY FOR CENTRALLY ASSESSED PROPERTIES**

**FOR: JANUARY 1, 2015**



## **UTAH STATE TAX COMMISSION**

**PROPERTY TAX DIVISION  
NATURAL RESOURCES SECTION  
210 NORTH 1950 WEST, THIRD FLOOR  
SALT LAKE CITY, UTAH 84134**

**(801) 297-3600**

**[www.propertytax.utah.gov](http://www.propertytax.utah.gov)**



UTAH STATE TAX COMMISSION  
PROPERTY TAX DIVISION  
SUMMARY OF EQUITY RATES AND CAPITAL STRUCTURE

3/19/2015

**2015**

Page 1 of 23

Industry	Page	Debt Rate	Debt/Equity	Equity Yield Rate	WACC
<b>COAL MINING</b>	3	<b>8.90%</b>	<b>55% / 45%</b>	<b>13.38%</b>	<b>10.92%</b>
<b>PRECIOUS METALS</b>	6	<b>7.01%</b>	<b>30% / 70%</b>	<b>9.07%</b>	<b>8.45%</b>
<b>NON-PRECIOUS METALS</b>	9	<b>7.01%</b>	<b>25% / 75%</b>	<b>12.16%</b>	<b>10.87%</b>
<b>NON-METALS</b>	12	<b>8.16%</b>	<b>15% / 85%</b>	<b>10.92%</b>	<b>10.50%</b>
<b>OIL &amp; GAS PRODUCTION/WD</b>	15	<b>8.16%</b>	<b>35% / 65%</b>	<b>12.67%</b>	<b>11.10%</b>
<b>OIL &amp; GAS GATHERING</b>	18	<b>7.01%</b>	<b>35% / 65%</b>	<b>11.59%</b>	<b>9.98%</b>
<b>SAND AND GRAVEL</b>	21	<b>8.16%</b>	<b>15% / 85%</b>	<b>10.73%</b>	<b>10.34%</b>



**UTAH STATE TAX COMMISSION  
PROPERTY TAX DIVISION  
KEY RATES AND FIGURES**

3/19/2015

**2015**

Page 2 of 23

**CORPORATE BONDS**

Aaa	3.79%
Aa	3.89%
A	4.05%
Baa	4.74%
Ba1	7.01%
Ba2	8.16%
Ba3	8.16%
B1	8.90%
B2	8.90%
B3	8.90%
Caa1	10.17%
Caa2	10.17%
Caa3	12.53%
Ca	13.32%
C	16.82%

**PUBLIC UTILITY BONDS**

Aaa	N/A
Aa	3.90%
A	3.95%
Baa	4.70%

**PREFERRED STOCKS**

Aaa	3.79%
Aa	3.89%
A	4.05%
Baa	4.74%

**MISCELLANEOUS RATES**

Risk-Free Rate	2.47%
Market Risk Premium	7.00%
Default Income Tax Rate	38.50%
ValueLine GDP Price Deflator Forecast	2.00%

**INFLATION FACTORS**

Year	4th Quarter GDP Implicit Price Deflator	Annual Percent Change	Conversion Factor
2004	90.049	N/A	1.206
2005	93.100	3.39%	1.166
2006	95.580	2.66%	1.136
2007	97.956	2.49%	1.108
2008	99.815	1.90%	1.088
2009	100.169	0.35%	1.084
2010	101.949	1.78%	1.065
2011	103.917	1.93%	1.045
2012	105.824	1.84%	1.026
2013	107.301	1.40%	1.012
2014	108.578	1.19%	1.000

2015 - 2005 Average Change: 1.89%

**Source:**

U.S. Department of Commerce: Bureau of Economic Analysis  
Gross Domestic Product: Implicit Price Deflator

**Website:**

<http://alfred.stlouisfed.org/series?seid=GDPDEF>

**MISCELLANEOUS INFORMATION**

NOMINAL RATE (NR) = Includes both the real rate and the impact of inflation (IR).

REAL RATE =  $[(1+NR)/(1+IR)] - 1$

Coal Example =  $[(1+0.1092)/(1+0.0189)] - 1 = 0.0886$

INDUSTRY	NOMINAL	REAL
Coal	10.92%	8.86%
Precious Metals	8.45%	6.44%
Non-Precious Metals	10.87%	8.81%
Non-Metals	10.50%	8.45%
Oil & Gas Production/WD	11.10%	9.04%
Oil & Gas Gathering	9.98%	7.94%
Sand & Gravel	10.34%	8.29%
Uranium	13.29%	11.19%

(tax-adjusted)	NOMINAL	REAL
Coal	14.65%	12.52%
Precious Metals	12.38%	10.29%
Non-Precious Metals	16.52%	14.36%
Non-Metals	16.25%	14.09%
Oil & Gas Production/WD	16.20%	14.04%
Oil & Gas Gathering	14.65%	12.52%
Sand & Gravel	15.99%	13.84%
Uranium	21.08%	18.83%



**UTAH STATE TAX COMMISSION  
PROPERTY TAX DIVISION  
COAL MINING -- EQUITY RATE MODELS**

3/19/2015

**2015**

Page 3 of 23

**RECONCILIATION**

Equity Models				Equity Rate
CAPM: Rule 62 Compliant				<b>13.32%</b>
CAPM: Total NYSE				N/A
CAPM: Supply Side				<b>11.96%</b>
CAPM: Deciles 1 & 2				N/A
Division's Risk Premium				<b>10.73%</b>
DGM: Earnings & Dividend				<b>13.91%</b>
DGM: Plowback Ratio				<b>0.00%</b>
<b>Reconciled Equity Rate</b>				<b>13.38%</b>
Reconciled Equity Rate	13.38%	45.00%	6.02%	
Debt Rate (Corporate B2)	8.90%	55.00%	4.90%	
<b>Weighted Average Cost of Capital</b>				<b>10.92%</b>
Reconciled Equity Rate	13.38%			
Tax-Adjusted (38.25%)	21.67%	45.00%	9.75%	
Industry Debt Rate	8.90%	55.00%	4.90%	
<b>Tax-Adjusted Weighted Average Cost of Capital</b>				<b>14.65%</b>

**GUIDELINE COMPANY INFORMATION SUMMARY**

Company Name	Tax Rate	Relative Financial Strength	Beta
Alliance Resource	NMF	0.89 (B++)	1.00
Alpha Natural Res.	NMF	1.44 (C)	2.00
Arch Coal	NMF	1.44 (C)	1.80
CONSOL Energy	28.82%	1.00 (B+)	1.40
Peabody Energy	NMF	1.11 (B)	1.55
<b>Selected</b>	<b>38.25%</b>	<b>1.18</b>	<b>1.55</b>

**CAPM: RULE 62 COMPLIANT**

Item	Rate
Market Risk Premium	7.00%
x Industry Beta	1.55
Industry Risk Premium	10.85%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>13.32%</b>

**CAPM: FULL NYSE**

Item	Rate
Market Risk Premium	0.00%
x Industry Beta	1.55
Industry Risk Premium	0.00%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>N/A</b>

**CAPM: SUPPLY SIDE**

Item	Rate
Market Risk Premium	6.19%
x Industry Beta	1.55
Industry Risk Premium	9.59%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>12.06%</b>

**CAPM: DECILES 1 & 2**

Item	Rate
Market Risk Premium	0.00%
x Industry Beta	1.55
Industry Risk Premium	0.00%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>N/A</b>

**DIVISION'S RISK PREMIUM**

Item	Rate
Market Risk Premium	7.00%
x Industry Financial Strength	1.18
Industry Risk Premium	8.26%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>10.73%</b>



