VALUATION OF OPTIONS

This writeup describes the basic process for valuing non-marketable options. Assumed are the following:

- there is no public trading market for the option itself (if so, they are called warrants)
- at least one year remaining until expiration
- at time of exercise, the company will issue shares for cash or other consideration; additional shares will remain outstanding.

The first step in the valuation process is to determine the value of a share of the common. Thus, it is necessary to analyze business enterprise value for the closely-held firm. Even if the valuation involves warrants and a restricted or inactive public market for the stock and warrants, it is still important to objectively assess overall business value.

The next step is to gauge the impact of the option terms as they apply to the various mathematical formulas for measuring values. The key terms are:

1. Expiration Time - the longer the time, the greater the potential stock appreciation. If there is an early call, the option has less value.

2. Degree of Leverage - the lower the option price, the greater the option's leverage or time value; as the spread between option price and stock price increases, the option's leverage decreases.

3. Volatility of Stock Value - generally, the wider the value fluctuations, the greater the option's leverage or time value (remember, downside movements cannot reduce the option value below zero).

4. Dividends - payment of dividends detracts from option value because money is drained from reinvestment which might increase stock price and the option holder receives no dividend.

5. Interest Rates - higher interest rates tend to produce higher option value, as follows: stock prices decline to reflect efficient capital markets, providing for higher future appreciation of this underlying security.

6. Potential Dilution - the more options outstanding, the more dilution will occur when the options are exercised.

7. Underlying Stock Liquidity - the more readily marketable the stock, the more valuable is the option.

8. Financial Stability - of the company and the expected return on the equity.