Comparability of Divergent Financial Statements in the Petroleum Exploration Industry

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Accounting practices used in the petroleum industry are marked by substantial intra- and inter-industry differences. Such diversity makes the task of comparing financial statements and performance of petroleum exploration firms especially difficult. From the point of view of financial analysts and many other users of financial information, it would be desirable to have all firms use a uniform set of accounting procedures. Today, the petroleum industry and the accounting profession are sharply divided on the propriety of various accounting procedures and uniformity seems to be a distant goal at best.

Until such time as these differences are resolved, the external users of financial statements must take the best use they can of the accounting information published by different firms using different accounting methods. In this paper, I present a method of adjusting divergent financial statements to a comparable basis. The discussion is limited to the variations in the capital/expense decision for prediscovery costs in the petroleum exploration industry.

Prediscovery costs include the costs of geological and geophysical exploration, property acquisition and carrying costs, and exploratory drilling costs. Some accountants recommend capitalizing all prediscovery costs. Others would relate parts of such costs to successful and unsuccessful segments of the exploration activity.

The practice of capitalizing only those prediscovery costs which are directly identifiable with the discovery of a commercial reserve and treating all other costs as operating expense is referred to as successful efforts costing (SEC). On the other hand, the practice of capitalizing all prediscovery costs irrespective of the results of exploration is called full costing (FC). Several variations of each accounting method are used in practice. These variations are ignored in the analysis presented here in order to highlight the differences (or lack of them) between the SEC and the FC methods in their “pure” form and define procedures for converting SEC financial statements to FC basis and vice versa.

Since the sum of earnings over the lifetime of a firm is invariant to alternative accounting procedures used for reporting purposes (as against those used for tax purposes), the basic effect of accounting policies on earnings is to determine their distribution over the life cycle. Patterns of earnings over the life cycle therefore provide a natural framework for a comparative study of alternative accounting practices. This framework is used throughout the present study.

The life cycle of a firm may be divided into several stages such as birth, growth, maturity, decline and the end. Different accounting practices result in different distribution of earnings over each stage of the life cycle. If the earnings of a firm in one stage of its life cycle are higher under accounting practice A