**UTAH STATE TAX COMMISSION  
PROPERTY TAX DIVISION  
COAL MINING -- DIVIDEND GROWTH MODELS**

3/19/2015  
**2015**  
Page 4 of 23

**DIVIDEND GROWTH MODEL: EARNINGS AND DIVIDEND GROWTH**

Company Name	Recent Stock Price	Next Year's Dividend	Projected Earnings Growth	Projected Dividend Growth	Market Growth Rate	D.G.M. Rate
Alliance Resource	\$43.18	\$2.74	5.00%	7.50%	6.25%	12.60%
Alpha Natural Res.	\$1.61	-	-	-	-	-
Arch Coal	\$1.68	\$0.01	-	-14.00%	-14.00%	-
CONSOL Energy	\$34.30	\$0.25	8.50%	-3.00%	2.75%	3.48%
Peabody Energy	\$7.74	\$0.34	40.50%	2.00%	21.25%	25.64%
<b>Indicated Rate</b>						<b>13.91%</b>

**DIVIDEND GROWTH MODEL: PLOWBACK RATIO**

Company Name	Recent Stock Price	Next Year's Dividend	Return on Equity	Retention Rate	Market Growth Rate	D.G.M. Rate
Alliance Resource	\$43.18	\$2.74	-	-	-	-
Alpha Natural Res.	\$1.61	-	-	-	-	-
Arch Coal	\$1.68	\$0.01	-	-	-	-
CONSOL Energy	\$34.30	\$0.25	-	-	-	-
Peabody Energy	\$7.74	\$0.34	-	-	-	-
<b>Indicated Rate</b>						<b>0.00%</b>

**COMMENTS ABOUT THE COAL MINING INDUSTRY**



**UTAH STATE TAX COMMISSION  
PROPERTY TAX DIVISION  
COAL MINING -- CAPITAL STRUCTURE**

3/19/2015

**2015**

Page 5 of 23

**CALCULATION OF CAPITAL STRUCTURE**

Company Name	Total Debt	Long-Term Interest	Implied Coupon Rate*	Market Value of Debt**	Fair Value of Debt***	Pref'd Divs	MV of Pref Eqty+	Recent Stock Price	Shares Outstd	Market Value of Equity
Alliance Resource	757.5	30.0	1.98%	410.8	-	-	-	43.18	73.9	3,191.0
Alpha Natural Res.	3,891.9	275.0	3.53%	3,230.4	-	-	-	1.61	232.8	374.8
Arch Coal	5,156.2	390.0	3.78%	4,517.7	-	-	-	1.68	213.8	359.2
CONSOL Energy	3,248.0	220.0	3.39%	2,607.9	-	-	-	34.30	228.1	7,823.8
Peabody Energy	5,991.1	420.0	3.51%	4,942.0	-	-	-	7.74	270.1	2,090.6
<b>Total</b>				<b>15,708.8</b>			-			<b>13,839.4</b>

**CAPITAL STRUCTURE**

Company Name	Percent Debt & Preferred Equity	Percent Common Equity
Alliance Resource	11.41%	88.59%
Alpha Natural Res.	89.60%	10.40%
Arch Coal	92.63%	7.37%
CONSOL Energy	25.00%	75.00%
Peabody Energy	70.27%	29.73%
<b>Mean</b>	<b>57.78%</b>	<b>42.22%</b>
<b>Weighted Mean</b>	<b>53.16%</b>	<b>46.84%</b>

**REMARKS**

\* Implied Coupon Rate is a semi-annual rate.

\*\* Market Value of Debt: 8.90% (Corporate B2)

\*\*\* Fair Value of Debt overrides the Market Value of Debt in calculation of Capital Structure.

+ Market Value of Pref. Equity: 4.74% (Baa)



**UTAH STATE TAX COMMISSION**  
**PROPERTY TAX DIVISION**  
**PRECIOUS METALS -- EQUITY RATE MODELS**

**RECONCILIATION**

Equity Models				Equity Rate
CAPM: Rule 62 Compliant				8.98%
CAPM: Total NYSE				N/A
CAPM: Supply Side				8.23%
CAPM: Deciles 1 & 2				N/A
Division's Risk Premium				9.89%
DGM: Earnings & Dividend				8.94%
DGM: Plowback Ratio				0.00%
<b>Reconciled Equity Rate</b>				<b>9.07%</b>
Reconciled Equity Rate	9.07%	70.00%	6.35%	
Debt Rate (Corporate Ba1)	7.01%	30.00%	2.10%	
<b>Weighted Average Cost of Capital</b>				<b>8.45%</b>
Reconciled Equity Rate	9.07%			
Tax-Adjusted (38.25%)	14.69%	70.00%	10.28%	
Industry Debt Rate	7.01%	30.00%	2.10%	
<b>Tax-Adjusted Weighted Average Cost of Capital</b>				<b>12.38%</b>

**GUIDELINE COMPANY INFORMATION SUMMARY**

Company Name	Tax Rate	Relative Financial Strength	Beta
Agnico Eagle Mines	52.11%	1.00 (B+)	0.75
Allied Nevada Gold Corp	NMF	1.33 (C+)	0.95
AuRico Gold Inc	NMF		0.90
Barrick Gold	42.12%	0.89 (B++)	0.75
Coeur Mining Inc.	NMF	1.22 (C++)	1.30
Goldcorp Inc.	24.27%	0.89 (B++)	0.80
Hecla Mining	NMF	1.11 (B)	1.30
Kinross Gold	NMF	1.00 (B+)	1.00
Kirkland Lake Gold Inc	NMF		0.90
New Gold Inc	NMF		0.90
Newmont Mining	NMF	1.00 (B+)	0.75
Richmont Mines	24.79%		0.90
<b>Selected</b>	<b>38.25%</b>	<b>1.06</b>	<b>0.93</b>

**CAPM: RULE 62 COMPLIANT**

Item	Rate
Market Risk Premium	7.00%
x Industry Beta	0.93
Industry Risk Premium	6.51%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>8.98%</b>

**CAPM: FULL NYSE**

Item	Rate
Market Risk Premium	0.00%
x Industry Beta	0.93
Industry Risk Premium	0.00%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>N/A</b>

**CAPM: SUPPLY SIDE**

Item	Rate
Market Risk Premium	6.19%
x Industry Beta	0.93
Industry Risk Premium	5.76%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>8.23%</b>

**CAPM: DECILES 1 & 2**

Item	Rate
Market Risk Premium	0.00%
x Industry Beta	0.93
Industry Risk Premium	0.00%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>N/A</b>

**DIVISION'S RISK PREMIUM**

Item	Rate
Market Risk Premium	7.00%
x Industry Financial Strength	1.06
Industry Risk Premium	7.42%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>9.89%</b>



**UTAH STATE TAX COMMISSION**  
**PROPERTY TAX DIVISION**  
**PRECIOUS METALS -- DIVIDEND GROWTH MODELS**

3/19/2015  
**2015**  
Page 7 of 23

**DIVIDEND GROWTH MODEL: EARNINGS AND DIVIDEND GROWTH**

Company Name	Recent Stock Price	Next Year's Dividend	Projected Earnings Growth	Projected Dividend Growth	Market Growth Rate	D.G.M. Rate
Agnico Eagle Mines	\$27.00	\$0.32	0.50%	-13.50%	-6.50%	-
Allied Nevada Gold Corp	\$0.91	-	-	-	-	-
AuRico Gold Inc	\$3.38	-	-	-	-	-
Barrick Gold	\$10.91	\$0.20	-25.50%	-16.50%	-21.00%	-
Coeur Mining Inc.	\$5.30	-	-	-	-	-
Goldcorp Inc.	\$18.83	\$0.60	2.00%	9.50%	5.75%	8.94%
Hecla Mining	\$2.84	-	1.00%	-	1.00%	-
Kinross Gold	\$2.90	-	-6.00%	-6.00%	-6.00%	-
Kirkland Lake Gold Inc	\$3.00	-	-	-	-	-
New Gold Inc	\$4.42	-	5.00%	-	5.00%	-
Newmont Mining	\$19.34	\$0.10	-14.00%	-32.00%	-23.00%	-
Richmont Mines	\$3.80	-	-	-	-	-
<b>Indicated Rate</b>						<b>8.94%</b>

