# A. COAL PROPERTIES ANALYSIS

June 1, 1998
Rich Boyle
State Tax Commissioner
West Virginia State Tax Department

1. Capitalization Rate Survey and Results

In developing a capitalization rate for use in valuing income-producing properties, consideration should be given to the three approaches generally considered in estimating a discount rate. As a result of a limited number of sales involving producing properties, the Bands-of-Investment and the Summation Techniques will be utilized.

Summation Technique

A. Safe Rate - 90-day Treasury Bills

January - December 1997 = 5.123%
January - December 1996 = 5.025%
January - December 1995 = 5.513%

B. Risk Rate

1) Debt - interest differential between Loan Rates and 90-day Treasury Bills.

| Loan Rates * | Risk Rate |
|---|---|
| 1997 - 10.250% | 5.127% |
| 1996 - 11.283% | 6.258% |
| 1995 - 10.750% | 5.237% |

* From Questionnaire

2) Equity - differential between Equity Rates and 90-day Treasury Bills.

| Equity Rates * | Safe Rate |
|---|---|
| 1997 - [13.0% ÷ (1-.29)] - 5.123 = | 13.187% |
| 1996 - [12.5% ÷ (1-.29)] - 5.025 = | 12.581% |
| 1995 - [12.5% ÷ (1-.29)] - 5.513 = | 12.093% |

* *Moody's Handbook on Common Stocks and Value Line Investments Survey Analysis*

3) Risk Rate - composite of Loan and Equity Rates weighted by industry estimated capital structure.*

| Equity Rates | Debt Rate | Composite Risk Rate |
|---|---|---|
| 1997 - 7.912% | 2.051% | 9.963% |
| 1996 - 7.549% | 2.503% | 10.052% |
| 1995 - 7.256% | 2.095% | 9.351% |

* Debt Equity Ratio = 40% Debt - 60% Equity

C. Non-Liquidity Rate - interest differential between 90-day Treasury Bill rates and one year Treasury Bill rates which reflect time necessary to sell active properties.

| | 1 Yr. T-Bill | - | 3 Mo. T-Bill | = | Non-Liquidity Rate |
|---|---|---|---|---|---|
| January - December 1997 = | 5.334% | - | 5.123% | = | .211 % |
| January - December 1996 = | 5.224% | - | 5.025% | = | .199 % |
| January - December 1995 = | 5.713% | - | 5.513% | = | .200 % |

D. Management Rate - charges for management of investment portfolios (from questionnaire).

Rates: $5/$1000 of principal or .500%

Capitalization Rate (Coal)

| | 1997 | 1996 | 1995 |
|---|---|---|---|
| Safe Rate | 5.123 | 5.025 | 5.513 |
| Risk Rate (Composite) | 9.963 | 10.052 | 9.351 |
| Non-Liquidity Rate | .211 | .199 | .200 |
| Management Rate | .500 | .500 | .500 |
| | 15.797 | 15.776 | 15.564 |
| * Weight | X .40 | X .30 | X .30 |
| | 6.319 | 4.732 | 4.669 |

Weighted Total = 15.720% Round to 15.75%

* The valuation of an active coal property is dependent on the weighted average of the past three years of production. Therefore, the capitalization rate will be estimated in the same manner.

## B. OIL AND GAS PROPERTIES ANALYSIS

June 1, 1998
Rich Boyle
State Tax Commissioner
West Virginia State Tax Department

1. Capitalization Rate Survey and Results

In developing a capitalization rate for use in valuing income-producing properties, consideration should be given to the three approaches generally considered in estimating a discount rate. As a result of a limited number of sales involving producing properties, the Bands-of-Investment and the Summation Techniques will be utilized.

Summation Technique

A. Safe Rate - 90-day Treasury Bills

January - December 1997 = 5.123% ÷ (.95) = 5.393

B. Risk Rate

1) Debt - interest differential between Loan Rates and 90-day Treasury Bills.

| Loan Rates * | | Risk Rate |
|---|---|---|
| 1997 - 9.75% | 4.627% ÷ (.95) = | 4.871% |

* From Questionnaire

2) Equity - differential between Equity Rates and 90-day Treasury Bills.

| Equity Rates * | | Risk Rate |
|---|---|---|
| 1997 - [13.00% ÷ (1-.37)] - 5.123 | = | 15.512% |

* *Moody's Handbook on Common Stocks and Value Line Investments Survey Analysis*

3) Risk Rate - composite of Loan and Equity Rates weighted by industry estimated capital structure.*

| Equity Rates | Debt Rate | Composite Risk Rate |
|---|---|---|
| 1997 - 8.532% 2.192% | | 10.724% |

