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December 18, 1979

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Cheney & Brock
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Dear Kim:

I have examined the Annual Reports of Atlantis Development Inc. that you sent me; also, the monthly income statements from May through December 1976 for the same company. I have not conducted an audit of the books of the company so that I am unable to express an opinion on the accuracy of these records.

These reports appear to have been drawn up on an accrual basis in accordance with generally accepted accounting principles (hereinafter GAAP) and to be broadly consistent from year to year; however, it is well recognized that financial measurement in accordance with GAAP does not purport to represent the value of a company to a buyer or a seller. A balance sheet reflects, on the one side, the acquisition costs of assets, depreciated where appropriate, not the value or worth of these assets. Likewise, liabilities are entered at their initial contract price and are not adjusted subsequently to reflect their value in the light of changed market conditions. Moreover, intangibles, such as goodwill, do not appear unless acquired in a trade. In my opinion, therefore, the retained earnings figure as of January 1976 does not reflect the value of the company as of that date.

It is recognized by all authorities that value is a function of future benefits and not of past costs. In the case of a company's shareholders, the benefits are future dividends (or equivalently, future earnings). The appropriate procedure to valuing a company is to project its earnings (or its dividends) and to discount these to the present. This is inherently subjective, but no other alternative exists.

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Where a company is traded freely, the procedure referred to in the last paragraph, is done formally or informally by numerous willing buyers and sellers. The result is a fair market value that is probably the best estimate of the value of a company. In the case of Atlantis no such market existed. Mr. Malloy paid \$50,000 for his one-fourth share in 1975 which suggests he valued the company at that time at, at least, and possibly considerably more, than, \$200,000. In my opinion, there is no evidence in the data I have examined of a deterioration in value subsequent to this trade, so that this probably represents a lower bound on the value of the company as of January 19, 1976.

In the absence of a free market in the shares of a company, one is obliged to appraise the value of the company oneself. Two approaches have been used. Each is a variant on the basic procedure alluded to above.

The first approach attempts to value the assets and liabilities of the company. This approach is most appropriate for a stable business involving mostly tangible assets. It is least appropriate where the business is very new and/or involves many intangible assets. The real asset of Atlantis Development Inc. was its superior product. This is an intangible asset which, in accordance with GAAP, does not appear on a balance sheet. In my opinion, therefore, this approach is wholly inappropriate for this company.

The second approach is to capitalize earnings using a price-earnings multiplier. This is more easily done where the company is relatively stable. It involves estimating a normalized earnings figure, i.e., one free of abnormal events; a growth rate that might reasonably be expected to apply for the company's life; and a suitable discount rate based on the risk class of the company. The approach is more complex when a company is running at a loss or is in a period of abnormally high growth. Both these factors are present in the case of Atlantis Development.

To use the method, it is necessary to make a number of adjustments to remove the influence of fixed costs on the income statement so as to arrive at a normalized earnings figure. The resulting number is in excess of \$12,500 for the period ended January 19, 1976. An appropriate capitalization rate for a company at this stage of its growth might be 25%. I have no evidence that indicates that the company could not have grown at a rate of 20% per year. The resulting price-earnings ratio is 20, yielding a value in excess of \$250,000. This correlates well with Mr. Malloy's estimate and, in my opinion, is a reasonable base figure.

The approach assumes, of course, that the company will produce profits. I undertook, therefore, a breakeven analysis of the company as might have been done on January 19, 1976. It is apparent, first, that in the last quarter of 1975 the company had already broken even and, in fact, had shown a small profit. In my opinion, this indicates that the company was on the verge of profitability.

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Looking to the future, as one must to arrive at an estimate of value, it appears, first, that breakeven, on an annual basis, would have been achieved at a sales level of approximately \$220,000. This is 14% above the sales reported for the period ending January 19, 1976. In my opinion, this was well within striking distance for the company which had been growing at rates well over 200% - a rate which the new company has subsequently maintained. In my opinion, also, the nearness of breakeven should have been apparent on January 19, 1976 to any reasonable observer.

If one assumes a short-term growth rate of 200% (exceeded by both the old and the new companies), Atlantis would have wiped out its accumulated deficit by mid-1977. Profits by the end of 1978 would have been of the order of \$75,000 - this figure was exceeded, in fact, by the end of 1977 by Atlantis Weathergear. If one assumes a capitalization rate of 20% now, to reflect the lower risk, and a long-term growth rate of 10%, in my opinion, well within reason, one arrives at a price-earnings multiplier of ten. This yields a value for Atlantis Development Inc. of over \$550,000 as of January 19, 1976. In my opinion, this represents a wholly reasonable estimate of the value of Atlantis Development Inc. as at January 19, 1976.

I trust that you will find the aforegoing useful.

Sincerely,

Michael F. van Breda Assistant Professor of Management Science

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