**DIVIDEND GROWTH MODEL: PLOWBACK RATIO**

Company Name	Recent Stock Price	Next Year's Dividend	Return on Equity	Retention Rate	Market Growth Rate	D.G.M. Rate
Agnico Eagle Mines	\$27.00	\$0.32	-	-	-	-
Allied Nevada Gold Corp	\$0.91	-	-	-	-	-
AuRico Gold Inc	\$3.38	-	-	-	-	-
Barrick Gold	\$10.91	\$0.20	-	-	-	-
Coeur Mining Inc.	\$5.30	-	-	-	-	-
Goldcorp Inc.	\$18.83	\$0.60	-	-	-	-
Hecla Mining	\$2.84	-	-	-	-	-
Kinross Gold	\$2.90	-	-	-	-	-
Kirkland Lake Gold Inc	\$3.00	-	-	-	-	-
New Gold Inc	\$4.42	-	-	-	-	-
Newmont Mining	\$19.34	\$0.10	-	-	-	-
Richmont Mines	\$3.80	-	-	-	-	-
<b>Indicated Rate</b>						<b>0.00%</b>

**COMMENTS ABOUT THE PRECIOUS METALS INDUSTRY**



**UTAH STATE TAX COMMISSION  
PROPERTY TAX DIVISION  
PRECIOUS METALS -- CAPITAL STRUCTURE**

3/19/2015

**2015**

Page 8 of 23

**CALCULATION OF CAPITAL STRUCTURE**

Company Name	Total Debt	Long-Term Interest	Implied Coupon Rate*	Market Value of Debt**	Fair Value of Debt***	Pref'd Divs	MV of Pref Eqty+	Recent Stock Price	Shares Outstd	Market Value of Equity
Agnico Eagle Mines	1,400.7	60.7	2.17%	1,000.7	-	-	-	27.00	174.0	4,698.0
Allied Nevada Gold Corp	543.3	-	-	543.3	-	-	-	0.91	104.0	94.6
AuRico Gold Inc	251.5	-	-	251.5	-	-	-	3.38	247.6	836.9
Barrick Gold	13,094.0	800.0	3.05%	11,836.2	-	-	-	10.91	1,164.7	12,706.9
Coeur Mining Inc.	469.5	-	-	469.5	-	-	-	5.30	102.8	544.8
Goldcorp Inc.	3,022.0	48.0	0.79%	1,273.9	-	-	-	18.83	812.5	15,299.4
Hecla Mining	517.5	-	-	517.5	-	-	-	2.84	342.7	973.3
Kinross Gold	2,081.3	43.0	1.03%	983.4	-	-	-	2.90	1,143.4	3,315.9
Kirkland Lake Gold Inc	130.8	-	-	130.8	-	-	-	3.00	70.2	210.6
New Gold Inc	1,610.6	-	-	1,610.6	-	-	-	4.42	2,820.9	12,468.4
Newmont Mining	6,773.0	300.0	2.21%	4,908.1	-	-	-	19.34	498.0	9,631.3
Richmont Mines	31.6	-	-	31.6	-	-	-	3.80	33.1	125.8
<b>Total</b>				<b>23,557.1</b>			-			<b>60,905.9</b>

**CAPITAL STRUCTURE**

Company Name	Percent Debt & Preferred Equity	Percent Common Equity
Agnico Eagle Mines	17.56%	82.44%
Allied Nevada Gold Corp	85.17%	14.83%
AuRico Gold Inc	23.11%	76.89%
Barrick Gold	48.23%	51.77%
Coeur Mining Inc.	46.29%	53.71%
Goldcorp Inc.	7.69%	92.31%
Hecla Mining	34.71%	65.29%
Kinross Gold	22.87%	77.13%
Kirkland Lake Gold Inc	38.32%	61.68%
New Gold Inc	11.44%	88.56%
Newmont Mining	33.76%	66.24%
Richmont Mines	20.06%	79.94%
<b>Mean</b>	<b>32.43%</b>	<b>67.57%</b>
<b>Weighted Mean</b>	<b>27.89%</b>	<b>72.11%</b>

**REMARKS**

\* Implied Coupon Rate is a semi-annual rate.

\*\* Market Value of Debt: 7.01% (Corporate Ba1)

\*\*\* Fair Value of Debt overrides the Market Value of Debt in calculation of Capital Structure.

+ Market Value of Pref. Equity: 4.74% (Baa)



**UTAH STATE TAX COMMISSION**  
**PROPERTY TAX DIVISION**  
**NON-PRECIOUS METALS -- EQUITY RATE MODELS**

**RECONCILIATION**

Equity Models				Equity Rate
CAPM: Rule 62 Compliant				12.27%
CAPM: Total NYSE				N/A
CAPM: Supply Side				11.04%
CAPM: Deciles 1 & 2				N/A
Division's Risk Premium				9.26%
DGM: Earnings & Dividend				11.54%
DGM: Plowback Ratio				0.00%
<b>Reconciled Equity Rate</b>				<b>12.16%</b>
Reconciled Equity Rate	12.16%	75.00%	9.12%	
Debt Rate (Corporate Ba1)	7.01%	25.00%	1.75%	
<b>Weighted Average Cost of Capital</b>				<b>10.87%</b>
Reconciled Equity Rate	12.16%			
Tax-Adjusted (38.25%)	19.69%	75.00%	14.77%	
Industry Debt Rate	7.01%	25.00%	1.75%	
<b>Tax-Adjusted Weighted Average Cost of Capital</b>				<b>16.52%</b>

**GUIDELINE COMPANY INFORMATION SUMMARY**

Company Name	Tax Rate	Relative Financial Strength	Beta
BHP Billiton Ltd. ADR	31.53%	0.78 (A)	1.30
Freeport-McMoRan C&G	30.02%	0.89 (B++)	1.40
Revelt Mining Co Inc	NMF	1.22 (C++)	1.20
Rio Tinto plc	33.24%	0.78 (A)	1.50
Southern Copper	32.43%	0.78 (A)	1.35
Taseko Mines Ltd	20.80%		1.60
Teck Resources Ltd. 'B'	38.53%	0.89 (B++)	1.40
Thompson Creek Metals Company	NMF	1.33 (C+)	1.50
Vale S.A. ADR	NMF	1.11 (B)	1.35
<b>Selected</b>	<b>38.25%</b>	<b>0.97</b>	<b>1.40</b>

**CAPM: RULE 62 COMPLIANT**

Item	Rate
Market Risk Premium	7.00%
x Industry Beta	1.40
Industry Risk Premium	9.80%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>12.27%</b>

**CAPM: FULL NYSE**

Item	Rate
Market Risk Premium	0.00%
x Industry Beta	1.40
Industry Risk Premium	0.00%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>N/A</b>

**CAPM: SUPPLY SIDE**

Item	Rate
Market Risk Premium	6.19%
x Industry Beta	1.40
Industry Risk Premium	8.67%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>11.14%</b>

**CAPM: DECILES 1 & 2**

Item	Rate
Market Risk Premium	0.00%
x Industry Beta	1.40
Industry Risk Premium	0.00%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>N/A</b>

**DIVISION'S RISK PREMIUM**

Item	Rate
Market Risk Premium	7.00%
x Industry Financial Strength	0.97
Industry Risk Premium	6.79%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>9.26%</b>