* Debt Equity Ratio = 45% Debt - 55% Equity

C. Non-Liquidity Rate - interest differential between 90-day Treasury Bill rates and one year Treasury Bill rates which reflect time necessary to sell active properties.

| | 1 Yr. T-Bill | - | 3 Mo. T-Bill | = | Non-Liquidity Rate |
|---|---|---|---|---|---|
| January - December 1997 = | 5.334% | - | 5.123% | = | .211% |

D. Management Rate - charges for management of investment portfolios (from questionnaire).

Rate: .500%

E. Property Tax Rate - sixty percent (60%) of the Statewide average of tax rates on Class III properties.

1997 = 60% of 2.2211 = 1.333 %

Capitalization Rate (Oil/Gas)

| | | 1997 |
|---|---|---|
| Safe Rate | = | 5.393 |
| Risk Rate (Composite) | = | 10.724 |
| Non-Liquidity Rate | = | 0.211 |
| Management Rate | = | .500 |
| Property Tax Rate | = | 1.333 |

18.161 = Capitalization Rate

18.25% (Rounded)

C. OTHER ACTIVE NATURAL RESOURCE
PROPERTIES ANALYSIS

June 1, 1998
Rich Boyle
State Tax Commissioner
West Virginia State Tax Department

1. Capitalization Rate Survey and Results

In developing a capitalization rate for use in valuing income-producing properties, consideration should be given to the three approaches generally considered in estimating a discount rate. As a result of a limited number of sales involving producing properties, the Bands-of-Investment and the Summation Techniques will be utilized.

Summation Technique

A. Safe Rate - 90-day Treasury Bills

January - December 1997 = 5.123%
January - December 1996 = 5.025%
January - December 1995 = 5.513%

B. Risk Rate

1) Debt - interest differential between Loan Rates and 90-day Treasury Bills.

| Loan Rates * | Risk Rate |
|---|---|
| 1997 - 9.500% | 4.377% |
| 1996 - 10.250% | 5.225% |
| 1995 - 11.000% | 5.487% |

* From Questionnaire

2) Equity - differential between Equity Rates and 90-day Treasury Bills.

| Equity Rates * | Risk Rate |
|---|---|
| 1997 - [13.0% ÷ (1-.29)] - 5.123 | = 13.187% |
| 1996 - [12.5% ÷ (1-.29)] - 5.025 | = 12.581% |
| 1995 - [12.5% ÷ (1-.29)] - 5.513 | = 12.093% |

* *Moody's Handbook on Common Stocks and Value Line Investments Survey Analysis*

3) Risk Rate - composite of Loan and Equity Rates weighted by industry estimated capital structure.*

| Equity Rates | Debt Rate | Composite Risk Rate |
|---|---|---|
| 1997 - 7.912% | 1.751% | 9.663% |
| 1996 - 7.549% | 2.090% | 9.639% |
| 1995 - 7.256% | 2.195% | 9.451% |

* Debt Equity Ratio = 40% Debt - 60% Equity

B. Non-Liquidity Rate - interest differential between 90-day Treasury Bill rates and one year Treasury Bill rates which reflect time necessary to sell active properties.

| | | 1 Yr. T-Bill | - | 3 Mo. T-Bill | = | Non-Liquidity Rate |
|---|---|---|---|---|---|---|
| January - December 1997 | = | 5.334% | - | 5.123% | = | .211 % |
| January - December 1996 | = | 5.224% | - | 5.025% | = | .199 % |
| January - December 1995 | = | 5.713% | - | 5.513% | = | .200 % |

D. Management Rate - charges for management of investment portfolios (from questionnaire).

Rates: $5/$1000 of principal or .500%

E. Property Tax Rate - sixty percent (60%) of the statewide average of tax rates on Class III properties.

1997 = 60% of 2.2211 = 1.333 %

1996 = 60% of 2.2234 = 1.334 %

1995 = 60% of 2.2339 = 1.340 %

Capitalization Rate (Other Natural Resources)

| | 1997 | 1996 | 1995 |
|---|---|---|---|
| Safe Rate | 5.123 | 5.025 | 5.513 |
| Risk Rate (Composite) | 9.963 | 9.639 | 9.451 |
| Non-Liquidity Rate | .211 | .199 | .200 |
| Management Rate | .500 | .500 | .500 |
| Property Rate Tax | 1.333 | 1.334 | 1.340 |
| | 17.130 | 16.697 | 17.004 |
| * Weight | X .40 | X .30 | X .30 |
| | 6.857 | 5.009 | 5.101 |

Weighted Total = 16.962% Round to 17.00%

* The valuation of an active natural resource property is dependent on the weighted average of the past three years of production. Therefore, the capitalization rate will be estimated in the same manner.