**UTAH STATE TAX COMMISSION  
PROPERTY TAX DIVISION  
NON-PRECIOUS METALS -- DIVIDEND GROWTH MODELS**

3/19/2015  
**2015**  
Page 10 of 23

**DIVIDEND GROWTH MODEL: EARNINGS AND DIVIDEND GROWTH**

Company Name	Recent Stock Price	Next Year's Dividend	Projected Earnings Growth	Projected Dividend Growth	Market Growth Rate	D.G.M. Rate
BHP Billiton Ltd. ADR	\$47.54	\$2.59	5.50%	6.50%	6.00%	11.45%
Freep't-McMoRan C&G	\$23.55	\$1.32	6.00%	4.50%	5.25%	10.86%
Revet Mining Co Inc	\$0.78	-	-	-	-	-
Rio Tinto plc	\$45.72	\$2.18	4.50%	12.50%	8.50%	13.27%
Southern Copper	\$28.44	\$0.48	6.00%	-8.00%	-1.00%	-
Taseko Mines Ltd	\$1.05	-	-	-	-	-
Teck Resources Ltd. 'B'	\$16.13	\$0.90	4.00%	6.00%	5.00%	10.58%
Thompson Creek Metals Company	\$1.70	-	-	-	-	-
Vale S.A. ADR	\$7.94	\$0.58	-6.50%	-11.50%	-9.00%	-
<b>Indicated Rate</b>						<b>11.54%</b>

**DIVIDEND GROWTH MODEL: PLOWBACK RATIO**

Company Name	Recent Stock Price	Next Year's Dividend	Return on Equity	Retention Rate	Market Growth Rate	D.G.M. Rate
BHP Billiton Ltd. ADR	\$47.54	\$2.59	-	-	-	-
Freep't-McMoRan C&G	\$23.55	\$1.32	-	-	-	-
Revet Mining Co Inc	\$0.78	-	-	-	-	-
Rio Tinto plc	\$45.72	\$2.18	-	-	-	-
Southern Copper	\$28.44	\$0.48	-	-	-	-
Taseko Mines Ltd	\$1.05	-	-	-	-	-
Teck Resources Ltd. 'B'	\$16.13	\$0.90	-	-	-	-
Thompson Creek Metals Company	\$1.70	-	-	-	-	-
Vale S.A. ADR	\$7.94	\$0.58	-	-	-	-
<b>Indicated Rate</b>						<b>0.00%</b>

**COMMENTS ABOUT THE NON-PRECIOUS METALS INDUSTRY**



**UTAH STATE TAX COMMISSION**  
**PROPERTY TAX DIVISION**  
**NON-PRECIOUS METALS -- CAPITAL STRUCTURE**

3/19/2015  
**2015**  
Page 11 of 23

**CALCULATION OF CAPITAL STRUCTURE**

Company Name	Total Debt	Long-Term Interest	Implied Coupon Rate*	Market Value of Debt**	Fair Value of Debt***	Pref'd Divs	MV of Pref Eqty+	Recent Stock Price	Shares Outstd	Market Value of Equity
BHP Billiton Ltd. ADR	34,589.0	1,500.0	2.17%	24,723.3	-	-	-	47.54	2,660.6	126,484.9
Freep't-McMoRan C&G	19,737.0	1,130.0	2.86%	17,031.7	-	-	-	23.55	1,038.0	24,444.9
Revett Mining Co Inc	4.8	-	-	4.8	-	-	-	0.78	34.6	27.0
Rio Tinto plc	26,104.0	1,400.0	2.68%	21,517.4	-	-	-	45.72	1,848.5	84,513.4
Southern Copper	4,205.7	150.0	1.78%	2,660.6	-	-	-	28.44	835.3	23,755.9
Taseko Mines Ltd	581.8	-	-	581.8	-	-	-	1.05	193.4	203.1
Teck Resources Ltd. 'B'	8,129.0	480.0	2.95%	7,170.4	-	-	-	16.13	576.3	9,295.7
Thompson Creek Metals Company	977.1	-	-	977.1	-	-	-	1.70	171.5	291.6
Vale S.A. ADR	29,416.0	1,335.0	2.27%	21,658.8	-	-	-	7.94	5,153.4	40,918.0
<b>Total</b>				<b>96,325.9</b>			-			<b>309,934.5</b>

**CAPITAL STRUCTURE**

Company Name	Percent Debt & Preferred Equity	Percent Common Equity
BHP Billiton Ltd. ADR	16.35%	83.65%
Freep't-McMoRan C&G	41.06%	58.94%
Revett Mining Co Inc	15.09%	84.91%
Rio Tinto plc	20.29%	79.71%
Southern Copper	10.07%	89.93%
Taseko Mines Ltd	74.12%	25.88%
Teck Resources Ltd. 'B'	43.55%	56.45%
Thompson Creek Metals Company	77.02%	22.98%
Vale S.A. ADR	34.61%	65.39%
<b>Mean</b>	<b>36.91%</b>	<b>63.09%</b>
<b>Weighted Mean</b>	<b>23.71%</b>	<b>76.29%</b>

**REMARKS**

\* Implied Coupon Rate is a semi-annual rate.  
\*\* Market Value of Debt: 7.01% (Corporate Ba1)  
\*\*\* Fair Value of Debt overrides the Market Value of Debt in calculation of Capital Structure.  
+ Market Value of Pref. Equity: 4.74% (Baa)



**UTAH STATE TAX COMMISSION  
PROPERTY TAX DIVISION  
NON-METALS -- EQUITY RATE MODELS**

**RECONCILIATION**

Equity Models				Equity Rate
CAPM: Rule 62 Compliant				10.59%
CAPM: Total NYSE				N/A
CAPM: Supply Side				9.57%
CAPM: Deciles 1 & 2				N/A
Division's Risk Premium				9.54%
DGM: Earnings & Dividend				13.85%
DGM: Plowback Ratio				4.20%
<b>Reconciled Equity Rate</b>				<b>10.92%</b>
Reconciled Equity Rate	10.92%	85.00%	9.28%	
Debt Rate (Corporate Ba2)	8.16%	15.00%	1.22%	
<b>Weighted Average Cost of Capital</b>				<b>10.50%</b>
Reconciled Equity Rate	10.92%			
Tax-Adjusted (38.25%)	17.68%	85.00%	15.03%	
Industry Debt Rate	8.16%	15.00%	1.22%	
<b>Tax-Adjusted Weighted Average Cost of Capital</b>				<b>16.25%</b>

**GUIDELINE COMPANY INFORMATION SUMMARY**

Company Name	Tax Rate	Relative Financial Strength	Beta
Compass Minerals Int'l	26.54%	1.00 (B+)	0.85
Eagle Materials	31.66%	1.00 (B+)	1.25
Intrepid Potash Inc	41.53%	1.11 (B)	1.40
Martin Marietta	26.82%	0.89 (B++)	1.10
Potash Corp.	27.40%	0.67 (A+)	1.05
U S Lime & Minerals	25.38%	1.00 (B+)	0.80
USG Corp.	NMF	1.33 (C+)	1.70
Vulcan Materials	NMF	1.11 (B)	1.10
<b>Selected</b>	<b>38.25%</b>	<b>1.01</b>	<b>1.16</b>

**CAPM: RULE 62 COMPLIANT**

Item	Rate
Market Risk Premium	7.00%
x Industry Beta	1.16
Industry Risk Premium	8.12%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>10.59%</b>

**CAPM: FULL NYSE**

Item	Rate
Market Risk Premium	0.00%
x Industry Beta	1.16
Industry Risk Premium	0.00%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>N/A</b>

**CAPM: SUPPLY SIDE**

Item	Rate
Market Risk Premium	6.19%
x Industry Beta	1.16
Industry Risk Premium	7.18%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>9.65%</b>

**CAPM: DECILES 1 & 2**

Item	Rate
Market Risk Premium	0.00%
x Industry Beta	1.16
Industry Risk Premium	0.00%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>N/A</b>

**DIVISION'S RISK PREMIUM**

Item	Rate
Market Risk Premium	7.00%
x Industry Financial Strength	1.01
Industry Risk Premium	7.07%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>9.54%</b>



**UTAH STATE TAX COMMISSION  
PROPERTY TAX DIVISION  
NON-METALS -- DIVIDEND GROWTH MODELS**

3/19/2015  
**2015**  
Page 13 of 23

**DIVIDEND GROWTH MODEL: EARNINGS AND DIVIDEND GROWTH**

Company Name	Recent Stock Price	Next Year's Dividend	Projected Earnings Growth	Projected Dividend Growth	Market Growth Rate	D.G.M. Rate
Compass Minerals Int'l	\$86.93	\$2.60	13.50%	8.50%	11.00%	13.99%
Eagle Materials	\$77.06	\$0.40	29.50%	7.00%	18.25%	18.77%
Intrepid Potash Inc	\$14.21	-	-	-	-	-
Martin Marietta	\$110.85	\$1.60	22.50%	2.00%	12.25%	13.69%
Potash Corp.	\$35.49	\$1.40	-	12.50%	12.50%	16.44%
U S Lime & Minerals	\$71.96	-	-	-	-	-
USG Corp.	\$27.60	-	-	-	-	-
Vulcan Materials	\$66.98	\$0.24	-	6.00%	6.00%	6.36%

**Indicated Rate**

**13.85%**

**DIVIDEND GROWTH MODEL: PLOWBACK RATIO**

Company Name	Recent Stock Price	Next Year's Dividend	Return on Equity	Retention Rate	Market Growth Rate	D.G.M. Rate
Compass Minerals Int'l	\$86.93	\$2.60	29.50%	18.00%	5.31%	8.30%
Eagle Materials	\$77.06	\$0.40	16.00%	14.50%	2.32%	2.84%
Intrepid Potash Inc	\$14.21	-	-	-	-	-
Martin Marietta	\$110.85	\$1.60	9.00%	11.50%	1.04%	2.48%
Potash Corp.	\$35.49	\$1.40	22.00%	10.00%	2.20%	6.14%
U S Lime & Minerals	\$71.96	-	10.80%	10.80%	1.17%	-
USG Corp.	\$27.60	-	20.00%	20.00%	4.00%	-
Vulcan Materials	\$66.98	\$0.24	9.50%	9.50%	0.90%	1.26%

**Indicated Rate**

**4.20%**

**COMMENTS ABOUT THE NON-METALS INDUSTRY**



**UTAH STATE TAX COMMISSION  
PROPERTY TAX DIVISION  
NON-METALS -- CAPITAL STRUCTURE**

3/19/2015

**2015**

Page 14 of 23

**CALCULATION OF CAPITAL STRUCTURE**

Company Name	Total Debt	Long-Term Interest	Implied Coupon Rate*	Market Value of Debt**	Fair Value of Debt***	Pref'd Divs	MV of Pref Eqty+	Recent Stock Price	Shares Outstd	Market Value of Equity
Compass Minerals Int'l	627.4	18.0	1.43%	302.8	-	-	-	86.93	33.5	2,912.2
Eagle Materials	312.3	23.0	3.68%	288.0	-	-	-	77.06	50.1	3,860.7
Intrepid Potash Inc	150.0	-	-	150.0	-	-	-	14.21	75.4	1,071.4
Martin Marietta	1,618.2	53.5	1.65%	850.1	-	-	-	110.85	46.3	5,132.4
Potash Corp.	4,192.0	120.0	1.43%	2,020.3	-	-	-	35.49	856.1	30,383.0
U S Lime & Minerals	17.9	-	-	17.9	-	-	-	71.96	5.6	403.0
USG Corp.	2,210.0	172.0	3.89%	2,128.5	-	-	-	27.60	137.3	3,789.5
Vulcan Materials	2,006.1	202.0	5.03%	2,380.7	-	-	-	66.98	130.6	8,747.6
<b>Total</b>				<b>8,138.3</b>			<b>-</b>			<b>56,299.8</b>

**CAPITAL STRUCTURE**

Company Name	Percent Debt & Preferred Equity	Percent Common Equity
Compass Minerals Int'l	9.42%	90.58%
Eagle Materials	6.94%	93.06%
Intrepid Potash Inc	12.28%	87.72%
Martin Marietta	14.21%	85.79%
Potash Corp.	6.23%	93.77%
U S Lime & Minerals	4.25%	95.75%
USG Corp.	35.97%	64.03%
Vulcan Materials	21.39%	78.61%
<b>Mean</b>	<b>13.84%</b>	<b>86.16%</b>
<b>Weighted Mean</b>	<b>12.63%</b>	<b>87.37%</b>

**REMARKS**

\* Implied Coupon Rate is a semi-annual rate.

\*\* Market Value of Debt: 8.16% (Corporate Ba2)

\*\*\* Fair Value of Debt overrides the Market Value of Debt in calculation of Capital Structure.

+ Market Value of Pref. Equity: 4.74% (Baa)



**UTAH STATE TAX COMMISSION  
PROPERTY TAX DIVISION**

3/19/2015

**2015**

**OIL & GAS PRODUCTION/WD -- EQUITY RATE MODELS**

Page 15 of 23

**RECONCILIATION**

Equity Models	Equity Rate
CAPM: Rule 62 Compliant . . . . .	11.71%
CAPM: Total NYSE . . . . .	N/A
CAPM: Supply Side . . . . .	10.64%
CAPM: Deciles 1 & 2 . . . . .	N/A
Division's Risk Premium . . . . .	10.10%
DGM: Earnings & Dividend . . . . .	21.26%
DGM: Plowback Ratio . . . . .	0.00%
<b>Reconciled Equity Rate</b>	<b>12.67%</b>
Reconciled Equity Rate	12.67%
Debt Rate (Corporate Ba3)	8.16%
<b>Weighted Average Cost of Capital</b>	<b>11.10%</b>
Reconciled Equity Rate	12.67%
Tax-Adjusted (38.25%)	20.52%
Industry Debt Rate	8.16%
<b>Tax-Adjusted Weighted Average Cost of Capital</b>	<b>16.20%</b>

**CAPM: RULE 62 COMPLIANT**

Item	Rate
Market Risk Premium	7.00%
x Industry Beta	1.32
Industry Risk Premium	9.24%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>11.71%</b>

**CAPM: FULL NYSE**

Item	Rate
Market Risk Premium	0.00%
x Industry Beta	1.32
Industry Risk Premium	0.00%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>N/A</b>

**CAPM: SUPPLY SIDE**

Item	Rate
Market Risk Premium	6.19%
x Industry Beta	1.32
Industry Risk Premium	8.17%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>10.64%</b>

**CAPM: DECILES 1 & 2**

Item	Rate
Market Risk Premium	0.00%
x Industry Beta	1.32
Industry Risk Premium	0.00%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>N/A</b>

**DIVISION'S RISK PREMIUM**

Item	Rate
Market Risk Premium	7.00%
x Industry Financial Strength	1.09
Industry Risk Premium	7.63%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>10.10%</b>

**GUIDELINE COMPANY INFORMATION SUMMARY**

Company Name	Tax Rate	Relative Financial Strength	Beta
Abraxas Petrol	NMF	1.11 (B)	2.00
Bill Barrett Corp	NMF	1.22 (C++)	1.20
Continental Resources	37.00%	1.00 (B+)	1.50
Earthstone Energy Inc	22.22%	1.22 (C++)	1.05
Emerald Oil Inc	NMF	1.22 (C++)	1.30
Encana Corp.	NMF	1.00 (B+)	1.15
Escalera Resources Co.	NMF	1.44 (C)	1.25
Legacy Reserves	NMF	1.11 (B)	1.05
Linn Energy LLC	NMF	1.22 (C++)	0.90
Matador Resources Company	17.70%	1.00 (B+)	1.30
Newfield Exploration	18.68%	1.00 (B+)	1.45
Pioneer Natural Res.	37.70%	0.78 (A)	1.40
QEP Resources	41.14%	0.89 (B++)	1.35
Resolute Energy Corp	NMF	1.22 (C++)	1.25
Royale Energy Inc	NMF	1.22 (C++)	1.50
Ultra Petroleum	NMF	1.11 (B)	1.00
Warren Resources Inc	NMF	1.11 (B)	1.65
Whiting Petroleum	36.00%	0.89 (B++)	1.45
WPX Energy	NMF	1.00 (B+)	1.35
<b>Selected</b>	<b>38.25%</b>	<b>1.09</b>	<b>1.32</b>



**UTAH STATE TAX COMMISSION**  
**PROPERTY TAX DIVISION**  
**OIL & GAS PRODUCTION/WD -- DIVIDEND GROWTH MODELS**

**DIVIDEND GROWTH MODEL: EARNINGS AND DIVIDEND GROWTH**

Company Name	Recent Stock Price	Next Year's Dividend	Projected Earnings Growth	Projected Dividend Growth	Market Growth Rate	D.G.M. Rate
Abraxas Petrol	\$2.97	-	-	-	-	-
Bill Barrett Corp	\$11.56	-	15.00%	-	15.00%	-
Continental Resources	\$38.79	-	19.00%	-	19.00%	-
Earthstone Energy Inc	\$23.50	-	-	-	-	-
Emerald Oil Inc	\$1.18	-	-	-	-	-
Encana Corp.	\$13.81	\$0.28	16.00%	-11.50%	2.25%	4.28%
Escalera Resources Co.	\$0.57	-	-	-	-	-
Legacy Reserves	\$12.21	-	10.24%	-	10.24%	-
Linn Energy LLC	\$11.35	\$3.05	12.00%	5.00%	8.50%	35.37%
Matador Resources Company	\$20.65	-	-	-	-	-
Newfield Exploration	\$26.60	-	4.00%	-	4.00%	-
Pioneer Natural Res.	\$149.89	\$0.08	22.00%	35.50%	28.75%	28.80%
QEP Resources	\$19.99	\$0.12	15.50%	16.50%	16.00%	16.60%
Resolute Energy Corp	\$1.18	-	15.00%	-	15.00%	-
Royale Energy Inc	\$2.15	-	-	-	-	-
Ultra Petroleum	\$13.16	-	8.00%	-	8.00%	-
Warren Resources Inc	\$1.63	-	-	-	-	-
Whiting Petroleum	\$33.19	-	13.00%	-	13.00%	-
WPX Energy	\$11.91	-	-	-	-	-

**Indicated Rate**

**21.26%**

**DIVIDEND GROWTH MODEL: PLOWBACK RATIO**

Company Name	Recent Stock Price	Next Year's Dividend	Return on Equity	Retention Rate	Market Growth Rate	D.G.M. Rate
Abraxas Petrol	\$2.97	-	-	-	-	-
Bill Barrett Corp	\$11.56	-	-	-	-	-
Continental Resources	\$38.79	-	-	-	-	-
Earthstone Energy Inc	\$23.50	-	-	-	-	-
Emerald Oil Inc	\$1.18	-	-	-	-	-
Encana Corp.	\$13.81	\$0.28	-	-	-	-
Escalera Resources Co.	\$0.57	-	-	-	-	-
Legacy Reserves	\$12.21	-	-	-	-	-
Linn Energy LLC	\$11.35	\$3.05	-	-	-	-
Matador Resources Company	\$20.65	-	-	-	-	-
Newfield Exploration	\$26.60	-	-	-	-	-
Pioneer Natural Res.	\$149.89	\$0.08	-	-	-	-
QEP Resources	\$19.99	\$0.12	-	-	-	-
Resolute Energy Corp	\$1.18	-	-	-	-	-
Royale Energy Inc	\$2.15	-	-	-	-	-
Ultra Petroleum	\$13.16	-	-	-	-	-
Warren Resources Inc	\$1.63	-	-	-	-	-
Whiting Petroleum	\$33.19	-	-	-	-	-
WPX Energy	\$11.91	-	-	-	-	-

**Indicated Rate**

**0.00%**

**COMMENTS ABOUT THE OIL & GAS PRODUCTION/WD INDUSTRY**

[Empty space for comments]



**UTAH STATE TAX COMMISSION**  
**PROPERTY TAX DIVISION**  
**OIL & GAS PRODUCTION/WD -- CAPITAL STRUCTURE**

3/19/2015  
**2015**  
Page 17 of 23

**CALCULATION OF CAPITAL STRUCTURE**

Company Name	Total Debt	Long-Term Interest	Implied Coupon Rate*	Market Value of Debt**	Fair Value of Debt***	Pref'd Divs	MV of Pref Eqty+	Recent Stock Price	Shares Outstd	Market Value of Equity
Abraxas Petrol	61.5	-	-	61.5	-	-	-	2.97	92.6	275.0
Bill Barrett Corp	829.1	-	-	829.1	-	-	-	11.56	47.8	552.6
Continental Resources	6,133.4	314.5	2.56%	4,314.5	-	-	-	38.79	371.3	14,402.7
Earthstone Energy Inc	7.0	-	-	7.0	-	-	-	23.50	1.7	40.0
Emerald Oil Inc	192.5	-	-	192.5	-	-	-	1.18	65.8	77.6
Encana Corp.	6,086.0	390.0	3.20%	5,043.3	-	-	-	13.81	740.9	10,231.8
Escalera Resources Co.	45.0	-	-	45.0	-	3.7	78.1	0.57	11.5	6.6
Legacy Reserves	1,199.2	-	-	1,199.2	-	5.4	113.9	12.21	57.3	699.6
Linn Energy LLC	12,310.1	530.0	2.15%	7,669.6	-	-	-	11.35	329.7	3,742.1
Matador Resources Company	250.0	-	-	250.0	-	-	-	20.65	65.7	1,356.7
Newfield Exploration	3,046.0	190.0	3.12%	2,473.4	-	-	-	26.60	136.7	3,636.2
Pioneer Natural Res.	2,659.0	155.0	2.91%	2,052.9	-	-	-	149.89	142.6	21,374.3
QEP Resources	3,115.5	170.0	2.73%	2,291.8	-	-	-	19.99	179.3	3,584.2
Resolute Energy Corp	736.5	-	-	736.5	-	-	-	1.18	73.8	87.1
Royale Energy Inc	1.5	-	-	1.5	-	-	-	2.15	14.9	32.0
Ultra Petroleum	2,437.0	120.0	2.46%	1,665.8	-	-	-	13.16	153.0	2,013.5
Warren Resources Inc	418.3	-	-	418.3	-	-	-	1.63	72.9	118.8
Whiting Petroleum	2,653.5	147.6	2.78%	1,979.4	-	-	-	33.19	118.7	3,939.7
WPX Energy	2,047.0	117.0	2.86%	1,557.7	-	-	-	11.91	201.0	2,393.9
<b>Total</b>				<b>32,789.0</b>			<b>192.0</b>			<b>68,564.4</b>

**CAPITAL STRUCTURE**

Company Name	Percent Debt & Preferred Equity	Percent Common Equity
Abraxas Petrol	18.28%	81.72%
Bill Barrett Corp	60.01%	39.99%
Continental Resources	23.05%	76.95%
Earthstone Energy Inc	14.89%	85.11%
Emerald Oil Inc	71.27%	28.73%
Encana Corp.	33.02%	66.98%
Escalera Resources Co.	94.91%	5.09%
Legacy Reserves	65.24%	34.76%
Linn Energy LLC	67.21%	32.79%
Matador Resources Company	15.56%	84.44%
Newfield Exploration	40.48%	59.52%
Pioneer Natural Res.	8.76%	91.24%
QEP Resources	39.00%	61.00%
Resolute Energy Corp	89.42%	10.58%
Royale Energy Inc	4.48%	95.52%
Ultra Petroleum	45.27%	54.73%
Warren Resources Inc	77.88%	22.12%
Whiting Petroleum	33.44%	66.56%
WPX Energy	39.42%	60.58%
<b>Mean</b>	<b>44.29%</b>	<b>55.71%</b>
<b>Weighted Mean</b>	<b>32.48%</b>	<b>67.52%</b>

**REMARKS**

\* Implied Coupon Rate is a semi-annual rate.

\*\* Market Value of Debt: 8.16% (Corporate Ba3)

\*\*\* Fair Value of Debt overrides the Market Value of Debt in calculation of Capital Structure.

+ Market Value of Pref. Equity: 4.74% (Baa)



**UTAH STATE TAX COMMISSION**  
**PROPERTY TAX DIVISION**  
**OIL & GAS GATHERING -- EQUITY RATE MODELS**

**RECONCILIATION**

Equity Models				Equity Rate
CAPM: Rule 62 Compliant				8.63%
CAPM: Total NYSE				N/A
CAPM: Supply Side				7.92%
CAPM: Deciles 1 & 2				N/A
Division's Risk Premium				9.26%
DGM: Earnings & Dividend				18.50%
DGM: Plowback Ratio				0.00%
<b>Reconciled Equity Rate</b>				<b>11.59%</b>
Reconciled Equity Rate	11.59%	65.00%	7.53%	
Debt Rate (Corporate Ba1)	7.01%	35.00%	2.45%	
<b>Weighted Average Cost of Capital</b>				<b>9.98%</b>
Reconciled Equity Rate	11.59%			
Tax-Adjusted (38.25%)	18.77%	65.00%	12.20%	
Industry Debt Rate	7.01%	35.00%	2.45%	
<b>Tax-Adjusted Weighted Average Cost of Capital</b>				<b>14.65%</b>

**GUIDELINE COMPANY INFORMATION SUMMARY**

Company Name	Tax Rate	Relative Financial Strength	Beta
Access Midstream Partners L.P.	NMF	0.89 (B++)	0.85
Blueknight Energy Partners L.P.	NMF	1.22 (C++)	0.75
Crestwood Midstream Partners	NMF	1.00 (B+)	0.80
EnLink Midstream Partners L.P.	NMF	1.00 (B+)	1.15
ONEOK Inc.	NMF	1.00 (B+)	1.05
Plains All Amer. Pipe.	NMF	1.00 (B+)	0.75
Regency Energy Partners LP	NMF	0.89 (B++)	0.85
Tesoro Logistics LP	NMF	0.89 (B++)	0.75
Western Gas Partners LP	NMF	0.78 (A)	0.85
Williams Cos.	26.20%	1.00 (B+)	1.00
<b>Selected</b>	<b>38.25%</b>	<b>0.97</b>	<b>0.88</b>

**CAPM: RULE 62 COMPLIANT**

Item	Rate
Market Risk Premium	7.00%
x Industry Beta	0.88
Industry Risk Premium	6.16%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>8.63%</b>

**CAPM: FULL NYSE**

Item	Rate
Market Risk Premium	0.00%
x Industry Beta	0.88
Industry Risk Premium	0.00%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>N/A</b>

**CAPM: SUPPLY SIDE**

Item	Rate
Market Risk Premium	6.19%
x Industry Beta	0.88
Industry Risk Premium	5.45%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>7.92%</b>

**CAPM: DECILES 1 & 2**

Item	Rate
Market Risk Premium	0.00%
x Industry Beta	0.88
Industry Risk Premium	0.00%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>N/A</b>

**DIVISION'S RISK PREMIUM**

Item	Rate
Market Risk Premium	7.00%
x Industry Financial Strength	0.97
Industry Risk Premium	6.79%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>9.26%</b>



**UTAH STATE TAX COMMISSION**  
**PROPERTY TAX DIVISION**  
**OIL & GAS GATHERING -- DIVIDEND GROWTH MODELS**

3/19/2015  
**2015**  
Page 19 of 23

**DIVIDEND GROWTH MODEL: EARNINGS AND DIVIDEND GROWTH**

Company Name	Recent Stock Price	Next Year's Dividend	Projected Earnings Growth	Projected Dividend Growth	Market Growth Rate	D.G.M. Rate
Access Midstream Partners L.P.	\$55.86	-	15.00%	-	15.00%	-
Blueknight Energy Partners L.P.	\$6.72	-	13.55%	-	13.55%	-
Crestwood Midstream Partners	\$16.00	-	5.00%	-	5.00%	-
EnLink Midstream Partners L.P.	\$29.27	-	8.00%	-	8.00%	-
ONEOK Inc.	\$49.92	\$2.36	11.00%	16.50%	13.75%	18.48%
Plains All Amer. Pipe.	\$52.31	\$2.80	9.00%	10.50%	9.75%	15.10%
Regency Energy Partners LP	\$24.17	-	-	-	-	-
Tesoro Logistics LP	\$59.21	-	17.50%	-	17.50%	-
Western Gas Partners LP	\$74.28	-	9.77%	-	9.77%	-
Williams Cos.	\$45.22	\$2.45	12.00%	21.00%	16.50%	21.92%
<b>Indicated Rate</b>						<b>18.50%</b>

**DIVIDEND GROWTH MODEL: PLOWBACK RATIO**

Company Name	Recent Stock Price	Next Year's Dividend	Return on Equity	Retention Rate	Market Growth Rate	D.G.M. Rate
Access Midstream Partners L.P.	\$55.86	-	-	-	-	-
Blueknight Energy Partners L.P.	\$6.72	-	-	-	-	-
Crestwood Midstream Partners	\$16.00	-	-	-	-	-
EnLink Midstream Partners L.P.	\$29.27	-	-	-	-	-
ONEOK Inc.	\$49.92	\$2.36	-	-	-	-
Plains All Amer. Pipe.	\$52.31	\$2.80	-	-	-	-
Regency Energy Partners LP	\$24.17	-	-	-	-	-
Tesoro Logistics LP	\$59.21	-	-	-	-	-
Western Gas Partners LP	\$74.28	-	-	-	-	-
Williams Cos.	\$45.22	\$2.45	-	-	-	-
<b>Indicated Rate</b>						<b>0.00%</b>

**COMMENTS ABOUT THE OIL & GAS GATHERING INDUSTRY**



**UTAH STATE TAX COMMISSION  
PROPERTY TAX DIVISION  
OIL & GAS GATHERING -- CAPITAL STRUCTURE**

**CALCULATION OF CAPITAL STRUCTURE**

Company Name	Total Debt	Long-Term Interest	Implied Coupon Rate*	Market Value of Debt**	Fair Value of Debt***	Pref'd Divs	MV of Pref Eqty+	Recent Stock Price	Shares Outstd	Market Value of Equity
Access Midstream Partners L.P.	4,120.7	-	-	4,120.7	-	-	-	55.86	189.1	10,563.1
Blueknight Energy Partners L.P.	212.9	-	-	212.9	-	21.6	455.7	6.72	22.8	153.2
Crestwood Midstream Partners	1,895.1	-	-	1,895.1	-	-	-	16.00	187.2	2,995.2
EnLink Midstream Partners L.P.	1,746.7	-	-	1,746.7	-	-	-	29.27	91.3	2,672.4
ONEOK Inc.	7,205.6	360.0	2.50%	5,657.4	-	-	-	49.92	206.6	10,313.5
Plains All Amer. Pipe.	8,390.0	323.0	1.92%	5,561.2	-	-	-	52.31	359.1	18,784.5
Regency Energy Partners LP	6,427.0	-	-	6,427.0	-	-	-	24.17	210.9	5,097.5
Tesoro Logistics LP	1,276.0	-	-	1,276.0	-	-	-	59.21	54.4	3,221.0
Western Gas Partners LP	2,082.9	-	-	2,082.9	-	-	-	74.28	117.3	8,713.0
Williams Cos.	20,941.0	1,000.0	2.39%	15,948.2	-	-	-	45.22	683.0	30,885.3
<b>Total</b>				<b>44,928.1</b>			<b>455.7</b>			<b>93,398.7</b>

**CAPITAL STRUCTURE**

Company Name	Percent Debt & Preferred Equity	Percent Common Equity
Access Midstream Partners L.P.	28.06%	71.94%
Blueknight Energy Partners L.P.	81.36%	18.64%
Crestwood Midstream Partners	38.75%	61.25%
EnLink Midstream Partners L.P.	39.53%	60.47%
ONEOK Inc.	35.42%	64.58%
Plains All Amer. Pipe.	22.84%	77.16%
Regency Energy Partners LP	55.77%	44.23%
Tesoro Logistics LP	28.37%	71.63%
Western Gas Partners LP	19.29%	80.71%
Williams Cos.	34.05%	65.95%
<b>Mean</b>	<b>38.35%</b>	<b>61.65%</b>
<b>Weighted Mean</b>	<b>32.70%</b>	<b>67.30%</b>

**REMARKS**

\* Implied Coupon Rate is a semi-annual rate.

\*\* Market Value of Debt: 7.01% (Corporate Ba1)

\*\*\* Fair Value of Debt overrides the Market Value of Debt in calculation of Capital Structure.

+ Market Value of Pref. Equity: 4.74% (Baa)



**UTAH STATE TAX COMMISSION  
PROPERTY TAX DIVISION  
SAND AND GRAVEL -- EQUITY RATE MODELS**

**RECONCILIATION**

Equity Models				Equity Rate
CAPM: Rule 62 Compliant				10.73%
CAPM: Total NYSE				N/A
CAPM: Supply Side				9.77%
CAPM: Deciles 1 & 2				N/A
Division's Risk Premium				9.47%
DGM: Earnings & Dividend				15.37%
DGM: Plowback Ratio				0.00%
<b>Reconciled Equity Rate</b>				<b>10.73%</b>
Reconciled Equity Rate	10.73%	85.00%	9.12%	
Debt Rate (Corporate Ba2)	8.16%	15.00%	1.22%	
<b>Weighted Average Cost of Capital</b>				<b>10.34%</b>
Reconciled Equity Rate	10.73%			
Tax-Adjusted (38.25%)	17.38%	85.00%	14.77%	
Industry Debt Rate	8.16%	15.00%	1.22%	
<b>Tax-Adjusted Weighted Average Cost of Capital</b>				<b>15.99%</b>

**GUIDELINE COMPANY INFORMATION SUMMARY**

Company Name	Tax Rate	Relative Financial Strength	Beta
Eagle Materials	31.66%	1.00 (B+)	1.25
Granite Construction	NMF	1.00 (B+)	1.25
Martin Marietta	26.82%	0.89 (B++)	1.10
Vulcan Materials	NMF	1.11 (B)	1.10
<b>Selected</b>	<b>38.25%</b>	<b>1.00</b>	<b>1.18</b>

**CAPM: RULE 62 COMPLIANT**

Item	Rate
Market Risk Premium	7.00%
x Industry Beta	1.18
Industry Risk Premium	8.26%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>10.73%</b>

**CAPM: FULL NYSE**

Item	Rate
Market Risk Premium	0.00%
x Industry Beta	1.18
Industry Risk Premium	0.00%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>N/A</b>

**CAPM: SUPPLY SIDE**

Item	Rate
Market Risk Premium	6.19%
x Industry Beta	1.18
Industry Risk Premium	7.30%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>9.77%</b>

**CAPM: DECILES 1 & 2**

Item	Rate
Market Risk Premium	0.00%
x Industry Beta	1.18
Industry Risk Premium	0.00%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>N/A</b>

**DIVISION'S RISK PREMIUM**

Item	Rate
Market Risk Premium	7.00%
x Industry Financial Strength	1.00
Industry Risk Premium	7.00%
Add: Risk-Free Rate	2.47%
<b>Indicated Rate</b>	<b>9.47%</b>



**UTAH STATE TAX COMMISSION  
PROPERTY TAX DIVISION  
SAND AND GRAVEL -- DIVIDEND GROWTH MODELS**

3/19/2015  
**2015**  
Page 22 of 23

**DIVIDEND GROWTH MODEL: EARNINGS AND DIVIDEND GROWTH**

Company Name	Recent Stock Price	Next Year's Dividend	Projected Earnings Growth	Projected Dividend Growth	Market Growth Rate	D.G.M. Rate
Eagle Materials	\$77.06	\$0.40	29.50%	7.00%	18.25%	18.77%
Granite Construction	\$37.19	\$0.52	35.00%	7.50%	21.25%	22.65%
Martin Marietta	\$110.85	\$1.60	22.50%	2.00%	12.25%	13.69%
Vulcan Materials	\$66.98	\$0.24	-	6.00%	6.00%	6.36%
<b>Indicated Rate</b>						<b>15.37%</b>

**DIVIDEND GROWTH MODEL: PLOWBACK RATIO**

Company Name	Recent Stock Price	Next Year's Dividend	Return on Equity	Retention Rate	Market Growth Rate	D.G.M. Rate
Eagle Materials	\$77.06	\$0.40	-	-	-	-
Granite Construction	\$37.19	\$0.52	-	-	-	-
Martin Marietta	\$110.85	\$1.60	-	-	-	-
Vulcan Materials	\$66.98	\$0.24	-	-	-	-
<b>Indicated Rate</b>						<b>0.00%</b>

**COMMENTS ABOUT THE SAND AND GRAVEL INDUSTRY**



**UTAH STATE TAX COMMISSION  
PROPERTY TAX DIVISION  
SAND AND GRAVEL -- CAPITAL STRUCTURE**

3/19/2015  
**2015**  
Page 23 of 23

**CALCULATION OF CAPITAL STRUCTURE**

Company Name	Total Debt	Long-Term Interest	Implied Coupon Rate*	Market Value of Debt**	Fair Value of Debt***	Pref'd Divs	MV of Pref Eqty+	Recent Stock Price	Shares Outstd	Market Value of Equity
Eagle Materials	312.3	23.0	3.68%	288.0	-	-	-	77.06	50.1	3,860.7
Granite Construction	271.3	25.0	4.61%	299.3	-	-	-	37.19	38.9	1,446.7
Martin Marietta	1,618.2	53.5	1.65%	850.1	-	-	-	110.85	46.3	5,132.4
Vulcan Materials	2,006.1	202.0	5.03%	2,380.7	-	-	-	66.98	130.6	8,747.6
<b>Total</b>				<b>3,818.1</b>			<b>-</b>			<b>19,187.4</b>

**CAPITAL STRUCTURE**

Company Name	Percent Debt & Preferred Equity	Percent Common Equity
Eagle Materials	6.94%	93.06%
Granite Construction	17.14%	82.86%
Martin Marietta	14.21%	85.79%
Vulcan Materials	21.39%	78.61%
<b>Mean</b>	<b>14.92%</b>	<b>85.08%</b>
<b>Weighted Mean</b>	<b>16.60%</b>	<b>83.40%</b>

**REMARKS**

\* Implied Coupon Rate is a semi-annual rate.

\*\* Market Value of Debt: 8.16% (Corporate Ba2)

\*\*\* Fair Value of Debt overrides the Market Value of Debt in calculation of Capital Structure.

+ Market Value of Pref. Equity: 4.74% (Baa)